

THREESTONEBURN FOREST

OUTLINE HABITAT MANAGEMENT PLAN

CONTENTS

- 1. Introduction**
- 2. Threestoneburn Forest**
- 3. Development and Implementation of the Outline Habitat Management Plan**
- 4. Summary**

1. INTRODUCTION

This Outline Habitat Management Plan (HMP) has been prepared to accompany the application for consent to deforest the Threestoneburn Plantation, near Wooler in Northumberland. It has been prepared to explain how it is envisaged that the land to be subject to deforestation is to be managed, and to inform on the Environmental Impact of the proposals. It is a working document, subject to ongoing revision and modification, which will be developed and refined following the grant of consent for the deforestation. The outline HMP has been put together by Scottish Woodlands Ltd following discussions with the Northumberland National Park Authority and Natural England and is subject to ongoing consultation with the landowner. Further information about the habitats and flora and fauna of Threestoneburn Forest can be found in the *Threestoneburn Forest Environmental Statement* (ES), and in the Appendices.

Copies of these documents may be obtained from Scottish Woodlands Ltd, Alnwick, Northumberland.

The proposed deforestation project area encompasses a number of habitats and different land uses. The site is under the ownership of Lilburn Estates (see map).

The main aim of the Habitat Management Plan is to provide an integrated approach to nature conservation which is compatible with the operation of the future land uses on the site. This will be achieved through a programme of habitat restoration and management with the objective of enhancing biodiversity, whilst taking account of the requirements of the landowners.

The site currently comprises the following principal habitats:

- Blanket bog (approximately 64 ha)
- Conifer plantation (approximately 568 ha)
- Grassland (approximately 18 ha).
- Heathland (approximately 60 ha)

The overall aspirations for the site are to:

- Fell areas of conifer plantation, with the aim of reverting this to ‘modified bog’, which is an open, heathy, grassy habitat, on peaty ground; and heathland, broadleaved scrub and woodland on less waterlogged more mineral soils.
- Increase NBL area, by replanting riparian zones within the forest and on neighbouring land under the same ownership.
- Enhance the ecological connections between the habitats present on site and those outwith the site boundary.
- Encourage populations of valued species, such as black grouse, upland waders and other moor-land birds, by providing suitable habitat.

This document sets out the nature conservation aspirations for the area and outlines the means by which these aspirations can be reached. The habitats it is proposed to maintain or establish are illustrated indicatively in below;

Habitat	Current Area (Ha)	Future Area (ha)
Blanket Bog	64	296
Conifer Plantation	568	0
Grassland	18	57
Heathland	60	292
Native Broadleaves	2	67



Figure 1 – Remnant Blanket Bog vegetation in saddle between Hedgehope and Dunmoor Hills

2. THREESTONEBURN FOREST

2.1 Introduction

Threestoneburn Forest occupies 712 ha on the eastern flanks of Hedgehope and Dunmoor hills in the eastern Cheviots in Northumberland. The western half of the area is predominantly blanket bog much of which has been modified by cultivation, drainage and conifer planting. The eastern half of the property is predominantly heathland, again much of it cultivated and planted with conifers. Planting of the forest commenced in 1967 and the principal species is sitka spruce. Most of the planting was carried out between 1972 and 1977 but the trees growing in some of the compartments were planted as recently as 1982. The soils beneath the conifers comprise blanket peat, peaty gleys and podsols. The presence of these soil types, together with the nature of the vegetation along the tracks and rides, show that most of the property was formerly either blanket bog or heathland, and would have supported vegetation communities similar to the open land adjoining at Ilderton Dodd Farm.

The current vegetation along the rides, burns and higher unplanted ground on the western edge can be divided into three main types:

- Blanket bog vegetation, which occupies most of the higher ground and rides and track edges in the western part (Figure 1). It is characterised by hare's-tail cottongrass (*Eriophorum vaginatum*), wavy hair-grass (*Deschampsia flexuosa*) and *Sphagnum* mosses. Heather (*Calluna vulgaris*) is patchy but, where it does occur, grows vigorously, probably as a result of drying of the peat due to drainage.
- The edges of burns and other wet areas, which tend to be vegetated with soft rush (*Juncus effuses*) and tufted hair-grass (*Deschampsia cespitosa*). The vegetation on the banks of Threestoneburn is illustrated in Figure 2.
- Dry heath vegetation, characterised by a high cover of heather and pleurocarpous mosses, which occurs on the rides and roadsides in the drier eastern portion of the property and on the forest boundary in the north-eastern corner.



Figure 2 - Above Riparian habitat at Threestoneburn

Features of significance for nature conservation within Threestoneburn Forest include:

- The large areas of undisturbed blanket bog on the western boundary, which are included in the Cheviot SSSI. (NT945195 & NT965185).
- The patches of dry heath vegetation and rock outcrops at Cunyon crags (NT977181).
- Threestoneburn riparian zone (NT958191 to NT979202)
- Ponds (3) located adjacent to burn (NT964203 & NT966205)

2.2 Proposal

After felling, the main objectives of management are to:

- Restore blanket bog vegetation across the western part of the forest site. The regeneration of typical blanket bog species in recently felled areas such as Holburn Moss, Northumberland indicates that re-creation of a 'modified blanket bog' habitat is feasible on the peat at Threestoneburn. To date, there have been relatively few attempts to restore felled conifer plantations on peat to bog habitats, especially blanket bog, with the exception of Forsinard in the Flow Country of northern Scotland and current Forestry Commission work such as the Border Mires Project in Kielder.
- Restore heathland vegetation across the eastern part of the forest. In 1999-2001 some 150 ha of this habitat was restored elsewhere on Lilburn Estate as illustrated in Figure 3. This restoration has proven to be very effective and the heather vegetation had fully recolonised the site within 3-4 years of the conifers being removed.
- Encourage upland waders and red and black grouse.
- Create and maintain ecological connections with adjacent habitats.



