Matterdale Forest Design Plan

Text & Graphs

Summer 2010

Forestry Commission England

Contents

The plan is presented in four separate sections:

- Text
- Viewpoint Photos
- General Photo Survey
- Maps

The process by which this plan has been developed is characterised by three main stages:

1) Understanding Matterdale
2) Developing a vision
3) Implementing the vision

The Viewpoints and General Photo Survey principally reflect the first two stages in the process whilst the maps and text describe the full process. The table below illustrates the way that the various maps, photos and text fit into the stages in the process and helps guide the reader through the plan.

Understanding Matterdale	***Text*** • Introduction • Survey • Achievements during last plan period
	Maps • Location • Photo Survey Viewpoints • Current Forest Species • Recreation & Access • Community • Social & Economic • Water, Heritage & Nature Conservation • Wind Hazard Class & Soils • Roads & Harvesting • Aerial Photo (not available on web site) • Landform Assessment • ESC Native Broadleaved Species • ESC Conifer Species • Achievements
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Developing A Vision	***Text*** • Review & Appraisal

	Maps
	• Review Issues
	• Design Concept
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	All Photos
Implementing the Vision	***Text*** • Objectives of the Plan • Delivery of the North West England Forest District Strategic Plan • Delivery against National Policy " A Strategy for England's Trees, Woods and Forests" • Graphs
	Maps • Future Woodland Management • Future Woodland Species • Future Access, Community, Health & Wellbeing • Future Conservation & Heritage • Planning for Climate Change

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Summer 2010

Introduction

Matterdale is situated within the Lake District National Park to the south of the A66 corridor on the gently sloping land below the hills of Matterdale Common. The forest is freehold and occupies an area of 291 hectares. Originally planted wholly with conifers between 1960 and 1965 to a geometric ride infrastructure with timber production being the main objective, these crops have been largely clearfelled. Restocking is based on organic shapes that are less intrusive on the landscape and provide increased conservation and recreational value. The first Forest Design Plan was approved in 1999 and the first review in 2004.

Survey

The forest is important in the landscape being highly visible from the A66 and the popular hill walks on Blencathra, Great Mell Fell and The Dodds. Traditionally levels of public use have been reasonably low, the forest used mainly by local dog walkers, cyclists and horse riders. Immediately adjacent are the highly popular facilities of Rookin House Activity Centre and Troutbeck Caravan Park. Both encourage their visitors to use the forest. The Activity Centre offers pony trekking through the forest. Extending and upgrading the forest road network to provide access for recent extensive timber harvesting has offered scope to improve the potential for the forest to deliver public benefits by improving access and increasing path linkages outwith the forest. The planned programme of conifer felling and restocking has opened up internal views particularly along Thornsgill Beck and removed some of the external geometric forest boundaries.

In terms of conservation, Thornsgill Beck features as a significant watercourse running through the forest, into the River Derwent and on to Bassenthwaite Lake. The forest is contained within Bassenthwaite Lake catchment area and as such, management aims for the forest include protecting the water quality and health of the lake. The western bank of Thornsgill Beck is the site of two important geological rocky outcrops with Site of Special Scientific Interest (SSSI) designation as part of the wider Thornsgill Beck, Mosedale Beck and Wolf Crags SSSI. Additionally, there are some interesting crags formed from slate outcrops further to the south named Pencil Crags.
The creation of larger open areas alongside the tributaries has provided an ideal habitat for adders and in 2006 a joint project with Capita and the Forestry Commission saw the release of a number of this species along with creation of several hibernacula. These sites are monitored annually.
The other important aspect is the close proximity to several areas of blanket bog – Binks Moss, Whitesike Moss and Sandbeds Moss. These provide an important habitat for associated heather, sphagnum and plant species including hare's tail cotton grass and bog rosemary.
Matterdale is not otherwise notable for its wildlife. There are undoubtedly the usual mammal populations associated with this type of plantation woodland, and raptors particularly buzzards are occasionally spotted overhead.

Elevation ranges from 200m to 400m above sea level and exposure is high within the gently undulating landscape. The major landscape feature is Thornsgill Beck that runs from north to south through the main block and has some steep sided banks and crags in places.

