

Falside Land Management Plan 2015- 2025

Dumfries and Borders Forest District

Falside

Land Management Plan



Approval date: *** 9/2/2017

Plan Reference No:

Plan Approval Date:

Plan Expiry Date: 8/2/2027

Falside Land Management Plan 2015- 2025

FOREST ENTERPRISE - Application for Forest Design Plan Approvals in Scotland


Forest Enterprise - Property


Forest District:	Dumfries & Borders Forest District
Woodland or property name:	Falside
Nearest town, village or locality:	Chesters
OS Grid reference:	NT65781178
Local Authority district/unitary	Scottish Borders

Areas for approval

	Conifer	Broadleaf
Clear felling	53.1Ha	0.0Ha
Restocking/Underplanting	16.3ha	0.8ha
New planting (see appendix 4)	0.0ha	

1. I apply for **Forest Design Plan** approval for the property described above and in the enclosed Forest Design Plan.
2. * I apply for an opinion under the terms of the **Environmental Impact Assessment (Forestry) (Scotland) Regulations 1999 for afforestation/road building** as detailed in my application.
3. I confirm that the initial scoping of the plan was carried out with FC staff in 2014
4. I confirm that the proposals contained in this plan comply with the UK Forestry Standard.
5. I confirm that the scoping, carried out and documented in the Consultation Record attached, incorporated those stakeholders which the FC agreed must be included.
6. I confirm that agreement has been reached with all of the stakeholders over the content of the design plan and that there are no outstanding issues to be addressed. Copies of consultee endorsements of the plan are attached.
7. I undertake to obtain any permissions necessary for the implementation of the approved Plan.

Signed 
Forest District Manager

Signed 
Conservator

District Dumfries & Borders

Conservancy South Scotland

Date 16/2/17

Date of Approval 9/2/2017

Date approval ends: 8/2/2027



Certificate of Approval for Tree Felling

This is to certify that tree felling under

**Forest Plan ref. 035715025
Falside Land Management Plan**

*has been approved by the Forestry Commission as
being in accordance with Government policy for the
sound management of a renewable resource.*

*This certificate is valid for the felling
done under felling licence number 1,
issued for the above Forest Plan.*

Signed

Forestry Commission Officer

Date 9/2/2017

Licence to Fell Growing Trees

In respect of: **Falside Land Management Plan**

1. This licence gives permission under section 10 of the Forestry Act 1967 (as amended) to fell only the trees specified for felling in the approved Forest Plan current at the time this licence is issued, and which bears the same reference number as this licence.
2. This licence is valid for a minimum of one year from the date it is signed and will then expire on the date on which the Forest Plan expires or is terminated.
3. Where the Forest Plan does not specify restocking work, this licence unconditionally approves the felling work on that part of the land.
4. Where the Forest Plan specifies restocking work, this licence approves the felling work on that part of the land, on the conditions set out in the schedule below.
5. If a Tree Preservation Order is placed on any of the trees after this licence is issued, the consent of the Local Authority must be obtained before they are felled
6. Others involved with the felling should be told about this licence e.g. by giving a copy of the licence and map to the person felling the trees. If the land is sold, the new owner should also be told about this licence.

NOTE In England and Wales, this felling licence will not cover the felling of trees to which a Tree Preservation Order applies or which are in a Conservation Area if the existence of the Order or Area has not been declared in the Forest Plan.

Signed  Date 9/2/2017
For Forestry Commission

Schedule

1. Each part of the land on which the felling takes place, or other land as may be specified in the Forest Plan, must be restocked in accordance with the requirements of the UK Forestry Standard and the rules and practice of good forestry using:-
 - (a) the planting and regeneration operations; and
 - (b) the species of tree;set out in the Forest Plan for that part of the land.
2. For each part of the land, Condition 1 above will be carried out by the end of the first full planting season after felling, or at such other times as may be agreed and set out in the approved Forest Plan.
3. For a period of 10 years after the restocking or planting;
 - (a) the trees will be adequately protected and weeded; and
 - (b) losses will be replaced to provide a stocking no less than the minimum required by the UK Forestry Standard or as may be specified in the Forest Plan.

Falside Land Management Plan 2015- 2025

FOREST ENTERPRISE - Application for Forest Design Plan Approvals in Scotland

Forest Enterprise - Property

Forest District:	Dumfries & Borders Forest District
Woodland or property name:	Falside
Nearest town, village or locality:	Chesters
OS Grid reference:	NT65781178
Local Authority district/unitary	Scottish Borders

Areas for approval

	Conifer	Broadleaf
Clear felling	73.4Ha	0.0Ha
Restocking/Underplanting	16.3ha	0.8ha
New planting (see appendix 4)	0.0ha	

1. I apply for **Forest Design Plan** approval for the property described above and in the enclosed Forest Design Plan.
2. * I apply for an opinion under the terms of the **Environmental Impact Assessment (Forestry) (Scotland) Regulations 1999 for afforestation/road building** as detailed in my application.
3. I confirm that the initial scoping of the plan was carried out with FC staff in 2014
4. I confirm that the proposals contained in this plan comply with the UK Forestry Standard.
5. I confirm that the scoping, carried out and documented in the Consultation Record attached, incorporated those stakeholders which the FC agreed must be included.
6. I confirm that agreement has been reached with all of the stakeholders over the content of the design plan and that there are no outstanding issues to be addressed. Copies of consultee endorsements of the plan are attached.
7. I undertake to obtain any permissions necessary for the implementation of the approved Plan.

Signed Alan Brumie
Forest District Manager

Signed.....
Conservator

District Dumfries & Borders

Conservancy South Scotland

Date 27th Jan '16

Date of Approval

Date approval ends:

Falside Land Management Plan 2015- 2025

Summary sheet (UKWAS requirement)

Description	Percentage of Forest block	Location of data
Restock main conifer species	43%	Forester restock layer
Restock other conifers species	21%	Forester restock layer
Open space	21%	Forester restock layer
Native broadleaves	15%	Forester restock layer
Managed for conservation/biodiversity	19%	Forester management layer
Long Term Retentions	1%	Forester management layer
Natural reserve – plantation	0%	Forester management layer
Natural Reserve – AWS	1%	SNH AWS layer cat 1a

We manage Scotland's National Forest Estate 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.



FSC® C011771
The mark of responsible forestry



Falside Land Management Plan 2015- 2025

Contents

Summary of Proposals

1.0 Introduction:

- 1.1 Setting and context
- 1.2 History of plan
- 1.3 Planning context

2.0 Analysis of previous plan

- 2.1 Lethem
- 2.2 Peel
- 2.3 Hyndlee (East)

3.0 Background information

- 3.1 Physical site factors
 - 3.1.1 Geology Soils and landform
 - 3.1.2 Water
 - 3.1.3 Climate
- 3.2 Biodiversity and environmental designations
 - 3.2.1 National Designations
 - 3.2.2 Open Habitats
 - 3.2.3 Woodlands
 - 3.2.4 Protected Species
 - 3.2.5 Deer Population
- 3.3 The existing forest
 - 3.3.1 Age structure, species and yield class
 - 3.3.2 Access
 - 3.3.3 LISS potential
 - 3.3.4 Current and potential markets
- 3.4 Landscape and landuse
 - 3.4.1 Landscape character and value
 - 3.4.2 Visibility
 - 3.4.3 Neighbouring landuse
- 3.5 Social factors
 - 3.5.1 Recreation
 - 3.5.2 Community
 - 3.5.3 Heritage
- 3.6 Statutory requirements and key external policies

4.0 Analysis and Concept

- 4.1 Analysis

Falside Land Management Plan 2015- 2025

4.2 Concept

5.0 Forest Design Plan Proposals

5.1 Management Type

5.1.1 Clearfell

5.1.2 Minimum Intervention

5.1.3 Continuous Cover/Low Impact Silvicultural Systems

5.1.4 Long Term Retentions

5.1.5 Natural Reserves

5.2 Future Habitats and Species

5.3 Restructuring

5.4 Operational Access

5.5 Thinning Plans

5.6 Deer management

5.7 Management of open land

5.8 Public Access

5.9 Heritage Features

5.10 Critical success factors

Appendices:

- I Design plan brief
- II Consultation record
- III Tolerance table

Falside Land Management Plan 2015- 2025

Support documents: Maps

1. Location map
2. BGS Bedrock Map
3. FC Soil Classification Map
4. Landform Analysis Map
5. Aspect Map
6. Slope Map
7. Climate Scores Map
8. DAMS Scores Map
9. Landscape Character Type Map
10. Species Composition Map
11. Age Class Map
12. Yield Class Map
13. Historic Landscape Map
14. Year of Mean Maximum Annual Increment Map
15. Current Forest Design Plan Management Map
16. Current Forest Design Plan Future Habitats and Management Map
17. Analysis and Concept Plans
18. Management Map
19. Future Habitats and Management map
20. Thinning Coupe Map
21. Carter Bar Viewpoint Analysis and future visualisations

Falside Land Management Plan 2015- 2025

Summary of Proposals

This is the third review of forest design plan for this area, in the past two decades there has already been significant effort towards restructuring, and this latest plan builds upon that principle. This plan continues to recognise the challenge of diversifying even aged first rotation stands, with the threat of windthrow, and felling shapes and timing have been carefully considered.

The forest will predominantly remain a productive conifer plantation, the main species being Sitka Spruce (around 43% of the forest). Secondary conifer species planned for restocking are, Scots pine Douglas fir and Norway spruce. There are also proposals to plant areas of Western Red Cedar on suitable sites. Although Larch does not feature in the first 10 year of restocking, it has remained an important part of future plans, depending on the outcome of the phytophthora ramorum outbreak further west.

The area of native broadleaves in Falside will also increase from 35.5ha in 2015 to 52.6ha in 2026. This increase is will mainly due to a productive Oak and birch stand being planted on the fertile slopes of Roughleenook hill.

The continued recruitment of native riparian zone broadleaves along the Jed water is an important aspect of this plan. There is also a proposal to have a small amount of productive Birch/Oak acting as a buffer to the important native woodland natural reserve at Mervinslaw.

This design plan proposes the construction of 1322m of new forest roads, which is required to give an alternative access to the South of Clessley Plantation.

Due to the large amount of premature felling in previous plans there has been a change to the coupe layout in the forest. The design plan proposes 53.1ha of clearfelling, which will produce an estimated 26,584m³ of timber in the first 10 year period. Although clear fell remains the most common management technique, the average coupe size has reduced from 23.9ha to 18.1ha. The average annual clearfell cut proposed in this FDP is 4334m³

Falside Land Management Plan 2015- 2025

Thinning has also been looked at as part of the design plan. There is an estimated 7,000m³ of potential thinning to be removed from Falside in the next 10 years.

Critical Success Factors

1. The continued stability of the first rotation crops assigned for later phase clearfelling.
2. Adequate protection for softer conifer and broadleaf species to be established
3. Continued riparian zone broadleaf recruitment.

Falside Land Management Plan 2015- 2025

1.0 Introduction:

1.1 Setting and context

This plan covers the operational proposals for the next 10 years of a rolling 35 year plan. The complete outline is attached for context, with supporting maps, long term felling and restocking proposals with relevant tables detailing future age structure and species composition.

