Forestry and Land Scotland
Coilltearachd agus Fearann Alba

Lesmahagow

Land Management Plan 2023-2033

Central Region

Brocketsbrae, Lesmahagow, Auchlochan and Coalburn

Plan Reference No: 032/23/02
Plan Approval Date: 09/05/2023
Plan Expiry Date: 09/05/2033

We manage Scotland's national forests and land to the United Kingdom Woodland Assurance Standard – the standard endorsed in the UK by the international Forest Stewardship Council® and the Programme for the Endorsement of Forest Certification. We are independently audited.

Our land management plans bring together key information, enable us to evaluate options and plan responsibly for the future. We welcome comments on these plans at any time.

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Version History

Version	Date	Comments
1	16/09/2022	Submitted to Scottish Forestry on this date
2	10/10/2022	Following feedback from South Lanarkshire Council Access Officer the LMP has been reviewed and the following changes have been made: • Map 15 added: 'Visitor Zones & Path Networks'. This map identifies two FLS interactive visitor zones. • Section 7.11 (long term management proposals) updated. • Sections 5 & 11 (Appendix II – supporting information) updated. These changes should provide a more informative picture of existing recorded access routes within and around the forest, assigned visitor zones, our management proposals and key challenges. We have added a paragraph on the management of woodland within visitor zones (Section 7.11). We have also updated the consultation record in Table 35 (Appendix I) to show feedback received so far.
3	05/12/2022	In response to queries raised by Scottish Forestry & NatureScot, changes made: • Proposed forest road lengths clarified with updates in Table 3 (Section 2.1) & Table 10 (Section 2.6) showing breakdown of road upgrade & road construction. Additional annotation text added to clarify Map 12 Proposed Forest Access. • Table 3 (Section 2.1) planting in Ash dieback areas clarified to state 'enrichment planting' with sub-note for explanation. • Letter drops to properties adjacent to woodland creation areas and forest planner visit to discuss proposals with potentially affected residents. • Forest planner discussion with internal wildlife management team to discuss possible 'deer trap' implications of woodland creation at Brockets brae - raised by NatureScot. • Revisions to woodland creation proposals: Removal of Brockets brae woodland creation proposal (*NS 8190 3983*), amendment of area next to Johnshill Farm - removing area immediately adjacent to Farm (*NS 8176 3716*), change to native broadleaves in area next to Netherton Croft, change in design and species in areas near Modhachidh Residence (*NS 8329 3569*). • Total area of woodland creation/expansion changed from 13.43 ha to 8.1 ha.

Version	Date	Comments
		• Changed have been made to Section 2.5, Table 9, Table 12, Section 3.4, Section 7.9, Map 11 'Proposed Woodland Creation' (V3) & Map 10 'Future habitats & species' (V3).
4	12/12/2022	**Further consultation comments recorded in Appendix I 'Land Management Plan Consultation Record' (including website consultation feedback)**
5	07/02/2023	**Woodland creation area at Modhachidh residence (NS 832 356) re-designed to reduce woodland creation impact on views from residence. Updated Map 11 'Proposed Woodland Creation' (V4). Total area of woodland creation has not changed. LMP text, tables, charts and maps changed to start year 2023.**
6	05/05/2023	**Revisions made as per inconsistencies identified by SF 05/05/2023.**
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Table of Contents

1.0 Summary of Proposals

1.1 Key Background Information

To meet the UK Forestry Standard, this Land Management Plan (LMP) sets out proposals to be undertaken by Forestry and Land Scotland in Lesmahagow forest.

The forest (shown on Map 1) covers 1079.93 hectares. It was a collection of 7 former farms properties acquired over the period 2008 to 2012. Woodland creation planting was completed between 2012 and 2015, with a significant proportion (~60%) of the land retained as open ground.

Lesmahagow forest lies entirely within South Lanarkshire Council area. The closest settlement is Lesmahagow with a population of approximately 8,150 residents. Other fringe settlements include Brocketsbrae, Auchlochan, Coalburn, and New Trows.

In order to better present these proposals, the land management plan has divided Lesmahagow forest into four geographically distinct sub-blocks as follows: -

- Brocketsbrae
- Lesmahagow (including Coalburn Moss)
- Auchlochan (Nethan Valley)
- Braehead

The extent of each of these sub-blocks is shown in Map 1A (Location) and listed in the following table: -

Table 1. Sub-blocks making up Lesmahagow forest Land Management Plan

Forest Sub-block	Area (Ha)
Brocketsbrae	164.12
Lesmahagow (including Coalburn Moss)	603.11
Auchlochan (Nethan Valley)	163.20
Braehead	149.50
Total LMP Area	**1079.93**

A more detailed description of each sub-block is provided in **Appendix II**, **Section 1.0**.

1.2 Lesmahagow Land Management Plan Objectives 2023-2033

1. Determine thinning requirements & timings for both mature and recently established woodland over the plan period. To assess the economic and practical viability of these operations.

2. Assess additional roading or access requirements for management of the woodland over the plan period.

3. Pre-emptively remove larch as an early thinning or restructuring operation.

4. Assess the impact of Chalara on ash and the potential options for intervention and mitigation measures.

5. Contribute to the conservation and enhancement of the site's biodiversity value through appropriate design and management.

6. Protect and manage Coalburn LRB SSSI – currently under a under management programme, including an assessment of re- wetting opportunities and grazing management.

7. Establish a methodology for the monitoring and management of the Native woodland forest habitat network management.

8. Review the management of PAWS areas and assess the implementation of management recommendations and the need for further works.

9. Examine options for alternative restocking, including woodland expansion.

10. Review management options for open ground.

11. Appropriately manage existing features of cultural interest including woodland pasture.

12. Continue to provide a facility for the allotments and maintain liaison with the local community. To review the current management requirements for maintaining this facility.

13. Continue to maintain the showground area as open ground and review the cropping let associated with this area.

14. Investigate opportunity to provide l inks to the Active Travel plan project for South Lanarkshire.

15. Review and assess access provision within the Visitor Zones in terms of their management and development.

All sections of the main document can be accessed through the **Table of Contents (above)** by pressing/clicking on the relevant section.

Detailed management proposals for delivery are provided in **Section 7.0.**

Section 7.16 summarises **key woodland changes** over the next 20 years - in the form of tables and charts.

All **appendices** and supporting maps can be accessed through the Lesmahagow Land Management Plan website:

Detailed **background information** on the plan area, including analysis of the previous plan and main considerations going forward are in **Appendix II**.

A list of **supporting maps** is in **Appendix III** and specifically referred in the text, where they support relevant Sections.

Appendix IV shows how the main management objectives link to Forestry and Land Scotland's corporate plan.

1.3 UK Woodland Assurance Indicators of Proposed Plan

Table 2 – UKWAS Indicators of Proposed Plan

UKWAS indicator	Description	Lesmahagow LMP 2023-2033	
		Area (ha)	% of Plan Area
Total Plan Area		1079.9	
Total Current Woodland Area	**Sub-cmpts** with any of these land uses, with total trees in the sub-cmpt greater or equal to 20%: High forest (PHF), Windblow (PWB), Partially Intruded Broadleaves (PIB), Seed Stand (PSS), Seed Orchard (FMS), Research Plantation (PRP), Ancient and Ornamental (NAO), Arboreta (NAR), Worked coppice (PWC), Christmas trees (FMC), Felled (PFE) and Burnt (PBU).	405.3	**37.53%**
Natural Reserve – Plantation Origin	Natural reserves are predominantly wooded, usually mature and intended to reach biological maturity. They are permanently identified and in locations which are of particularly high wildlife interest or potential. They are managed by minimum intervention unless alternative interventions have higher conservation or biodiversity value.	55.8	**5.17%**
Natural Reserve – Semi-natural	As above	0	**0.00%**
Management Coupes/Areas under Long term retention or managed under LISS and Minimum Intervention	**Management Coupes** with Individual, stable stands and clumps of trees retained for environmental benefit significantly beyond the age or size generally adopted by the woodland enterprise.	407.7	**37.75%**
Total Area of Land with Conservation Value	Includes natural reserves, minimum intervention coupes, long-term retentions, LISS management coupes. Designated/protected sites.	633.0	**58.61%**
Planned Open	Managed Open and Successional Open.	582.4	**53.93%**

2.0 Scottish Forestry Regulatory Requirements

All proposals have been produced in accordance with a range of government and industry standards and guidance as well as recent research outputs.

2.1 Summary of Planned Operations

Approval is sought for 10.38 ha felling , 216.04 ha of thinning, and 3225m of new forest roading within the next 10-year operational period.

Table 3 Summary of Planned Operations

Planned Operations	2023-2033
Clearfell/Clearfell with seed tree (afforested area)	10.38 ha
LISS Felling (afforested area)	0
Thinning	216.04 ha
LISS Restock (replanted area)	0
Restocking (Phase 1 coupes)	2.05 ha
Restocking (Phase 2 coupes)	8.33 ha
Enrichment Planting (Significant gaps formed by ash deaths/ removals) *	11.2 ha
Woodland Creation (New Planting)	8.1 ha
Road Construction	3225 m
Road Upgrade	295 m

**This planting is to replace trees that have died from Ash Dieback disease and not associated with any proposed felling in the land management plan.*

2.2 Proposed felling in years 2023-2033

(See **Maps 8A, 8B & Map 13** – management coupes and timber haulage)

The proposed felling in the first two LMP phases will entail clearfelling of 10.38 ha of woodland. Most of this felling relates to the felling of mixed coniferous shelterwoods which have reached the end of their rotation period.

All felled coupes are proposed for restocking within 2 years of felling. Details of restocking are below in **Section 2.4**.

Table 4 Clearfelling over the 10 year LMP period

Clearfelling over the 10 year LMP period											
Clearfelling Phase One 2023-27											
Coupe Ref	**Proposed FY Year**	**Gross Area (ha)**	**Original Planting Year**	**Sitka spruce (net ha)**	**Larch (net ha)**	**Scots Pine (net ha)**	**Lodgepole pine (net ha)**	**Wind Blow (ha)**	**Open (ha)**	**% LMP area**	**Estimated Total Volume m³**
42006	2025	0.26	1960			0.06	0.14		0.06	0.024%	75
42019	2025	1.79	1960	0.82	0.55				0.42	0.165%	882
Totals		**2.05**								**0.189 %**	**957m³**
Clearfelling Phase Two 2028-32											
Coupe Ref	**Proposed FY Year**	**Gross Area (ha)**	**Original Planting Year**	**Sitka spruce (net ha)**	**Larch (net ha)**	**Scots Pine (net ha)**	**Lodgepole pine (net ha)**	**Wind Blow (ha)**	**Open (ha)**	**% LMP area**	**Estimated Total Volume m³**
42037	2028	6.33	SS 1975 & SP/JL/SS 1950	5.88	0.09	0.13			0.23	0.586%	3884
42039	2028	2.00	1950	0.57	0.07	0.13		1.23		0.185%	580
Totals		**8.33**								**0.771 %**	**5421m³**

2.3 Proposed thinning in years 2023-2033

(See Map 9 Proposed Thinning)

Tables 5 & 6 Proposed Thinning over the 10 year LMP period

Thinning by Forest Species (Area in Hectares)	
Tree species	**Area (ha)**
Sitka spruce	44.19
Larch	13.02
Douglas fir	4.79
Broadleaves	136.14
Total Area	**198.14**
% of LMP Area	**18.35%**

Thinning by Objective (Area in Hectares)	
Objective	**Area (ha)**
Commercial conifer thinning	62
Amenity & Ash die-back thinning	118.92
Conservation (PAWS) thinning	17.22
Total Area	**198.14**

Commercial conifer thinning will solely involve first thinning operations to establish long-term machine access racks and lightly thin the remaining matrix. Some of the thinning proposed will target Larch for removal under FLS's Larch Strategy, and will also target ash which has been severely affected by CAD and is disfiguring trees to the detriment of the visual amenity of the forest. The expected marketable volume is estimated to be 2824m^3 or 2613 tonnes. **Map 13 – Ten Year Timber Haulage Plan** converts this volume to tonnage, showing the locations we expect to transport this timber from across the LMP area.

Amenity and Ash die-back thinning will be undertaken as non-commercial operations due to the small amounts to be felled and the unmarketable size of the trees. In Ash die-back areas, thinning will be undertaken only to allow safe access for enrichment planting. Amenity thinning may be undertaken along existing informal footpaths to improve visibility and encourage large crowns. Conservation (PAWS) thinning will be very localized, targeted immediately around veteran broadleaved trees to gradually 'free up' from non-native species.

2.4 Proposed restocking in years 2023-2033

Restocking is proposed for areas of proposed felling.

Where sites are being replanted, the fallow period will be 1 to 2 years. The forest blocks in this plan are relatively small with no recent felling, hence Hylobius populations have not had the chance to build up. Weed competition is deemed a more challenging factor for establishment, which will be monitored and controlled. (see **Map 10: Future Habitats and Species**)

Total restock phase 1 = 2.05 hectares
Total restock phase 2 = 8.33 hectares
Total Restock Plan Period = 10.38 hectares

Enrichment planting is anticipated to be required as a result of the impacts of CAD on mixed and mixed broadleaf woodlands where ash forms a significant component (see **Map 14 – Presence of Ash**). The requirement for pro-active replacement/enrichment planting is guided by **Table 34 - Objective Appraisal, Monitoring & Evaluation** in **Section 8.0 - Critical Success Factors** for situations where gaps resulting from targeted thinning operations or CAD deaths in the crop are unlikely to be infilled by natural regeneration.

The criteria for replacement planting indicates that gaps up to 5m x 5m can be left to naturally regenerate where viable seed source in close vicinity (e.g. seeding birch, alder, willow), and that gaps up to 2.5m x 2.5m can be left where no viable seed source in close vicinity (e.g. young oak, N maple, hazel etc.).

Currently there is 28.1ha of recently established woodland which has ash forming 30%-45%, and a further 48.9ha of woodland where ash represents 45-80% of the woodland composition. It has been estimated that 5% of the areas with 30-45% ash will require replacement planting to be carried out **(1.4 ha)**, and 20% of those areas with 45%+ ash will require replacement planting **(9.8 ha).**

In total the estimated enrichment replacement planting requirement predicted within this plan period is equivalent to 11.2 ha.