Soils are generally poor across the entire site with peaty gleys and surface water gleys dominating. The exception being along the banks of Thornsgill Beck where there are some pockets of brown earth and some skeletal soils present.
The combination of poor soils and high exposure mean that the risk of windblow is high and is therefore a prime planning and management consideration. Most of the forest is classified as windthrow hazard 5 or 6. All the original conifer plantings were unthinned and will have attained economic felling age over a ten-year period by 2011. Fellings have been large scale with coupe boundaries aligned to the existing ride network - the aim being to minimise the risk of windblow in neighbouring standing crops.

Achievements during last plan period.

The previous plan objectives are listed below with achievements highlighted for each objective.

- Improve the age class of the forest with phased felling and aim to increase opportunities for this at the next rotation through a more interlocking and less geometric ride structure after restocking.
  Felling has been carried out according to the approved previous forest design plan review in 2004 and within the site limitations of high wind hazard classifications. A less geometric ride structure is developing as restocking plans are implemented. Natural regeneration within and around restock coupes is creating a less blocky and more natural appearance.

- Improve the forest margin as far as is possible at restocking within existing FC landholding. Continue to assess the potential of any acquisition of surrounding land in an attempt to link in with blocks of private woodland with a view to improving the landscape as a whole.
  Restocking within the existing FC landholding has followed the more organic boundaries mapped out at the previous forest design plan review in 2004. Natural regeneration of mixed species in the areas left unplanted has the potential to result in a more natural and graded forest edge. Further opportunity to assess the potential for acquisition of surrounding land that could link in with neighbouring woodlands has not arisen.

- Maximise conservation benefits by clearfelling unthinned conifers around watercourses. At restocking, aim for creating a mixture of open space and native broadleaves (predominantly birch and rowan) to improve the habitat.
  Watercourses have been cleared of mature conifers promoting natural regeneration of native broadleaves largely birch with some willow and rowan. Spruce regrowth is also evident. Some native broadleaved planting has been carried out and there is a mosaic of open space with a variety of herbaceous and floral species colonising.

- Improve public access provisions within Matterdale. Look to build on the existing road network and create a series of paths that can be used for informal walking, cycling and horse riding. Improve links with external paths and lanes and also with the adjacent Caravan Park and activity centre to encourage public access into the forest.
  The existing road network has been extended to improve access for timber harvesting and this means that there is greater access through the forest linking in with the A5091 further to the south.

Appraisal

Matterdale's high visibility in the surrounding landscape means that the overall appearance of the forest and its external margins are an important consideration and further progress has been made since the previous forest design plan review in 2004. Extensive areas of mature conifer with associated harsh geometric boundaries have been clearfelled and restocking has been carried out to an approved organic design more in sympathy with the contours of the surrounding landscape. Coupe shapes remain large scale to reflect the landscape and the need to work to windfirm boundaries. Opportunities remain to improve age class structure at restocking and organic shapes follow the same design as previous.

Scattered conifer and native broadleaved regrowth has occurred along some forest margins creating a more graded and natural forest edge valuable as a wildlife consideration as well as from a visual aspect. This regrowth is profuse particularly within the most southerly coupe where

spruce dominates. Designated as open space following clearfell at the last forest design plan because of its obvious block effect on the landscape it will gradually become noticeable as the trees mature. Working in partnership, various options are being discussed to deal with this issue.

Species choice at restocking as confirmed by the FC Ecological Site Classification software is largely confined to Sitka spruce as the main timber producing species. The existing profuse regeneration has supplemented the planting programme. Opportunities to increase habitat diversity have been successful both through planting of native broadleaved species and through promotion of natural regeneration. Birch and to a lesser extent willow and rowan are growing in abundance toward the southern end of the forest and scattered trees are evident throughout areas left unplanted.

Much open space habitat has been created along Thornsgill Beck and associated tributaries through conifer removal and careful restocking away from the beck bank sides. The scattered regrowth of broadleaved and conifer species will contribute toward creating a mosaic of dappled shade and sun – the optimum habitat for riparian zones and important for the adder population. As well as providing important wildlife habitats this increasing diversity in structure and species is creating a forest that is visually attractive internally and on a landscape level. The creation of wider margins throughout the forest provides a variety of important habitats for fauna, flora and associated insect species.

