

Tay Forest District

North Rannoch

Land Management Plan

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.



Approval date: 27/05/2016

Plan Reference No: LMP8 2016

Plan Approval Date: 27/05/2016

Plan Expiry Date: 27/05/2026



# North Rannoch Land Management Plan 2016 to 2026

## FOREST ENTERPRISE - Application for Land Management Plan Approvals in Scotland

### Forest Enterprise - Property

Forest District:	Tay Forest District
Woodland or property name:	North Rannoch – Rannoch Lodge & Talladh a Bheithe
Nearest town, village or locality:	Kinloch Rannoch
OS Grid reference:	NN490 576
Local Authority district/unitary Authority:	Perth & Kinross Council

### Areas for approval

	Conifer	Broadleaf
Clear felling	223.2 ha	2 ha
Restocking	180.1 ha	45.1 ha

1. I apply for Land Management Plan approval for the property described above and in the enclosed Land Management Plan.
2. \* I apply for an opinion under the terms of the Environmental Impact Assessment (Forestry) (Scotland) Regulations 1999 roads as detailed in my application.
3. I confirm that the initial scoping of the plan was carried out with FC staff on 

March 2013
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.
7. I undertake to obtain any permissions necessary for the implementation of the approved Plan. (eg Prior Notification for the proposed forest road extension)

Signed ..... Signed.....  
Forest District Manager Conservator

District ..... Conservancy.....

Date ..... Date of Approval.....

Date approval ends:.....

\*delete as appropriate



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## Summary of Proposals:

### Timber production

Rannoch Lodge - adjust the harvesting programme to remove coupes affected by windthrow.

Rannoch Lodge and Talladh a Bheithe – thin the more accessible broadleaves to improve quality and value.

Talladh a Bheithe - remove Sitka spruce and lodgepole pine from unflushed blanket bog and manage in line with peatland restocking guidance and blanket bog strategy – currently pending.

Ensure that future restocking is sustainable through establishment on suitable sites where maximum species yield can be attained and a broad range of future market requirements are met.

Thin coupes at an early age in order to promote crop stability, improve tree form and counter pathogens such as Dothistroma needle blight.

### Landscape

Apply Forestry Commission landscape design principles to ensure that forest views are in keeping with the surrounding area and reflect the sensitivities associated with land found in National Scenic Areas.

### Biodiversity & Heritage

Continue to sustainably manage key species (such as red squirrel and black grouse), and habitats particularly native woodland, through careful management that takes into account influencing factors and future opportunities.

Safeguard all known heritage features and be receptive to new discoveries.

Consider the wider habitat networks which exist on neighbouring ground as well as the national forest estate by seeking to link with new and existing woodlands on forest boundaries.

Expand areas of native woodland through new planting and natural regeneration on both PAWS and other forest land. Work with natural processes to expand variable density riparian woodland creating dappled shade on watercourses that feed the River Tay SAC.

### Access & Health

Ensure that visitor zone principles are applied to the main forest entrances and the right of way through Rannoch Lodge.



## 1.0 Introduction:

### 1.1 Setting and context

The forest plan of North Rannoch is composed of two forest blocks, Rannoch Lodge and Talladh a Bheithe. These forests are typical of many commercial upland forest which are heavily influenced by soil type, climate and the legacy of an even age structure.

Covering 1248 ha, Talladh a Bheithe is the largest forest and is notable for areas of good growth rates and extensive birch woods which front the northern shoreline of Loch Rannoch. The most productive ground lies on the southern and eastern sections of the forest where there are valuable stands of Douglas fir, Scots pine, Norway & Sitka spruce and larch. The remaining areas are under a non-thin regime on account of poor growth rates, restricted or no access and windthrow hazard.

The Rannoch Lodge forest is 260 ha and is similar in part to Talladh a Bheithe with better soils being found in its southern parts and poorer soils dominating other areas. Large scale windthrown has taken place in two northern coupes which has prompted some significant coupe re-sequencing to take place as part of this plan review.

Both forests have sizable areas of PAWS designated ground and scattered heritage features of which some are exposed and others are still under tree cover.

The management of the Forestry Commission Scotland's national forest estate is guided by Scottish Forestry Strategy (SFS) 2006, which sets out seven key themes:-

- **Climate change**
- **Timber**
- **Business development**
- **Community development**
- **Access & Health**
- **Environmental quality**
- **Biodiversity**

**Table 1. Relevant issues under the SFS and Tay Forest District Key Themes**

<b>SFS Key Themes</b>	<b>Relevant issues identified for North Rannoch FP</b>
<b>Climate Change</b>	<p>Opportunities for contributing towards national targets for renewable energy via woodfuel.</p> <p>Carbon sequestration levels increased by extending low impact silvicultural systems.</p> <p>Thinning where possible to counter the advance of Dothistroma needle blight.</p>
<b>Timber</b>	Continue to grow quality timber sustainably.
<b>Business Development</b>	Through timber harvesting, woodland establishment and maintenance. Continue to consider landscape value within the wider context of the National Park.
<b>Community Development</b>	Encourage communities who wish to become more involved in the management of, or outputs from, their local forest
<b>Access &amp; Health</b>	Informal access routes through use of forest roads and tracks.
<b>Environmental Quality</b>	<p>Continue to work with local archaeologists and Historic Environment Scotland in order to protect the historic features in our care.</p> <p>Watershed management through appropriate scale and sequencing of coupes coupled with careful adherence to Forest and Water Guidelines. Water quality sensitive species such as fresh water pearl mussel and salmonids can be influenced by forestry activity.</p>
<b>Biodiversity</b>	<p>Continue to increase riparian zone area and manage areas that are previously opened after felling through establishment of native broadleaves.</p> <p>Work with SNH to protect and enhance locally important sites in our care.</p> <p>Maintain areas of unmanaged heathy ridges as a contrasting feature to the managed moorland which locally predominates. Species of note include red squirrel, black grouse and possibly pearl bordered fritillary.</p>

### 1.2 History of plan

Since its establishment in the 1950's, there have been a series of 10 year management plans covering the forests of North Rannoch. This current plan is a revision of the 2004 to 2014 plan which was produced using an early form of Geographic Information System mapping.

## 2.0 Analysis of previous plan

### 2.1 Analysis from previous plan

The main focus of the previous plan was on felling sequences in coupes concentrated in the east of Talladh a Bheithe with continuous cover forestry becoming an integral part of the management structure. Large sections of the forests more western coupes were classified as 'outwith the plan' on account of age class and crop development. Under the current revision, these coupes have now been sequenced along with a more detailed approach to recording 'open land' and areas containing marketable native broadleaves.