Figure 3 – Above heather regeneration at Wooler Common. It is hoped that the moorland recovery proposed at Threestoneburn will be as successful as that previously carried out on the above site in 1999-2001

The following measures are proposed to meet these objectives:

- Clear all of the coniferous plantations and allow regeneration of blanket bog and heathland species. A combination of conventional and whole tree harvesting methods (detailed in Chapter 6 of the Threestoneburn Environmental Statement) will be employed across the site, depending on soil types and ground conditions. It is intended to recover as much of the brash from the site as possible, however where conditions require it harvesters and forwarders will run on brash mats and secondary brash recovery will be attempted.
- The extent of felling operations in Threestoneburn Forest enables investigation of different harvesting methods and post-harvest management on restoration success. It would be of benefit to compare conventional harvesting using tracked vehicles with whole tree harvest by clam-bunk forwarder or skyline. The latter technique results in minimal disturbance of the peat surface, thus enhancing the speed and extent of vegetation recovery. Removal of all residues in the form of brash and needles also minimises nutrient inputs to the peat, encouraging the regrowth of ombrotrophic mire species rather than competitive grasses. In addition the absence of brash will enable the swifter introduction of grazing, which will benefit the bog recovery process.

- Following harvesting, it is essential to rewet the peat to encourage the development of wet heath and mire vegetation. Where necessary on the site, plastic dams will be inserted at strategic intervals to prevent the flow of peat and water. A survey of the distribution and condition of drains will be undertaken following felling operations, and methods of blocking drains and the precise positioning of dams will be reviewed with experts in peatland restoration on site after felling has finished
- Retain ponds and burns.
- Plant native broadleaved species along the riparian zones and fence to exclude grazing.

The new native broadleaf planting is shown on the attached maps but can be summarised as follows;

1. Riparian zones within Threestoneburn Forest – 67.7 ha. Combination of NVC Woodland Classification W9 (Upland Mixed Broadleaf) and W11 (Upland oak/birch).
2. Langleeford Valley – Fence off area of riverbank and adjoining land to allow NBL natural regeneration to occur (W9) – 4.02 ha
3. Earle Hill Head – 6.90 ha of new native broadleaf woodland (W9 & W11)
4. Brownslaw – 1.64 ha new riparian woodland (W9)
5. Kirknewton Torrs – 10.22 ha riparian woodland (W11 & W4)

- Remove regenerating sitka spruce as necessary.
- On completion of the operational phase of the deforestation process it is intended to integrate the future management of the site with the management of the adjoining moorland owned and managed by Lilburn Estates. The accompanying map shows the adjoining landuse as well as identifying the various management agreements that the adjoining land is already subject to. The land to the North of the forest is currently under a Countryside Stewardship Agreement and in due course this land will be entered into Higher Level Stewardship, as will the area of former forest.
- Immediately after completion of the deforestation project the site will be checked to ensure that no livestock can access it. Depending on the soil types it will take 3-5 years for the vegetation to recover for the site to be utilisable for light grazing by sheep. In the longer term it will be an important management tool to allow sheep to graze the area, especially in the summer months.

- Lilburn estates have been very successful in converting overgrazed hill land predominantly consisting of grass and deforested conifer plantations to productive heather dominated moorland capable of supporting healthy populations of red grouse, other moorland birds and flocks of sheep in a sustainable system.
- As mentioned above sheep are used as an important tool in managing the moorland. In addition to this burning and cutting of the heather is also used to ensure that a mosaic of different vegetation types and ages and heights of the heather is created. This management is vital to ensure that the habitat is varied enough to provide a food source and nesting sites for ground nesting species such as red and black grouse.
- The Lilburn Estate management team and game keeping staff will be responsible for the ongoing management of the area post deforestation and its integration with the adjacent moorland already subject to a management regime.

3. DEVELOPMENT AND IMPLEMENTATION OF THE OUTLINE HABITAT MANAGEMENT PLAN

3.1 Management arrangements

To be confirmed in consultation with National Park Authority and Natural England, but likely to be Higher Level Stewardship.

3.2 Responsibilities and roles of National Park Authority Landowner and Natural England

To be confirmed.

3.3 Liaison and review arrangements

To be confirmed.

3.4 Monitoring

To be confirmed.

4. SUMMARY

Implementation of the Habitat Management Plan, as outlined in this document, will result in creation of habitats of higher nature conservation value than those they replace. For example, the area of blanket bog habitat will be increased from 64 to 296 ha. This will provide habitat for a variety of moorland and wading birds and will enhance ecological connections between the blanket bog and marshy grassland areas. In addition, the wildlife value of the habitats which are to be retained will be increased through sensitive management, for example through modification of grazing regimes.

The estimated areas of habitats ‘before’ and ‘after’ the proposed development are summarised in the table above.

It is well known that efforts to recreate habitats do not always result in habitats of equivalent quality to undisturbed habitats, at least not in the short-term. However, positive intervention to restore and manage habitats helps ‘kick-start’ the ecological functioning of the system by accelerating the development of vegetation cover and colonisation by typical animal species. At Threestoneburn, the habitats to be created, as proposed in this Outline Habitat Management Plan, are of greater nature conservation value than those they replace (e.g. modified bog and heath-land compared with conifer plantation). Furthermore, the area of habitat to be created is extensive and provides linkages with different habitats within the site. The implementation of this Habitat Management Plan will, therefore, ensure a net increase in the nature conservation value of the site.

It is also intended to gradually integrate and management of the site into the existing well established management regime of the surrounding predominantly heather moorland.