The level of informal recreation continues to be acceptable as is promotion of use of the forest by the Activity Centre and the Caravan Park. The forest roads will be maintained to ensure safety and usability and the more open nature of the forest along both the roads and the beck aims to provide a more pleasant and interesting experience for regular users and visitors alike. Internal and external viewpoints will be changeable, as the forest environment is dynamic.

Objectives of the Plan

Ongoing

- Manage all work in accordance with the District Strategic Plan, The Regional Forestry Framework, A Strategy for England's Trees, Woods and Forests and the UK Woodland Assurance Scheme
- Consult and inform stakeholders, visitors and the local community about the ongoing and future management of the forest through local meetings, regional website and temporary information signing where appropriate
- Monitor levels of natural regeneration and manage accordingly
- Take into account developing advice on adapting to and mitigating against the impacts of climate change

The next 5 years

- Achieve the proposed felling and restocking plan
- Control levels of excessive conifer regrowth throughout the riparian zone
- Control levels of conifer regrowth on the external forest margins to ensure visual conformity
- Explore options to resolve the landscaping issue at the south western end of the forest
- Protect the SSSI's, FC nature reserve and sheepfold during forest operations
- Ensure safety and usability of forest road network
- Ensure adherence to Bassenthwaite Lake Management Plan

These objectives are further explored in the following maps:

- Future Woodland Management
- Future Woodland Species
- Future Access, Community, Health & Wellbeing
- Future Nature, Conservation & Heritage
- Planning for Climate Change

Delivery against the North West England Forest District Strategic Plan

Matterdale lies within the Cumbria High Fells management zone of the North West England Forest District Strategic Plan (NWEFDSP) (2010 to 2014). Within the general description for this zone the Strategic Plan makes the statements below which are relevant to this plan.

- Presumption to thin all areas of WHC 3 and below (and more sheltered WHC 4). If necessary thin steep areas at zero surplus for both aesthetic and timber quality benefits.
- Main conifer species will be Sitka spruce, Larch, Douglas fir and Scots pine which grow fast and yield high quality timber when planted on appropriate sites. Do not replant with Western hemlock, Western Red cedar or Grand fir as there is poor demand from saw millers and replace with other species
- In timber marketing and operations management aim to minimise disruption to recreational facilities, particularly forest walks at Whinlatter/Dodd.
- Work in partnership with tenant farmers to improve conservation and landscape value of farmland and open fell. In general, reduce grazing pressure from sheep to improve heathland condition.
- Manage and extend Upland Oakwoods according to HAP. In these areas nature conservation will be the prime objective

Detailed below are the objectives of the Cumbria High Fells management zone (highlighted in blue), and how the implementation of the revised Matterdale FDP will deliver against the objectives.

Quality of Life

Main focus of formal recreation provision and future development will be at Whinlatter Forest Park and Dodd Wood.

Apply continuous cover management systems to conifers, particularly stands of Douglas fir on lower elevation sites, particularly near recreational facilities. Preference to regenerate naturally with planting as last resort. Retain some big conifers indefinitely at Whinlatter.

In timber marketing and operations management aim to minimise disruption to recreational facilities, particularly forest walks at Whinlatter/Dodd.

Whinlatter to become a central hub for Adventure Capital (ADCAP) Cumbria. Cumbria aims to be recognised as ADCAP UK by 2012.

Implemented through

- Improving the visitor experience by leaving unplanted wide margins alongside forest roads promoting broadleaved growth and associated floral diversity
- Improving the visitor experience by encouraging broadleaved regrowth along external boundaries to soften the harsher effects of planted conifer crops
- Managing mixed species throughout Thornsgill Beck riparian zone and other open areas/margins by minimum intervention aimed at ensuring health and safety
- Maintaining access points and forest roads to ensure safety and usability advising visitors of pending/underway forestry operations

Natural Environment

Review the stewardship plan for the Ennerdale valley with our partners United Utilities and National Trust.

Manage and extend Upland Oakwoods according to HAP. In these areas nature conservation will be the prime objective.

Restore heathland SSSI to favourable condition at Hobcarton starting with removal of Sitka spruce.