This is the third land management plan revision for Falside forest totalling some 589ha of predominantly plantation forestry located close to the village of Chesters.

The extent of the plan is detailed on the Location Map.

All operations will be carried out to internationally recognised forestry standards as required under UK Woodland Assurance Scheme (UKWAS) and Forest Stewardship Council (FSC).

This forest is part of Dumfries and Borders Forest District and is certified by the Forest Stewardship Council (FSC) and Programme for Endorsement of Forest Certification (PEFC). Certified woodlands are subject to regular audit by an independent audit body against the requirements of UK Woodland Assurance Standard (UKWAS). UKWAS is the independent certification standard for verifying sustainable woodland management in the UK.

Falside Land Management Plan 2015- 2025

1.2 History of the site

Prior to afforestation Falside was predominately rough grazing, with a small amount of improved grazing surrounding the Roughlee property (which has moved from its original location). The grazing was broken up by a series of shelterbelt plantations. These have been removed during afforestation.

There is one area of ancient woodland adjacent to the Jed Water.

Falside was afforested in two stages

- The majority of the landholding was acquired in 1970 and planted in 1977/78
- Falside farm acquisition 1990 and planted in 1996

Strategic timber production was the main objective for the area. Many of these first rotation crops have been thinned and are beginning to approach maturity.

1.3 Planning Context

The management of Forestry Commission Scotland's NFE (National Forest Estate) is guided Strategic Directions for the national forest estate.

These strategic directions are described in 'The role of Scotland's National Forest Estate and Strategic directions for 2013-2016' document. The key themes that link with Falside are;

- Productive
- Cared for
- Healthy
- Accessible

Relevant issues under the SFS and Dumfries and Borders Forest District Strategic Plan Key Themes are identified in the design brief in appendix I.

Falside Land Management Plan 2015- 2025

2.0 Analysis of previous plans

The second revision of the Falside forest design plan expires on 31/3/2016.

The strongest influences on the previous management of Falside related to the conservation of biodiversity (specifically the enhancement of the Jed water and its attached ancient woodland site).

There has been a disappointing amount of native broadleaf colonisation in the riparian zones in this area. Planted alder and some willow have established but little else. This should be closely monitored in this plan period.

The area of Juniper in the forest have been protected and enhanced with cuttings taken and planted at suitable sites elsewhere in the forest.

Restructuring the forest started in 2004/05 with the felling of 5 coupes prematurely. Three coupes phased in the previous plan, these were all felled and produced good quality Sitka Spruce crops. The double mole bore contour ploughing in some coupes caused some operational issues for access and in achieving OGB4 even spacing of crops during restocking. However these second rotation crops are establishing well and will produce good quality sawlogs when felled.

Thinning has been also been successfully carried out over large areas of the forest.

There has been one small area of windblow (3ha) that was felled using the tolerance tables in the forest design plan.

Two new roads were built in the last plan period to access first the first thinning at Clessley plantation and felling coupes at Appletree burn.

One amendment to the plan was submitted, this was to restock the felling coupe adjacent to the Jed Water ancient woodland with oak and birch rather than Sitka spruce to further enhance and protect this feature. At the time of writing this is awaiting planting in the winter of 15/16.

Landscape sensitivity was judged as relatively low although the forest is visible on the horizon from the Carter bar "iconic" viewpoint.

3.0 Background information

3.1 Physical site factors

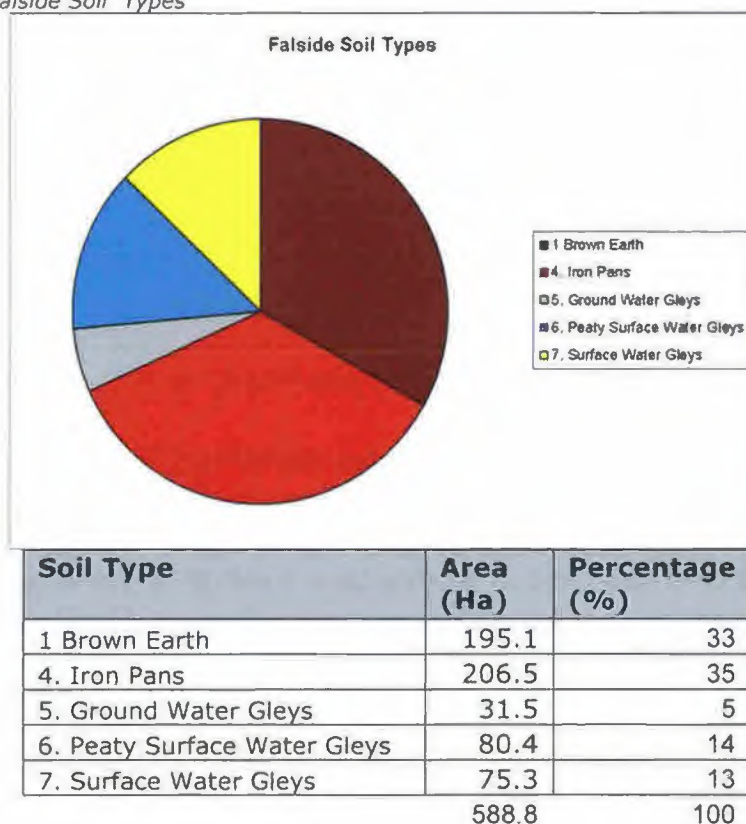
3.1.1 Geology Soils and landform

There are a mixture of bedrocks under Falside the most dominant being sandstone derived. This bedrock produces soils with a sandy texture that are freely draining. There are areas of greywacke within the forest bedrocks that produce more clay based soils types with poorer drainage characteristics. There is also an area of mafic igneous rocks, these are rocks that are rich in ferrous minerals. For further information refer to the Falside bedrock map.

A detailed soils survey has been carried out in the forest.

Over the forest there is a wide variety of soil types. The different types are displayed in the figure 1 below;

Figure 1; Falside Soil Types



For spatial reference refer to the FC Soil classification Map.

Falside Land Management Plan 2015- 2025

The topography in the forest changes from a gently sloping ridgeline running North East South West to the north of the C31 minor road, to the steeper slopes of Mervinlaw which is south of the road. These steeper slopes are incised by gullies that feed into the main river valley of the Jed Water.

Elevations in the forest range from 150masl in the low ground in the Jed Water Valley, to 354masl on Feast Knowe. For further information please refer to the Landform analysis plan and slope maps.

Aspects across the forest are illustrated on the Aspect map. The shows that the forest has no dominant aspect, with a range of site types.

The geology, soils and landform within Falside give scope to grow a variety of timber species. Restocking should be carried out using species that are suitable for the soil type and exposure of the site.

3.1.2 Water

Falside falls within Jed Water catchment area. This watercourse flows on into the Teviot and then the River Tweed at Kelso.

The Jed Water flowing around the southern boundary of the forest is designated as part of the River Tweed SAC.

SEPA has River Basement Management Plans (RBMP) for the Scottish water courses. The RBMP identifies the status and the threats of each catchment (2008) and promotes management to achieve an overall good status or at least ensure no deterioration in status.



Jed Water River Valley at Mervinlaw August 2015

Falside Land Management Plan 2015- 2025

Jed Water

The current status of these water bodies is good with high confidence. There are no pressures on this water body. Additional/new riparian buffers will be created at time of first rotation felling and second rotation restocking. These extra buffers will increase the quality of the water in these watercourses.

Water Management

All operations within the forest will adhere to the forest and water guidelines, which will protect aquatic habitats within the forest. Improvements to drain layouts during restocking and road maintenance operations will be carried out to best practice. Water acidity is not considered to be a problem in this particular area.

An increase in minimum intervention and natural reserves will help maintain tree cover and slow down any run off associated with clear fell management techniques.

Within the forest there are two private water supplies. These will be identified and provisions made in the restocking plan to protect the area around the supplies.

3.1.3 Climate

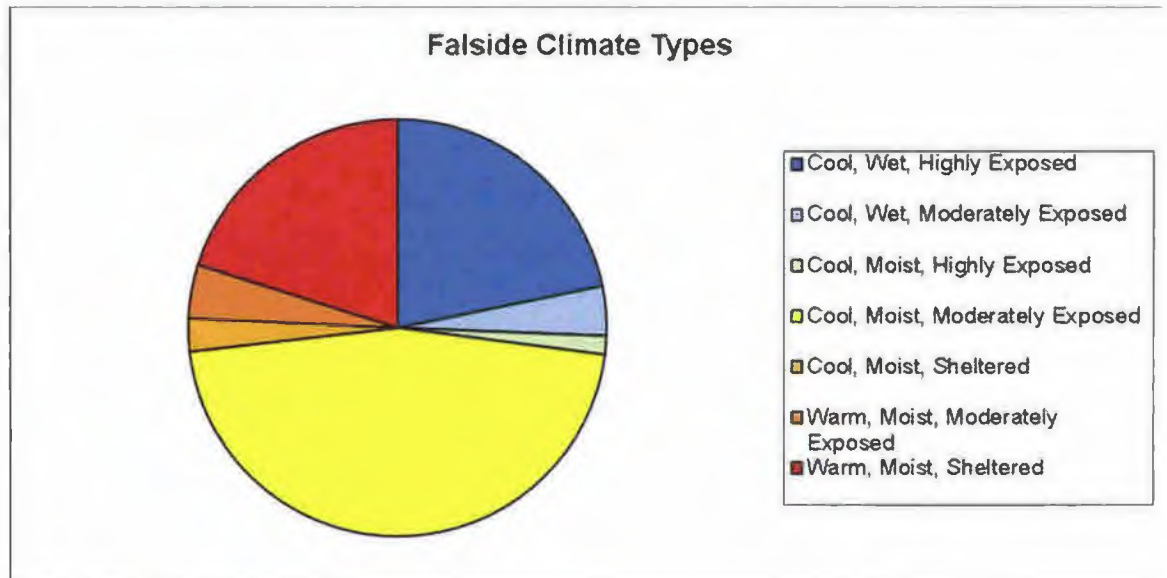
Current climate

Falside offers a variety of different climate types ranging from cool, wet highly exposed, to warm, moist, sheltered. The breakdown in terms of areas of these climate zones are illustrated on the figure 3.

Figure21;Falside Climate Types

Climate Zone	Area (ha)
Cool, Wet, Highly Exposed	128
Cool, Wet, Moderately Exposed	22.6
Cool, Moist, Highly Exposed	8.5
Cool, Moist, Moderately Exposed	271.6
Cool, Moist, Sheltered	15.1
Warm, Moist, Moderately Exposed	24.5
Warm, Moist, Sheltered	118.6

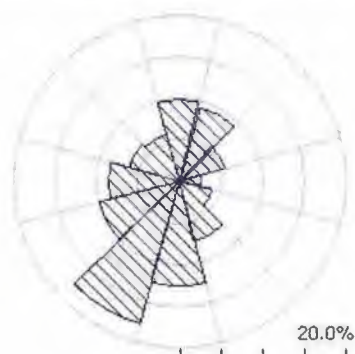
Falside Land Management Plan 2015- 2025



The climatic zones will have to be considered when planning restock species in the forest. For further spatial information please refer to the Climate Data Map.