Table 7 Phase 1 Restocking of felled areas 2023-2027

Sub-block & Coupe Number	Total Area (ha)	Sitka spruce (ha)	Lodgepole pine (ha)	Scots Pine (ha)	Norway spruce (ha)	Birch (ha)	Native mixed broadleaves (ha)	Open ground (ha)	NVC Type[3]	Restock year	Restock Planting (stems/hectare and square spacing)	Monitoring Comments (including and reason not to restock)
Brocketsbrae **42006**	**0.26**			0.13	0.13					2026	[2]Plant productive conifer 2700 stems/ha (1.9 mx 1.9m) Intimate mix	**SDA**[1]
Lesmahagow **42019**	**1.79**						1.10	0.69	W11	2026	Plant Native Broadleaves Woodland 1600 stems/ha. Intimate mix Open ground to protect water pipeline and retain existing open areas.	**SDA**

1. SDA = Stocking Density Assessment at growth year 1 and growth year 5
2. Productive conifer restock planting at full initial density of 2,700 stems/ha to achieve a final density of 2,500 stems/ha at year 5, with an emphasis on achieving overall stocking (See **Section 7.8.1** for specific coupe planting mix).
3. See **Section 7.8.2 Restock Prescriptions & 7.9 Woodland Creation** for NVC semi-natural woodland type planting mix.

Table 8 Phase 2 Restocking of felled areas 2028-2032

Sub-block & Coupe Number	Total Area (ha)	Sitka spruce (ha)	Lodge-pole pine (ha)	Scots Pine (ha)	Douglas fir (ha)	Mixed broadleaves (ha)	Native mixed broad-leaves (ha)	Open ground (ha)	NVC Type [3]	Restock year	Restock Method & Initial Density (Restock/Nat Regen/Alt Area/Coppice/Open	Monitoring Comments (including and reason not to restock)
Braehead **42037**	**6.33**	1.46	0.7	0.62	0.76		2.07	0.72	W11	2029	[2]Plant Productive Conifers 2700 stems/ha (1.9 mx 1.9m) Intimate mix. Plant Broadleaf/Mixed Woodland 1600 stems/ha (2.5m x 2.5m) Intimate mix.	**SDA**[1]
Braehead **42039**	**2.00**			0.17		1.18	0.51	0.14	W11	2029	Plant Broadleaf/Mixed Woodland 1600 stems/ha (2.5m x 2.5m) Intimate mix.	**SDA**

1. SDA = Stocking Density Assessment at growth year 1 and growth year 5
2. Productive conifer restock planting at full initial density of 2,700 stems/ha to achieve a final density of 2,500 stems/ha at year 5, with an emphasis on achieving overall stocking (See **Section 7.8.1** for specific coupe planting mix).
3. See **Section 7.8.2 Restock Prescriptions & 7.9 Woodland Creation** for NVC semi-natural woodland type planting mix.

2.5 Proposed New Planting (Woodland Creation) 2023-2033

Opportunities for woodland creation amounting to 8.1 hectares have been identified as part of the plan review process in consultation with FLS teams. The proposals include areas of land:

- Where native woodland expansion will enhance riparian habitat.
- Where tree planting will assist management access between existing forest stands.
- That are coming to the end a third party lease period & the lease is not expected to be renewed.
- That have had unauthorised livestock grazing or grass cutting.

The proposed main purpose of the proposed areas of new woodland is amenity and nature conservation, with timber production adjacent to existing conifer stands.

The locations, proposed woodland types and objectives of these identified new planting sites are set out in **Table 9** (below) and are highlighted on **Map 11 – Proposed Woodland Creation.** Further details and the rationale for the different planting mixes are set out in **Section 7.9.**

Table 9 Proposed Woodland Creation Areas

Sub-block & Management Coupe	Grid reference	Area (ha)	Proposed Woodland type	Objective/Considerations
Lesmahagow (north) Coupe 42025	NS 819 371	1.24	Native mixed broadleaves (scrub woodland)	Native mixed broadleaves (scrub woodland) – DO NOT PLANT BIRCH - site is near Coalburn Moss SSSI. Plant: Hawthorn/Blackthorn/Dogwood/Goat willow/Rowan @ 1600/ha Underground power cable & overhead powerlines present. No planting within utility provider recommended wayleaves.
Lesmahagow (south) Coupe 42028	NS 832 357	5.69	Native mixed broadleaves (scrub woodland) Native mixed broadleaves (core woodland) Mixed woodland	Expansion of native riparian & mixed woodland along the Coal & Fauldhouse Burn. DO NOT PLANT BIRCH - site is near Coalburn Moss SSSI. Mix 1: Native mixed broadleaves (scrub woodland) Hawthorn/Blackthorn/Dogwood/Goat Willow/Rowan @ 1600/ha (3.12 hectares) Mix 2: Native mixed broadleaves (core woodland) Sessile oak/Bird cherry/Rowan @ 1600/ha (1.67 hectares) Mix 3 (next to existing Scots pine): Native mixed broadleaves/Scots pine 3:1 intimate mix @ 1600/ha (0.9 hectares) No planting within utility provider recommended wayleaves. Unplanted buffers to be used along ownership boundary (minimum 10 metres).
Braehead Coupes 42033	NS 828 345	0.32	Native mixed broadleaves (scrub woodland)	The overall change in design in this area from productive conifers to amenity native/mixed woodland. As part of this long-term change a native scrub woodland edge will be created just north of Netherton Croft. Unplanted buffers to be used along ownership boundary (minimum 10 metres).
Braehead Coupe 42036	NS 824 340	0.85	productive conifer	Expansion of existing areas of productive conifer woodland to improve productive capacity & operational access between stands where excessive open ground inherited from last plan. No planting within utility provider recommended wayleaves. Unplanted buffers to be used along ownership boundary (minimum 10 metres).
Total Area		**8.1 hectares**		

2.6 New forest road construction 2023-2033

One of the key issues currently restricting management of the larger productive woodland blocks in the Lesmahagow Forest area is the lack of suitable management access to the timber crops for the purposes of thinning, harvesting and restocking. There has been no great need to form this access under the previous management phases as the majority of the woodland areas were newly established and developing through the younger establishment phase and more mature woodland areas were considered windfirm into this current plan phase.

Proposed forest access requirements for the next ten years are summarized in **Table 10** and displayed in **Map 12 – Proposed Forest Access.**

Section 7.15 – Operational Access has more detailed management proposals for this infrastructure (by sub-block), together with **justification and assessment of sensitivities**.

In total **3225m** of new forest road installation and the upgrading of **295m** of existing road is proposed within the Lesmahagow LMP area within the 10-year plan period.

1. New forest road infrastructure is proposed at Brocketsbrae to facilitate thinning of the young conifer stands in coupe 42003 & 42005, & clearfelling of a small mature shelterbelt (42006). The conifer thinning will establish a system of access racks and aim to pre-emptively remove the larch component.

   Also, a small spur road is required to serve the proposed Phase 1 felling of coupe 42019 within the Lesmahagow main block. This small stand comprises 40% Larch planted in 1960. The spur road will also serve thinning and future management of broadleaved stands in 42020.

2. Finally The construction of sections of new forest road are proposed to facilitate the proposed felling operations in the southern sub-block Braehead. There is currently limited access to productive conifer crops, some of which include Larch. The proposed new roads will facilitate a 1st thinning operation, particularly to the Douglas fir & Spruce/Larch stands in Phase 2.
   In addition the proposed roads at Braehead will allow safe access to a number of mature shelterbelts reaching the end of rotation and starting to suffer from wind damage. These mature conifer woodland areas are proposed for felling under the Phase 2 of this plan.

Provision for safe timber stacking, HGV turning, on-site welfare and storage have been incorporated into the proposed new forest road lengths in the form of extended spurs, hammerheads & laybys within the forest block. All access points onto the public highway will be designed & built to accommodate HGV traffic with adequate visibility splays to allow safe exit/entry sight lines. Some form of vehicle control such as a vehicle barrier & roadside fencing will be required to prevent

unauthorised access.

The following table lists the extent of proposed new forest roading proposed for each of the forest blocks. The text below this table summarises detailed access requirements and proposals in each sub-block.

Table 10 New forest roads requirement

New forest road requirements 2023-2033					
Forest Sub-Block & Coupe Number	**Type**	**Total length (metres)**	**Road width Incl. drains (metres)**	**Total Area (Hectares)**	Monitoring Comments
Brocketsbrae	New road Upgrade	1905 143	12.5	2.38 N/A	**GIS Planned road layers**
Lesmahagow	New road	230	12.5	0.29	**GIS Planned road layers**
Braehead	New road Upgrade	1090 152	12.5	1.34 N/A	**GIS Planned road layers**
Total (Incl. Upgrades)		**3520**		**3.72**	

(See **Map 12 Proposed Forest Access**)

Forest Quarries

No forest quarries are proposed within the Lesmahagow LMP area within the 10-year plan period. The stone requirements for the forest roads, splays and hard standing areas are anticipated to be primarily sourced from the FLS quarry at Heathlands in Forth.

2.7 Departure from UKFS guidelines

All operations will be conducted in accordance with Forest Industry Best Practice Guidance and the UK Forestry Standard.

2.8 Standards and guidance on which LMP is based

This land management plan has been produced in accordance with a range of government and industry standards and guidance as well as recent research outputs. A full list of these standards and guidance can be found here: https://forestryandland.gov.scot/what-we-do/planning/links

2.9 Tolerance Table

Table 11 Regulatory tolerances for changes to the approved land management plan

Action Required	Map Required (Y/N)	Adjustment to felling period	Adjustment to felling coupe boundaries	Timing of restocking	Change to species	Wind throw response	Adjustment to road lines	Designed open ground
Scottish Forestry (SF) Approval not normally required (record and notify SF)	N	Fell date can be moved within 5 year period where separation or other constraints are met	<10% of coupe size.	Up to 5 planting seasons after felling (allowing fallow periods for *Hylobius*).	Change within species group E.g. Scots pine to birch, Non-native conifers e.g. Sitka spruce to Douglas fir, Non-native to native species (allowing for changes to facilitate Ancient Woodland policy).			**Location of temporary open ground e.g. deer glades if still within overall open ground design** **Increase by 0.5 ha or 5% of area - whichever is less**
Approval by exchange of letters and map	Y		10-15% of coupe size.	5 years +	Change of coupe objective that is likely to be consistent with current policy (e.g. from productive to open, open to native species).	Up to 5 Ha	Departures of greater than 60 m from the centre of the road line	**Increase of 0.5 ha to 2 ha or 10% - whichever is less** **Any reduction in open ground**
Approval by formal plan amendment	Y	Felling delayed into second or later 5 year period Advance felling into current or 2nd 5 year period	>15% of coupe size.		Major change of objective likely to be contrary to policy, E.g. native to non- native species, open to non-native,	More than 5 Ha	As above, depending on sensitivity	**More than 2 ha or 10%** **Any reduction in open ground in sensitive areas** **Colonisation of open Areas agreed as critical**

Forestry and Land Scotland's Larch Strategy

The management of larch and controlling the spread of *Phytopthora ramorum* relates to the revised Scottish Forestry *Phytophthora ramorum* action plan published in June 2021. The blocks all fall within the Priority Action Zone and under the FLS Larch Strategy the aim is to undertake preparatory planning for sites. This LMP currently proposes the early removal of larch from forest blocks. Further tolerances have been applied for areas of larch requiring felling under Statutory Plant Health notices in other areas of Scotland. However felling to remove larch from the Lesmahagow Forest area under this LMP should offset the need for additional tolerances.

Restocking Options.

Where larch is to be felled and Scottish Forestry guidance for the selection of suitable replacement species will be followed.

In landscape terms the replacement of larch with native broadleaves on woodland edges is deemed appropriate in terms of softening these visible margins, and in terms of maintaining visual diversity.

3.0 Environmental Impact Assessment (EIA) Screening Determination for forestry projects

3.1 Proposed deforestation

Table 12 Proposed work that may require Screening determination for EIA

Proposed Work							
Please put a cross in the box to indicate the type of work you are proposing to carry out. Give the area in hectares and where appropriate the percentage of conifers and broadleaves							
Proposed Work	Select (X)	Area (ha)	Conifer	Broad-leaves	Proposed work	Select (x)	**Length (m)**
Afforestation	X	8.1	1.085	7.015	Forest roads	X	**3225**
Deforestation	X				Forest quarry		
Location of work		**Across the Lesmahagow Land Management Plan Area**					

No deforestation is proposed within the Lesmahagow LMP area within the 10- year plan of this plan. The Future Habitats and Species plan does however propose an area of Lowland raised bog restoration after felling phase 3. This will be reviewed following Scottish Forestry policy in the following LMP renewal.

3.2 Proposed forest road works

Details of the proposed forest roads and the rationale for installation are in **Section 2.6** (above) and **Section 7.14 Operational Access**.

3.3 Proposed forest quarries

No forest quarries are proposed within the Lesmahagow LMP area within the 10-year plan period. The stone requirements for the forest roads, splays and hard standing areas are anticipated to be primarily sourced from the FLS quarry at Heathland in Forth.

3.4 Proposed afforestation

Opportunities for woodland creation amounting to 8.1 hectares have been identified as part of the plan review process in consultation with FLS teams. This is less than the current screening threshold of 20 hectares. The proposals include areas of land:

- Where native woodland expansion will enhance riparian habitat.
- Where tree planting will assist management access between existing forest stands.

- That are coming to the end a third party lease period & the lease is not expected to be renewed.
- That have had unauthorised livestock grazing or grass cutting.

The proposed main purpose of the proposed areas of new woodland is amenity and nature conservation, with timber production adjacent to existing conifer stands.

The locations and proposed woodland types at these identified new planting sites are shown on **Map 11 – Proposed Woodland Creation** with details set out in **Section 2.5 (Table 9) & Section 7.9.**

3.5 Additional regulatory requirements

Planning consent is likely to be required to obtain necessary approvals for the proposed road accesses where links are proposed to connect to public roads with the entrances proposed for the access and egress of timber lorries and forestry machinery.