In Rannoch Lodge a balanced approach to clearfell and continuous cover regimes has been applied in order to produce a more diverse forest structure and provide opportunities for PAWS restoration. Detail with open areas and native woodland has again been general and the current plan attempts to bring greater spatial representation of resources plus future opportunities which maybe achieved from both a marketing and biodiversity perspective.

Felling and restocking at Talladh a Bheithe progressed as intended under the previous plan. However the pace of felling at Rannoch Lodge has been running about 5 years behind initial plans with two orange coupes carrying forwards into the red phase of this new plan. This alleviates adjacency concerns.

The restocking species choice has evolved from one plan to the next particularly at the eastern end of Talladh a Bheithe where restocking was shown as larch and Douglas fir. This area is PAWS and is shown as native woodland in this new plan. The necessity of change was recognised via restock workplanning and subsequently fed into the plan revision.

Under the previous plan the forest block of Camusericht was included as part of North Rannoch but has since been sold on the open market.

### 3.0 Background Description

#### 3.1 Physical site factors

##### 3.1.1 Geology Soils and landform

The forest blocks of North Rannoch sit within a glaciated valley running West to East with 9 mile long Loch Rannoch forming a dominant feature on a landscape which is predominantly hillside.

Parent material covering North Rannoch is composed mainly of moine, feldspar and granulite with localised intrusions of porphyrite and porphyre. There is a dominance of glacial till over the area which has resulted in poor sandy, coarse and loamy soils forming the majority of soil. Pockets of better soils are found over the intrusions of porphyrite and porphyre where podzolised brown earths form an alternative to podzols, peaty gleys, flushed gleys and deep peat which dominate over most of the forest.

##### 3.1.2 Water

Both forests are located on the shore line of Loch Rannoch which is part of the River Tay Special Area of Conservation (SAC). There are a number of internal water courses of varying size in each forest which flow directly into Loch Rannoch or the river Gaur. In Talladh a Bheithe an aqueduct serving a nearby hydro-electric generating plant runs through the forest and serves as both a feature and site constraint for forest operations.

##### 3.1.3 Climate

There is a westerly climate in Rannoch which conspires to give a cool and wet local climate. The temperatures range for the area is -15°C to 28°C with an average annual rainfall of 1700mm, on average there are 40 days per year of snowfall with low to moderate accumulations. Late spring frosts are common.

Exposure is significant with a DAMS range of 16-19 covering the majority of the area.

### 3.2 Biodiversity and environmental designations

Within Rannoch Lodge and Talladh a Bheithe, there are significant areas of semi-natural woodland with successful areas of natural regeneration, there are PAWS areas in both forest blocks. The silver birch is of notably good form with plentiful mature trees for seed source. In terms of key species, populations of red squirrel, black grouse and pearl bordered fritillary are present and greatly enhance diversity value.

The following designations are in place;

National Scenic Area (Glen Lyon and Loch Rannoch NSA) designation covers the eastern part of Rannoch Lodge and all of Talladh a Bheithe.

River Tay Special Area of Conservation (SAC) including Loch Rannoch which the forest fronts. An appropriate assessment will be required to accompany this plan because of the forestry operations potential to impact on the SAC, see comments from SNH in the consultation record.

In terms of mitigation measures for protected species, there will be strict adherence to the following guidance during the application this forest plan outputs;

Forest operations & wildlife in Scottish forests; Guidance Note 31 (2006)  
Forest operations & birds in Scottish forests; Guidance Note 32 (2006)  
Forest operations & Red Squirrels; Guidance Note 33 (2006)  
Forest operations & European protected species; Guidance Note 34  
Bat Habitat use in Forestry Commission Guidance Note 35a  
Forest operations & great crested newt Scotland; Guidance Note 35b  
Forest operations & otters in Scotland, Forestry Commission Guidance Note 35c  
Forest operations & wildcats in Scotland; Guidance Note 35d  
Forest & Water Guidelines; 5<sup>th</sup> edition (2011)  
Creating new native woodlands; Bulletin 112 (1994)  
Forest operations & badger setts; Practice guide 9  
Identifying the historic environment in Scotland's forests and woodlands  
Freshwater Pearl Mussel guidance (SNH)

North Rannoch FDP area sits within the catchment of the River Tay SAC and as such protection and enhancement of this designated site is recognised as a high priority. Environmental protection is considered at 3 different levels of planning within Tay Forest

District with the emphasis changing at each level. All operations that can influence water are undertaken with reference to the latest UK Forestry Standard Guidelines for Forests and Water (FWG) currently in their 5<sup>th</sup> edition and supporting guidance as listed above in this Section.

District strategic plan – Considers issues across the district at a strategic level and highlights broader principals and direction for management. Mostly looking for positive enhancements through design changes

Land management plan – covers a forest block or cluster of blocks in more detail and seeks regulatory approval for proposals over a 10 year period. Will seek to address specific issues and embed design changes.

Work plan – details the working methods for an individual coupe or piece of work. Mainly focused on protective measures.

Specific actions:

Protection and enhancement of the water environment are achieved in a number ways:

- Longer term design changes to enhance the water environment for example introducing greater buffering of watercourses with native woodland. This is a strategy that is being used at North Rannoch with the restocking proposals being set out on the future habitats map.
- Enhance water quality by altering details of forest design to help provide the ecological requirements set out in table 3.1 of the FWG an example at North Rannoch would be felling and restocking.
- Protection via application of the Forests and Water Guidelines (Currently 5<sup>th</sup> edition but any subsequent revisions will be adopted). FWG will be applied to all forest operations at North Rannoch including felling, restocking, roads and woodland creation. Where contractors are used adherence to the guidelines forms a contractual obligation. Our adherence to this best practice is also independently audited via UKWAS certification.
- Protection of adjacent designated sites will be achieved through the accurate capture of data in the North Rannoch forest plan and the transfer of key information into work plans in preparation for delivery on the ground. The forest district will always adopt the precautionary approach through undertaking walk over surveys, clearly defining work zones, applying close onsite supervision and recording any pertinent points.

FWG provide a comprehensive framework to cover all aspects of the operations proposed in the North Rannoch LMP. A number of the guidelines have been enshrined as legally binding GBRs but taken in their entirety the FWG provide a level of protection to the water environment substantially above legal requirements.