The Detailed Aspect Method of Scoring (DAMS) give a wide range of scores. The Jed water valley has a DAMS score of less than 10, whereas the tops Feast Knowe the DAMS score are 18-20. In terms of area 438.9ha or 74% of the forest is theoretically thinnable, with DAMS scores of 16 or less. In reality the actual thinnable area will be less due to access, soils and slope constraints. For further information please refer to the DAMS scores map.

Figure 3: Eskdalemuir Wind Rose (located 42 km to the west of the forest)



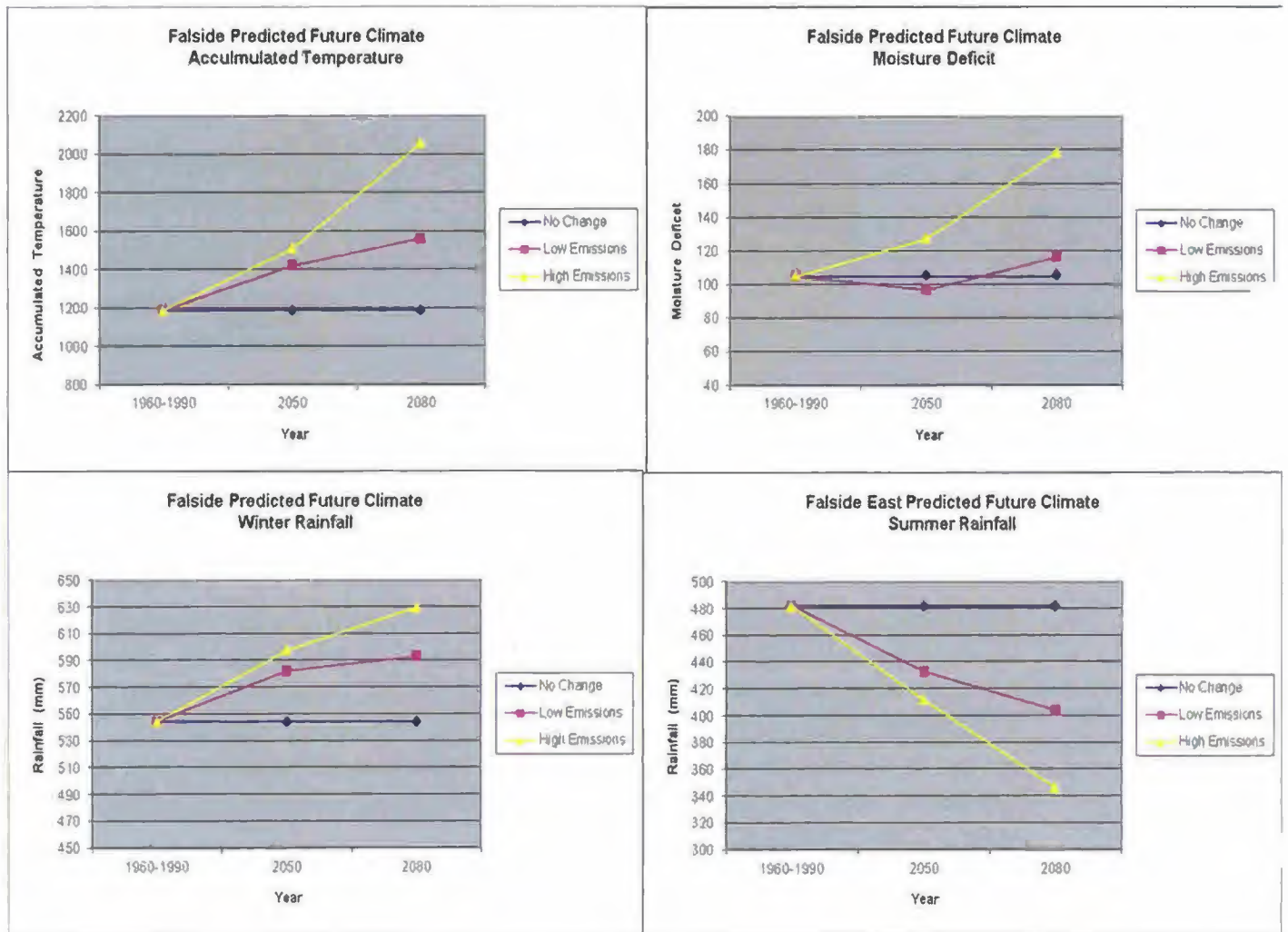
Prevailing winds are from the Southwest as illustrated in figure 4:

This prevailing wind direction should be considered when planning felling coupes and windfirm edges.

Falside Land Management Plan 2015- 2025

For future climate predictions we have used the ESC tool to consider the 2050 and 2080 low and high emissions scenario data for this area. The findings of this study are illustrated in figure 4;

Figure 4: Falside Future Climate Predictions



The key points to take from this data are;

- The area will be warmer with a longer growing season.

This will enable us to explore the use of some alternative conifer and broadleaf species in the next and future rotations.

- The moisture deficit (wetness) will be drier.

Looking at future ESC limiting factors soil moisture regimes are the restricting factor for many species.

Falside Land Management Plan 2015- 2025

There are no windiness predictions available in the data. Although it is assumed that storm events will be more common in the future. Coupes should be designed to be robust to future wind events

Ecological Site Classification (ESC) can also list species suitability for the site in the future and the following species are predicted to be suitable or very suitable in 2050 following high emissions scenario;

- Lodgepole Pine
- Macedonian Pine
- Sitka Spruce
- Western Red Cedar
- Lawsons Cypress
- Downy birch
- Aspen
- Red Alder, Grey Alder
- Cider Gum

The main limiting factor for other species is Soil Moisture Regime. It would be possible to grow other species on the more gleyed soils in the site.

3.2 Biodiversity and environmental designations

3.2.1 National Designations

The Landscape character assessment map shows that there are two special landscape areas surrounding Falside.

To the east of Falside are the Cheviot foothills. The viewpoint at Carter Bar also receives special mention in the designation.



View of Falside Forest from the Carter Bar Viewpoint (October 2015)

Falside Land Management Plan 2015- 2025

The area to the north west of the forest forms the Teviot Valleys special landscape area. Within the management recommendations for this site it promotes the restructuring of forests in this area, which is something we will be doing in this plan.

Although Falside itself does not fall within these designated sites the coupes should be sensitively designed so they do not detract from the surrounding landscape.

As part of this plan future visualisations illustrating the coupe design will be created from the iconic Carter bar viewpoint.



The Jed water running along the boundary of Mervinslaw is a Special Area of Conservation (SAC) and forms part of the wider River Tweed SAC. This site is designated for its internationally important array of fish (lamprey and salmon), mammal (otters) and vegetation (rivers with floating vegetation often dominated by water-crowfoot). The entire forest drains into this important habitat.



Views of developing Riparian Native Woodland on the Jed Water August 2015

Falside Land Management Plan 2015- 2025

3.2.2 Open Habitats

An open habitat survey has been carried out for Falside in the summer of 2013. It highlighted two main types of important UKBAP open habitat sites within the forest;

W19 Juniperus communis spp.

There is one main area of mature Juniper shrubs running along the south east slopes of kiln burn. These are associated with some coarse grassland and rush mire. There is some evidence of shoot dieback on some of the mature shrubs. The reason given for this is the advanced age of the shrubs in this area.

Tests have been carried out and confirm no *Phytophthora austrocedri* in the shrubs. This dieback will be closely monitored during this management plan period. The main threat stated in the open habitat report is the lack of young juniper plants in the area. To mitigate this cuttings have been taken and propagated at Delemere nursery. These plants have been planted in shrub shelters at other suitable sites within the forest and in other forests in the area.



Juniper Shrubs showing some dieback amongst bracken August 2015



Aerial photo with important Juniper area highlighted. August 2015

Sedge Fen/ Swamp

Falside Land Management Plan 2015- 2025

Small areas of sedge fen have been identified running along the Jed water. These areas fall within the riparian corridor that has been designated as mixed native broadleaves and open space. This designation will protect the fens from afforestation in the future. The wet nature and dense vegetation associated with these sites should prevent conifer natural regeneration occurring, but this will be monitored and removed as part of continued open habitat survey.



*Aerial View of
August 2015*

Sedge fen/Swamp

3.2.3 Woodlands

There are 6.1ha fragment of ancient woodland that runs along the Jed water to the east of Mervinslaw. This is rare and valuable in the context of the Scottish borders and has a detailed management plan written by Richard Thompson (FES native woodland Ecologist) which can be viewed in the appendices. This woodland exhibits a number of fine veteran ash oak and alder as well as some excellent standing deadwood with associated rare saproxylic invertebrates and fungi.



Mervinslaw Wood Pasture Ancient Woodland Site August 2015

Falside Land Management Plan 2015- 2025

This land management plan will look to provide habitat links and buffers with this important site.

Looking at the first edition ordnance survey maps none of the



Peel burn veteran Alder and Oak August 2015

woodland farm copses that existed prior to afforestation are present. There are isolated veteran trees that run along the Peel Burn and Clessely plantation burn that appear on these maps.

These isolated trees would have been too small to map as part of the native woodland survey but are interesting features and should be protected by this forest design plan.

During the past design plan period there has been broadleaf planting particularly around riparian zones.

The best examples of these are those which have had some form of protection from browsing damage (1.2m tree shelters or deer fencing)

This design plan should look to continue to improve these habitat links throughout the forest.

3.2.4 Protected Species

There is currently limited knowledge about raptor presence in the area, however recent thinning operations and the resultant opening up of dense conifer stands are likely to increase raptor presence in the future. As there are Schedule 1 raptor species in nearby forest blocks, future colonisation is a strong possibility. Barn owls, another Schedule 1 species currently successfully breed within the forest boundary. These known nest sites – artificial and natural - are monitored closely throughout the year and any chicks ringed. There are confirmed raven sightings in the area although nest locations are currently not monitored.

Falside Land Management Plan 2015- 2025

Otter sightings have been recorded for the Jed Water and are likely to be a consideration in all water courses in the area.

Numerous and sizeable badgers setts throughout the area are surveyed, monitored and marked on constraints maps to avoid damage or disturbance during forestry or civil engineering operations. The majority of these are located near the northern forest boundary giving easy access to the open farmland beyond.

3.2.5 Deer Populations

In terms of Deer management Falside is combined with Wauchope West (Shankend, Whitrope and Wauchope Burn), Wauchope East (Lethem, Peel, Hyndlee) and Swinnie to form a management unit which totals 9071ha.

The only species at the moment in the management unit is Roe Deer. The control in Falside is carried out using a deer management permission.

Population as of August 2012 was 7.7 per 100ha. Our forecast is for a gradual sustainable reduction with a target population of 5 per 100ha over the next 5 years.