Management proposals for areas adjacent to and potentially influencing Coalburn Moss SSSI will require consultation with NatureScot.

4.0 Introduction

The proposals set out in this plan aim to meet with the various objectives set out in the FLS Corporate Plan 2019 - 2022, although the contribution to be made will vary according to the nature of, and flexibility offered by the individual woodlands.

The woodland management and proposed works will vary according to the woodland property. In each case FLS will adhere to the standards set out in the UK Forestry Standard and to the standards set out in the UK Woodland Assurance Scheme.

4.1 The Existing Land Holding

The Lesmahagow LMP area is 1079.93 hectares in total. The current land use is as follows:

Table 13 – Land Use within Lesmahagow Plan Area (2022)

Land Use	Area(ha)	%
Agricultural land	78.6	7.28%
Felled	0	0.00%
High Forest	400.7	37.11%
Open	582.4	53.93%
Open Water	0.1	0.01%
Other Built Facility	0.4	0.04%
Research Plantation	3.5	0.32%
Unplantable or bare	13.1	1.21%
Windblow	1.1	0.10%
Total	**1079.93**	**100.00%**

Detailed information on the land management plan area including the history of purchase, physical site factors and existing forest attributes can be found in **Appendix II Supporting Information.**

Based on these proposals **Section 7.16 Key Woodland Changes** shows how the plan area is expected to change over the next 20 years.

4.2 Setting and Context

Lesmahagow forest lies entirely within South Lanarkshire Council area. The closest settlement is Lesmahagow with a population of roughly ~8,150 residents. Other fringe settlements include Brocketsbrae, Auchlochan, Coalburn, and New Trows.

The forest (shown on Maps 1A & 1B) covers 1079.93 hectares. It was a collection of 7 former farms properties acquired over the period 2008 to 2012. Woodland creation planting was completed

between 2012 and 2015, with a significant proportion (~60%) of the land retained as open ground.

In order to better present management proposals, four geographically distinct sub-blocks have been identified within the plan area: -

- Brocketsbrae
- Lesmahagow (including Coalburn Moss)
- Auchlochan (Nethan Valley)
- Braehead

The extent of each of these sub-blocks is shown in Map 1A (Location)

The forest is also located within the Central Scotland Green Network (CSGN) boundary and delivers towards several of the project themes or workstreams, as set out in the Delivery Plan 2030 (DP30), these being Natural Climate Solutions, Place-making, Health and Wellbeing, and Green Recovery. Objectives set out in the Delivery plan which particularly relate to this plan include: -

Table 14. How this plan contributes to the Central Scotland Green Network Project

Ref	Objective	Primary Workstream (s)
Biodiversity and ecological coherence		
HA1	Increase tree planting levels and woodland cover within the CSGN	Natural Climate Solutions Placemaking
HA2	Increase the area of restored peatland within the CSGN	Natural Climate Solutions Placemaking
HA5	Increase the quality/condition of habitats	Natural Climate Solutions Placemaking
HA6	Increase habitat connectivity	Natural Climate Solutions Placemaking
Green Infrastructure		
GI1	Increase access to greenspace for people living & working in Central Scotland	Placemaking Health and Wellbeing Green Recovery
GI2	Increase the quality and functionality of greenspaces within the CSGN	Natural Climate Solutions Placemaking Health and Wellbeing Green Recovery

Detailed information on Lesmahagow Plan Area is in **Appendix II Supporting Information**

The full list of management objectives are in **Section 1.2** and **Appendix IV** shows how these objectives are linked to Forestry and Land Scotland's corporate plan.

5.0 Plan Objectives

The next LMP's overarching Management Objectives are outlined in **Section 1.2 'Lesmahagow Land Management Plan Management Objectives 2023-2033'** (above). These objectives were agreed at an internal scoping meeting held with FLS local delivery teams in May 2021. Feedback and comment from this meeting were combined with detailed desk and site surveys, and liaison with key stakeholders. This information was combined with an assessment of the previous plan to identify the main considerations for the next ten years (See **Appendix II Supporting Information, Sections 3.0 to 4.0)**

Section 6.0 Analysis and Concept illustrates how the information gathered, was schematically analysed to identify important features, constraints and opportunities within the forest and how these relate to the overarching management objectives. This allowed the formation of management concepts or general strategies from which more detailed management proposals and prescriptions could be produced (**Section 7.0 Long term Management Proposals**). This whole process is summarized in **Table 15** (below) and **Maps 6A - 6D Analysis** & **Maps 7A – 7D Concept.**

Section 8.0 Critical Success Factors shows how each overarching management objective will be appraised, where and when each objective will be monitored; by who and where it will be recorded. This will enable an evaluation of success as part of the mid and end of plan reviews.

6.0 Analysis and Concept

6.1 Analysis

A walk-over survey of Lesmahagow forest was carried out as part of the preparation of this plan. An analysis of the survey information collected on each site was carried out, the results of which are summarised on maps 6A -6H Survey and Analysis

Several key points were noted which apply across a number of the blocks. These include: -

- Areas of recent broadleaf planting with high proportions of ash which are growing poorly.
- Extensive management access network which is as yet undefined in terms of key long-term management access.
- Lack of road infrastructure limiting future management operations
- Areas of wind damage resulting from delayed thinning and/or felling
- The presence of site services and the need to safeguard these
- The presence of adjacent habitats and the need to safeguard these.
- Anti-social issues affecting a number of the sites.
- Extensive areas of young planting which are reaching thinning age within the 20 year plan period
- Limited formal recreational provision which impacts on visitor numbers, and limitations in making provision owing to the sites being served by narrow minor road network with few parking areas or layby/stopping off points.
- The need to maintain boundary features, including hedges and fencing.
- The impacts of plant health issues which is felt across a number of the forest blocks, particularly impacting areas with ash and larch.
- The safeguarding of important habitats.
- The presence of heritage features.
- Tree health and safety issues, particularly relating to mature field and road boundary trees.
- Areas of Ancient and PAWS woodland with high biodiversity and conservation values and the appropriate management of these areas.
- The presence of EU protected species (and signs of these) on a number of sites.
- The presence of invasive non-native species (INNS) is noted in one location.
- Deer management remains an issue on most sites and is of concern given proposals for restocking in future management phases.

6.2 Concept

Supporting Maps: Concepts Maps 7A – 7D.

The key management plan objectives have been considered alongside each of the sites in terms of their condition and management requirements, as highlighted by the site survey analysis of key features.
A list of key opportunities and constraints have been distilled from this analysis which have given rise to management concepts. The concepts have in turn given rise to management proposals which aim at achieving the set objectives.
The analysis of opportunities and constraints and the arising management concepts have been summarised in the following table: -

Table 15 – Concept development through analysis of constraints and opportunities

Linked LMP Management Objectives Constraints/Challenges	Opportunities	Concept
1. To determine thinning requirements & timings for both mature and recently established woodland over the plan period. To assess the economic and practical viability of these operations.		
Areas for thinning and felling are identified for this plan period	Opportunity to assess likely timber volumes arising from proposed operations.	**Timber extraction is likely to be a required operation to facilitate restocking operations and ongoing management of the Forest area. Provision of suitable forest access will reduce costs and will have future benefits in terms of the longer-term management of the Forest**
2. To assess additional roading or access requirements for management of the woodland over the plan period.		
Assessment of existing and future access requirements relating to management access	Opportunity to develop sections of the required access network to cater for requirements within this plan period, with scope for future extension and connectivity into adjacent woodland areas with future requirements.	**An infrastructure of rides was planned at establishment stage to provide for future management needs.**
3. To pre-emptively remove larch as an early thinning or restructuring operation.		

Linked LMP Management Objectives Constraints/Challenges	Opportunities	Concept
Limited management access is a key constraint to proposed operations **In areas of more recent planting, the larch crop is relatively young and small in stature, with limited marketability**	Larch is present within mature former farm shelterbelt features, most of which are at the end of their useful rotation. Thinning and felling operations are proposed for each of the affected blocks, presenting an opportunity for larch removals Larch is also proposed for removals from recently planted mixed conifer woodland areas through thinning	**The provision of management access to facilitate scheduled felling and thinning operations is proposed.** **The provision of management access to facilitate scheduled felling and thinning operations is proposed.** **In some areas harvesting operations may be uneconomical, and thinning may be a cut to residue operation.**
4. To assess the impact of Chalara on ash and the potential options for intervention and mitigation measures.		
Ash is increasing being adversely affected by Cad within the Forest Area. High proportions of Ash have been used in some of the recent planting, and the impacts of the disease are increasingly visible.	Opportunity for the early removal and replacement of ash with alternative species in areas with high proportions of ash, and high proportions of infected trees.	**Although unlikely to have a major impact in the incidence of CAD within the forest, early action on severely affected areas will reduce the visual impact on the disease.**
5. To contribute to the conservation and enhancement of the site's biodiversity value through appropriate design and management.		
The woodland has recently been planted and has yet to fully develop. The Forest Design Plan Has identified and made provision for key features of conservation interest. **Management of areas of conservation interest is low-key and is partly constrained by practical issues such as resourcing enhancement works.**	Opportunity to identify key opportunities for enhancement in terms of conservation value	**Consideration of the current land uses and management has been carried out as part of the plan development.** **Key opportunities identified relate to the potential for woodland expansion, particularly of native woodland along riparian corridors.**
6. To protect and manage Coalburn LRB SSSI – currently under a under management programme, including an assessment of re-wetting opportunities and grazing management.		
The LRB SSSI is currently being actively and positively managed under a management Plan coordinated by NatureScot. **The site is monitored and issues relating to**	Opportunity to carry out maintenance operations to fulfil requirements of maintain the SSSI in a favourable condition	**Carry out scrub control operations on the SSSI area.**

Linked LMP Management Objectives Constraints/Challenges	Opportunities	Concept
encroachment of scrub regeneration on the bog surface is ongoing		
7. To establish a methodology for the monitoring and management of the Native woodland forest habitat network management		
A variety of native planting mixes have been planted as part of the recent woodland planting works.	Opportunity to record and monitor native woodland areas in terms of their composition and contribution to the existing native woodland habitat network and adjacent areas of habitat interest	**Record and monitor areas of native woodland planting. Steer composition of native woodland areas towards the appropriate NVC types for the location.**
8. To review the management of PAWS areas and assess the implementation of management recommendations and the need for further works		
PAWS areas have been identified along the River Nethan valley. To date little management of these areas has been carried out.	Recent assessment of the PAWS areas has identified improvement operations including the control of Invasive non-native species and halo thinning to create canopy gapes to favour native tree species, regeneration and ground flora layers.	**Carry out halo thinning and vegetation control operations as recommended.**
9. To examine options for alternative restocking, including woodland expansion		
Areas proposed for felling and restocking have been identified under this plan.	Opportunity to restructure woodland areas in keeping with long-term objectives and the wider Forest design.	**Proposed restocking has taken consideration of appropriate replacement woodland types in light of the context, locations, and nature of these woodland areas.**
10. To review management options for open ground.		
Extensive areas of open ground are present within the forest, serving a number of purposes, including nature conservation, access, service wayleaves, agricultural use, woodland pasture, and maintenance of views.	Opportunity to review land-use in relation to open ground areas, and to identify opportunities for alternative and more beneficial use..	**Areas of open ground use and management is reviewed under this Management Plan.**
11. To appropriately manage existing features of cultural interest including woodland pasture.		

Linked LMP Management Objectives Constraints/Challenges	Opportunities	Concept
There are few areas of cultural interest present within the forest. The Forest Design Plan took cognisance of the se features at part of the forest design process to protect and maintain a setting for these features.	Opportunity for further parkland tree planting to provide for successional tree features within the parkland areas.	**Review the management of woodland pasture which is currently managed under a lease agreement.**
12. To continue to provide a facility for the allotments and maintain liaison with the local community. To review the current management requirements for maintaining this facility.		
The area allocated for community allotments at Brocketsbrae is active and well-managed by the local community.	Continue to support local community activity and interest in the allotments project. Also continue to support the community orchard project at Brocketsbrae	**Continued community involvement and activity in the forest area provides opportunities to extend community interest, and to develop active participation and use and management of the wider forest area.**
13. To continue to maintain the showground area as open ground and review the cropping let associated with this area.		
The showground area is a large area of field managed under an agricultural lease and seasonally cropped for silage. The Showground is used one a year for the annual agricultural show.	Opportunity to seek alternative location for the Agricultural show, with potential to free up the field area for alternative use.	**The use of the showground area has been considered under this plan.** **In view of the lack of a suitable alternative area, it is likely to remain in its current use for the plan period.**
14. To investigate opportunity to provide links to the Active Travel plan project for South Lanarkshire.		
Access within the forest area is catered for in the form of rides. Key routes are seasonally cut to maintain access, primarily for management use.	The Forest connects to a number of existing paths and cycleways. There are opportunities to develop access within the forest and provide links to key routes, to expand on public use of the area, and to provide potential routes for Active Travel.	**Opportunities for public access have been considered under this management plan.**
15. To review and assess access provision within the Visitor Zones in terms of their management and development		
There is currently a low level of access provision within the forest area, and no formal provision in terms of invited access.	There is potential to plan for the provision of an increased recreational infrastructure over this plan period to cater for future potential use of the area by the neighbouring local communities	**Access provisional and the potential for development of recreational facilities is considered under this plan.**

7.0 Long term Management Plan Proposals

7.1 Overall Management

All proposals have been designed in accordance with sound silvicultural and environmental principles, falling within the framework outlined by the UK Forestry Standard, the UK Woodland Assurance Scheme, FC Bulletin 112 Creating New Native Woodlands, FC Bulletin 115 Alternative Silvicultural Systems to Clearcutting in Britain, FC Bulletin 124 Ecological Site Classification for Forestry and the current FC edition of Forest & Water Guidelines. A full list of current standards and guidance can be found here

This plan has considered the natural and historic environment as well as green network opportunities.