## 3.3 The existing forest

### 3.3.1 Age structure, species and yield class

#### Talladh a Bheithe

Species	Planting Year	Yield Class	Area (ha)	Wind hazard
DF	1952 - 1985	8 to 12	53.29	3 to 4
EL	1953 to 2003	4 to 12	4.14	3 to 4
HL	1953 to 1985	6	46.13	3 to 4
JL	1952 to 1985	4 to 12	60.89	3 to 4
LC	1953	10	0.85	3
LP	1952 to 1985	4 to 10	265.35	3 to 4
MC	1953	14	1.92	3
NF	1953	10	0.1	3
NS	1953 to 1956	10 to 14	7.41	3
RC	1954	18	0.31	3
SP	1952 to 2003	6 to 12	92.64	3 to 4
SS	1952 to 2003	8 to 20	418.93	3 to 4
WH	1952 to 1953	14 to 16	0.99	3 to 4
BI	1941 to 2003	2 to 6	86.71	3 to 4
OK	1985	4	6.8	3 to 4

#### Rannoch Lodge

Species	Planting Year	Yield Class	Area (ha)	Wind hazard
DF	1961 to 1966	8 to 14	14.06	3
HL	1963	4	0.92	3
LP	1962 to 1967	4 to 10	20.11	3 to 4
MC	1964	0	1.48	3
NF	1966 to 1967	14	1.25	3 to 4
NS	1961 to 1966	8 to 14	27.34	3
SP	1962 to 2010	6 to 12	47.37	3 to 4
WH	1967	14	2.81	3
SS	1962 to 2010	12 to 18	30.02	3 to 4
BI	1961 to 1966	0	3.31	3
MB	1964	0	1.5	3

### 3.3.2 Access

Access route by public road to both forests is via the B846 which runs via Tummel Bridge to Aberfeldy and is an agreed timber haulage route.



### 3.3.3 LISS potential

There are continuous cover coupes in both forests, with the majority being located at Talladh a Bheithe where rich soils offer good growth rates, species diversity and scope for meaningful levels of regeneration. With both forests, the potential to expand continuous cover beyond current levels is very limited on account of poorer soils which impact on crop growth rates.

## 3.4 Landscape and land use

### 3.4.1 Landscape character and value

The character of the area is described in Scottish Natural Heritage's Tayside landscape character assessment Upper Highland Glens with lochs:

- visual dominance of lochs, enlarged by hydro electrical power
- geological and physical structure similar to Upper Glens
- the expanse of water is changing its appearance according to the weather, adding to its sense of exposure and desolation

Landscape guidelines in terms of woodland include the following recommendations:

- Employ more varied species mixes
- Vary the size of felling coupes, with smaller areas on the lower slopes
- Adopt a more naturalistic appearance, responding to landform and features such as burns and crags
- Manage grazing levels in and around birch woodland to allow regeneration and expansion

### 3.4.2 Visibility

In terms of visibility, both forests can be viewed clearly from the B846 which runs north of Loch Rannoch and from an unclassified public road running along the lochs southern shore. The forests are also in clear view of a several private houses and scattered communities and can be viewed from the main local population centre of Kinloch Rannoch.

### 3.4.3 Neighbouring landuse

Both Rannoch Lodge & Talladh a Bheithe are adjoined by traditional sporting estates who have a strong interest in red deer as a key income source. There is

also a notable forestry component within the estates which ranges from established commercial plantation to new native woodland schemes.

Close to both forests are a scattered number of domestic properties which include accommodation of various types for the local tourism market that relies on seasonal and year round trade.

### 3.5 Social factors

#### 3.5.1 Recreation

Recreation use within the forests of North Rannoch is low and mainly restricted to walkers using the right of way to access the hills to the north and local residents and occasional visitors walking on the forest roads. There are no purpose built visitor facilities beyond access gates and some provision of space for parking near main forest entrances.

#### 3.5.2 Community

The main community hub for the area is Kinloch Rannoch, where the village hall acts as a venue for meetings and events. There is a small community at Bridge of Gaur which is composed of scattered houses and bordered by large estates.

#### 3.5.3 Heritage

There are five known unscheduled ancient monuments within Rannoch Lodge which include – a possible homestead, two possible bloomery sites, sheilings and a building near the road of unknown origin. A further 15 recorded features are found within Talladh a Bheithe and are recorded in the National Monument Record of Scotland as well as in Tay Forest District data sets.

### 3.6 Statutory requirements and key external policies

There are no designations or requirements additional to those outlined in section 3.2.

## 4.0 Analysis and Concept

### 4.1 Analysis of constraints and opportunities

Factor	Opportunity	Constraint	Concept Development
Areas of extensive windblow	Opportunity to review forest plan proposals for specific coupes where windblow is present.	Removing small pockets of windblow can be financially prohibited.	Quantify windblown areas and incorporate with scheduled local work.
High levels of external deer pressure coming from the north and west	Develop within the bounds of the local deer management group a commitment to reduce deer numbers.  Secure funding to invest in upgrading deer protection infrastructure and more intensive levels of internal control.	Condition of boundary fences and deer cull levels implemented by neighbouring landowners.	Assess current condition of boundary fences and secure funding for replacements.  Work closely with local deer management group to establish collaboration in areas of significant pressure.
Areas where fertile soils are found and access is good	Diversify species mixtures to increase value and meet the needs of both mainstream and niche markets.	Possible increase of management costs to protect and maintain future high value trees.  Develop and retaining local niche marketing knowledge.	Consider planting species such as Douglas fir, Western red cedar, European larch, oak and other broadleaved species.  Record planting on sub compartment data base and establish a resumption system for monitoring crop development.
Overhead electricity cables	Wayleaves provide habitat for a number of species and serve as wildlife corridors. These area may	Restricts the timing of harvesting operations and requires significant staff time to engage	Regard as minimal intervention areas where management is limited to periodic

	contain pearl bordered fritillary so opportunity to carry out some bracken control to benefit this species.	with energy companies.	removal of conifer regeneration.
Sizable areas of birch with good form	Identify and market high value trees to ensure highest price is achieved. Record and share experiences of marketing as a learning and development exercise for FC staff.	Achieving the best price for niche products may be difficult thought lack of hardwood marketing experience.	Seek advice from wider FC where experience will have been gained from undertaking similar marketing ventures.
National Scenic Area	Create and well designed forest which complements its surrounding landscape during current and future rotations.	Factors such as windblow can dramatically influence forest design and in extreme cases force restructuring.	Apply Forestry Commission forest design principles to each operational element of the plan and review outputs using design models. Inspect and assess individual coupes on the merits of stability and development during each forest plan review.
PAWS	Increase level of native woodland to increase biodiversity and create greater forest structure. Where possible optimise the growing of productive broadleaves.  Work with natural processes where possible to meet long term goals.	Internal deer pressure often necessitates that fencing is the only option available to allow successful re-establishment. The costs required to undertake this work are high and initial regeneration levels can be varied.	Deer control should be increased in areas which are vulnerable to browsing. Within the district Small stock fence encloses have proven to be effective in allowing trees to regenerate.
Tree pathogens and climate change	Allows an opportunity to consider a range of management options and create a more diverse	Predicating future trends and having the necessary resources available to effectively	Plant a more diverse range of species. Thin early to establish a greater

	forest structure.	respond.	resistance to windblow. Monitor and act when required.
Limited roading infrastructure for western areas of Talladh a Beithe	During the period of the plan, construction of a 800m section of road is planned to reach isolated coupes.	Additional roading may have a negative visual impact if route is either poorly located or limited on account of terrain.	Highlight new roadline in current forest plan review in order to secure EIA determination. Engage forest civil engineering to design new road and associated features.