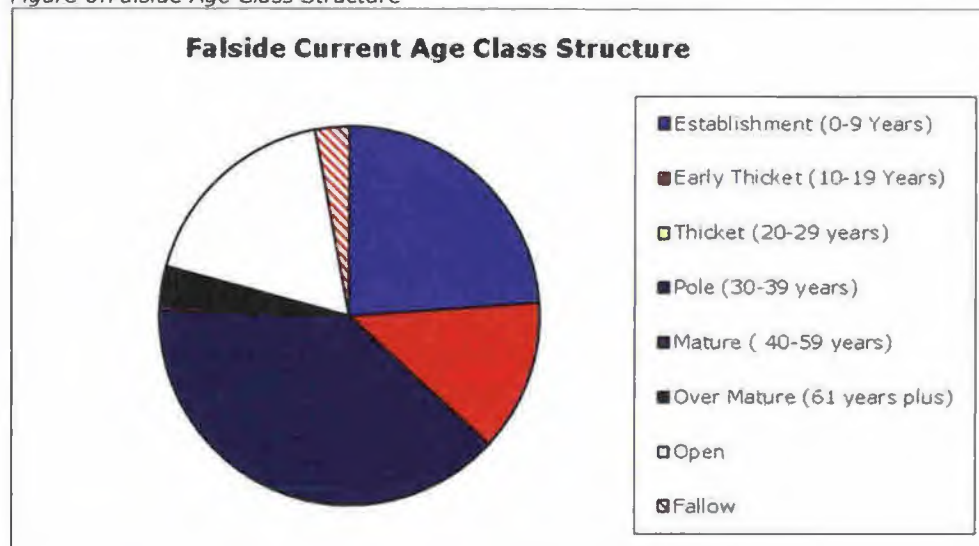
See section 5.6

3.3 The existing forest:

3.3.1 Age structure, species, yield class and management types

The current age class of the forest is illustrated in figure 6;

Figure 6: Falside Age Class Structure



Falside Land Management Plan 2015- 2025

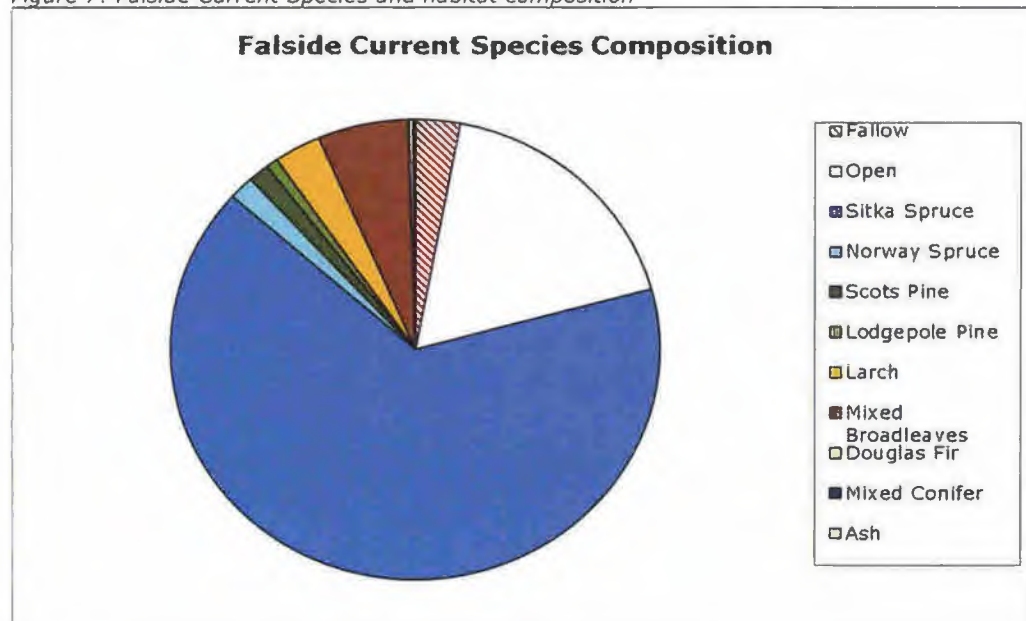
Age Class	Area (Ha)
Establishment (0-9 Years)	140.8
Early Thicket (10-19 Years)	76.4
Thicket (20-29 years)	0
Pole (30-39 years)	227.5
Mature (40-59 years)	2.9
Over Mature (61 years plus)	19.7
Open	105.2
Fallow	17.4

589.9

Looking at the figures it can be seen that Falside has begun restructuring. The last design plan has felled coupes early to fast forward this process. This plan will phase coupes so that the shortfalls in mature crops are increased.

Figure 7 displays the current species composition of Falside;

Figure 7: Falside Current Species and habitat composition



Falside Land Management Plan 2015- 2025

Species	Area (ha)
Fallow	17.4
Open	105.2
Sitka Spruce	388.2
Norway Spruce	9.9
Scots Pine	8.1
Lodgepole Pine	4.7
Larch	18.5
Mixed Broadleaves	35.2
Douglas Fir	1.9
Mixed Conifer	0.5
Ash	0.3

589.9

Falside is currently dominated by Sitka spruce which occupies 66% of the forested area. It is envisaged in this plan that SS will still continue to be the dominant species but opportunities to diversify the conifer composition should be investigated in the areas where other species are deemed suitable.

The native broadleaf elements of the forest will also increase as targeted planting of broadleaves along riparian corridors and buffers to the existing native woodland is undertaken.

The forest has a range of yield classes that are displayed spatially on the Yield class map.

Although yield class is a good indicator of tree growth generally it is also species specific. Some of the lower yield classes displayed are from slower growing species such as Scots Pine or Larch.

Figure 9 below illustrates the coupe management types within the forest.

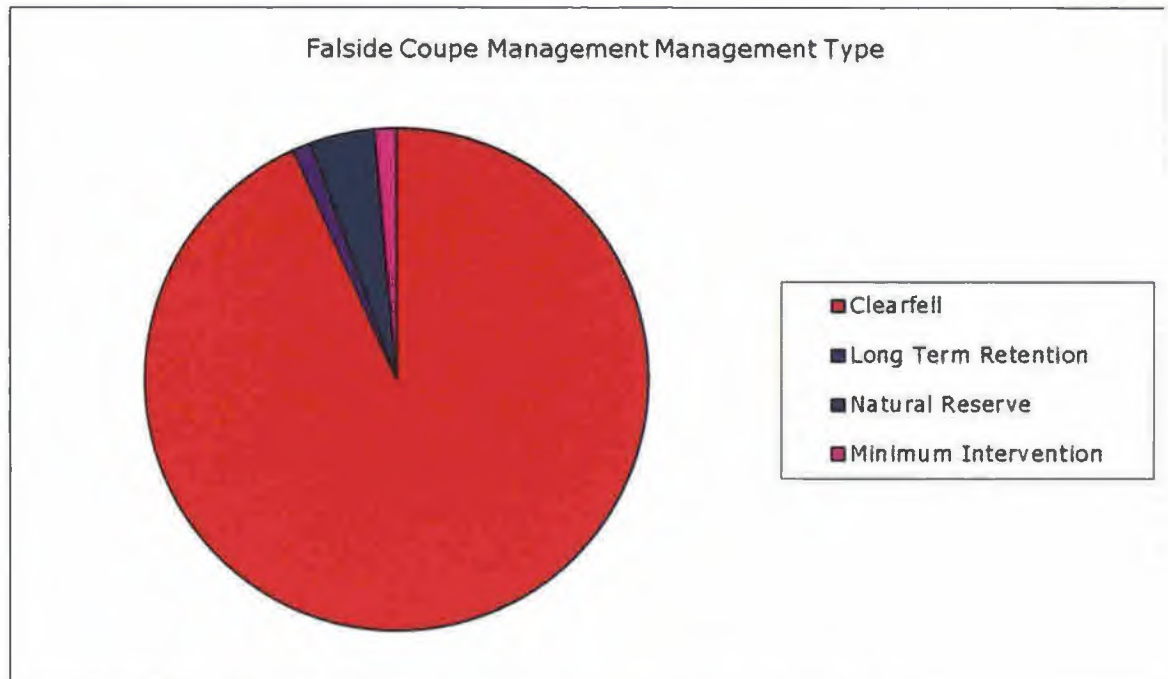
Figure 9: Falside Coupe Management Types

Coupe Management Type	Area (ha)	Area (%)	Comments
Clearfell	549.3	93	Including open streamsides, roads etc
Long Term Retention	6.9	1	Coupes with a delayed felling year
Natural Reserve	24.3	4	Coupes With no planned Management intervention
Minimum Intervention	8.4	1	Coupes with minimal management intervention

588.9

100

Falside Land Management Plan 2015- 2025



Clearfell is the most common management practice, and will continue to be into the future.

3.3.2 Access

With large areas of private and state owned productive forests in the area, strategic management of timber transport is essential. Timber transport from Falside to the processing plants within the South of Scotland is considered, along with privately owned forests, as part of the Scottish Borders Timber Transport Group. This group aims to minimise impact to roads and communities through agreeing route solutions.

Public road access to the forest is from the C31 between Chesters and Earlsheugh on the A68. This is a recognised timber haulage route with no restrictions.

There are 4 main threshold entrances into the forest which are listed below;

- Mervinslaw (NGR NT65971189) Servicing the forest to the south of the public road
- Roughlee (NGR NT65471156) Servicing the Clessely Hill plantation
- Falside (NGR NT64391140) Servicing the coupes around Belling Hill

Falside Land Management Plan 2015- 2025

- Knot of the Gate (NGR NT58860289) Servicing the south of Hyndlee and Lethem

The majority of the forest is well roaded with an ongoing upgrade and maintenance programme to make sure the forest roads are kept to specification.

There may be some road building detailed in this plan to access thinning and future clearfell coupes.

Public access is encouraged in all of these areas whether on foot, horseback, or bicycle. Public access within is managed under the Scottish Outdoor Access Code (SOAC).

3.3.3 LISS potential

There are areas of the forest that would be suitable for management using natural reserve and minimum Intervention that will be mapped out during this plan. These are areas of woodland which will be allowed to develop naturally, with limited management intervention in perpetuity.

There are sheltered areas in the forest which have programmed thinning regimes. These stable coupes give potential for conversion to continuous cover forestry but at the moment there is a low appetite for this form of management in Falside due to the increased management costs in a primary timber producing forest. Natural regeneration may be used to restock some of these coupes in the future.

3.3.4 Current and potential markets

Currently a large proportion of the timber produced from Falside is softwood which supplies the large scale processing sawmills in the area. This does not rule out hardwood and other diverse timber products, these are particularly relevant given the benefits species diversity can bring to other social and environmental management objectives. These opportunities will be considered and implemented as part of the plan.

3.4 Landscape and landuse

3.4.1 Landscape character and value

Falside Land Management Plan 2015- 2025

With reference to the Landscape Character and Landform analysis map it can be seen that all of the forest falls into the Cheviot foothills SNH landscape value.

The Cheviot foothills is a large scale landscape with a simple, open character. Distant views are frequently gained. Mixed landuse ranging from predominantly grassland, unimproved grasslands on the hill tops, forestry and shelterbelts, mean that the landscape is a diverse one.

There are two special landscape areas within the landscape type, the long standing cheviot foothills and the recently designated Teviot valleys SLA.

3.4.2 Visibility

Internal and External intervisibility is high, with moderate visual sensitivity as assessed in the Ash Consultancy Borders Landscape assessment.

Specifically for Falside, felling and restock coupe design will be considered from the iconic viewpoint of the Carter bar to reduce the impact of forest operations on this viewpoint. Further species diversification and increased broadleaf species will also help increase the visual amenity of the forest.

