

4. Part D – Management Proposals

4.1 *Silvicultural policy*

4.1.1 Overall Objectives

The main management objectives for both woods are to:-

1. Conserve, regenerate and promote the restoration of native woodland habitat and enhance the biodiversity of flora and fauna in the area through restructuring, regeneration and management;
2. Ensure open and inclusive access to the woods for cultural, educational and informal recreational use to the benefit of the wider public.

This will be achieved by:

- Continued restructuring to break up the even aged plantations and create opportunities to diversify age and species structure throughout the woodland area;
- Monitoring, maintaining and developing existing habitat within the woods;
- Creating new habitats where appropriate;
- Monitoring, maintaining and developing existing recreational facilities;
- Creating new paths and public facilities where appropriate;
- Improving communications and information handling to benefit the local community and wider public and promote social, cultural, educational and recreational use of the woodland;
- Continuing to develop School Wood and Milton Wood with their own identities.

Key aspects have been raised through consultation with the local community and explored by discussion amongst the trustees. These form the basis for the operational objectives outlined in the detailed management programme (see Maps 5a and 5b – Concepts).

4.1.2 Opportunities and Constraints

i) School Wood

Key opportunities and constraints associated with School Wood are shown in Appendix 9 and Map 6a, along with indicators of progress against objectives.

Key objectives laid down when reviewing the Forest Plan were:

1. Differentiate School Wood from surrounding forest / woodlands and from Milton;
2. Give School wood its own identity;
3. Consolidate informal social role of School Wood;
4. Integrate internal forest design with external landscape;
5. Improve conservation / amenity value of woodland by varying structure / age;
6. Promote local cultural role of the wood.

ii) Milton Wood

Key opportunities and constraints associated with Milton Wood are shown in Appendix 9 and Map 6b, along with indicators of progress against objectives.

Key objectives laid down when reviewing the Forest Plan were:

1. Integrate internal forest design with the external landscape;
2. Improve biodiversity value of riparian corridor at edge of Milton Wood;
3. Improve conservation value through choice of tree species and planting location;
4. Promote local cultural / social role of the woodland;
5. Differentiate SCW Milton Wood from surrounding FC plantation forest / woodlands;
6. Give Milton Wood its own identity.

4.2 Detailed Management Programme

4.2.1 Summary

The planned programme includes (a) felling and replanting proposals for non-native stands in Milton Wood and (b) identifies stable areas under native species (mainly Scots pine) in both School and Milton Wood which, through thinning and small group selection to increase light levels and encourage natural regeneration, will be retained and managed to gradually develop into continuous cover native woodland. Designed areas of open ground have also been identified and these will be managed accordingly. The programme also contains proposals for small areas of new habitat creation and restoration. This restructuring programme meets the primary management objective to create uneven aged native woodlands (see Map 9) and will be supported by a programme of monitoring, maintenance and review to ensure that the Community's long term vision for these woods can be achieved.

In order to achieve the objective of open and inclusive access to the woods to the benefit of the wider public the programme also focuses on continued maintenance, improvement and expansion of facilities such as the path network, information boards, car parks and viewpoints. Provision is also made to continue developing links with the local community and wider public. This will ensure that social activities, education and training, local employment and volunteering and general management opportunities are optimised within both woods.

4.2.2 Felling

A programme of small areas of clear felling is planned for Milton Wood with the following operational objectives:

- Clearance of unstable areas;
- Removal of stands of non-native Sitka spruce and Douglas fir;
- Improve public amenity by opening out viewpoints, improving access, opening up archaeological sites and local landscape improvements;
- Provide valuable harvesting income towards management costs.

Full details are given in Fig 8 - Summary Schedule of Felling, Thinning and Restructuring and Map 7.

4.2.3 Thinning

Selective thinning of Scots pine long-term retentions in both School and Milton Woods will have the following objectives:

- a) Foster crown development and increase seed source;
- b) Increase light levels on the forest floor;
- c) Take the opportunity to remove occasional Sitka spruce or Douglas fir;
- d) Take the opportunity to clear archaeological sites;
- e) Increase flora diversity and encourage natural regeneration and increase structural diversity. In order to start the restructuring process in School Wood a pilot group selection may be created during the thinning operation in the NW section of the wood. This will involve creating a very heavily thinned small clearing (~0.2ha) in which Scots pine regeneration will be encouraged and progress will be closely monitored to gain valuable management experience in this type of re-structuring;
- f) Thinning of other species will be opportunistic to remove weaker stems, open up viewpoints, and remove trees in undesirable locations. As stability is a major consideration any species growing on unstable soils or in exposed locations will not be thinned.