Approximately 53% of Lesmahagow Forest is made up of open areas consisting mainly of areas of identified biodiversity and cultural interest, but also made up of leased agricultural land and service wayleaves serving a high density of utilities throughout the woodland (mainly electricity, telecoms and water supply). The proportion of open space is not expected to change significantly over the plan period although some re-adjustment of management will result in slightly less ground leased for agriculture and some localised expansion of woodland. FLS will continue to work with utilities providers to ensure safe access, retention of wayleaves and management of the woodlands, and have recently disposed of land at Lesmahagow to Scottish Power to accommodate proposals to meet the requirements of the service network.

Future habitats and species plans including additional woodland creation areas have taken account of existing and proposed utilities.

Most of the woodlands in the Lesmahagow Forest area are first rotation plantations. The majority is 10 years old or less and has only recently advanced from its establishment phase. A significant proportion of the recent planting is productive conifer, but an equally high percentage of the younger woodland areas are mixed broadleaves, and most are near native of native in terms of their composition.

Due to the young age of the woodland only limited felling is proposed under this plan, targeting relatively small areas of pre-existing mature shelterwoods showing signs of instability and suffering wind damage.

Harvesting of these areas will produce the greatest proportion of timber over the plan period, hence these operations will need to be served by suitable forest infrastructure in the form of

access points, loading and turning areas, and forest access roads (See **Section 2.6**).

Management of the younger coniferous woodland is anticipated to involve periodic thinning interventions, and clearfelling and restocking at the end of their rotation period (55 -65 years in most cases). These areas have good potential for high grade timber production.

The current growth rate of Douglas fir stands at Braehead suggests they will be ready for first thinning late within Phase 2 of this plan. New road infrastructure has therefore been proposed to facilitate access to these stands.

In young mixed conifer planting with a high proportion of larch, the early removal of this species will be started as part of the first commercial thinning operation – Phase 2 of this plan. The bulk of these stands are located within Brockets Brae sub-block and therefore new road infrastructure has been proposed to facilitate access to this area. This thinning operation, although commercially viable, is slightly premature but has been proposed for reasons of plant health, to help prevent the spread of *Phytopthora ramorum* in the Central Region Forest District.

These early thinning operations will prepare targeted stands for high yield commercial thinning operations in the longer term and the production of structural grade timber.

Remaining young conifer stands have been included within the plan period for first thinning but are more likely to be left until felling phase 3 or 4. Growth rates will be re-assessed at the plan's 5 year mid-term review.

Many areas of recently planted broadleaf areas have ash present as part of the woodland mix, to a greater or lesser extent (See **Map 14 – Presence of Ash**). Chalara ash dieback (CAD) is spreading rapidly throughout the Forest area and affecting a high proportion of the young ash planting. This in-turn is impacting on the visual amenity for the woodland. It is however unlikely that the ash will be removed until commercial thinning operations commence.

Tree condition will be monitored and where there is a risk to public safety trees will be made safe or cut to residue. Enrichment planting will be undertaken in gaps unlikely to fill with natural regeneration. For example, in stands with a high proportion of birch (profuse seeding species), natural regeneration will be used but with some enrichment planting of oak. In stands with large areas of dead ash & remaining trees are unlikely to produce a viable seed source (Alder/Willow) group enrichment planting will be used. Criteria for action is detailed in **Section 7.7.3 Restock Prescription – Enrichment planting** (below)

Section 8.0 Critical Success Factors provides information on how we will monitor and respond to the spread of ash dieback within existing stands.

Younger planted mixed broadleaved stands will be managed under low impact silvicultural systems (LISS) where larger compartments are grouped together and there is good management access. The intention will be to maintain continuous cover woodland, enhance biodiversity and produce some small-scale niche timber. At this early stage the intended management systems are 'group and uniform shelterwood systems' (dependent on the tree species present and their shade tolerance), with the option to restock either by natural regeneration or planting. This will be reviewed as thinning progresses.

Less accessible, more fragmented young mixed broadleaved stands will be managed as long-term retention. As forest road access is gradually improved throughout the forest there may be opportunity to thin these stands and potentially produce some small scale timber.

The existing natural reserve areas will be expanded to include some existing young planted and mature mixed broadleaved stands where this improves ecological connectivity between the existing natural reserves and better protects core areas of ancient woodland.

In other woodland areas of conservation interest, where some intervention is proposed to enhance their value, works will generally be limited to minor enhancement operations, including tree safety works and halo thinning around veteran trees. These areas will managed as minimum intervention but not as natural reserve during the plan period.

Supporting maps sets for Management Proposals section:

- Maps 2A-2D - Designations Maps
- Maps 8A & 8B - Management coupes
- Map 9 - Ten year thinning plan
- Map 10 - Future habitats and species
- Map 11 – Proposed woodland creation

7.2 Clearfelling

Supporting Maps: 8A & 8B Management Coupes & 13 Timber haulage plan.

Proposed felling coupes within the plan period are detailed in **Section 2.2** and **Table 4**.
Felling coupes have been selected based on are variety of factors including: -

- The condition of the current woodland/crop
- Site conditions, including exposure, soils, drainage
- Plant health (presence of Larch)

- The presence and location to windfirm edges
- Future management proposals and requirements

The majority of the proposed felling identified in this plan period relate to the felling of mature coniferous shelterwood features inherited as part of the former agricultural landscape, and all of which are suffering from wind damage at the end of their useful rotation period.

Some of these shelterwoods also consist of a proportion of larch, and one of the aims of management is the removal of larch from the Forest area. Larch will not form a component of the restocking mixes as a result.

7.3 Thinning

Supporting Maps: Map 9 – Ten year thinning plan

FLS policy generally assumes that all productive crops will be thinned, unless:

- Thinning is likely to significantly increase the risk of windblow.
- Operations are likely to require an unacceptably large investment in relation to the potential benefits due to access or market considerations.
- Thinning is unlikely to improve poorly stocked or poor-quality crops.

In the case of the Lesmahagow Forest blocks, recently established woodland blocks are at an early stage (p2012-2015) and are just closing canopy, and although thinning is anticipated as being required during this plan period most stands of this age are scheduled for Phase 3 to 4, when the crops will have reached an age of 20-25 years.

There are however areas of mixed conifer planting which include larch in the planting mix, particularly in the Brockets Brae sub-block (coupes 42003 & 42005). In Phase 2 of this plan FLS propose to start the removal of larch as part of their Larch Policy aimed at controlling the spread of *Phythopthora ramorum* (PR) in the Central Region.

In these stands Larch has been planted in intimate mix with Sitka spruce. It is therefore unlikely that complete removal of Larch will be possible during the first operation, however a system of machine access racks can be established throughout the crop to allow a quicker response time should PR be identified and to facilitate subsequent thinning interventions.

Within the Braehead sub-block stands of pure Douglas fir (coupe 42040) planted in 2012 are exhibiting good growth rates and are likely to be ready for a first thinning intervention late in Phase 2 of this plan. Similarly, some spruce stands planted in 2012 (coupe 42036) may be ready to thin late in Phase 2, allowing access to a small mixed spruce/larch area for 1st thinning. All first thinning operations will involve line thinning with light selective removal of trees in the remaining matrix.

The proposed thinning should benefit the retained conifer crop in reducing competition, increasing air flow (where some larch remains) and increase stem diameter and stability through the planting blocks. It will also form access rides through the blocks for future inspections and subsequent thinning and felling operations.

Areas of recently planted broadleaf and mixed woodland make up a significant proportion of the woodland planting at Lesmahagow. These woodlands consist of a range of species mixes and form areas of productive mixed broadleaf, productive native broadleaf, and native woodland.

In these woodland areas thinning is also proposed both to maintain woodland health and continue to provide recreational and amenity benefits. Although these stands have been proposed for thinning within the 10 year plan period, it is more likely they will be thinned later in phases 3 or 4 of the felling plan - when the crops will have reached 20-30 years of age. The main objectives for the thinning will be to improve timber quality of retained trees, maintain species and structural diversity, increase management options in the long term, increase light levels, and to retain and increase sightlines.

Ash forms a component within most of the broadleaf areas to a greater or lesser extent ranging from 10% if the mix up to 55% of some mixes (**Map 14**). Chalara ash dieback (CAD) is having an increasing physical and visible impact on the Forest area, and is noted as being present in most of the young broadleaf areas, and in regeneration layers of mature woodland areas. Monitoring of CAD is carried out by FLS and the results from monitored sample plots show a steady increase in terms of numbers of trees affected and the severity of impact of the disease.

Most of the broadleaf woodland planting has been carried out as an intimate mix, either as small species groups or discontinuous broken rows of species intermixed.

In areas with a high proportion of ash (30-55%) and significant die-back present, some thinning to residue may be carried out to facilitate safe access for enrichment planting with alternative native tree species.

In general the higher ash proportions have been used in more productive native woodland mixes. Replacement planting will aim at retaining the native composition of the mix including productive high forest species, in particular oak.

Commercial thinning would normally be carried out at, or below, the level of marginal thinning intensity (i.e. removing no more than 70% of the maximum MAI, or YC, per year). Higher intensities (no more than 140 % of maximum MAI, or YC, per year) may be applied where thinning has been delayed, larger tree sizes are being sought or as part of a LISS prescription.

In all cases work plans will define the detailed thinning prescription before work is carried out

and operations will be monitored by checking pre and post thinning basal areas for the key crop components.

In addition to this

7.4 Continuous Cover Forestry

CCF = Continuous Cover Forestry

LISS = Low impact silvicultural systems

Supporting Maps: **map 8A & 8B** – Management coupes.

7.4.1 CCF Group and Uniform Shelterwood Systems

Productive continuous cover management coupes have been proposed in the larger and more accessible areas of young mixed broadleaved woodland. These will be managed to maintain a continuous cover stand structure, enhance biodiversity and produce some small-scale niche timber. Commercially high output timber production will not be the primary objective.

At this early stage the intended management systems are 'group and uniform shelterwood systems' (dependent on the tree species present and their shade tolerance), with the option to restock either by natural regeneration or planting. For example, stands dominated by Norway maple and, to a lesser extent, Oak will be managed as uniform shelterwood. Stands dominated by birch will be managed as group shelterwood. This will be reviewed as thinning progresses.

7.4.2 Minimum Intervention

Minimum Intervention areas make up 71.54 hectares of the plan area. The majority of these (55.8ha) will be managed as Minimum Intervention (Natural Reserves) and primarily incorporate ancient woodlands and plantations with good semi-natural characteristics. They have been expanded to include some existing young planted broadleaved stands where this improves ecological connectivity between the existing natural reserves and areas of ancient woodland.

The remaining Minimum Intervention areas cover the PAWS stands where some halo thinning of veteran broadleaves such as Oak is required to protect these important semi-natural features. This is particularly the case along some areas the Nethan Valley in Auchlochan sub-block.

7.4.3 Long-Term Retentions

A large proportion of the broadleaved stands will be managed as Long-Term Retention (293.49ha) with the primary aim of improving age class and structural diversity over the plan area. Many of these stands are still young so it is important that we maintain some flexibility for future management, whilst recognizing their potential for retention beyond economic felling age

and diversifying forest structure. They include areas proposed for later thinning which may eventually be managed as LISS productive systems. Other areas are likely to expand minimum intervention and natural reserve areas to improve overall resilience and ecological connectivity.

Table 16 showing proposed CCF, LISS, MI and Long-term Retention Management Areas:

Management Type	Area (ha)	% of LMP Area
Uniform Shelterwood	29.46	2.73
Group Shelterwood	13.19	1.22
Minimum Intervention	15.74	1.46
Minimum Intervention (Natural Reserve)	55.80	5.17
Longterm Retentions	293.49	27.39

Lastly, the majority of old beech hedge bank features are now recorded in the FLS forest inventory (Sub-cpt database). Whilst these features are located within larger management coupes with other primarily objectives (open space, long term retention or clearfell), the management prescription within these coupes clearly identifies these features for protection during forest operations.

7.5 Other Tree Felling in Exceptional Circumstances

FLS will normally seek to map and identify all planned tree felling in advance through the LMP process.
However, there are some circumstances requiring small scale tree felling where this may not be possible and where it may be impractical to apply for a separate felling permission due to the risks or impacts of delaying the felling.
Felling permission is therefore sought for the LMP approval period to cover the following circumstances:

- Individual trees, rows of trees or small groups of trees that are impacting on important infrastructure (as defined below*), either because they are now encroaching on or have been destabilised or made unsafe by wind, physical damage, or impeded drainage.

*Infrastructure includes forest roads, footpaths, access (vehicle, cycle, horse walking) routes, buildings, utilities and services, and drains.

The maximum volume of felling in exceptional circumstances covered by this approval is 75 cubic metres (approximately 3 lorry loads of timber) per Land Management Plan per calendar year.
A record of the volume felled in this way will be maintained and will be considered during the five year Land Management Plan review.

7.6 Chalara Ash Dieback

With the help of a recently formed Ash Dieback Risk Group, Scotland is gearing up to deal with a significant increase in damage likely to arise from ash dieback over the coming years, particularly the risks posed by dead or dying trees near public roads and forest tracks. To help with these developments, Scottish Forestry has commissioned the Tree Council to help support organisations across Scotland and in June 2021 the Tree Council produced an 'Ash Dieback Action-Plan Toolkit for Scotland' to help support landowners, consultants, practitioners and land managers.

FLS has now integrated this guidance into its strategic level Ash Action Plan and its ongoing tree safety inspections. Priority areas of survey are all zones where Ash is within falling distance of all public roads, railways, neighbouring properties, amenity areas and car-parks, passable forest roads and well used way-marked trails and public rights of way.

Surveys have been undertaken within Lesmahagow forest blocks to quantify tree numbers and priority/non-priority work programmes. Priority tree safety works are progressing within the existing tree safety work programmes and FLS will work to Scottish Forestry and NatureScot guidance where pre-emptive felling is deemed necessary.

7.7 Restructuring

Areas proposed for clearfelling offer an opportunity for restructuring of the Forest in line with the Management Objectives

The following attributes give Lesmahagow land management plan area high potential for age class restructuring in the long term:

- Extensive ride systems, creating a significant number of separate stands with windfirm edges.
- Diverse range of species and mixture combinations therefore increasing silvicultural management options in the future.
- Proposals for an extensive forest road network to allow timely thinning and increased stand stability.