Opportunities should be taken to improve the woodland margins in this land management plan period.

3.4.3 Neighbouring landuse

There are a mixture of surrounding land uses including improved and unimproved grassland, rough grazed moor and new native woodland planting.

There are also privately owned forestry plantations. Where possible we will plan our felling coupe phasing, and restocking, to complement these forests and not compromise our own or adjacent crop stability.

Falside Land Management Plan 2015- 2025

3.5 Social factors

3.5.1 Recreation

There are no formal recreation facilities at Falside. There are no plans to develop any facilities during this land management plan period.

Access in forest is encouraged by FES under the Scottish Outdoor Access Code (SOAC) and is used regularly by horse riders and dogwalkers. There is a Public right of way through the forest although generally the walkers and horse riders stick to the forest roads and tracks.

3.5.2 Community

The communities around the forest are very much rural with scattered settlements and farmstead surrounding the forest. The closest village is Chesters, there are currently no formal links with the local community in this area.

The local community council will be consulted as part of this plan and a guided visit to the forest will be offered to interested parties.

3.5.3 Heritage

With reference to the Historic landscape map. There are no scheduled monuments within the forest boundary. The closest monument is the Mervinslaw Tower which lies just north of the boundary running along the peel. Operations planned in this land management plan will not negatively affect this monument.



Mervinslaw Tower August 2015

Falside Land Management Plan 2015- 2025

There are a number of heritage features highlighted on the feature layer but there is limited evidence of these existing on the ground. The suggested farmsteads lie in existing open space so these should be protected in this management plan. Any other features that are discovered will be protected using the workplan system.

3.6 Statutory requirements and key external policies

Other than the protected areas and features mentioned above there is no known statutory requirements and key external policies covering Falside.

4.0 Analysis and Concept

4.1 Analysis and Concept

The Analysis and Concept maps show detailed considerations of the factors that influenced the development of design and long term vision of this forest.

4.2 Concepts of the plan

The design concept has been graphically presented in the site analysis and design concept maps.

Falside Land Management Plan 2015- 2025

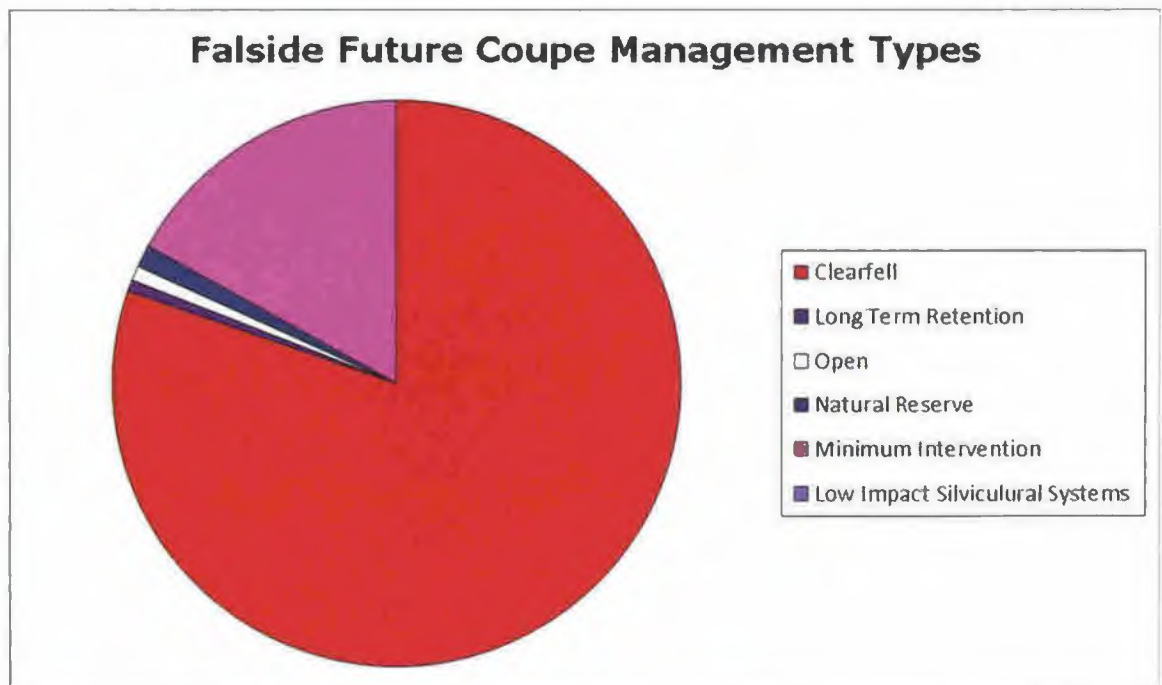
5.0 Land Management Plan Proposals

5.1 Management types

The Coupe Management types are illustrated in the figures 10 and the management map;

Figure 10: Falside Coupe Management type

Coupe Management Type	Area (ha)	Area (%)	Comments
Clearfell	473.1	80	Including open streamsides, roads etc
Long Term Retention	3.8	1	Coupes with a delayed felling year
Open*	5	1	Coupes classified as 100% open
Natural Reserve	7.5	1	Coupes With no planned Management intervention
Minimum Intervention	99.6	17	Coupes with minimal management intervention



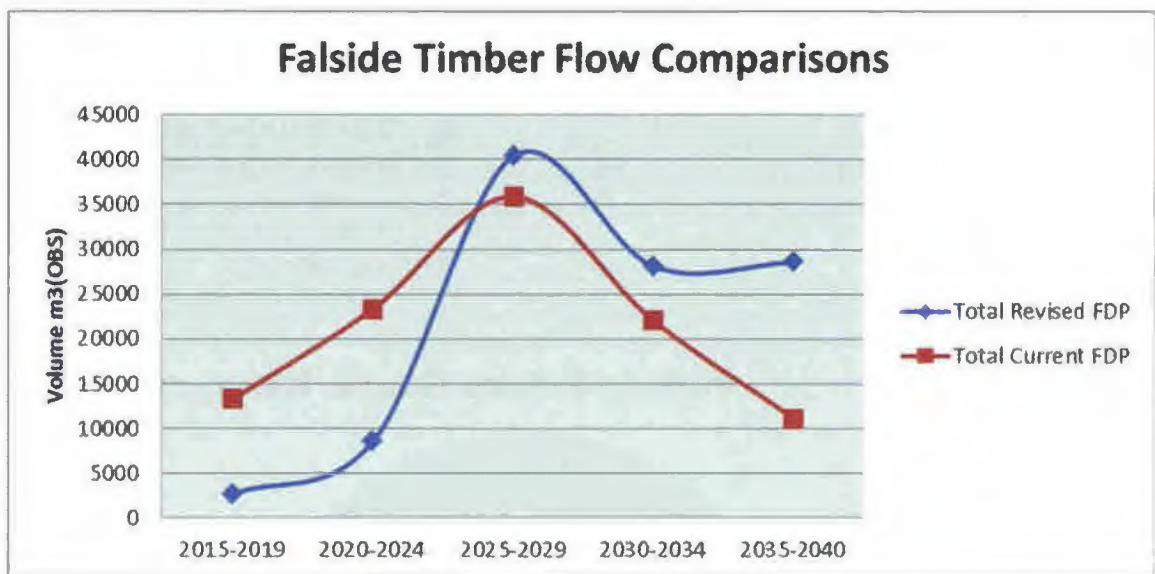
5.1.1 Clearfell

The majority of the forest will continue to be managed using traditional clear fell coupes. There will be 80% of the forest managed using this technique. Although this is the most common management type the average coupe size has been reduced from 23.9ha to 18.1ha. The predicted volume production over the next 25 years for the revised FDP is compared to the current FDP on figure 11;

Figure 11: Current and Proposed Land Management Plan Timber Streams

Falside Land Management Plan 2015- 2025

	Volume m3(obs)				
	2015-2019	2020-2024	2025-2029	2030-2034	2035-2040
Falside Revised LMP	2696	8543	40420	28112	28583
Falside Current FDP	13239	23315	35870	22043	11118



The revision of this plan has delayed the flow of timber from Falside. This is due to the retention of many of the clear fell coupes to felling dates that are closer matching to their year of MMAI. This will help offset the slowed production of other forests in this area during the 2030's.

The average annual cut for the revised plan area over the next 35 years is 4334m3. This is slightly more than the 4223m3 that would have been the average annual cut in the current plan.

Figure 12 illustrates the timings of the felling coupes for approval in the next 10 years of this forest design plan.

Falside Land Management Plan 2015- 2025

Figure 12: Falside Proposed felling Coupes for Approval

Coupe Number	Felling Year	Production Forecast Volume (m3)	Net Area (Ha)	Comments
61171	2019	2696	8.7	Clearfell of mature SS
61382	2020	6105	11.5	Clearfell of mature SS
61226	2021	2437	6.9	Clearfell site for restructuring
61003	2025	15346	26	Clearfell site for restructuring
Totals		<u>26584</u>	<u>53.1</u>	



The presumption is that the felling of the above coupes will not take place until the neighbouring restock areas have reached 2m. Where coupes have been blown down and cleared before neighbouring coupes reach 2m, adjacency issues will be dealt with through a delay in restocking, i.e. a coupe will not be restocked until all surrounding crops are at least 2m tall.

The sites listed in figure 12 will be conventionally restocked during this design plan period with fallow periods between 1 and 5 years depending on adjacency issues. Hot planting will be permitted if it alleviates future adjacency issues.

5.1.2 Minimum Intervention

Minimum intervention coupes cover 17% of the forest.

These areas are predominantly the riparian zones that are being left to gradually colonise with native trees following felling of plantation. Current biodiversity value is limited and the area is not predominantly wooded, therefore it would be inappropriate to classify this area as a Natural Reserve. Minimum Intervention is the appropriate classification in the short to medium term and, if a biologically rich native woodland community develops here in the future, it can be reclassified as a Natural Reserve. There may be some additional native woodland enrichment planting or conifer removal required in these areas during this design plan period. Sitka spruce regeneration will be removed from a minimum intervention riparian zones when it reaches 10% of the total

Falside Land Management Plan 2015- 2025

area. Predicted future broadleaf densities in the minimum intervention areas are specified on the future habitats and management map.



Developing riparian woodland adjacent to the Jed water, designated as minimum intervention (August 2015)

5.1.3 Continuous Cover/ Low Impact Silvicultural Systems (LISS)

There are no areas of LISS designated in this plan. However large parts of the forest have been well thinned and it is likely that natural regeneration could be used to restock some of the Sitka spruce sites using a uniform shelterwood system. A decision for these areas will be taken at the next design plan revision.

5.1.4. Long Term Retention

1% of the plan area is designated as long term retention. Generally these are stands of Scots pine and larch that are on the shoulders of the minimum intervention areas. These areas hold value for conservation as well as adding age and species diversity to the forest.

These stands will be held long past their economic felling age and although small in area are important character elements of the forest. Opportunities should be taken in felling coupes that are planned in the next ten years to identify similar areas and flag for retention.