Specific details of planned felling and restocking are given in Figs 8 and 9 plus Maps 7 and 8.

Figure 8: Summary Schedule of Felling, thinning, restructuring

Phase	Species	Clearfell area (ha)	Thinning area(ha)		Volume (m ³ /ha)	Production* (tonnes)
		Milton	Milton	School		
2012-2016	SP		14.0	11.0	25	590
	DF	1.46			400	550
	NS	0.73			450	310
	SS	0.54			300	150
	Total	2.73	14.0	11.0		1600
2017-2021	SP		14.0	5.0	25	450
	SP	0.35			220	70
	DF	0.43			450	180
	NS	0.24			350	80
	SS	0.15			350	50
	Total	1.17	14.0	5.0		830
2022-2026	SP		14.0	5.0	20	360
	DF	0.65			450	270
	NS					
	SS	0.13			450	50
	Total	0.78		5.0		
2027-2031	SP					
	DF	1.12			500	530
	NS					
	SS	0.48			500	230
	Total	1.6				
2032-2036	SP					
	DF	0.29			500	130
	NS					
	SS	0.65			550	330
	Total	0.94				
2037-2041	SP					
	DF					
	NS					
	SS	0.77			600	430
	Total	0.77				

**Thinning production calculated using estimated removal of 20-30 tonnes/ha
(Tolerance: Standard FC Tolerances will apply. See Appendix 10 Tolerances).*

4.2.4 Retentions

Mature broadleaves and European larch will be retained for amenity and landscape reasons. Some larch may also be used for fence and infrastructure maintenance within the woods.

In Milton Wood two small areas marked on Map 8 (approx 0.2ha each) indicate where a variety of conifer species add to the specific character, amenity and educational value of the wood and these mixed areas will be managed to ensure the long term retention of these mature trees.

4.2.5 Restocking

The objective is to change from non-native to native species after clear-felling in Milton Wood. Restocking with native broadleaves in clear-felled areas will take place 3 – 5 years after clear felling to achieve a minimum stocking density of 1600 trees per hectare within 5 years of the restocking taking place. Some conifer natural regeneration is anticipated. Desirable species include Scots pine and low levels of Norway spruce regeneration for red squirrel habitat will be tolerated. Sporadic Sitka spruce regeneration is likely and low levels will be tolerated (see Control of Non-Native Invasive Species below). See Figure 9 and Map 8.

4.2.6 New planting

The management objective is to create new native woodland habitat by planting 0.38ha of native broadleaves in tree shelters in Milton Field. 0.38ha is less than the minimum threshold required for an Environmental Impact Assessment (threshold 2ha), but SCW will follow the formal EIA assessment procedure by submitting the EIA enquiry form to FC prior to planting. FC minimum average stocking density for new planting is 1,600 trees per hectare by Year 5. See Figure 9 and Map 8.

Figure 9: Summary Schedule of New Planting and Restocking

Phase	Species	New Planting	Restocking	Managed Regeneration(ha)	
		(ha)†	(ha)†	School	Milton
		Milton	Milton		
2012-2016	Native BL	0.38	2.73		
	SP			0.2 (Pilot Study)	
2017-2021	Native BL		1.17		
	SP			0.2*	0.2*
2022-2026	Native BL		0.78		
	SP			0.2*	0.2*
2027-2031	Native BL		1.6		
	SP			0.2*	0.2*
2032-2036	Native BL		0.94		
	SP			0.2*	0.2*
2037-2041	Native BL		0.77		
	SP			0.2*	0.2*

†Gross areas include open ground *Subject to review of School Wood pilot study results

4.2.7 Native Regeneration

The objective is to encourage gradual native regeneration where feasible throughout the woodland areas and start gaining experience of the specific management required to ensure Scots pine regenerates in the retained areas of even aged pine plantation as it evolves into continuous cover, un-even aged pine woodland. FC minimum average stocking density for natural regeneration is 1,100 trees per hectare at Year 5. The prescriptions are:-

- In order to assess how successfully this happens, it is proposed to set up a monitoring system (see paragraph 4.2.10 - Formal Monitoring) to establish a baseline survey linked to deer impact assessment before work starts. Assessments will be used to monitor damage affecting regeneration (browsing, stripping, fraying) to ensure stated stocking densities are achieved;
- Results from the small group selection pilot study in School Wood will be used to establish how best to proceed to ensure Scots pine regeneration, as well as broadleaved regeneration, can be successfully established when restructuring these plantations and developing continuous cover management;
- Supplementary Planting
In the event new planting, restocking and natural regeneration is not successful, supplementary planting will be undertaken to meet the required threshold by Year 5.