7.8 Restocking proposals

Supporting Maps: **Map 3 Soils & Hydrology, Map 4 DAMS (Wind Exposure) & Map 10 Future Habitats and Species**

In restocking of the woodland areas proposed for felling within the plan period, species selection has taken into account site conditions, extant plant health issues, management objectives, and site use.

- A mix of productive conifer, productive and semi-natural broadleaved woodlands are proposed, along with areas of open ground.
- There will be an increase in use of conifer mixtures to improve overall stand resilience to climate change and increase management options over the stand rotation.
- There are substantial areas of open ground within the forest. Where this is causing operational access challenges and is attracting illegal grazing encroachment, restocking will aim to expand the boundary of these stands for better connective management access and improved productive potential within the forest.
- The use of native tree species and native woodland types will be increased in the long term within existing broadleaved areas.
- Open space and open ground connective habitat will still form a substantial part of the forest habitat network.

The woodlands have been matched to the soils and ground vegetation, using the guidelines set out in the Forestry Commission's Ecological Site Classification (ESC) Bulletin 124. ESC uses climatic zone, exposure, soil moisture, and soil nutrient levels to inform the type of woodland most suited to the sites.

A number of ESC sample plots were selected across the forest area, the locations of each are shown on **Map 3 Soils-Hydrology-Terrain-ESC**. The number of points were selected to reflect the extent of the forest blocks represented, and the range of site conditions such as soil types, drainage, altitude, and levels of exposure.

Where sites are being replanted, the fallow period will be 1 to 2 years. The forest blocks in this plan are relatively small with no recent felling, hence Hylobius populations have not had the chance to build up. Weed competition is deemed a more challenging factor for establishment.

Soils and drainage conditions vary across the Forest area. Ground preparation will be appropriate for each site where restocking is proposed.

Due to current issues relating to plant health, neither larch species nor ash are proposed to form part of the restocking mixes.

A summary of the ESC results obtained from inputting the sample points is shown in the Table 18 below.

Table 17 - Key to ESC Results

Suitability	
VS	Very Suitable
S	Suitable
M	Marginal
U	Unsuitable

Table 18 – Ecological Site Classification Results

Supporting Map: Map 3 Soils-Hydrology-Terrain-ESC

Forest Block	Grid Ref	ESC Ref Point	Modelled YC_SS	DAMS	WHC	Indicated NVC 1	Suit-ability	Woodland NVC Type*	Indicated NVC 2	Suit-ability	Woodland NVC Type
Brocketsbrae	NS 833 408	**1**	21	17		W11	VS	Oak-birch with bluebell/wild hyacinth	W7	S	Alder-ash with yellow pimpernel
	NS 830 395	**2**	18	15		W17	S	Oak-birch with bilberry/blaeberry(Upland)	W11	S	Oak-birch with bluebell/wild hyacinth
Lesmahagow	NS 814 373	**3**	5	17		W4	M	Birch with purple moor grass	W18	U	Scots Pine with heather
	NS 824 377	**4**	5	17		W4	M	Birch with purple moor grass	W18	U	Scots Pine with heather
	NS 828 362	**5**	18	17		W4	VS	Birch with purple moor grass	W3	VS	Sallow with bottle sedge
	NS 811 362	**6**	5	17		W4	S	Birch with purple moor grass	W18	U	Scots Pine with heather
Auchlochan	NS 807 378	**7**	19	13		W17	S	Oak-birch with bilberry/blaeberry(Upland)	W11	S	Oak-birch with bluebell/wild hyacinth
	NS 795 362	**8**	18	15		W11	VS	Oak-birch with bluebell/wild hyacinth	W17	S	Oak-birch with bilberry/blaeberry(Upland)
Braehead	NS 811 334	**9**	9	15		W18	U	Scots Pine with heather	W17	M	Oak-birch with bilberry/blaeberry(Upland)
	NS 823 334	**10**	9	15		W18	S	Scots Pine with heather	W17	M	Oak-birch with bilberry/blaeberry(Upland)

7.8.1 Restock Prescription – Productive Conifer

An important function of this forest type is to produce a significant volume of softwood timber for the saw log market, pallet, small round and firewood markets.

As such and as per the Regional restocking strategy the management input will generally be:

- Low impact ground preparation methods tailored to soil type, terrain and harvesting residues present.
- Restock planting at full initial density of 2,700 stems/ha to achieve a final density of 2,500 stems/ha with an emphasis on achieving overall stocking.
- Standard top up spray and weeding as required.
- Standard stocking density assessment surveys at year 1 and year 5.

Restocking will avoid the use of larch, due to its plant health issues. Where productive conifer objectives are still specified in the Future Habitats & Species plan, alternative site suited species will be chosen based on soil type and exposure (Norway spruce, Douglas fir, Lodgepole pine, Scots pine, Western red cedar, and Pacific silver fir).

Scot's pine and Lodgepole pine are also at risk in terms of the threat posed by DNB. Where they are used, the projected Yield Class must be reduced by one Class (e.g. reduce YC 12 to YC 10). The planting of these species in mixture with other conifers will hopefully reduce the DNB inoculum load between individual pine trees.

All restocking of conifers in the next ten years will use intimate mixed species planting mixtures in order to increase the resilience of management options for individual stands.

Table 19 Productive conifer planting mixes (Map 10 Future Habitats and Species)

Coupe Number	Species Mix	% Mixture proportions	Comments
Coupe 42006	Norway spruce/Scots pine	50:50	**Plant in intimate mixture 1:1**
Coupe 42039	Sitka spruce/Lodgepole pine	50:50	**Plant in intimate mixture 1:1**
Coupe 42039	Sitka spruce/Douglas fir	50/50	**Plant in intimate mixture 1:1**

7.8.2 Restock Prescription – Non-commercial Mixed Woodland & Broadleaves

Table 20 (below) lists the specific planting mixes for each coupe which can be seen on **Map 10 Future Habitats and Species.** The main objective for these areas is to increase structural, landscape and ecological diversity. Planting should ensure different species are intimately mixed and main canopy species such as Oak and Scots pine are dispersed throughout the planting area rather than concentrated in specific zones. The Tables below provide a species mixture template for NVC types but FC Bulletin 112 'Creating New Native Woodland' (1994) & 'National Vegetation Classification – Field Guide to Woodland' (2001) can also be used to refine the planting design.

For the Scots pine/Native mixed broadleaved (NMB) planting mix, Scots pine should make up 25% and NMB 75%. The pine should be dispersed throughout the site by planting in a pattern of 3 native broadleaves to 1 pine.

Mixed broadleaves with a non-native broadleaved element make up a small proportion of restocking over the next ten years. It has been used where there is already an established non-native broadleaved element in the planting area that has been retained at clearfell (Coupe 42039)

For all planting mixes the following establishment techniques will be used: -

- Low impact ground preparation methods tailored to soil type, terrain and harvesting residues present.
- Restock planting to achieve a final density of 1,600 stems/ha with an emphasis on achieving overall stocking.
- Standard weeding as required.
- Standard stocking density assessment
- Deer control will be carried out
- Use physical protection such as tree shelters as specified in the Tables in below.

Table 20 Non-commercial Mixed Woodland & Broadleaves (Map 10 Future Habitats and Species)

Coupe Number	Species Mix	% Mixture proportions	Comments
Coupe 42019	W11 Oak-birch with bluebell/wild hyacinth	See left	**See W11 Table in Section 7.9**
Coupe 42037	W11 Oak-birch with bluebell/wild hyacinth	See left	**See W11 Table in Section 7.9**
Coupe 43037	Native mixed broadleaves/Scots pine	75/25	**For NMB use W11 planting mix Plant in intimate mixture 3NMB:1SP**
Coupe 43039	Native mixed broadleaves/Scots pine	75/25	**For NMB use W11 planting mix Plant in intimate mixture 3NMB:1SP**
Coupe 43039	Mixed broadleaves	See	

Table 21 Mixed Broadleaves

Species	%	Comments
Sessile oak	5	**In shelters**
Sycamore	5	**In shelters**
Norway maple	5	**In shelters**
Silver birch	10	
Rowan	10	
Common Alder	30	
Hazel	20	
Hawthorn	10	
Downy Birch	15	
	100	

Table 22 NVC W3 - Sallow with bottle sedge

Species	%	Comments
Grey sallow	50	
Bay Willow	20	
Downy Birch	20	**On drier sites**
Eared Willow	5	
Common alder	5	
	100	

Table 23 NVC W4 - Birch with purple moor grass

Species	%	Comments
Downy Birch	60	
Grey sallow	15	
Bay Willow	5	**On drier sites**
Eared Willow	5	
Common alder	5	
Silver birch	5	**On drier sites**
Sessile oak	2	**On drier sites, planted in shelters**
Hazel	3	**On drier sites**
	100	

Table 24 NVC W6 – Alder woodland with stinging nettle

Species	%	Comments
Common alder	55	
Crack willow	20	
Downy Birch	10	
Goat willow	3	
Holly	3	
Hawthorn	3	**On drier sites**
Guelder rose	2	**On drier sites**
Pedunculate oak	2	**On drier sites, planted in shelters**
Blackthorn	2	**On drier sites**

Species	%	Comments
	100	

Table 25 NVC W7 - Alder with yellow pimpernel (excl. Ash)

Species	%	Comments
Common alder	55	
Grey sallow	20	
Downy Birch	10	
Bird cherry	3	**On drier sites**
Rowan	3	
Hawthorn	3	**On drier sites**
Guelder rose	2	**On drier sites**
Sessile oak	2	**On drier sites, planted in shelters**
Hazel	2	**On drier sites**
	100	

Table 26 NVC W11 - Oak-birch with bluebell/wild hyacinth

Species	%	Comments
Sessile Oak	45	**In shelters**
Downy Birch	40	
Silver birch	5	**On drier sites**
Rowan	5	
Hazel	3	
Hawthorn	2	
	100	

7.8.3 Restock Prescription – Enrichment Planting

Management action will be carried out too infill gaps left as a result of diseased ash within mixed broadleaf areas, where ash is a significant component of the mix.

Map 14 shows the presence of Ash within Lesmahagow. Currently there is 28.1ha of recently established woodland which has ash forming 30%-45%, and a further 48.9ha of woodland where ash represents 45-80% of the woodland composition. It has been estimated that 5% of the areas with 30-45% ash will require replacement planting to be carried out (1.4 ha), and 20% of those areas with 45%+ ash will require replacement planting (9.8 ha).

In total the estimated enrichment replacement planting requirement predicted within this plan period is equivalent to 11.2 ha.

The following table details criteria for action where gaps are present.

Table 27 - Criteria for action where gaps in young crops

Gap Size	Following tree species within close vicinity (up to 3m metres from gap boundary)	Action
Up to 2.5m x 2.5m	Heavy seeded tree species with infrequent seed years (e.g. young oak, N maple, hazel, holly).	**Use natural regeneration to fill gap & review on annual basis**
Larger than 2.5m x 2.5m	Heavy seeded tree species (e.g. young oak, N maple, hazel, holly).	**Use planting to fill gap & beat up as necessary**
Up to 5m x 5m	Light seeded tree species with frequent seed production (e.g. birch, alder, willow)	**Use natural regeneration to fill gap & review on annual basis**
Larger than 5m x 5m	N/A	**Always use planting to fill gap & beat up as necessary**

This criteria is also recorded for LMP review purposes in **Table 34 Objective Appraisal, Monitoring & Evaluation**

Gaps formed in areas of mixed broadleaf woodland through the removal of diseased ash will be infilled using the following mix.

Table 28 – Enrichment planting mix

Species	%	Comments
Silver Birch	20	**Planted in shelters**
Sessile oak	20	**Planted in shelters**
Common alder	20	
Goat willow	10	
Grey sallow	10	
Downy Birch	10	
Hawthorn	5	**On drier sites**
Hazel	5	**On drier sites**
	100	

As deer fencing is unlikely to be an option for protection, planting in shelters will be required for productive species mixtures using Oak as a core component.

7.9 Woodland Creation

See Map 11 – Proposed Woodland Creation

Opportunities for woodland creation amounting to 8.1 hectares have been identified as part of the plan review process in consultation with FLS teams.

The proposals include areas of land:

- Adjacent to riparian habitat.
- That have had unauthorised livestock grazing or grass cutting.

- Where tree planting will assist management access between existing forest stands.

A summary of the proposed woodland creation areas is set out in **Table 9 (Section 2.5) & Map 11.** The proposed objectives are amenity and nature conservation, with timber production adjacent to existing conifer stands.

Site considerations & mitigation

Where woodland creation is immediately adjacent to an ownership boundary, an unplanted buffer should be used with a minimum width of 10 metres. This may be more, depending on proximity of built infrastructure.

Sensitivities such as path infrastructure, utilities, newly identified wildlife will be taken into account as part of the pre-operational workplan process to ensure all delivery methods meet UKWAS, UK Forestry Standard, legal and good practice guidelines (as per other forest operations).

The specification for proposed **conifer planting areas** is detailed above in **Section 7.8.1**

For the small **mixed woodland area** in coupe 42028 (0.9ha), the proposed planting mix is native mixed broadleaves/Scots pine 3:1 (intimate mix) @ 1600/ha. This area is adjacent to existing native broadleaves and pine woodland.

For **native broadleaved woodland** two specific types have been used which take account of proximity to residential properties, overhead powerlines & Coalburn Moss SSSI peat bog. **Birch species must not be planted** in these areas due to its high seeding capacity and potential invasive characteristics, particularly around the peat bog.

1. Native mixed broadleaves - core woodland: Sessile oak/Bird cherry/Rowan 1:1:1
2. Native mixed broadleaves – scrub/edge woodland: Hawthorn/Blackthorn/Dogwood/Goat Willow/Rowan in even proportions

The following establishment techniques will be used: -

- Low impact ground preparation methods tailored to soil type, and terrain.
- Planting to achieve a final density of 1,600 stems/ha with an emphasis on achieving overall stocking.
- Physical protection on susceptible species.
- Standard weeding as required.
- Standard stocking density assessment

7.10 Open land

7.10.1 Peatland Areas

The main area of peatland habitat is represented by Coalburn Moss which is positively managed under a SSSI management plan by NatureScot in collaboration with FLS.