Falside Land Management Plan 2015- 2025

5.1.4. Natural Reserves

Although they only cover a small area of the forest, Natural Reserves are extremely important for conservation. Natural reserves are predominantly wooded areas managed in perpetuity by minimum intervention. Conservation of biodiversity is the prime objective. The function of these reserves is to provide a continuity of habitat to allow sedentary species to establish and thrive. They can be put into two categories plantation (non-native) and ancient semi natural. There is one area of Natural reserve proposed in this plan, the ancient semi natural woodland at Mervinslaw.



Mervinslaw Wood pasture following removal of the adjacent conifer plantation

Looking at the detailed management plan written by Richard Thompson (FES native woodland ecologist) we will be carrying out the recommended short term management during the period of this plan. They are;

1. Significantly reduce deer impacts by culling.
2. Establish native woodland along the bank above the woodpasture to provide a buffer and scope for expansion of biodiversity remaining within the ancient woodland. Ash would have been an obvious choice for a proportion of this planting but in it's absence, Alder, Hawthorn, Hazel and Bird Cherry, Goat Willow are recommended on lower slopes whilst Oak (Pedunculate or Sessile), Rowan and Silver Birch are recommended on the upper bank.
3. Allow existing natural regeneration to establish and plant at a low density in areas without significant tree cover. Tree species would include Alder, Rowan, Holly, Hazel and Goat Willow.

Falside Land Management Plan 2015- 2025

5.2 Future Habitats and Species

The majority of the forest will be restocked using conventional methods. During this design plan period there are 2 coupes that are planned to be restocked in the 10 year period.

Figure 13 gives a detailed description of planned restock species in these coupes.

Figure 13: Falsidet Restock Coupes for approval

Coupe Number	Felling Year	Plant Year	Fallow	Gross Area (Ha)	Species	Net Area (ha)	Comments
61171	2019	2022	3	8.7	SS	5.3	SS planted to productive densities
					SP	1.6	SP planted to productive densities
					MB	0.3	Net area of planted native broadleaves
61382	2020	2023	3	11.5	SS	9.4	SS Planted to productive densities
					MB	0.5	Net area of planted native broadleaves
Totals				20.2		17.1	

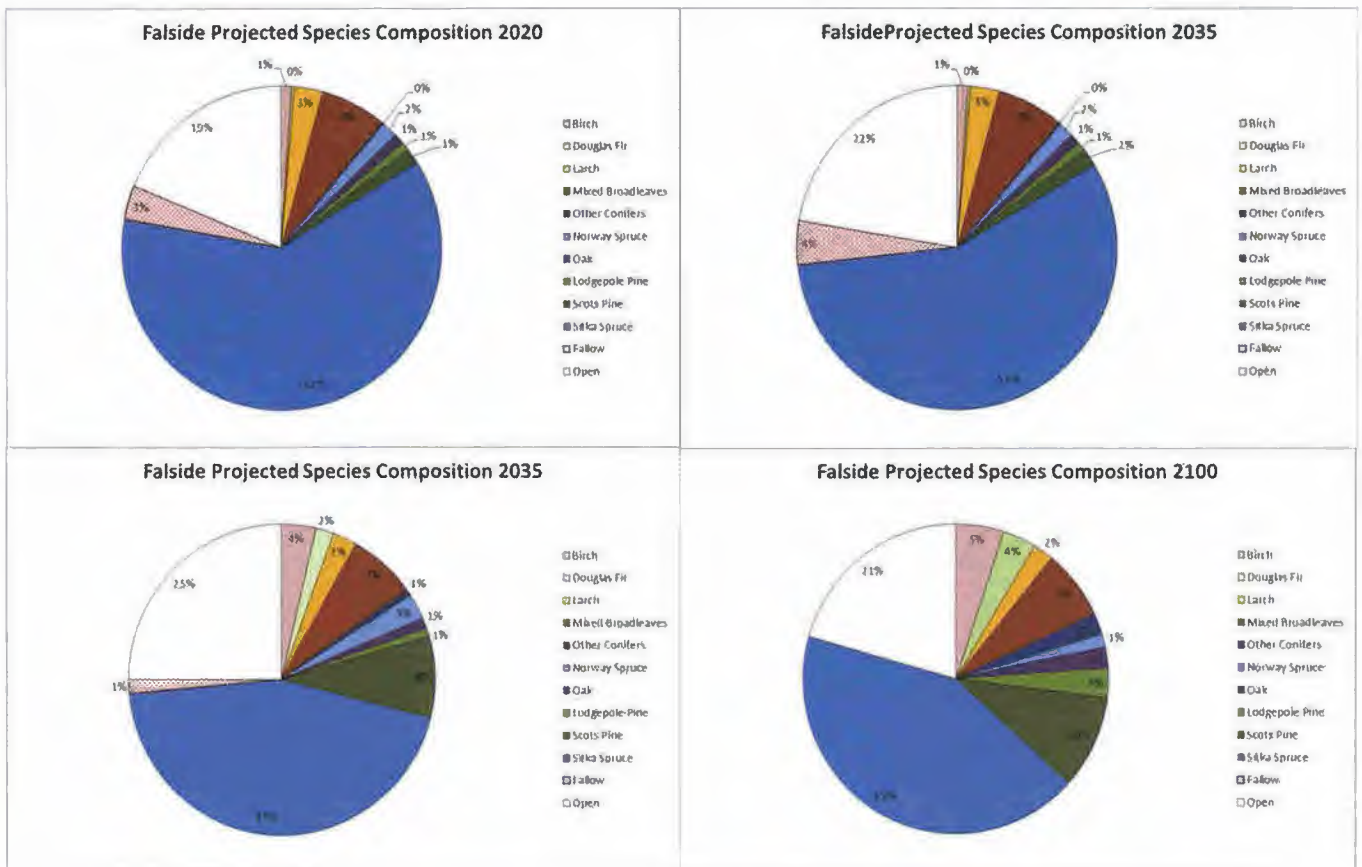
The native broadleaf planting detailed with the exception of Alder will be protected using 1.2m tubes and will be planted at 1600spha.

Figure 15 illustrates how the species composition will change throughout the design plan period and after this rotation;

Figure 15: Falside Future Species Composition

Species	Design Plan Year							
	2021	%	2026	%	2036	%	2100	%
Birch	6.4	1.1	6.4	1.1	21.9	3.7	29.9	5.1
Douglas Fir	1.7	0.3	1.7	0.3	11.2	1.9	20.6	3.5
Larch	17	2.9	17	2.9	14.9	2.5	12.7	2.2
Mixed Broadleaves	39.5	6.7	39.8	6.8	41.5	7.0	43.4	7.4
Other Conifers	1	0.2	1	0.2	4.2	0.7	13.1	2.2
Norway Spruce	9.3	1.6	9.3	1.6	15.7	2.7	8.2	1.4
Oak	6.4	1.1	6.4	1.1	6.4	1.1	12.8	2.2
Lodgepole Pine	4.9	0.8	4.9	0.8	5.1	0.9	18.5	3.1
Scots Pine	9.2	1.6	10.7	1.8	49.5	8.4	57.2	9.7
Sitka Spruce	363.2	61.7	334.4	56.8	262.9	44.6	251.4	42.7
Fallow	20.2	3.4	26	4.4	8.7	1.5		0.0
Open	110.2	18.7	131.4	22.3	147	25.0	121.2	20.6
	589	100	589	100.0	589	100.0	589	100.0

Falside Land Management Plan 2015- 2025



Over the next 25 years there is a marked reduction in the amount of Sitka spruce within the forest. This is replaced with increased Birch, Douglas fir and mainly Scots pine.

It should also be noted that the actual area of open space will be expected to reduce from the published figures as native broadleaves colonise the open space in the riparian zones through natural regeneration. The natural regeneration will be helped by targeted planted of native broadleaves in the restructuring detailed in this design plan. This planting will increase the future seed source in these areas.

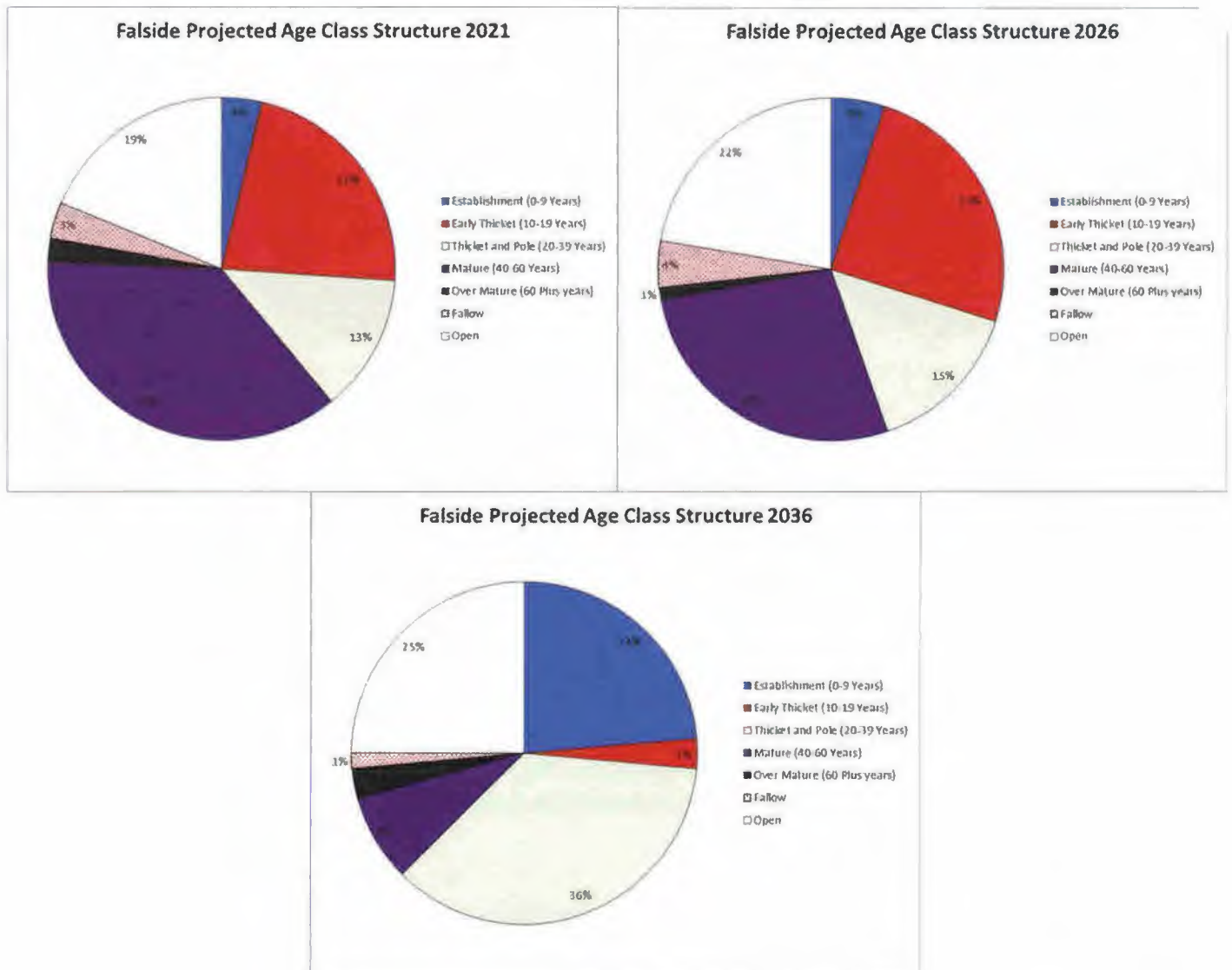
5.3 Restructuring

Figure 16 illustrates how the age class composition will change throughout the design plan period;

Falside Land Management Plan 2015- 2025

Figure 16 Falside future Age Class Composition

Age Class	Design Plan Year		
	2021	2026	2036
Establishment (0-9 Years)	22	29.5	139.3
Early Thicket (10-19 Years)	131.7	146.7	16.6
Thicket and Pole (20-39 Years)			
Mature (40-60 Years)	76.3	86.8	212.3
Over Mature (60 Plus years)	215.3	161.7	48.1
Fallow	13.3	6.9	17
Open	20.2	26	8.7
	110.2	131.4	147
	589	589	589



Restructuring has created a diverse age structure within Falside that will provide a steady sustainable flow of timber in the future.