At Matterdale and Blengdale create permanent network of open space/broadleaves at restocking so that average coupe size can be reduced in next rotation.

Work in partnership with tenant farmers to improve conservation and landscape value of farmland and open fell. In general, reduce grazing pressure from sheep to improve heathland condition.

Particularly high archaeological interest at Ennerdale to be protected.

Implemented Through

- Using felling and restocking opportunities to create organic coupe shapes sympathetic to the landscape
- Controlling excessive conifer regrowth where visually intrusive through working in partnership to explore various options and clearing obvious edge trees along fence lines particularly by the County Wildlife Sites
- Managing broadleaves and conifers within the open areas through minimum intervention encouraging long term wildlife habitats whilst controlling excessive spruce regrowth and favouring native species
- Protecting geological and archaeological features of note

Business and Markets

The Lake District Osprey project will continue to support the local economy.

Main conifer species will be Sitka spruce, Larch, Douglas fir and Scots pine which grow fast and yield high quality timber when planted on appropriate sites. Do not replant with Western hemlock, Western red cedar or Grand fir, as there is poor demand from saw millers, and replace with other species. At FDP revision felling will target the early removal of Western hemlock where this does not significantly compromise other objectives to minimise problem of vigorous natural regeneration. The only exception to the above will be the retention of feature trees around the main visitor facilities.

Presumption to thin all areas of WHC 3 and below (and more sheltered WHC 4). If necessary thin steep areas at zero surplus for both aesthetic and timber quality benefits.

Explore opportunities to develop hydroelectric schemes, for example at Whinlatter and Blengdale.

Implemented through

- Restocking with Sitka spruce that grows well on these poorer sites producing higher yields than other conifer species as confirmed by FC Ecological Site Classification software.

- The high wind hazard classification of 5 to 6 over most of the forest area means that all the conifer crops are unthinned to minimise the risk of windblow.

Delivery against National Policy " A Strategy for England's Trees, Woods and Forests"

The Strategy for England's Trees, Woods and Forests (ETWFS) replaced the England Forestry Strategy as the core policy for forestry in England in 2008. The strategy has three themes - Communities and Places, Land and Natural Environment and Working Woodlands.

Detailed below are the objectives of the ETWFS (highlighted in blue) grouped under its three themes and how the implementation of the revised Wythop FDP will deliver against the objectives.

Communities and Places

- involving local people in planning, managing and using local woodlands and the trees in streets and green spaces, to help achieve more cohesive communities and to show how individuals can contribute to environmental sustainability;
- making it easier for people to use and enjoy woodlands particularly in ways that benefit their physical and mental health, learning and personal development;
- creating liveable neighbourhoods, towns and cities by using trees and woodlands as part of the green infrastructure which frames and connects urban and rural areas, improves the quality of a place, and regenerates brown field and derelict land;
- using trees and woodlands to help minimise the impacts of climate change in built-up area

Implemented through

- Continuing to work with Rookin House Activity Centre & Troutbeck Caravan Site to encourage visitors to access the forest

- Continuing to use temporary signing as ways of updating the local community of operations and activities
- Providing the FDP in adobe acrobat format through a website page dedicated to this forest
- Continuing to provide the same low level of informal access across the forest

Land and Natural Environment

To create, expand and maintain a network of sustainably managed trees, woods and forests that are resilient to climate change and make a full contribution to:

- protecting and enhancing our woodland habitats and associated species and facilitating their resilience and adaptation to climate change;
- safeguarding, enhancing and celebrating the characteristic elements of rural and urban landscapes and their cultural and historic values;
- maximising the full range of ecosystem services provided by trees, woods and forests, including the protection of soil and water resources now and in the future, as needs change.