Other areas of peatland habitat present within the forest were identified by the ecological survey carried out at the Forest design stage. These have been maintained as open habitat along with areas of associated lagg habitat, with low levels of management intervention.

7.10.2 Grassland Areas

There are significant areas of open ground present within the forest blocks which represent a variety of grassland habitats. A large proportion of these areas occupy service wayleaves and rides, or are designed open areas between planting blocks, for a variety of purposes including maintaining areas of ground flora interest, retaining views, and avoiding geometric planting shapes and respecting existing landforms.

In general, these areas will be retained as grassland areas without management intervention and left to develop naturally.

7.11 Visitor Zones, Public Access & Associated Woodland Management

Visitor Zones are identified in areas where FLS encourage and manage access or where the woodland managed by FLS interacts with popular visitor sites or access routes.

There are currently two areas along higher specification surfaced paths assigned as visitor zones. These are shown on **Map 15.**

1. The first zone (NS 820 399) leads north from an existing core path on Eastwood road, linking to a planted orchard. This will be maintained as a visitor zone due to its higher usage. There is also potential for future interest in community management of the orchard.
2. The second zone (NS 813 380) runs along a core path linking from Coalburn Road at Turnburn Brae westwards to New Trows Road (and crossing the river Nethan via a footbridge). This high specification path has been assigned an interactive visitor zone due to its higher usage and its links with a number of longer distance walking routes through the Nethan Valley.

Within the visitor zones, single trees or small groups of trees will be removed when necessary to protect facilities, infrastructure and trails, or to enhance the setting of features, or to maintain existing views.

Woodland in these zones may be thinned, or trees re-spaced, for safety reasons (including to increase visibility to ensure that sites are welcoming and feel safe) and where it is necessary to enhance the experience of the forest setting, through the development of large trees, or preferential removal of trees to favour a particular species.

In addition, the management plan area has an extensive network of ride systems and informal desire lines that can be used by the public for responsible, non-motorised informal access.

FLS actively promote responsible access to our sites under the Scottish Outdoor Access Code. Recorded paths are regularly inspected to assess maintenance requirements, conduct tree safety inspections & remove obstructions. This is reviewed annually for our level of provision.

Due to the fragmented nature of forest blocks within Lesmahagow plan area, further development of recreational provision would require a joined up approach from multiple landowners and partners which FLS are happy to contribute to, and facilitate on our land, but cannot take the lead on this at the current time. It is anticipated that as the forest develops and infrastructure is put in place to facilitate forest management access, there will be greater potential for this development in the future.

There are currently no formal parking facilities in the forest, and none proposed within this plan period.

7.12 Hedges

The Forest borders a number of public roads along which hedges are present. The hedge features are generally informal features and are periodically trimmed back on an annual basis to prevent encroachment onto the road corridors.

The periodic management of hedges along highways and footpaths will be continued over this plan period.

7.13 Biodiversity & Environment

7.13.1 Habitat & Species Management

The various woodland and open priority habitats as well as the species they support will continue to be conserved and developed as per the management detailed below.

Woodland

There are areas identified Ancient Woodlands present within Lesmahagow Forest. These include LEPO (Long Established of Plantation Origin) and ASNW (Ancient Semi Natural Woodlands), and PAWS sites.

There are also elements of Wood pasture Parkland HAP at Stockbriggs. These areas have been surveyed by FES Native Woodland Ecologist and are managed in accordance with their recommendations.

FLS will maintain semi-natural and new native broadleaved woodlands. Areas of Ancient Woodland in general have limited accessibility and little need for management intervention.

PAWS areas have been recently surveyed and assessed, with recommendations for halo thinning to help steer the woodland composition towards a more native type, and to encourage natural regeneration.

Most of these areas are proposed to be managed as Natural Reserves. but will be monitored to ensure they develop in line with management objectives.

Waterbodies

There are a number of small waterbodies and wetlands present across the Lesmahagow Forest sites. These are often associated with areas of high conservation interest including Coalburn Moss SSSI and areas of lagg Fen habitat.

These areas will be protected from forest operations in accordance with the Forest and water guidelines. No works are proposed to influence these areas.

Lowland Raised Bog

Coalburn is the main lowland Raised bog feature. The Bog is a SSSI and SAC and is being actively and positively management to maintain its conservation value.

Coalburn Moss Site of Special Scientific Interest (SSSI) is one of the best examples of raised bog in the country, covering 156.1ha, and is recognised as being of national importance.

In addition to its national importance the Moss is also of international importance, recognised through the European Habitats and Species Directive as a Special Area of Conservation (SAC) for its lowland raised bog, active raised bog, and degraded raised bog.

Lowland raised bog is a European Protected Habitat and degraded raised bog is seen as important as it has the potential to return to being active. The lowland raised bog and active raised bog is assessed to be in favourable condition. The degraded area raised bog is was assessed as unfavourable and recovering condition. Recent drain-blocking work has been carried out on the degraded bog areas Coalburn Moss to improve its condition.

NatureScot manage the area under a SSSI Management Plan, and co-ordinate operations with Forestry and Land Scotland.

There are a number of other smaller areas of peatland habitat interest. Although these are not designated sites, they have been identified through ecological survey and were protected from planting through the Forest Design Plan process.

These sites will continue to be monitored and managed as open habitats important for biodiversity.

Two small areas of deep peat at Braehead, identified at the time of acquisition, which had previously been planted with shelterwoods composed of mixed conifers. These areas are proposed

for felling in Phase 3 (2033 -2037) so will not be within the timescales of this plan. Further review of their potential for native wet woodland or peat restoration will not be undertaken until the next land management (2032).

Raptors

There is known to be significant levels of raptors within the central Scotland area, and it is anticipated that a number of these species will frequent the forest blocks. A number of raptor nesting sites have historically been recorded within the Forest area.

Management proposals include the long-term phasing and spread of coupe phases, which will in time result in the retention of significant mature canopy and along with areas proposed for low impact silvicultural , long-term retention, areas of minimum intervention, and natural reserve areas it is anticipated that forest management operations will have a neutral impact on raptors.

FLS will continue to follow Scottish Forestry Guidance Note 32: Forest operations and birds in Scottish forests and as such we will continue to carry out systematic Pre-operational checks to search for active nests of important birds at least two weeks before operations start and act in cognisance with current legislation.

Water Vole

Water voles are anticipated as being present within the forest, and particularly in the vicinity of key watercourses such as the River Nethan and Poniel Water and their tributaries.

Following national guidance we will continue to mitigate the effects of forestry operations on protected species throughout the length of this plan following Scottish Forestry Guidance Note 31: Forest operations and wildlife protection.

Ongoing monitoring of populations and habitats will inform and direct operations through the work plan process, allowing site specific mitigation to be developed and implemented

Badgers

Badgers are known to be present within the Forest area, and a number of setts, feeding sites, latrines, and other indicators have been recorded.

Operations proposed on each of these sites will include a pre-operational check to identify and protect badger setts (if present) and to mark and avoid disturbance to latrines and badger runs where identified.

All works will be carried out in accordance with Forest Practice guide 9 – Forest Operations and Badger Setts, and act in cognisance with current legislation.

Otters

Otters are present at the River Nethan and Poniel Water and are also using associated tributaries and are known to frequent Coalburn Moss in the spring to feed on amphibians.

Ongoing monitoring of populations and habitats will inform and direct operations through the work plan process, allowing site specific mitigation to be developed and implemented.

Bats

Bats are known to be present around Stockbriggs, Westoun and a number of other locations in areas of mature woodland, and a number of potential roosts have been identified through site survey.

Ongoing monitoring of populations and habitats will inform and direct operations through the work plan process, allowing site specific mitigation to be developed and implemented.

Breeding Birds

The most recent breeding bird survey was been carried out by in the 2009 breeding season. The survey identified a number of species of conservation interest, including both Red and Amber listed species.
Forest operations will be timed to avoid disturbance to breeding birds.

7.13.2 Deadwood

Deadwood can be trees or limbs in the early stage of decomposition, e.g. veterans or dying individual trees. The UK Woodland Assurance Standard (UKWAS) target is for an average of 20m3 of deadwood/hectare of woodland.

Opportunities for the retention and creation of deadwood habitat will be offered through thinning and felling operations proposed under the LMP.

Ash trees impacted by Chalara which is resulting in dieback and the death of individual trees will be left in situ where safe to do, which will increase available volumes of standing and fallen deadwood habitat throughout the forest area.

The aim is to use natural processes by retaining dead, windblown or snapped stems or those created during previous operations. These should be retained wherever possible to create an even mix of standing, fallen and/or stacked deadwood.

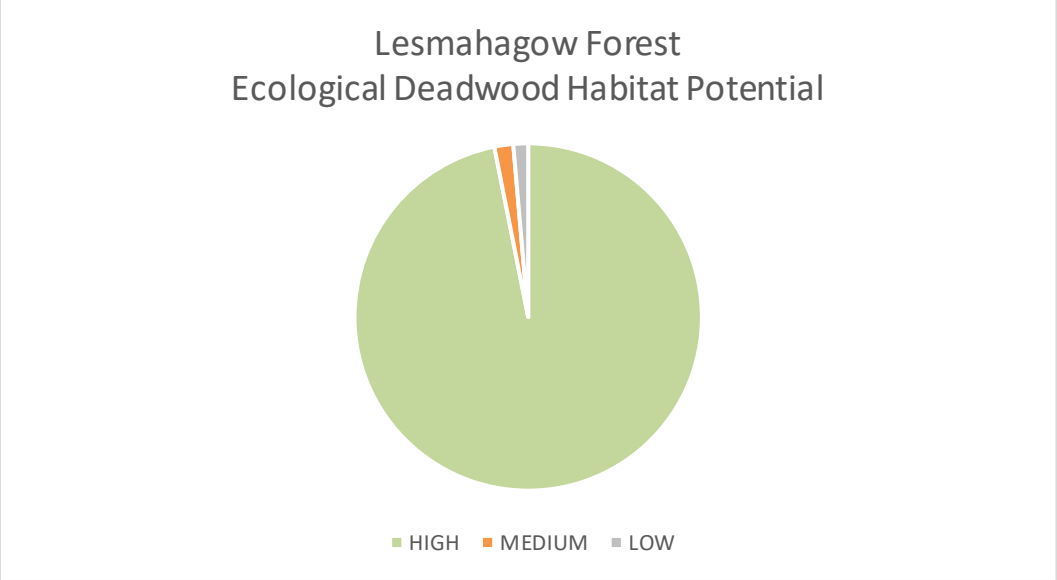
Deadwood Ecological Potential (DEP) varies across the Forest area. Assessment figures are based on the current woodland areas. Those areas with the greatest potential are associated with the more mature woodland areas present on field boundaries and along the River Nethan and Poniel Water. These will be subject to change as the woodlands develop.

A summary breakdown of this potential and distribution is given in the following table: -

Table 29 Deadwood Potential Lesmahagow

Assessed Deadwood Ecological Potential (DEP)	Woodland cover (ha)	Future Volume Estimate (m_3/ha)	Total Future Volume (m_3)
HIGH	92.33	50	**4616.5**
LOW	4.18	20	**83.6**
MEDIUM	6.56	10	**65.6**

Figure 1 Deadwood Ecological Potential Lesmahagow



Creation of deadwood habitat will be concentrated in areas where it will provide the highest ecological benefit, such as: -

- Riparian and wet woodlandareas
- Natural reserves and long-term retentions
- Ancient semi-naturalwoodland
- PAWS sites
- Areas of significant existing deadwood

In line with FLS Deadwood Policy the following additional actions should be adopted in the remaining High and Medium DEP areas: -

- Retain small groups of live trees and/or single large trees to develop into deadwood.

- Leave one very large fallen stem, if possible, on each site (>20cm diameter at breast height (dbh)).

7.13.3 Invasive species

There are few invasive species of concern present within the Lesmahagow Forest Blocks.

Only one report of Japanese knotweed being present was recorded in a recent site survey. This is located in the northeastern corner of the Lesmahagow sub-block. This area of Knotweed should be treated to remove its presence form site, and to avoid its spread and potential contamination of other areas of the Forest.

No *Rhododendron ponticum* has been recorded within the Lesmahagow Forest blocks, and no other Invasive Non-native Species (INNS) were recorded.

7.13.4 Wildlife (Deer Management)

The main objectives within the Lesmahagow Forests are:

- Maintain a sustainable deer population.
- To enable restocking to take place without the need for deer fencing and to achieve a the target stocking density (prescribed at initial planting) at year five (See also Section 7.8 Restocking Proposals).

Deer management at Lesmahagow is currently managed under contract. This will be kept under review to ensure adequate deer control. Access requirements will also be reviewed over the plan period in order to better assist with Deer control operations.

More targeted control of deer numbers and assessment of deer movement through the site will be undertaken by internal FLS staff, specifically where woodland creation, restock and enrichment planting is undertaken .

Deer fencing is not considered to be an appropriate option in the Lesmahagow Forest area, but individual tree protection may be used for those species most susceptible to browsing damage.

7.13.5 Landscape

In producing this LMP FLS has considered the landscape character of the area and the features outlined in NatureScot's landscape character assessment.

The impact of management proposals on the wider landscape is not anticipated to be significant given the limited scale and relative remoteness of the areas proposed for felling and restocking areas.

Where possible screening will be retained to limit the visual impact of felling coupes, making use of FLS and other areas of existing neighbouring woodland.

7.13.6 Hydrology

All operations will follow best practice as detailed in the current Forest and Water Guidelines. Timber extraction will normally avoid crossing burns or main drains, but, where necessary, each crossing point will be culverted or bridged. Branches will be kept out of watercourses and trees will generally be felled away from the watercourses.

7.13.7 NFM Study Areas

Lesmahagow site within the Bothwellhaugh River Catchment area. The area is not currently an NFM study area and no NFM action is currently required.

7.14 Heritage

A number of heritage features are identified across the Forest area. The area surrounding the estate is rich in cultural heritage from local communities, agriculture, and the mining activities of the past and present.

There are a number of structural remains on the site; including post medieval farmsteads to examples of Victorian architecture.

There are also the sites of standing stones long since removed at Crowhill, and the locally well-known Wallace's cave.