Falside Land Management Plan 2015- 2025

5.4 Operational Access

The majority of Falside is well served with forest roads following road building in the last design plan revision. The one exception to this is the southern area of the Clessley Plantation acquisition.

This land management plan has outlined 1.8km of new forest roads. This layout will ensure that Falside is completely roaded. These new forest roads have been sited to avoid environmental impacts, and have been checked with the area civil engineer to ensure that the proposed road line is feasible in terms of gradient.

Of this 1.8km, 1.3km is needed to be built to assist access to a clear fell coupe phased for 2026, and therefore will form part of the approval. These roads are summarised in figure 17.

Figure 17; Falside Forest Roads for Determination

Forest Road Name	Proposed Build Year	Length (m)	Comments
Clessley Plantation Access	2024	1322	Access road Peel. This will be used for clearfell and future thinning access.
Total		955m	

For further spatial information please refer to the Management and the Future Habitats and Management Maps.

5.5 Thinning plans

For further spatial information refer to the thinning coupe map.

As part of this forest design plan revision a detailed thinning programme has been drawn up for the first 10 years. Operational access, soils, DAMS scores and previous thinning history have been assessed as part of this exercise.

The plan shows a number of second rotation crops coming up to the age of 1st thinning in the next 10 years. There has been an assumption made for growth rates of the younger crops that will be coming on stream towards the end of the 10 year period.

Figure 18 summarises the planned thinning operations over the period of the design plan;

Falside Land Management Plan 2015- 2025

Figure 18: Falside Planned Thinning Coupes

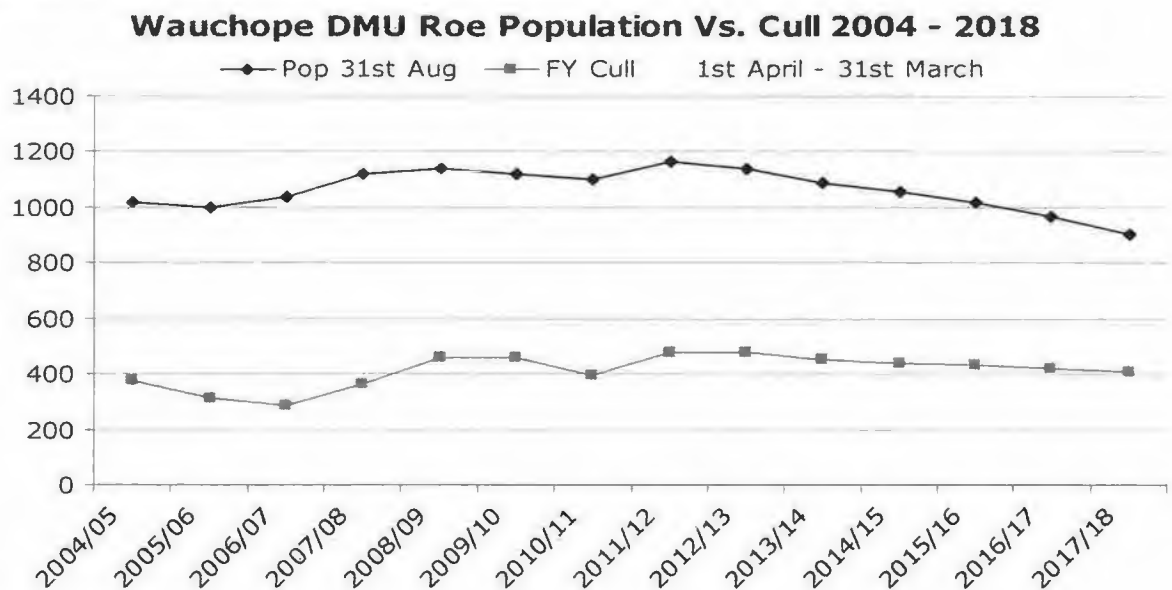
Coupe Number	Thinning Prescription	Operation Year	Gross area	Net Area	Estimated Volume (m3)	Comments
61503	2nd Thin	2017	26	22	880	2nd Crown thinning of 1st rotation SS
61503	2nd Thin	2018	24	20.4	816	2nd Crown thinning of 1st rotation SS
61503	2nd Thin	2022	26	22	880	3rd Crown thinning of 1st rotation SS
61503	2nd Thin	2023	24	20.4	816	3rd Crown thinning of 1st rotation SS
61504	1st Thin	2023	6	5.1	510	1st rack and matrix thin of 2nd rotation SS Crop
61502	1st Thin	2024	16	13.6	1360	1st rack and matrix thin of 2nd rotation SS Crop
61503	1st Thin	2024	26	22.1	2100	1st rack and matrix thin of 2nd rotation SS Crop
Totals			148	125.6	7362	

5.6 Deer Management

The future cull targets have been set to achieve less than 10% leader damage on all commercial tree species.

The annual deer cull for the whole of the Wauchope deer management unit will be set as indicated in figure 19;

Figure 19: Wauchope DMU Roe Population vs Cull 2004-2018



Falside Land Management Plan 2015- 2025

Should impact levels rise the cull target may be revised to reduce population levels below estimates.

5.7 Management of open land

Open land in the forest can be grouped into three broad categories;

1. Important Open Habitats

As detailed earlier in the management plan there are important open habitat areas within the forest. These are UKBAP priority habitats.

Areas of Juniper

During this plan period conifer regeneration is to be monitored and removed if it appears on the sites. The health of the juniper bushes are to be monitored annually and if suitable further cuttings to be taken from the parent bushes at Kiln Burn.

The recently planted cuttings on Tinnis Hill and the steep sloping banks above the Jed water will also be monitored and management activities, such as weeding carried out to ensure that they establish.



Juniper Cuttings in shrub shelters (prior to summer weeding operation) August 2015

Sedge Fen/Swamp

The areas of Sedge fen/ Swamp running along the Jed water will be monitored for any conifer regeneration which will be removed. Any drainage associated with operations in close proximity to the area should be planned carefully so not to adversely affect this habitat.

2. Open ground as a percentage of riparian zones

Within the riparian zones there is a mixture of prescriptions for open ground ranging from 10 to 90 %. The majority of these areas have been designated as minimum intervention coupes with the vision that in the future a network of riparian woodlands will be established in the

Falside Land Management Plan 2015- 2025

forest. Conifer natural regeneration will be monitored in these areas, and if they reach a percentage greater than 15% it will be removed.

3. Open ground along roads with little ecological interest.

Conifer natural regeneration will be monitored in these areas a decision on whether to remove will be made on a case by case basis.

5.8 Public Access

Public access in Falside will continue to be encouraged under the Scottish outdoor access code.

5.9 Heritage Features

Features that are not protected by any designations but mapped as heritage points will be addressed on a site by site basis in the work plan system prior to work commencing.

5.10 Critical success factors

Main critical success factors for plan development are:

1. The continued stability of the first rotation crops assigned for later phase clearfelling.
2. Adequate protection for softer conifer and broadleaf species to be established
3. Continued riparian zone broadleaf recruitment.

Appendix I Design Plan Brief

Falside Land Management Plan 2015- 2025

Appendix II Forest Design Plan Consultation Record

Consultee	Date contacted	Date response received	Issue raised	Forest District Response
Ms Liegh Mcivor Woodland Officer South Scotland Conservancy	09/11/2015 Site Visit	09/11/2015	Discussed design and species choice on site no issues raised all species well within UKWAS tolerances	N/A
Karen Ramoo SNH Operations officer South Scotland	20/11/2015	16/12/2015	Highlighted the importance of the river tweed sac that borders Falside and the requirements for a deer management plan.	LMP design has looked to improve the quality of the riparian zone and is removing none native conifers from this area. Falside falls under the wider Wauchope Deer management plan a copy can be obtained for the forest district.
Hazel Johnson Historic Environment Scotland Heritage Management Officer	20/11/2015	16/12/2015	No comments to make on consultation	Protect unscheduled monument through workplan system
Alasdair Milne SEPA Senior Planning Officer	20/11/2015	2/12/2015	All forest operation to follow forest and water guidelines.	Follow forest and water guidelines during operations
South Dean Community Council	20/11/2015	No response as of 7/1/2016	Offered to come and speak at community council meeting or give guided tour to the local community.	No response
Jim Knight	20/11/2015	No response	N/A	N/A

Falside Land Management Plan 2015- 2025

Scottish Borders Council Landscape Architect		as of 7/1/2016		
Andy Tharme SBC Biodiversity Officer	20/11/2015	No response as of 7/1/2016	N/A	N/A
Erica Niven SBC Access Officer	20/11/2015	No response as of 7/1/2016	N/A	N/A
Chris Bowles SBC Archaeologist	20/11/2015	No response as of 7/1/2016	N/A	N/A
Brian Young SBC Roads and Transport Department	20/11/2015	No response as of 7/1/2016	N/A	N/A
Mike Fraser RSPB	20/11/2015	No response as of 7/1/2016	N/A	N/A
Calum Rankine Borders Forest Trust	20/11/2015	No response as of 7/1/2016	N/A	N/A
Hugh Chalmers Tweed Forum	20/11/2015	No response as of 7/1/2016	N/A	N/A
Paula Mcdonald Visit Scotland	20/11/2015	No response as of 7/1/2016	N/A	N/A
Jamie Farquhar Confor	20/11/2015	No response as of	N/A	N/A

Falside Land Management Plan 2015- 2025

		7/1/2016		
N Yonge River Tweed Commission	20/11/2015	No response as of 7/1/2016	N/A	N/A
Chris Land Southern Upland Partnership	20/11/2015	No response as of 7/1/2016	N/A	N/A

Falside Land Management Plan 2015- 2025

Appendix III: Tolerance table

	Adjustment to felling period*	Adjustment to felling coupe boundaries	Timing of Restocking	Change to Species	Change to road lines	Windthrow response
FC Approval not normally required	Fell date can be moved within a 5 year period. Where separation or other constraints are met	1.0ha or 10% of coupe area – whichever is less	2 planting seasons after felling. Restocking within 2 years +/- of year 2 . For Shelterwood area stocking assessment by year 4 and beat up in 5 th growing season	Change within species groups e.g. evergreen conifers or broadleaves. Underplanting of CCF areas with species indicated on the FDP.		Up to 0.5ha
Approval by exchange of letters and maps		1.0ha to 5ha or 10% of coupe area- whichever is less			Additional felling of trees not agreed in plan. Departures of >60m in either direction from centre line of road	
Approval by formal plan amendment may be required	Advance felling into current or 2 nd 5 year period	>5ha or 10% of coupe area	If timing of restocking is out with the period detailed above	Change from specified native species. Change between species groups	As above depending on sensitivity	>5ha

Appendix IV: Mervinslaw Wood Pasture Ancient Woodland Report

Mervinslaw Wood Pasture

A fragment of ancient woodland remains to the east-south-east of Mervinslaw and Falside forest. This is rare and valuable in the context of the Scottish Borders and offers an opportunity to provide a nucleus for native woodland expansion into the recently felled adjoining coupe. The Jed Water lies along the eastern boundary and provides the link to a wider woodland habitat network.