## 4.2 Concepts of the plan

### Timber production

Address the significant volume of windblow effecting northern coupes at Rannoch Lodge by programmed harvesting.

Bring areas of birch woodland into a regular programme of work as with other thinning and continuous cover coupes.

Remove spruce and lodgepole pine from unflushed deep peat and manage these areas in line with peatland restocking guidance and blanket bog strategy – currently pending.

Establish a broader range of tree species for future use which can serve a number of markets

Extend the forest road network in order to attain future access to coupes currently isolated from existing roads.

### Environment

Expand the extent of native woodland in PAWS areas relying extensively on March fencing, culling and low cost/low impact means of protection.

Produce a healthy mixture of SP/NS on the eastern LEPO areas of Rannoch lodge to favour the native animal species and limit the grey squirrel population for the close future. Encourage natural regeneration of broadleaves on these areas as a long term aim.

Allowing natural processes to develop in areas of natural reserve and open land where tree colonisation is beginning to occur.

Create corridors of variable density riparian woodland as shown on Map 6.

### Landscape

Ensure landscape design is practical and sympathetic to internal and external views.

### Recreation

Ensure that core paths and rights of way are open and that visitor zone principles are upheld at key points within the forest

## 5.0 Management Proposals

### 5.1 Forest stand management

#### 5.1.1 Clear felling

The majority of clearfell coupes are located in Rannoch Lodge where windblow clearance has become a priority. In Talladh a Bheithe two coupes are to be felled, one during phase one and one in phase two, primarily spruce and lodgepole pine on blanket bog or shallow soils where growth and stability are becoming a problem. This will provide a significant area of bog restoration and Scots pine restock on the drier soils, which will tie in well with the adjacent birch woodland on the lower slopes.

Felling has been scheduled to avoid adjacency issues in line with UKFS general forestry practice point 15. There is one instance where consent is required for felling in phase 1 and then in an adjacent coupe in phase 2. Coupe 19024 followed by 19031 (see map 5). This is felt to be appropriate because a significant proportion of the combined felling area, particularly 19024 is for bog restoration and Scots pine / broadleaf habitat rather than commercial restock. Delaying 19031 would place significant pressures on the phasing of commercial fell and restock in later plans.

In terms of harvesting, work is split between standing sales, long term contracts and direct production covering thinning and clearfell. North Rannoch is served by agreed timber haulage routes to markets which include the Perthshire Timber Company (Dunkeld), RWE (Glenrothes), James Jones , BSW (Boat of Garten) and Norboard (Strirling).

Coupe	Fell Phase	Volume m <sup>3</sup>	Gross Felling ha	Gross Restock ha	Restock
21481		5320	26.7	26.7	SP 28%, SS 22%, MB 19%, BI 14%, Open 17%
21004		6009	18.2	18.2	NS 49%, SS 16%, MC 16%, BI 7%, MB 5%, Open 7%
19024		20604	95.3	95.3	SP 21%, BI 14%, MB 13%, Open 52%
19003		5464	9.3	9.3	Bi 41%, MB 26%, Open 33%
19015		17334	21.3	21.3	SP 42%, SP 35%, BI 3% MB 2%, Open 18%
19031		17462	54.4	54.4	SS 42%, SP 28%, BI 1%, MB 1%, Open 28%
<b>Total</b>		<b>72193</b>	<b>225.2</b>	<b>225.2</b>	

<b>Thinning volume</b>	<b>10662m3</b>	<b>Thin area = 282ha</b>	<b>Thin cycles approx. 7 years</b>
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### 5.1.2 Thinning

Owing to a number of site factors, thinning is limited to the lower slopes of both forest blocks. Where access, crop stability and development are good, thinning towards final crop and continuous cover forestry are viable options for both conifer and broadleave species. From 2012 onwards, a number of thinning coupes in Talladh a Bheithe were affected by catastrophic windblow, highlighting the risks of retaining crops beyond their rotation age and the recent run of extreme weather events.

Coupes suitable for thinning are highlighted on map 7.

### 5.1.3 LISS

The main areas of continuous cover forestry within North Rannoch are located at Talladh a Bheithe where birch woodland forms a significant component. Unlike conifer coupes, the birch woodland has had little management over the past 10 years and poses a challenge in both marketing and establishing an appropriate thinning regime.

Coupes designated as continuous cover are highlighted on map 5.

### 5.1.4 New roading infrastructure

Within Talladh a Bheithe, there is a requirement to construct a 800 meter section of forest road for future access to a significant area of commercial timber covering this and subsequent rotations. The proposed forest road lies within a National Scenic Area and therefore exceeds the threshold for Environment Impact Assessment determination.

The road will be constructed in accordance with the Forestry Commission's Civil Engineering Handbook (2<sup>nd</sup> edition, April 2014) for new forest roads.

Additionally there are two proposed new access points located at the Southern border of Talladh a Bheithe. These access points are also aimed to be used as turning heads and timber stacking areas during the future thinning operations. At this stage there are no further plans for road connections or road development around these access points.

The road construction will require prior notification/planning permission and EIA determination. These documents will be acquired prior to the road construction operation. The felling operations of the management coupes which require the new road section are during the second half of the LMP or outside the 10 year period of this plan. Because of this the application process needs to be carried out during the second five year half of the proposed LMP. If this is done earlier (first five year period of the proposed LMP) the approval period of these documents will run out before the road construction operation takes place.



## 5.2 Future habitats and species

Expansion of native woodland, ranging from wet woodlands and riparian habitats through to upland birch woods and native pine, will considerably increase the biodiversity value of these woodlands. Large scale integration of these blocks with existing and planned neighbouring woodland will create significant forest(ed) habitat networks. Key species such as red squirrels and blackgrouse will benefit from the planned operations and restructuring of these blocks. In terms of the restocking of the coupe 21004 (LEPO) conifers are planted to improve the habitat conditions for the native animal species.