The presence of these features have been recorded were taken into account and the forest design stage. Management proposals under this LMP will similarly take cognisance of these features and suitable buffers will applied to these features.

This will be carried out in accordance with the guidance provided in the Forests and Historic Environment Guidelines (2011), the SF policy document: Scotland's Woodlands and the Historic Environment (2008), and the supporting FLS Historic Environment Planning Guidelines.

Features typically have buffers ranging from 5-10 metres depending on their nature but these can be wider or, in some cases are not required. These operational constraints are identified on site and surveyed by Forest Regional staff prior to any work being undertaken to ensure that features can be marked and avoided.

Work prescriptions will similarly protect relevant historic environment features, keeping the features and their buffered protection areas clear from ground disturbing operations and planting.

Opportunities to enhance the setting of important sites will be considered on a case-by-case basis.

7.14.1 Scheduled Archaeology

There are no scheduled archaeological features present within the Lesmahagow blocks.

7.14.2 Non-Scheduled Archaeology

Appropriate buffers will be applied and maintained around pertinent non-scheduled archaeological features, these will be kept open and free of trees. All operations in the vicinity of such features will be conducted in accordance with UK Forestry Standard and be in accordance with the Forests and Historic Environment Guidelines (2011)

7.15 Operational Access

Forest Roads (See supporting Map 12 – Proposed Forest Access)
Table 30 New forest roads requirement

New forest road requirements 2023-2033					
Forest Sub-Block & Coupe Number	**Type**	**Total length (metres)**	**Road width Incl. drains (metres)**	**Total Area (Hectares)**	Monitoring Comments
Brocketsbrae	New road Upgrade	1905 143	12.5	2.38 N/A	**GIS Planned road layers**
Lesmahagow	New road	230	12.5	0.29	**GIS Planned road layers**
Braehead	New road Upgrade	1090 152	12.5	1.34 N/A	**GIS Planned road layers**

Brocketsbrae

2048m of forest road work is proposed at Brocketsbrae within the 10-year plan period. This includes the upgrading of **143m** of existing road leading to High Boreland Farm and a the new road leading to coupe 42003.

Both new forest roads are proposed to serve the proposed thinning operations and future management works at Brocketsbrae. These roads provide access to the main productive woodland blocks which are scheduled for thinning, and make provision for one small area of felling proposed within the plan period. The Brocketsbrae sub-block is split by the Dillar Burn, and proposed routes will serve the productive woodland areas to the east and west of the burn respectively.

Two small spur roads are proposed to access 1st thinning coupes where the sub-block is split into

discrete sections by Hawksland Road (*just to the east of junction with Devonburn road*), this will provide management access into these areas to establish thinning access racks and start removing larch.

The planned roads will remove the need to load timber directly from the public highway.

All proposed new road lines are outwith sensitive areas such as protected conservation sites, deep peats and scenic areas. The main features of consideration are the older p1950 beech lined boundaries. These will need to be crossed at a number of points and the proposed route has been chosen to run through existing gaps in the beech where practical. The majority of the new roadlines will be screened by existing conifer forest so are not expected to significantly impact views in the area.

Lesmahagow

230 m of new forest road is proposed at Lesmahagow within the 10-year plan period.
The proposed road will accommodate the felling of coupe 42019 and the extraction of thinnings proposed in the adjacent broadleaved stands.

The road will extend from an existing access which will be widened and upgraded as necessary to accommodate HGV traffic. The location of this access point has been chosen primarily to allow safe sightlines for vehicle traffic entering and exiting the public highway.

The proposed roadline is outwith sensitive areas such as protected conservation sites, deep peats and scenic areas The main constraint here is the overhead transmission line. Scottish Power will be consulted prior to construction to agree safe clearance heights.

Braehead

1090 m of forest road work is proposed at Braehead within the 10-year plan period, including **152m** of existing road which requires upgrading.

Forest stands along the minor public road (leading south from Bellfield road) are quite fragmented, therefore 3 access points are proposed from this minor public road. These new access points and associated forest spur roads will accommodate the proposed thinning and felling of coupes 42036 and 4037 (respectively). This new infrastructure will also remove the need to load timber directly from the public highway. The new roads here have been located to follow the contours of the landscape, particularly the longer section on the boundary of 42036 and 42037. Visibility requirements have also been considered for exit from and entry onto the public highway.

Two of the spur roads are proposed within LEPO designations. These areas are currently productive conifer shelterbelts (p1975 SS) proposed for felling in Phase 2. The road will allow felling of these shelterbelts and replanting with native/amenity woodland with an element of productive mixed

conifers. The majority of the new roadlines will be screened by existing planted conifer forest so are not expected to significantly impact views in the area.

There is a small tributary burn adjacent to the mixed conifer p1950 section of coupe 42037 to the east of the public highway. Standard controls following Forest & Water Guidelines will be followed for construction and subsequent use of this new road.

From Westerhouse farm/dwelling leading south, where the minor public road terminates, the existing track will be upgraded (152m) to access Phase 2 felling coupe 42039. In addition, a spur road will be constructed to provide thinning access for the p2012 Douglas fir crops in coupe 42040. There is a small tributary burn running west to east in between the Douglas fir thinning stands. Standard controls following Forest & Water Guidelines will be followed for construction and subsequent use of this new road.

7.16 Key Woodland Changes over the next 20 years

Table 31 – Land Use change within Lesmahagow Plan Area (2023 – 2043)

Land Use	Area 2023 (ha)	% of Total Plan area 2023	Area 2033 (ha)	% of Total Plan area 2033	Area 2043 (ha)	% of Total Plan area 2043
Agricultural land	78.6	7.28%	19.8	1.83%	2.7	0.25%
Felled	0	0.00%	3.6	0.33%	18.2	1.69%
High Forest	400.7	37.11%	411.4	38.10%	420.6	38.95%
Open	582.4	53.93%	628.1	58.16%	621.4	57.54%
Open Water	0.1	0.01%	0.1	0.01%	0.1	0.01%
Other Built Facility	0.4	0.04%	0.4	0.04%	0.4	0.04%
Research Plantation	3.5	0.32%	3.5	0.32%	3.5	0.32%
Unplantable or bare	13.1	1.21%	13	1.20%	13	1.20%
Windblow	1.1	0.10%	0	0.00%	0	0.00%
Totals	**1079.9**	**100.00%**	**1079.9**	**100.00%**	**1079.9**	**100.00%**

The land use at Lesmahagow is not anticipated as altering substantially, with the main changes of increased woodland and reduced agricultural use resulting from proposed land-use changes mainly to provide woodland biodiversity benefits.

Figure 2 – Land Use change within Lesmahagow Plan Area (2023 – 2043)

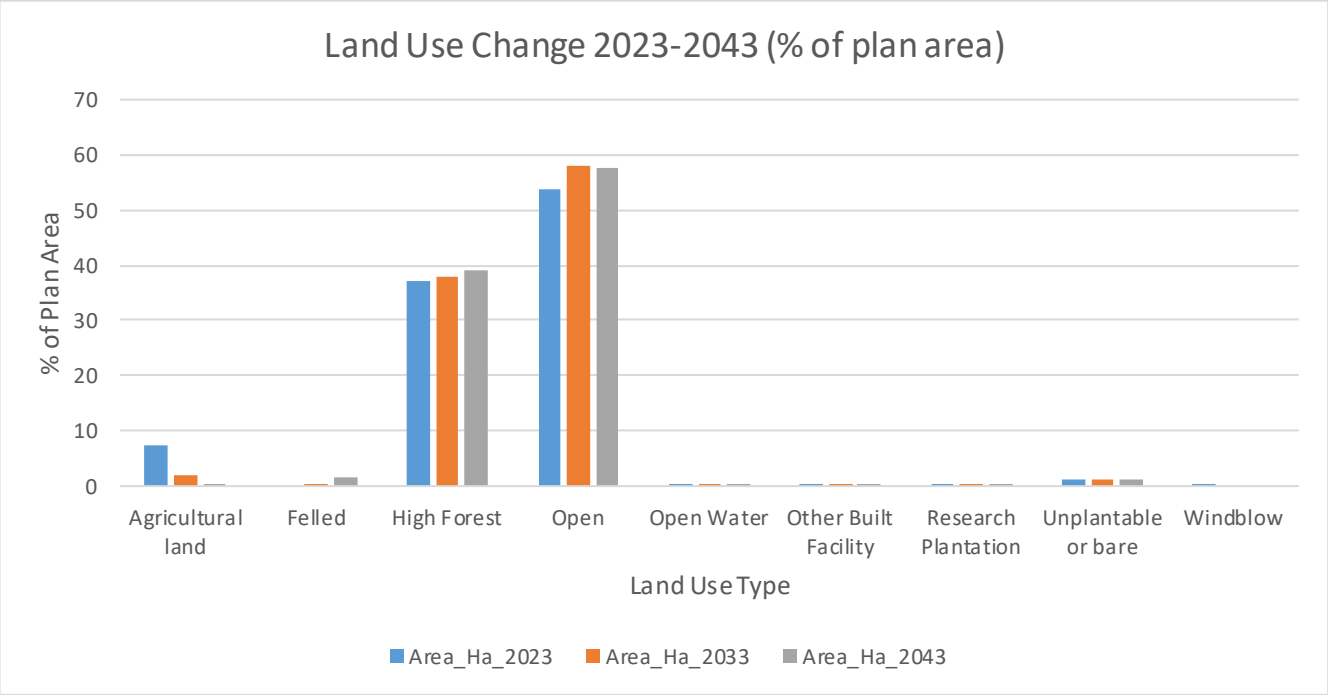


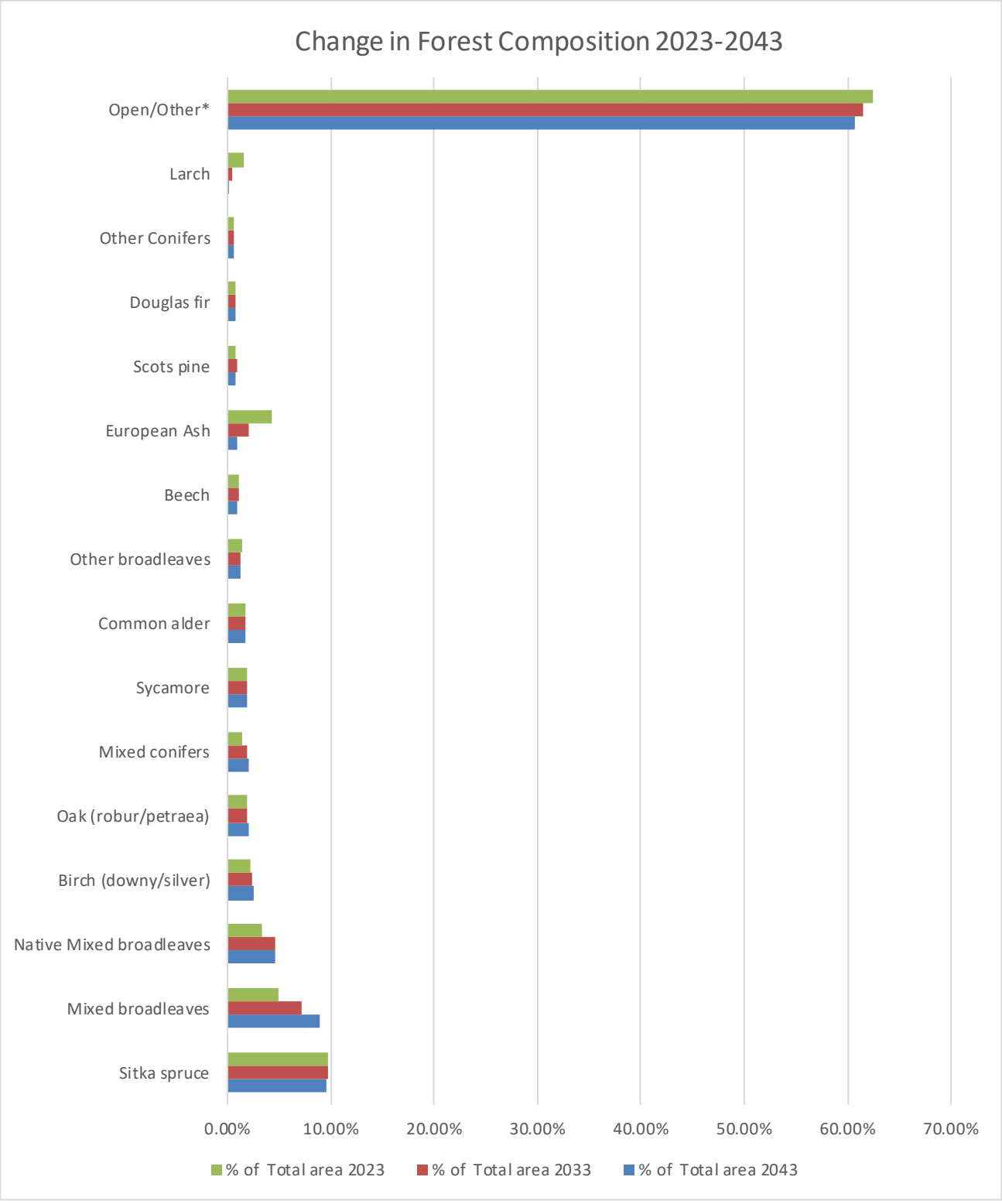
Table 32 – Change in Forest Composition within Lesmahagow Plan Area 2023-2043