Implemented through

- Use of ecological site classification to plan choice of future woodland species
- Enhancing riparian habitats by removal of invasive exotics such as conifers
- Basing the FDP process around understanding the importance of sense of place
- Protecting and enhancing the existing minimum intervention areas
- Protecting & enhancing SSSI's within the forest and planning with consideration for the SSSI and County Wildlife Sites that surround the forest
- Creating wildlife corridors into the forest from the surrounding fells via open areas and the FC nature reserve
- Protecting the existing monument – the sheepfold

Working Woodlands

The Government's objectives for this Strategy can only be delivered by a healthy woodland and forestry sector with viable businesses actively engaged in sustainable management and processing at national, regional, sub-regional and local level. This will require:

- the whole sector to have the expertise and capacity to ensure that sustainable management of woodlands delivers public benefits alongside business profitability. To achieve this, partnership programmes will involve the forestry, arboricultural, silvicultural, recreation, timber processing industries and related business sectors;
- innovation to develop new markets and modernise supply chains and infrastructure;
- Government resources targeted at the provision of public goods and at developing the capacity of the sector to adapt to future needs and diversify, creating a flexible industry run by well-trained people;
- substituting wood products for fossil fuels and other materials, as a contribution to UK targets for reducing greenhouse gas emissions

Implemented through

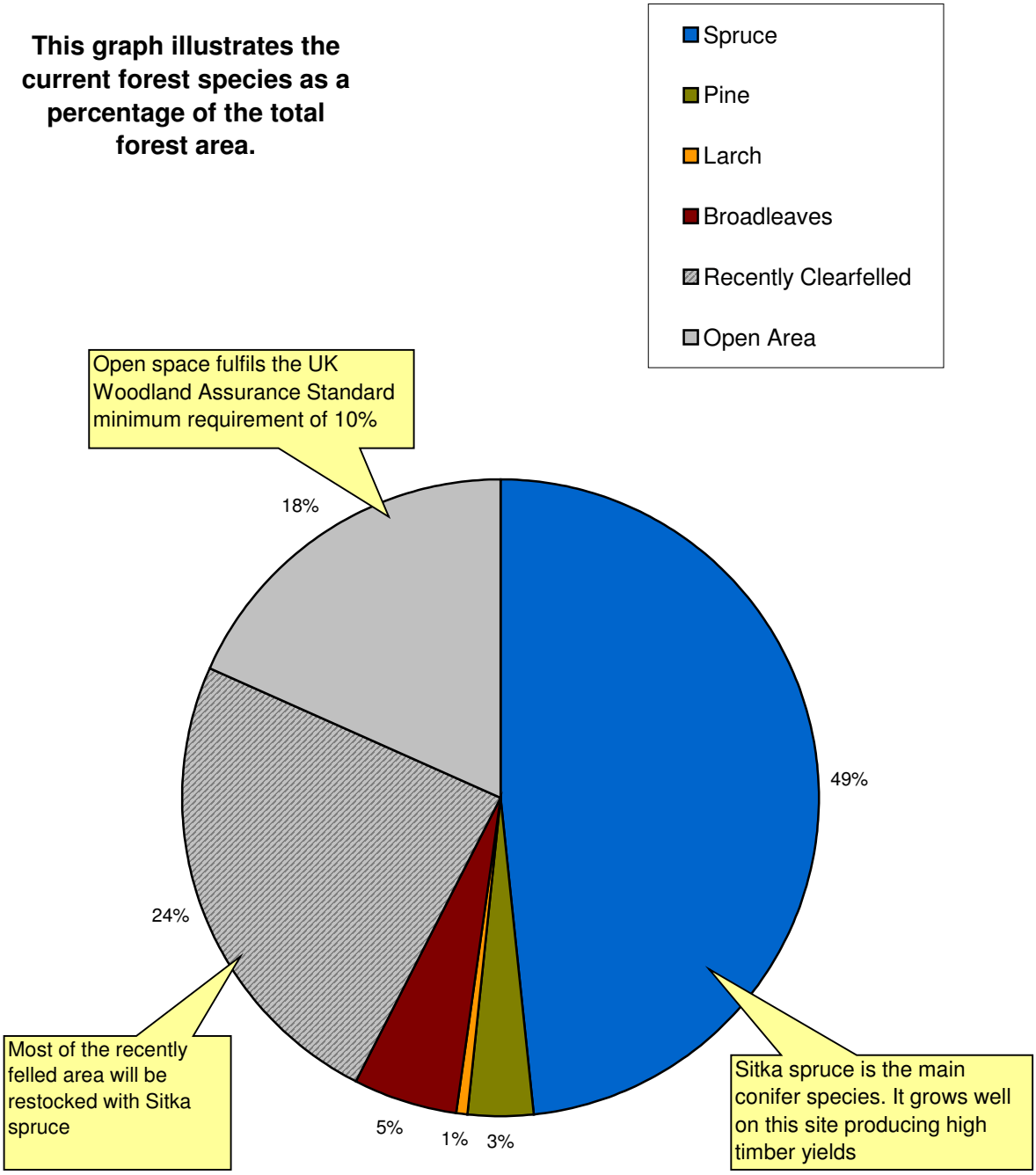
- Exploring opportunities of working with the local community to increase the use of woodfuel including offering applications for permits to those who wish to collect their own firewood e.g. web based 'gather your own firewood' project currently being trialled
- Preference for employing local contractors where possible