To account the possible pine weevil damage and chemical reduction strategy restocking of the management coupes will take place 4-5 years after the felling operation. Natural regeneration is seen as a potential for restocking if appropriate density and composition can be assumed to be present at the time when fallow period ends.

## 5.3 Restructuring

This plan will continue the development of a wider age structure of planted areas within the North Rannoch forests integrated with areas of open space, native woodland and natural reserve. In the short to medium term, Rannoch Lodge will undergo major change as windblow is cleared under large scale clearance. However, once complete smaller coupes will be created to reduce future impact.

## 5.4 Future management

A significant element of future management will be to bring Talladh a Bheithe's birch woodland into regular productive use which raises both a challenge and opportunity in bringing added value to this specific woodland resource.

## 5.5 Species tables

Species	2014		2024		2034	
Open	309	20%	324	21%	349	23%
MC	59	4%	73	5%	79	5%
SS	449	30%	375	25%	359	24%
SP	140	9%	243	16%	298	20%
JL	61	4%	42	3%	32	2%
DF	67	4%	59	4%	50	3%
LP	285	19%	206	14%	165	11%
NS	38	3%	34	2%	15	1%
NB	107	7%	152	10%	161	11%
Total area	1508		1508		1508	

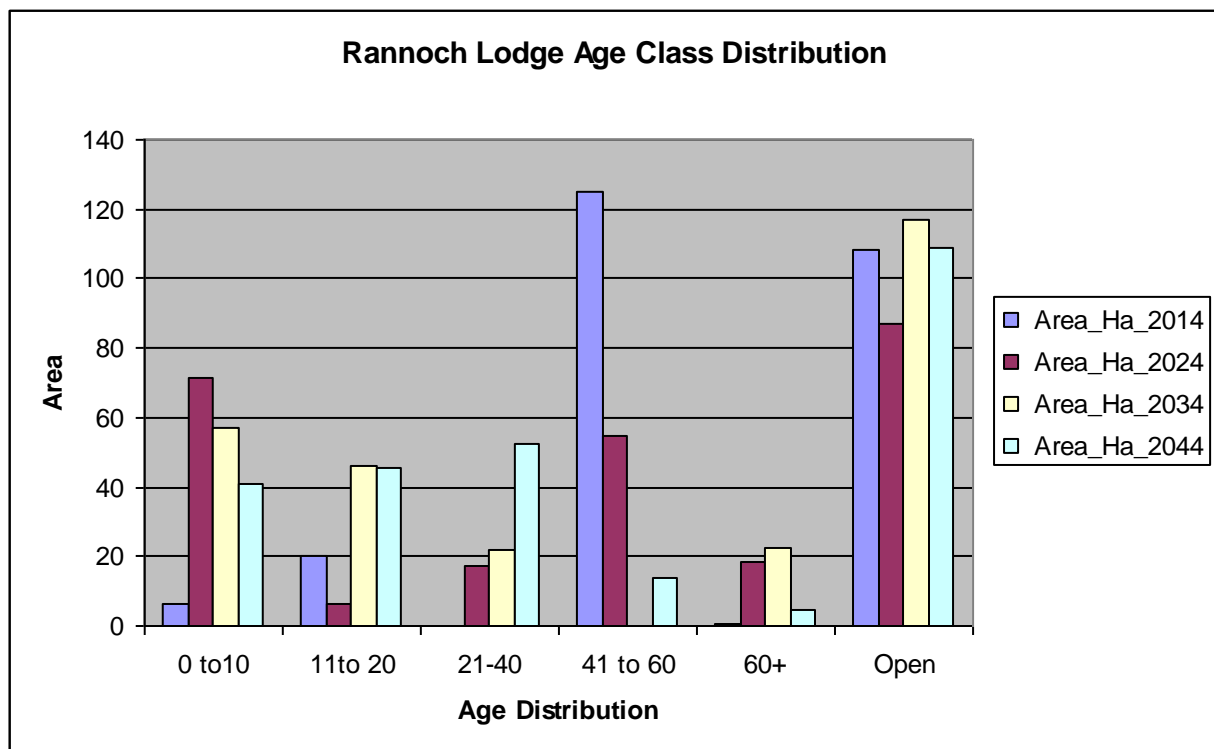
Natural reserve	77	6%	77	6%	77	6%
Minimum intervention	40	3%	40	3%	40	3%
Native broadleaves	107	7%	152	10%	179	11%

## Species table notes:

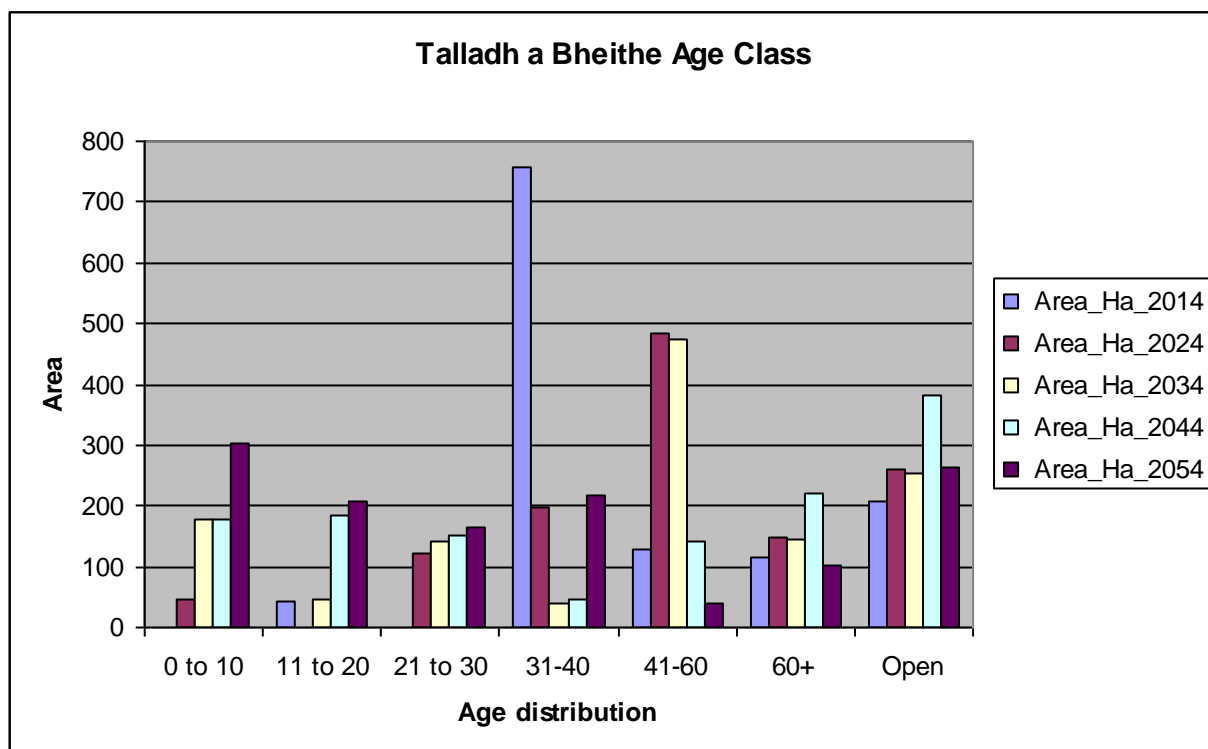
- Larch is unlikely to be viable long term this far west so no larch will be planted and pockets will be removed that might have otherwise been left as long term retentions. Wholesale removal will only be undertaken in response to p.ramorum infection.
- Douglas fir reduces over time as the most suitable ground is on PAWS sites which will be converted to native woodland when the opportunity presents.
- The native broadleaf area will mainly be birch and includes riparian corridors with a high percentage of open ground.
- Depending on site suitability there may be some shift in restocking from SS to NS for longterm benefit to red quirrels.