Species Composition	Sum of Area 2023(ha)	% of Total area 2023	Sum of Area 2033(ha)	% of Total area 2033	Sum of Area 2043(ha)	% of Total area 2043
Sitka spruce	104.3	9.66%	104.3	9.66%	103.1	9.55%
Mixed broadleaves	52.98	4.91%	76.71	7.10%	96.31	8.92%
Native Mixed broadleaves	36.42	3.37%	50.02	4.63%	50.22	4.65%
Birch (downy/silver)	24.23	2.24%	25.5	2.36%	28.2	2.61%
Oak (robur/petraea)	20.1	1.86%	20.9	1.94%	22.3	2.06%
Mixed conifers	15.26	1.41%	20.5	1.90%	22.1	2.05%
Sycamore	21.07	1.95%	21.07	1.95%	21.07	1.95%
Common alder	19.3	1.79%	19.3	1.79%	19.3	1.79%
Other broadleaves	14.6	1.35%	13.8	1.28%	13.1	1.21%
Beech	11.4	1.06%	11.4	1.06%	10.9	1.01%
European Ash	45.7	4.23%	21.8	2.02%	10.6	0.98%
Scots pine	8.8	0.81%	9.4	0.87%	9.1	0.84%
Douglas fir	7.7	0.71%	8.5	0.79%	8.5	0.79%
Other Conifers	6.4	0.59%	7.2	0.67%	7.2	0.67%
Larch	17.14	1.59%	4.5	0.42%	2.1	0.19%
Open/Other*	674.53	62.46%	665.03	61.58%	655.83	60.73%

Species Composition	Sum of Area 2023(ha)	% of Total area 2023	Sum of Area 2033(ha)	% of Total area 2033	Sum of Area 2043(ha)	% of Total area 2043
Grand Total	**1079.93**	**100.00%**	**1079.93**	**100.00%**	**1079.93**	**100.00%**

***Open/Other =** Agricultural Land, Open, Open Water, Other built facility, Unplantable/Bare.

Figure 3 – Change in Forest Composition within Lesmahagow Plan Area 2023-2043

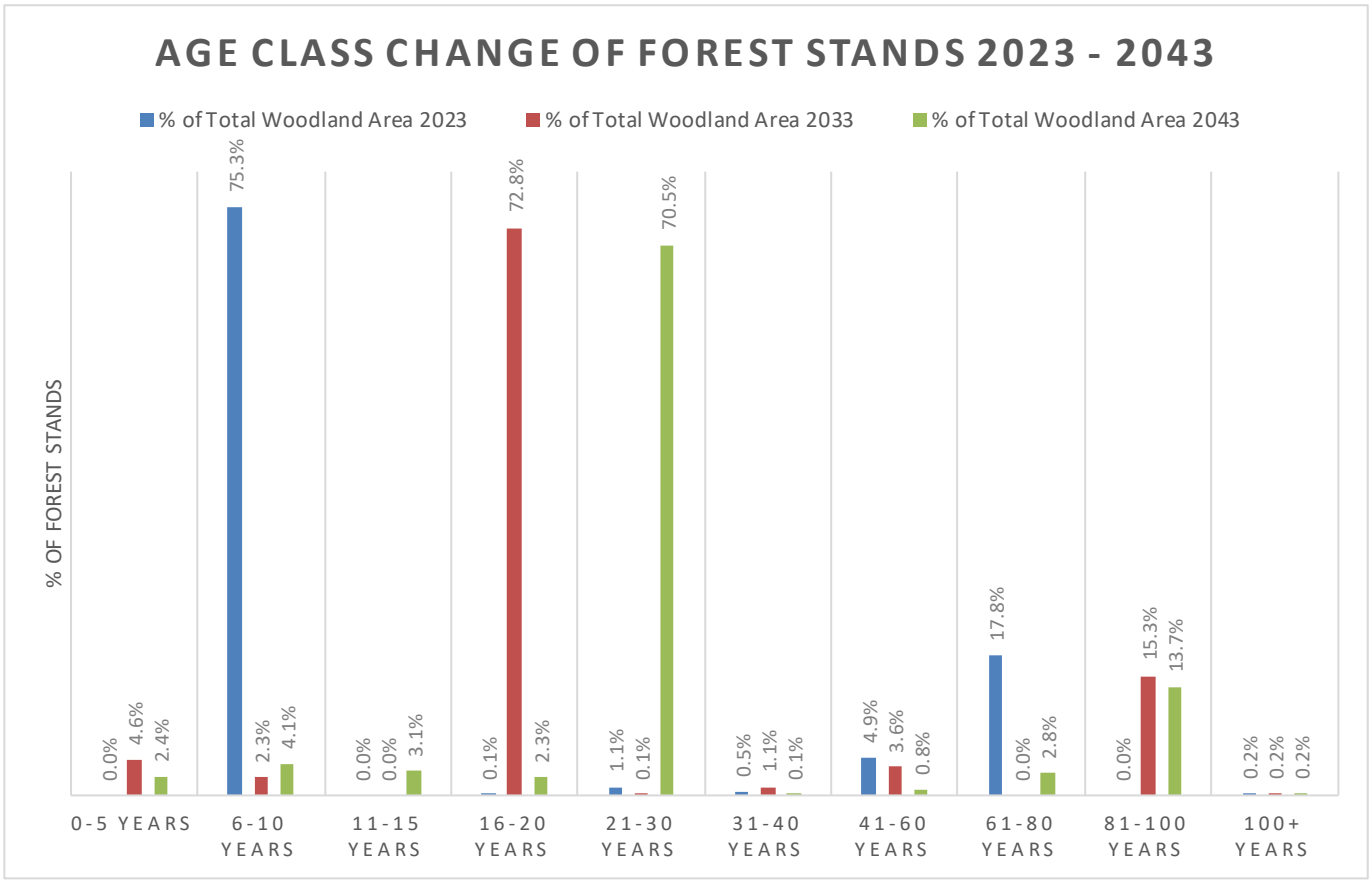


***Open/Other =** Agricultural Land, Open, Open Water, Other built facility, Unplantable/Bare.

Table 33– Age Class change of forest stands within Lesmahagow Plan Area 2023 - 2043

Age Class	% of Total Plan Area 2023	% of Total Plan Area 2032	% of Total Plan Area 2042
All 0-5 Years	0.0%	4.6%	2.4%
All 6-10 Years	75.3%	2.3%	4.1%
All 11-15 Years	0.0%	0.0%	3.1%
All 16-20 Years	0.1%	72.8%	2.3%
All 21-30 Years	1.1%	0.1%	70.5%
All 31-40 Years	0.5%	1.1%	0.1%
All 41-60 Years	4.9%	3.6%	0.8%
All 61-80 Years	17.8%	0.0%	2.8%
All 81-100 Years	0.0%	15.3%	13.7%
All 100+ Years	0.2%	0.2%	0.2%
Grand Total	**100.00%**	**100.00%**	**100.00%**

Figure 4 – Age Class change of forest stands within Lesmahagow Plan Area 2023 - 2043



8.0 Critical Success Factors

The success of this plan will be based on whether the objectives set out in **Section 1.0 Summary of Proposals** and **Appendix IV Management Objectives**.

Table 34 Objective Appraisal, Monitoring & Evaluation details how each objective will be appraised, where and when each objective will be monitored; by who and where it will be recorded. This will enable an evaluation of success as part of the mid and end of plan reviews.

Table 34 Objective Appraisal, Monitoring & Evaluation

Objective	Assessable Criteria	Appraisal Method	Monitoring Method	Monitor Where	Monitor When	Monitor Who	Record Monitoring Where	Evaluation. *How does the Appraisal and Monitoring method inform current & future proposals? If you cannot answer this question then the methods may not be appropriate.*
To determine thinning requirements & timings for both mature and recently established woodland over the plan period. To assess the economic and practical viability of these operations.	Thinning requirements identified through the LMP SCDP data	SCDB data and production forecast figures	Sub-cpt updates & LMP mid-term review	LMP	After operations and at appropriate intervals e.g. mid-term and 10 year reviews	Programme Manager/ Harvesting Team/ Planning Team	Against the LMP	**Evaluation of LMP and inventory figures will inform operational timing and production levels, to enable forward planning in terms of road requirements and the infrastructure required to facilitate woodland management /harvesting operations.**
To assess additional roading or access requirements for management of the woodland over the plan period.	Road locations and levels of provision	Assess proposed levels of provision against site requirements	LMP mid-term review	LMP	Prior to and during site operations	Programme Manager/ Harvesting Team/ Planning Team	Against the LMP	**Evaluation of road provision against operational requirements and ability to carry out scheduled operations**
To pre-emptively remove larch as an early thinning or restructuring operation.	Composition of woodland	Assess presence of larch, trends in removal & operational access to remaining larch stands	Delivery Team survey & sub-cpt updates & LMP mid-term review	LMP	After operations and at appropriate intervals e.g. mid-term and 10 year reviews	Programme Manager/ Harvesting Team/ Planning Team	Against the LMP	**Removal of areas of larch will be scheduled within the work programme. Where removal of larch is impractical or may detriment the remaining crop then operational access will be established for quick response to SPHNs. Operations will be monitored by the Programme Manager & Harvesting Manager. At mid-term review the planning team will assess remaining larch within the plan area, ease of access and incidence/spread of infection. Management proposals will be updated based on results of this review.**
To assess the impact of Chalara on ash and the potential options for intervention and mitigation measures.	Number of tree affected and degree of infection	Site sampling survey and monitoring Selected sample plots	Site monitoring reports. CAD survey reports	Sub-cpt database. Site reports.	Annually,	Stewardship Team	Forester Web	**Assessment of the spread and impact of CAD will inform management action, in line with current advice on treatment and control of the disease. It will also direct the use of proactive enrichment planting where gaps in the crop are unlikely to fill in from natural regeneration.. (gaps up to 5m x 5m can be left to naturally regenerate where viable seed source in close vicinity e.g. seeding birch, alder, willow. Gaps up to**

Objective	Assessable Criteria	Appraisal Method	Monitoring Method	Monitor Where	Monitor When	Monitor Who	Record Monitoring Where	Evaluation. *How does the Appraisal and Monitoring method inform current & future proposals? If you cannot answer this question then the methods may not be appropriate.*
								2.5m x 2.5m can be left where no viable seed source in close vicinity e.g. young oak, N maple, hazel etc)
To contribute to the conservation and enhancement of the site's biodiversity value through appropriate design and management.	Habitat diversity and condition	Site survey and monitoring	Sub-cpt updates	Sub-cpt database. Site reports	Annually	Environment Team	Forester Web	**Evaluate sites in terms of nature conservation values and potential. Evaluations should be balanced against the resource requirements to implement improvement and enhancement proposals**
To protect and manage Coalburn LRB SSSI – currently under a under management programme, including an assessment of re-wetting opportunities and grazing management.	SSSI status	SSSI Management Plan review	Site monitoring	Site reports	Prior to and during operations. At mid-term and 10 year review	Environment Team	Forester Web	**Site evaluation will be led by NatureScot. Proposed protection and enhancement operations will be instructed, monitored, and reviewed by NatureScot as part of the site management.**
To establish a methodology for the monitoring and management of the Native woodland forest habitat network management	SCDB details on native woodland areas. Fit with Native Woodland habitat network	SCDB updates	Site surveys	SCDB updates Site reports	At mid-term and 10 year review	Environment Team	Forester Web	**Evaluation of the current locations, compositions, and condition of native woodland areas within the forest will provide future guidance on management of these areas and potential expansion of these to infill gaps and link to other parts of a wider native woodland network.**

Objective	Assessable Criteria	Appraisal Method	Monitoring Method	Monitor Where	Monitor When	Monitor Who	Record Monitoring Where	Evaluation. *How does the Appraisal and Monitoring method inform current & future proposals? If you cannot answer this question then the methods may not be appropriate.*
To review the management of PAWS areas and assess the implementation of management recommendations and the need for further works.	Site management operations	Site survey	Site monitoring	Sub-cpt database. Site reports	At mid-term and 10 year review	Environment Team	Forester Web	**Evaluation of the PAWS areas will inform as to the efficacy of management in the rejuvenation and enhancement of these areas as valuable ancient woodland sites..**
To examine options for alternative restocking, including woodland expansion	Habitat diversity and condition	Site monitoring	LMP	On site Site reports	At mid-term and 10 year review	Planning Team Environment Team Stewardship Team	Forester Web	**Monitor sites for options relating to alternatives to restocking in terms of future species composition and appropriate land-use.**
To review management options for open ground.	Site use and management. Levels of encroachment	Site monitoring	Planning Team discussions with Land Agent & Stewardship Team	On site Site reports	At least annually	Planning Team Environment Team Visitor services Team Forest Rangers	Forester Web	**Evaluation of open ground areas will inform as to the appropriateness of the current land-use and management being carried out.**
To appropriately manage existing features of cultural interest including woodland pasture.	Historic features	Changes in condition	Site survey	Onsite. Aerial photos	Prior to and during operations. At mid-term and 10 year review	Environment Team	Forester Web Heritage Module	**Monitoring the condition of heritage features allows the Environment Manager and Visitor Services Manager to evaluate whether implementation of the plan has adversely affected any features.**

Objective	Assessable Criteria	Appraisal Method	Monitoring Method	Monitor Where	Monitor When	Monitor Who	Record Monitoring Where	Evaluation. *How does the Appraisal and Monitoring method inform current & future proposals? If you cannot answer this question then the methods may not be appropriate.*
To continue to provide a facility for the allotments and maintain liaison with the local community. To review the current management requirements for maintaining this facility	Levels of use. Management of allotment areas.	Site monitoring. Community liaison	Site visits	On site Site reports	Annually	Visitor services Team Forest Rangers	Forester Web	**Evaluation will provide an indication on the levels of interest and site use, and on the need and levels of any FLS support input.**
To continue to maintain the showground area as open ground and review the cropping let associated with this area.	Showground is managed in accordance with lease.	Showground use and management	Annual event, nature and scale.	Onsite. SCDB	Annually	Visitor Services Team/ Forest Rangers	Forester Web	**Evaluation will demonstrate whether or not the showground field remains in positive use, and the land is land is managed in accordance with lease and maintained in a neat and presentable condition.**
To investigate opportunity to provide links to the Active Travel plan project for South Lanarkshire	Levels of visitor use and demand.	Visitor use	Site monitoring	Onsite. SCDB Site Reports	Annually	Visitor Services Team/ Forest Rangers	Forester Web	**Evaluation of demand will indicate levels of use and demand, and whether existing provision is adequate or needs to be reviewed.**
To review and assess access provision within the Visitor Zones in terms of their management and development	Levels of visitor use and demand.	Visitor use	Site reports	Onsite. SCDB	Annually	Visitor Services Team/ Forest Rangers	Forester Web	**Evaluation of demand will indicate levels of use and demand, and whether existing provision is adequate or needs to be reviewed.**