Graphs

The following graphs illustrate the percentage split of current woodland species and land use, future felling phases and future woodland species and land use. These help to assess the plan against the UK Woodland Assurance Scheme guidance and ensure that the plan is balanced and will deliver the objectives set out earlier.

Current Species area as a Percentage of the Total Forest

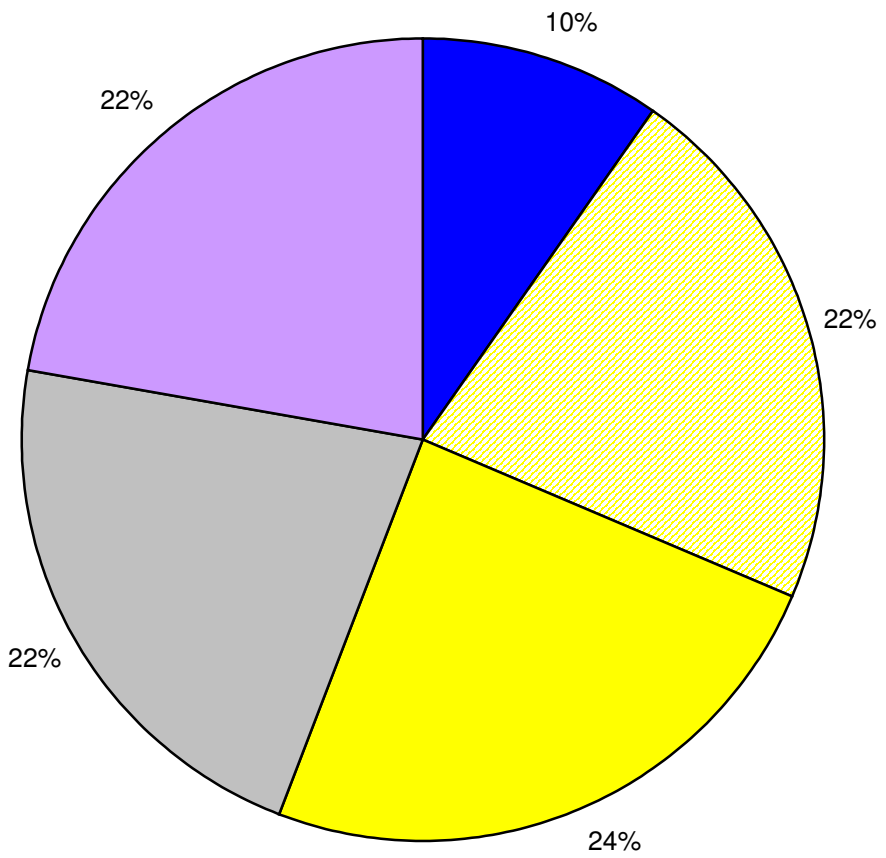
This graph illustrates the current forest species as a percentage of the total forest area.