## 5.6 Age structure

### Rannoch Lodge



## Talladh a Bheithe



## 5.7 Management of open land

Open ground will generally form an intimate network within the forests, maintaining the significant biodiversity value of these areas and the enhancement of the local landscape. Unless survey work identifies a type of priority open habitat then natural regeneration and gradual tree colonisation of open areas will be accepted. Blanket bog is an example of a priority open habitat found in this forest that would be kept clear of trees.

Specific location maps of the future blanket bog areas are not included as a part of the LMP. These areas will be individually assessed after the clearfell operations in terms of their future suitability for alternative landuse (blanket bog restoration). Necessary amendments will be then produced if the area is found to fit the policy and site criteria for this type of practice.

Management coupe 19024 is currently accounted as a potential site for blanket bog restoration but the specific restoration areas inside the coupe will be confirmed post-harvest. To enhance the biodiversity values and forest structure the areas of the management coupe which are not converted will be restocked with a mixture of Scots pine and birch, which in long term are not managed for timber. This manual planting is hoped to be enhanced by the natural regeneration of lodgepole pine as some mature trees are left standing on site to act as a seed source.

The temporary nature of open ground associated with felling and restocking is likely to benefit blackgrouse particularly if careful consideration is given to extended fallow periods in the most suitable areas.

### 5.8 PAWS restoration

Ancient woodland is well represented in these blocks. Effort to protect remnants including veteran trees is a standard part of forest operations.

Restoration of plantation woodland to native woodland is the normal practise on areas that are recognised as PAWS. It is intended that the area and connectivity of this native woodland will extend well beyond the PAWS.

Restoration will be gradual in the continuous cover areas and managed by regular thinning. If clearfell is the only option due to poor crop stability, then where possible productive broadleaved planting will be the preferred choice.

### 5.9 Deer management

The predominant deer species for North Rannoch is red with a small resident population of roe. In addition to this sika deer are expanding their range on the periphery of the design plan area from the north and west. The forests are enclosed with a mix of stock on the lower margins and deer fence to the upper margins. Very high open range densities exist on the western and northern boundary.

The overall plan will be to continue to monitor deer populations and trends by dung counts and culls to reduce densities to less than 10/100ha. In addition, we will monitor impact of deer on young restocking, areas of natural regeneration and important habitats. All wider deer management issues will be discussed at deer management group level.

The Forest District maintains a Forest Deer Management Strategy for all its forest blocks as a mechanism for identifying deer management issues at both strategic and operational level. Feeding into the strategy is captured data from cull records, boundary fence condition, browsing impacts, and estimated deer population figures within forest blocks and on neighbouring land. This information is collected by local staff and external bodies to give a holistic view of deer dynamics effecting individual forest blocks.

### 5.10 Critical success factors

Critical success factors for this plan period are as follows:

- The deer population is maintained at a level where browsing has minimal impact to restock and native woodland restoration sites
- Windblown areas are cleared and restocked as per the recommendations of this plan

- Site/species selection principles are applied to restocking coupes
- Landscape design is carried out to a high standard in order to reflect the sensitivities of being located in a National Scenic Area
- Continuous cover coupes are actively managed to sustainably add maximum value from a broad range of species and markets

## Appendix I: Forest Design Plan Scoping Record

Statutory Consultee	Date contacted	Date response recieved	Issue raised	Forest District Response
Historic Scotland	27 <sup>th</sup> November 2014	8 <sup>th</sup> December 2014	No issues raised	Noted
SEPA	5 <sup>th</sup> November 2014	10 <sup>th</sup> November 2014	To comment during consultation phase	Noted
SNH	27 <sup>th</sup> November 2014	8 <sup>th</sup> December 2014	<p>Protected Areas and Species</p> <p>Other than the usual protected species with which you and your team are well acquainted and for which no SNH comment is needed, we comment in some detail below only on the nearby River Tay SAC. For landscape, plans will need to account for the two blocks being within or part within the Loch Rannoch and Glen Lyon National Scenic Area and we consider there to be no value added in us commenting on landscape. NB and for information the whole of the Killichonan block is within the NSA while only the eastern half of the Coille Bhienie unit is in the NSA. Also, as an aside, the</p>	<p>The preservation of water quality is a prime concern for the Forest District in both a cumulative and individual context. In addition to following Forest &amp; Water Guidelines; 5<sup>th</sup> edition (2011), operations in environmentally sensitive areas will be subject to pre operations checks by the Forest Districts Environment team who will advise and consult in order that species and habitats are protected. This process is administered under the Forest District's Work Plan system which is explained in section 3.2 of this document.</p>