4.2.8 Management of Open Areas

Management objective is to increase the amount of managed open space to approx 15% over the plan period. This will be achieved by:

- 1) School Wood
 - a) The existing open wetland areas blanket mire (M18) will be retained through blocking drains and removal of tree seedlings;
 - b) Small open areas created during the felling and thinning cycles around the car parks and when opening up viewpoints will be maintained.
- 2) Milton Wood
 - a) Re-organising the open ground by planting the adjacent open field with native broadleaves and leaving some of the wetter areas where the unstable spruce stands are going to be felled as designed open ground;
 - b) Open areas will be created around archaeological sites at Birchbank and the old farmstead by manual felling / thinning and harvesting and subsequently kept open and protected from other forest operations;
 - c) Viewpoints opened up during the felling and thinning cycles will be maintained;
 - d) Review how the riparian area matures to promote a mosaic of native broadleaves and rush pasture (M23).

4.2.9 Protection and Maintenance

The objective is to ensure the woodlands and access within them continues to be maintained to present standards into the future. The following prescriptions will be followed:

- i) Annual stocking density assessments
All restocking and new planting areas will be checked to gauge establishment success. Average minimum stocking density after 5 years will comply with the Forestry Commission standard, as stated in 4.2.5, 4.2.6 and 4.2.7. Uniform distribution is not desirable, and some locations will naturally recruit regeneration of acceptable species to bolster planted density. Local trained volunteers could be used.

- ii) Herbivore impacts
 - a) Protective 1.2m tree shelters will be used for broadleaved tree planting;
 - b) The impact from deer will be monitored and controlled following the Deer Management Plan (Appendix 8); any deer records will be retained;
 - c) Browsing from rabbits or brown hares will be quantified by monitoring damage levels on natural regeneration. Control may become necessary if establishment does not reach the target stocking density;
 - d) Some conifer natural regeneration is anticipated. Rabbit / deer exclusion plots e.g. 5m x 5m, may be used to verify the extent of browsing damage on natural regeneration in the pine retention areas as part of the deer and vegetation monitoring process.

- iii) Control of non-native invasive species
 - a) Rhododendron will continue to be cleared from Milton. Re-growth will be treated with glyphosate;
 - b) Bracken suppressing natural regeneration or planted trees will be weeded;
 - c) Scattered mature Sitka spruce and Douglas fir will be tolerated throughout the woods. These will be gradually removed in the course of selective thinning / clear felling with a general long term tolerance that scattered trees never exceed 6% of the total species mix;
 - d) Sitka spruce and some Douglas fir regeneration are anticipated. Outwith the above designated areas, wherever possible, regeneration will be removed by chemical or hand weeding as appropriate. No such regeneration will be tolerated in the riparian areas;
 - e) Small scattered groups of Norway spruce regeneration will be allowed to mature as part of the wider objective of promoting red squirrel habitat, but not allowed to dominate beyond 3% of the overall species mix;
 - f) Beech is naturally regenerating in School Wood and any regenerating beech, lodgepole pine or garden escapees such as cotoneaster will be removed by hand weeding.

- iv) Fire Protection
 - a) Fire insurance cover will be maintained annually;
 - b) Provision for fire fighting and notices detailing action in the event of a fire will be made available. A Fire Plan has yet to be agreed.

4.2.10 Monitoring

The objective is to collect useful information for management, education and interpretational use. A balance needs to be struck so that the chosen survey techniques are suitable for trained volunteers to carry out but the results produced can be readily reviewed and retained by Trustees. These will be used to inform management decisions and reviews, in both the short- and long-term.