There are two distinct parts to the ancient woodland; a small section of riparian woodland of a high forest structure along the Peel Burn and a larger area of ancient wood pasture to the south.

The Roy map (c.1750) doesn't show any woodland cover for this site. However, this map was described as a "Magnificent military sketch" and didn't record all woodland. The First Edition OS map shows a woodland composed of mixed conifers and broadleaves with a mixture of straight and curved boundaries. This could be interpreted as a plantation. However, the same mixture of conifers and broadleaves is shown for the riparian area and the proximity of Edgerston Estate with its formal tree planting suggests that



woodland "improvement" was carried out in existing semi-natural woods – probably in the late 18th and early 19th centuries.

Falside Land Management Plan 2015- 2025

By the time of the 1892 -1905 map, the notation suggests that conifers had been felled out of both sections of wood (see the appendix). The Ancient Woodland Inventory classified both sections as Ancient, Semi-natural Woodland (the correct classification in my opinion).

There are a large number of Alders and Ash with substantial stools that are unlikely to have arisen from late 18th/ early 19th century planting. Also, the tree species diversity suggests a semi-natural origin (e.g. the presence of Bird Cherry and Hazel). It is conceivable



A ring of Bird Cherry suckers; probably the remains of a veteran tree



A large Alder stool

though that a number of the Ash and many, perhaps all, of the Oaks were planted. The may be associated with historic land management around the nearby Mervinslaw Tower



A mature oak that may have arisen from 18th/19th century planting

Falside Land Management Plan 2015- 2025

A number of the trees are fine veterans and exhibit features associated with ancient wood pasture. For example, large basal swelling associated with many years of livestock/high deer numbers grazing off basal shoots and amazing Rowan air trees with stilt roots. One Ash in particular has a form that strongly suggests pollarding. Large Alder stools may have arisen from coppicing or through the death of main stems and succession by basal shoots. The presence of a multi-stemmed Ash does suggest that some

coppicing took place in the past, perhaps at the time that the conifers were removed.



A fine Rowan air tree, the stilt roots of which once grew within the dead heartwood of an ancient Alder



An Ash with a form that strongly suggests that it has been pollarded in the past

To summarise historic management; this wood appears to have been subjected to a variety of

different approaches over the past two to three centuries. Some of the ancient

wood pasture trees show signs of being worked as coppice or pollards and tree form (large open canopies and swollen tree bases) suggests an open canopy. However, in amongst ancient trees, particularly in the southern half of the wood, there are trees of a more high forest structure that may have been planted. Judging by the amount of basal swelling, these appear subsequently to have also been subject to an extensive period of stock grazing.

Falside Land Management Plan 2015- 2025

There are a couple of archaeological features; an earth bank running between the riparian woodland and wood pasture (this is shown on the First Edition OS map and appears to run across the Peel Burn – probably associated with 19th century “improvements”) and a sunken trackway to the



Earth bank shown on the First Edition OS map



Sunken trackway

south (this isn't shown on the maps assessed).

There is some excellent deadwood within the wood pasture, often dead central stems within multi-stemmed stools. This may well support regionally significant or even nationally rare saproxylic invertebrates and fungi.



One of the more substantial examples of standing deadwood



A pin head lichen (*Chaenotheca trichialis*, I think) growing on deadwood

Falside Land Management Plan 2015- 2025

Deer impacts are variable across the site; generally high although there are a few hazel seedlings with only light browsing. The basal shoot diameter of several old Ash suggests that significant browsing pressure was removed from the site within the last few decades and this may co-inside with stock enclosure at the time of plantation establishment.



One of several heavily browsed oak "seedlings"



A lightly browsed Hazel seedling



Moderately browsed tufted hair-grass, an unpalatable species

Towards the south of the wood pasture, there are a significant number of Oak and Hazel seedlings. Most of these have been heavily browsed but some of the Hazel are only lightly browsed.

Plantation has recently been cleared around the bank above the woodpasture. Sitka Spruce was planted up to the edge of the ancient woodland boundary and felling operations have been carried out with care to avoid extraction damage.



A well managed harvesting operation that has clear felled Sitka Spruce from the

Falside Land Management Plan 2015- 2025

Management recommendations

The preferred approach:

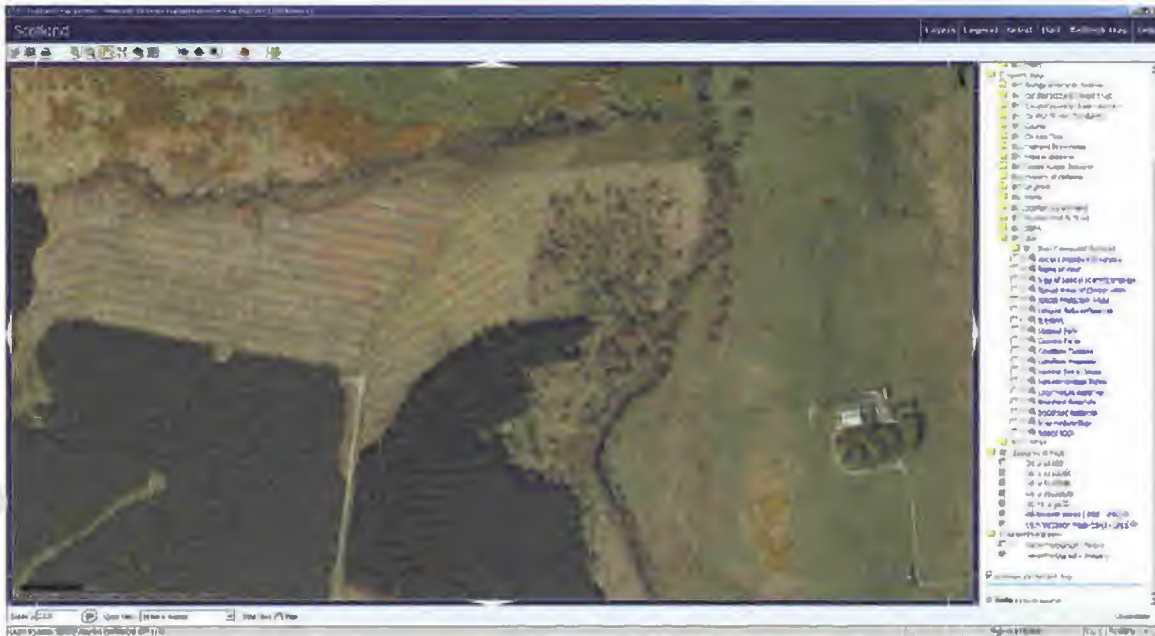
4. Significantly reduce deer impacts by culling.
5. Establish native woodland along the bank above the woodpasture to provide a buffer and scope for expansion of biodiversity remaining within the ancient woodland. Ash would have been an obvious choice for a proportion of this planting but in its absence, Alder, Hawthorn, Hazel and Bird Cherry, Goat Willow are recommended on lower slopes whilst Oak (Pedunculate or Sessile), Rowan and Silver Birch are recommended on the upper bank.
6. Allow existing natural regeneration to establish and plant at a low density in areas without significant tree cover (see shapefile). Tree species would include Alder, Rowan, Holly, Hazel and Goat Willow.
7. If possible, remove shee grazing and augment the colonising hawthorn to the north of the wood pasture with a low density of native trees to connect both parts of the ancient woodland.
8. In the medium to long-term, once existing natural regeneration and newly planted native trees have successfully established, introduce cattle to re-establish an open woodland mosaic.

If the actions above cannot be achieved for practical reasons (e.g. sufficient reduction of deer number through culling for some reason), then alternative approaches to native woodland establishment and recruitment of advance regeneration will need to be considered i.e. fencing or (least desirable) use of tubes and small exclosures around naturally regenerated seedlings.



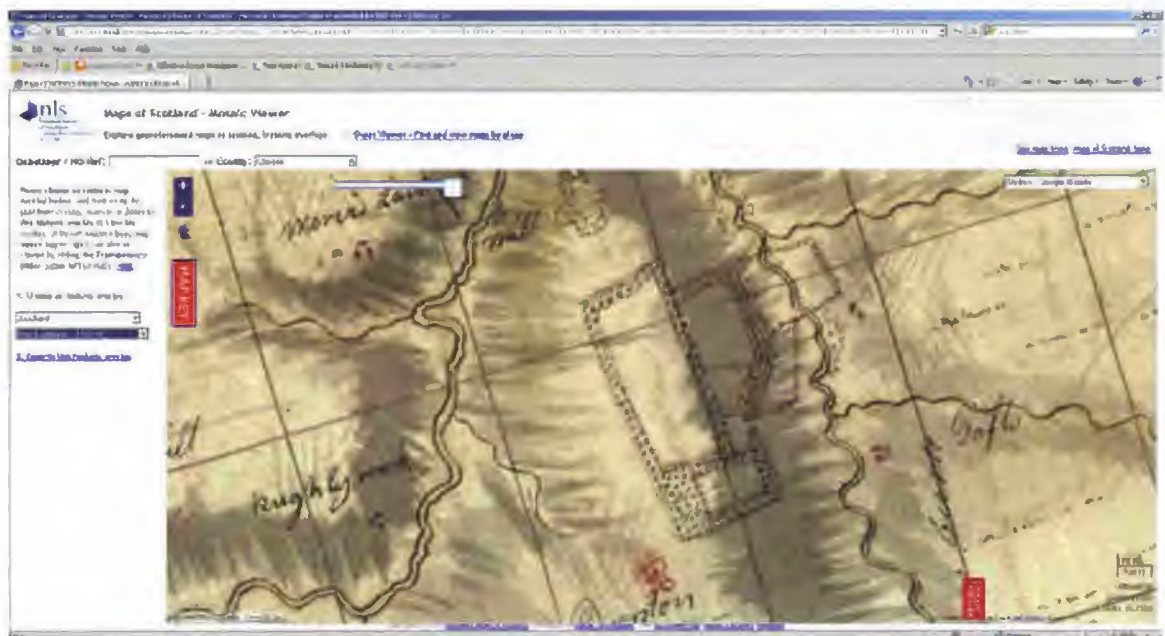
Hawthorn on sheep grazed land in-between woodpasture and riparian woodland.

Falside Land Management Plan 2015- 2025



2009 aerial photo prior to recent clearfell of remainder of plantation area

Appendix:
additional
maps



The Roy map (C.1750)



Falside Land Management Plan 2015-2025