			<p>designation Environmentally Sensitive Area, used on the analysis Map 3, was an agricultural classification for directing extra support payments. It was superseded by the rural stewardship scheme, in 2005 I think, and any remaining 10 year agreements will expire at the end of 2014. The term has limited remaining currency now and is, I believe, largely redundant.</p> <p>River Tay SAC Likely Significant Effect appraisal and advice</p> <p>The SAC could be affected by sediment released during clearfell operations or roads and ditch maintenance, or by nutrient enrichment through the decomposition of lop and top and brash mats. This risk would depend on location and extent of clearfell operations, which at this stage are not identified or described. However, given the sizes of the two blocks in the plan and the detail that is presented within the concept maps, it</p>	<p>Owing to the position Natura designation an appropriate assessment will be produced during with the consultation phase to demonstrate that the integrity of the site will not be effected by the proposed operations.</p> <p>Reference to the Environmentally Sensitive site as shown in Map 3 has been included in Section 3.2 as a historical footnote.</p> <p>The landscape designation section has been updated to name the specific NSA which covers most of the North Rannoch Forest Plan area.</p> <p>In the south west section of Rannoch Lodge, there is a notable area of Aspen which is being allowed to develop. A new section of deer fence was erected in 2011 on the forest blocks southern boundary to prevent grazing from transient red deer.</p>
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			<p>would be fair to say, that so long as forest operations consider site protection and follow UKFS best practice for both water and sediment management, and brash management, then with the scale of operations possible we would be safe to conclude that there to be no Likely Significant Effect on the Natura site.</p> <p>You should update the appraisal in line with the Natura requirements as more detailed plans develop. I've been offering the following link to anyone with the slightest interest <a href="http://www.snh.gov.uk/docs/C204761.pdf">http://www.snh.gov.uk/docs/C204761.pdf</a> You may find it of help in providing the information that the Conservancy will need when they, as Competent Authority carry out the appraisal.</p> <p>It is worth adding that we are not unduly concerned about the impact of forestry operations on the water quality of Loch Rannoch, but there is an aspect of cumulative effect, and the</p>	
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## North Rannoch Land Management Plan 2016 to 2026

			<p>need for closer consideration for operations which because of their location have greater connectivity with the Loch.</p> <p>And finally, some years ago I was in that area with a colleague with an interest in aspen and who took me to what he said was the largest aspen in Scotland. From (sketchy) memory it was between the road and the powerline not too far west of the Bridge of Gaur junction.</p>	
PKC	11/12/14	12/12/14	<p>Forest works</p> <p>All established paths and routes must be taken into account within any forest works. There should be an intention to maintain public access during works using signage to warn path users of the nature of the works. If temporary closure of paths are required good signage to advise the public of any temporary diversions or other restrictions to such paths should be employed. Any such diversions or restrictions should be kept to a minimum in both area and duration and the signage should accurately reflect these arrangements.</p>	<p>The location of all core paths and rights of way are held in the forest district data base and are embedded in operational work plans.</p> <p>Once an established route or path has been identified during the initial planning phase. Liaison with the appropriate PKC Access Officer is undertaken through the Forest Districts Highland Perthshire Communities, Recreation and Tourism (CRT) Forester. Following the requirements stated by the area Access Officer, the CRT and Operations</p>

			<p>We are always happy to offer advice on suitable diversions or advisory signage. We would in any case be grateful if you would keep us informed through providing advance notice of any diversions affecting the paths used for public access, particularly the routes included within the core paths plan. This allows us to pass relevant information on those who query the access restrictions they encounter.</p> <p>Fencing Any fencing which crosses established paths or routes should build in suitable gates so that public access is not obstructed. Self-closing gates can be used where grazing is an issue. Stiles should be used as a last resort as they restrict or prevent access for many users (elderly and less able walkers as well as horse riders and cyclists).</p> <p>Reinstatement after works Forestry works can severely damage paths and there may be a need to reinstate path surfaces to a condition</p>	<p>forester will compose a strategy of signage, diversions and systems of work to ensure safe public passage until normal conditions resume.</p> <p>These considerations along with any path protection measures will be written into the Operational Section of the District Work Plan as a permanent record for use by all internal stakeholders.</p> <p>In terms of improvements for public access, there are no plans under this forest plan review to develop new access routes. This is a reflection on the low level of public use in North Rannoch.</p>
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## North Rannoch Land Management Plan 2016 to 2026

			<p>suitable for public access.</p> <p>Improvements for Public Access</p> <p>Opportunities to improve provision for public access should be sought throughout the lifetime of the Plan. This could include: provision of new paths to viewpoints or improvement of views from existing paths and viewpoints, provision of signage or interpretation, provision of parking.</p>	
Scoping meeting held at Kinloch Rannoch Hall	26 <sup>th</sup> March 2013	26 <sup>th</sup> March 2013	<p>Key points raised at the meeting were,</p> <ul style="list-style-type: none"> <li>• Increase level of native species</li> <li>• Maintain formal and informal path network</li> <li>• Level of timber traffic and felling proposals within new plan</li> <li>• Pockets of unsightly windblown trees in key recreation areas</li> </ul>	
R Taylor, Rannoch	26 <sup>th</sup> March 2013	4 <sup>th</sup> April 2013	The area south of Aulich Hill (NN599 595) is to be replanted with Douglas Fir and other conifers. The	Area of native woodland has been expanded on account of PAWS

## North Rannoch Land Management Plan 2016 to 2026

			remaining trees here show that the area must once have been largely oak and a number of self seeding oaks are growing on non-fc land.	designation.
Claire Smith, RSPB	December 2014	5 <sup>th</sup> January 2015	<p>RSPB (in conjunction with SNH and FCS) carried out a black grouse lek survey around Rannoch in 2007. Although no leks were located within the two forest blocks that form part of this plan, six leks were located within 1.5km of the forest boundaries.</p> <p>Lek locations are likely to shift location between years, however, this indicates that the wider area is important for black grouse so any work to '<i>ensure boundary fences are secure</i>' should also consider marking to reduce the risk of collisions in line with FCS guidance. Black grouse will benefit from thinning to reveal native species and restocking with scots pine as well as opening of bog areas.</p> <p>Upland waders and divers are</p>	Environment team to survey fencelines and provide details for marking in line with guidance.

			<p>found in the wider area and these species will benefit from the retention and opening up of bog and pools within the forest as well as benefiting this priority habitat. We welcome the felling of spruce and lodge pole and restocking away from bogs. A range of passerines will use the birchwood and will benefit from the retention or expansion of this area and if felled, restocking this area with broadleaves.</p> <p>Ospreys have attempted to nest in this area and if any felling is planned during the breeding season woods should be checked for breeding birds or Logan Steele from Tayside Raptor Study Group contacted who may be able to provide more detailed information. Such species will benefit from areas of long term retention</p>	
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FINAL PR FEEDBACK, Spr				
Steve Callan, PKC		14 <sup>th</sup> April 2016	<p>I have reviewed the Forest Design Plan proposed for North Rannoch. From our mapping system much of the two sites is shown to be located with large areas classified as Ancient Woodland. From the submitted documents and plans it is not clear if the areas of Ancient Woodland will be avoided or how this proposal will be achieved without adversely impacting on them.</p> <p>I can confirm the Forest Plan potentially conflicts with the spirit of the Council's Forest and Woodland Strategy 2014. Page 15 of the Strategy states <i>"there is significant pressure on some of our most rich and ancient woodlands from development. These need to be preserved and enhanced as part of our most valuable heritage and</i></p>	<p><b>Ancient woodland</b></p> <p>The area flagged up is Class 2b LEPO. The North Rannoch plan is important for red squirrel, one of the 6 FCS Priority Species, so the decision was taken to restock with SP/NS where possible to benefit these species. Any remnants within the LEPO area will be protected during harvesting, as is standard prescription across the FD, and buffered during restock to ensure that they have plenty of space around them. Hen harrier, black grouse, red squirrel and pine marten all use the forest in its current form, and we would expect this to continue in the long-term given the plans put in place.</p> <p>We work within all relevant UKFS guidelines and within FES policy and would consult with PKC staff, HES and our own internal</p>