- i) Formal monitoring
 - a) Deer population and impact surveys based on the combination plot technique described in Forestry Commission Bulletin 128 and including damage impact assessment of browsing, stripping and fraying detailed in the Deer Management Plan (Appendix 8). Information collected will be used to monitor trends in populations and damage and used to inform management reviews;
 - b) Vegetation surveys: The aim of this monitoring will be to establish a baseline survey before work starts so it can also be linked to the deer monitoring and management programmes and used to monitor trends in regeneration and habitat development as management operations progress and to inform management reviews. Management information needed includes tree regeneration, ground flora, invasive species, damage levels and habitat structure. The best way to achieve this will be investigated and based on advice in Forestry Commission Bulletin 108 – Monitoring Vegetation Changes in Conservation Management of Forests;

- c) Wildlife and habitat surveys: whenever possible the opportunity to collect information about the wildlife in the woodlands through experts will be taken to inform management decisions regarding habitat management. Ways to establish information on important populations - birds, bats, red squirrels, badgers and identification of any other important species that could be included in future management plans for Local Biodiversity Action Plans (LBAP) and habitat enhancement / restoration will be actively sought.
- ii) Informal monitoring
Regular informal inspection and repair will continue to be used to manage the following maintenance activities:
 - a) Drains directly affecting the water table and hence rooting of mature trees will be maintained;
 - b) Fences, gates, roads will be checked and identified maintenance requirements actioned;
 - c) Path quality and weed growth will be checked and maintained as required;
 - d) Signs, way-markers and notice boards will be checked and maintained as required.

4.2.11 Other Management Operations

The objective is to ensure habitat development, community links, public access, education, interpretation and communications are embedded in overall management policies.

- i) Biodiversity enhancement
 - a) Deadwood, including standing deadwood will be retained where it will not endanger neighbours, property, or anyone using recognised paths or roads;
 - b) Seek additional advice on habitat enhancement and restoration including path edges, riparian rush pasture areas, enhancing links with neighbouring woodland and re-establishing wetlands in Milton after felling spruce;
 - c) Use results of the vegetation monitoring to review and look for opportunities to enhance bio-diversity as they arise.
- ii) Public Access
 - a) Continue monthly warden rota to assess hazards from dangerous trees to keep the risk to third parties, property and the public at acceptable levels and flag up any reasonable remedial action necessary to maintain a low risk environment;
 - b) Public liability cover will be maintained annually;
 - c) Footpaths will be kept open from weed growth and car park areas will be maintained to prevent tree saplings encroaching on open areas and access roads;
 - d) Visitor Surveys: investigate how these could be undertaken to get a better understanding about who uses the wood and Cabin.

4.2.12 Communications and Information Handling

The objective is to inform the local community and wider public about the woodlands.

- i) Neighbouring Landowner liaison
Investigate the possibility of setting up regular annual liaison with neighbouring landowners to look at herbivore control, local game shooting activities, stock or fencing issues, fire protection, fly tipping, general access and vehicular usage issues. This is currently informal.
- ii) Special Projects
Investigate ways to find and promote projects that link the woodlands with other community or educational interests. Present possibilities include:
 - a) Heritage Society and Archaeology - possible local social / cultural project linking with Strathnairn Historical Society looking at the historical and cultural significance of the

mill pond and race and the settlement at Birchbank resulting in some educational interpretation specific to Milton Wood;

- b) Continued links with Farr Primary School for general school curricular activities and use of the cabin in School Wood, with eco-school activities and environmental science field trips in both woods actively contributing to monitoring and management activities as part of a structured educational programme;
 - c) Investigate the possibility of widening links to other schools under the Eco-schools programme and also to see if there is any interest in involvement with setting up or getting practically involved with vegetation or deer monitoring assessments at Secondary School, College or UHI level;
 - d) Continued involvement with Highland Council Ranger Service.
- iii) Forest Cabin
Investigate ways to make more use of the cabin facilities for educational and social events.
- iv) Volunteering, Education And Training , Employment
Investigate ways to:-
- a) Improve the encouragement of local volunteers;
 - b) Identify and involve relevant local expertise and other specialist advisers;
 - c) Continue to provide training opportunities.
- v) Communications
Investigate ways to:-
- a) Improve communication with community over general management matters, events and generally keeping the membership updated
 - b) Improve communication with woodland users about the woodlands via interpretation, notice boards, use of the cabin, leaflets etc:
 - Management information – Access code and how to enjoy the woods responsibly, Fire precautions etc;
 - Recreational information – path network, position of benches, viewpoints and other facilities;
 - Educational information about wildlife, culture, archaeology, woodland management etc.

4.3 Review

This plan will be monitored annually and reviewed in 5 years.