Future Management Prescriptions as a Percentage of Total Forest

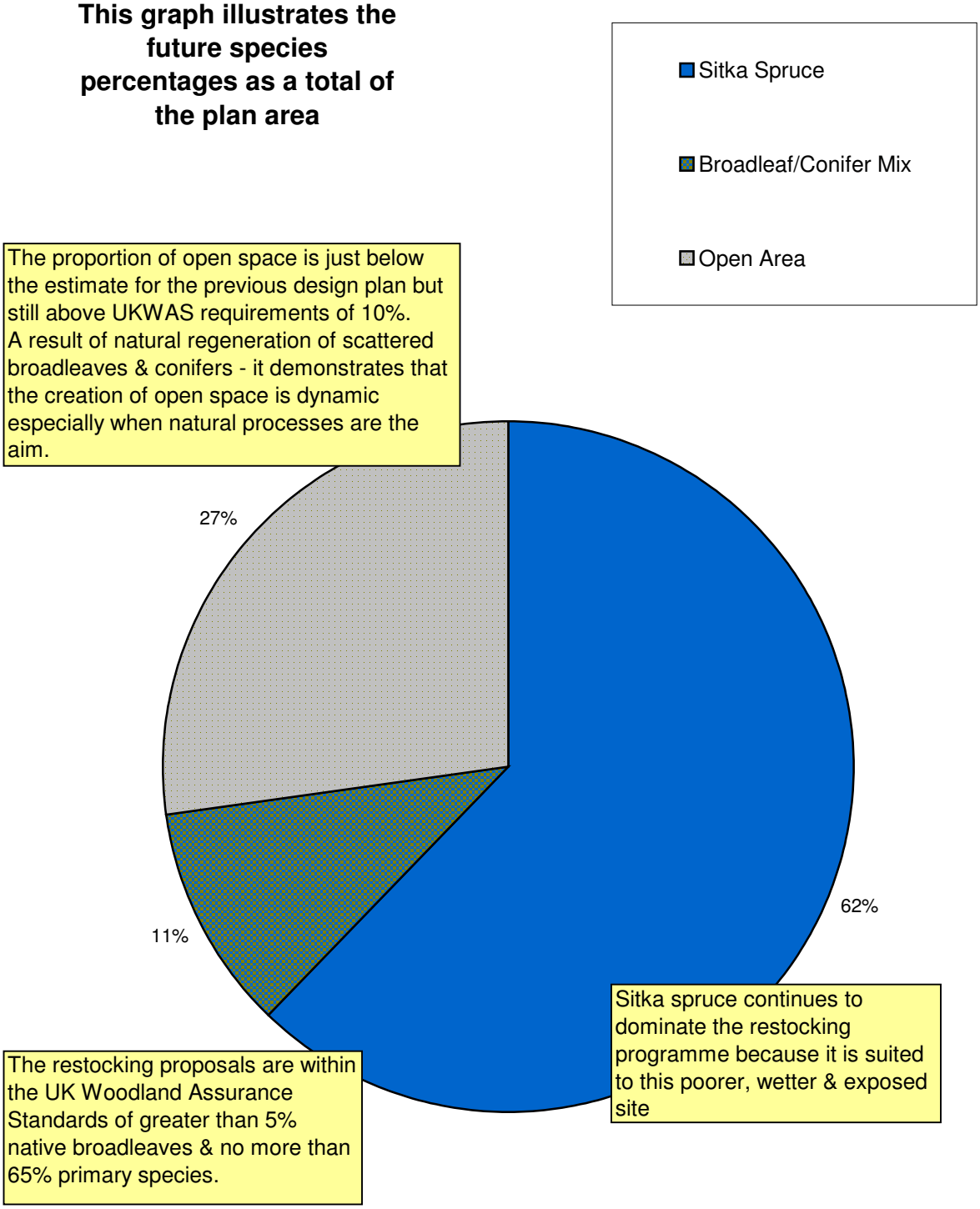
This graph illustrates the future management proposals as a percentage by area of the total forest

The harvesting proposals are within the UK Woodland Assurance Standards of not felling more than 25% of the forest area in any 5 year period



Restocking Species as a Percentage of Total Area

This graph illustrates the future species percentages as a total of the plan area



The proportion of open space is just below the estimate for the previous design plan but still above UKWAS requirements of 10%.
A result of natural regeneration of scattered broadleaves & conifers - it demonstrates that the creation of open space is dynamic especially when natural processes are the aim.

Sitka spruce continues to dominate the restocking programme because it is suited to this poorer, wetter & exposed site

The restocking proposals are within the UK Woodland Assurance Standards of greater than 5% native broadleaves & no more than 65% primary species.