			<p><i>biodiversity”.</i></p> <p>Both areas contain significant levels of archaeology and protected species such as Red Squirrel, Pine Marten, Hen Harrier, Black Grouse, Snipe and Palmate Newt and your Draft Land Management Plan refers to protection of cultural heritage and protection of species.</p> <p>I would also advise that the creation of a new forest road will potentially require planning permission if not done so already.</p> <p>On the basis of the above we would have some concerns regarding the Forest Plan and in particular its potential impact on designated Ancient Woodland and would welcome further clarification on this issue.</p>	<p>archaeologist as and when required prior to and during operations.</p> <p><b>New road and turning points</b> Will require prior notification/planning permission and EIA determination and will be acquired prior to the road construction operation. The operations of the management coupes which require this new road section are outside the 10 year period of this plan. application process needs to be carried out during the second five year half of the proposed LMP. If this is done earlier (first five year period of the proposed LMP) the approval period of these documents will run out before the road construction operation takes place.</p> <p><b>Plan amended to clarify these points (pages 22, 24 &amp; 25).</b></p>
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## Appendix II: Tolerance Table

	Adjustment to felling coupe boundaries	Timing of restocking	Change to species	Windthrow response
FC Approval not normally required	0.5ha or 5% of coupe – whichever is less	Variation of less than 2 planting seasons from standard restock year, 4 years post-felling	Change within species group, e.g. conifers: native broadleaves	Up to 1.0ha
Approval by exchange of letters and map	0.5ha to 2.0ha or 10% of coupe – which ever is first		Greater than 15% species change	1.0ha to 5.0ha – if mainly windblown trees between 5.0ha to 10ha in areas of low sensitivity.
Approval by formal plan amendment	Greater than 2.0ha or 10% of coupe	Variation of greater than 2 planting seasons from standard restock year, 4 years post-felling	Increased native woodland component.  Increase in native broadleaves and open/bog restoration	Greater than 5.0ha in areas of medium to high sensitivity



## Appendix III. Design Plan Brief

### FOREST PLAN BRIEF – March 2013

#### **North Rannoch**

The sustainable and efficient management of these forests will be driven by the identification of an appropriate balance between environmental issues, people's interests and economic productivity. The attached draft Strategic Plan identifies a zonation of management priorities for some of the key issues within these broad categories - conservation, landscape, recreation and timber production.

In comparison with other Forestry Commission forests in Scotland, the following classification gives a wider context to the value of these forests:

CATEGORY	RELATIVE VALUE
Conservation and heritage	<p>A number of unscheduled ancient monuments are found through out the forest and are identified on Forester GIS.</p> <p>Within Rannoch Lodge and Craiganour, there are significant areas of semi-natural woodland with successful areas of natural regeneration. In terms of FC Key species, populations of red squirrel and black grouse are present and enhance diversity value.</p> <p>There are PAWS designated areas in both forest blocks.</p> <p>Craiganour has a <b>Medium/High priority status</b> on account of native woodland and Rannoch Lodge, <b>Medium priority status</b> due to native woodland and important bird life.</p>
Landscape	<p>Both Rannoch Lodge and Craiganour are visible from the public road on the south side of Loch Rannoch.</p> <p>Proposed new forest roads pose a landscape concern in terms of visibility and will required an EIA determination as part of the FDP submission.</p> <p>On account of the NSA designations, Craiganour and southeast Rannoch lodge are classified a <b>High priority status</b>.</p>
Recreation	<p>The most significant feature is the right of way at Rannoch Lodge which serves as access for Ben Alder other wise there is only local use of the forests.</p> <p>There have been requests at a local level for access gates to have provision for buggies in their design.</p> <p>Both Rannoch Lodge and Craiganour are classified as <b>Low priority status</b>.</p>
Timber	<p>The lower sections of Rannoch Lodge and Craiganour have good soils</p>

<b>production</b>	<p>and consequently high growth rates from douglas fir, Norway and sitka spruce are the norm.</p> <p>At Craiganour, there is a good forest road network which was upgraded and extended in 2012. Access in Rannoch Lodge is more limited.</p> <p>High quality birch to be harvested through thinnings on sections close to lochside.</p> <p>Craiganour – <b>High priority</b> on account of access and good soils</p> <p>Rannoch Lodge - <b>Medium</b> due to slightly poorer soils and poor access.</p>
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### **Key issues**

National Scenic Area (NSA) designation covering the eastern part of Rannoch Lodge and all of Craiganour.

River Tay Special Area of Conservation (SAC) including Loch Rannoch which the forest fronts.

Hydro-electric aqueduct at Craiganour which entails periodic access by the hydro-board.

Construction of new forest roads to improve access – EIA determination

Graveyard at Rannoch Lodge is privately owned.

Electricity powerlines

High levels of external deer pressure from neighbours to the north and west however there is some buffering gained by new native woodland schemes which have been recently established on adjacent ground.

### **Conservation and heritage issues**

Stable population of black grouse

### **Landscape issues**

Impact of forest operations (harvesting, restocking and forest road construction) within NSA

## Recreation issues

Right of Way – public access point to Ben Alder and other areas of wild land.

## Timber production issues

Access limitations at Rannoch Lodge, working in close proximity to overhead powerlines.

## Consultation

This draft Strategic Plan is being sent to statutory consultees (\*Perth and Kinross Council, Angus Council, Fife Council, SNH, Historic Scotland, SEPA, FC(S) and to the community council and key neighbours. Feedback will be incorporated into the development of the detailed Forest Plan.

## Appendix IV

In terms of scoping for this design plan, a drop in meeting was arranged on the 26<sup>th</sup> of March 2013 at Kinloch Rannoch Village Hall. Using the forest district data base and the knowledge of local staff, invitations were sent to a broad range of individuals to comment on forest plan proposals presented by Tay Forest District staff. The meeting collected a range of general comments which were summarised into the points stated in Appendix 1 of this Forest Plan.