

*Division
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WORKING PLAN

of

KESSECK FOREST

Forest Years 1935 to 1944 (inclusive)

PART I

General Description

1. Situation:

The forest lies in the parishes of Knockbain and Killearnan in the Black Isle district of Ross & Cromarty. It is fairly well served by roads. Kessock lies in two blocks. One, the original acquisition, comprises the Ord Hill and it is probable that timber from this section will be most readily transported by sea. The second, or Allangrange portion, is about two miles from a L.M.S. railway station (Allangrange) and is well served by roads.

2. Area and Utilisation:

- (1) The whole area now planted was previously under a timber crop, of which some parts still remain. The remaining parts comprise a Forest Worker's Holding and a few acres of arable ground, at present let. The total acreage is :-

Table 1

Acquisition Report Proposals

From	By	Date	Plantations Acquired	Plantable (excl. Col. 4)	Nurseries	Agricultural	F.W.H.	Unplantable excl. Col. 8-9	Other Land		Total
									Description	Area	
1	2	3	4	5	6	7	8	9	10	11	12
Sir D. Macdonald	Purchase	1926	59.	524.5	-	1.5	-	20.3	-	-	405.3
Mrs Fraser-Mackenzie	Feu	1929	19.7	227.7	-	-	-	-	-	-	247.4
Sir D. Macdonald	Purchase	1933	-	-	-	-	2.5	-	-	-	2.5
			78.7	552.2	-	1.5	2.5	20.3	-	-	655.2

+ See Minute of Agreement of 1929 re alteration of boundary.
Shootings on Allangrange sections let by Minute of Lease of October 1929
See also relative Agreement of 1930.

(11) Existing Utilisation:

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Table 11

(a) Plantations:

	Acquired	...	...	84.5	
	Formed by Commission	...	...	565.	649.5 acres
(b)	In hand, awaiting planting				-
(c)	Nurseries				- +
(d)	Agriculture - number of tenancies	1.	area -	1.5	"
(e)	F.W.E. ... number	1	area	1.8	"
(f)	Unplantable land in hand				-
(g)	Other land				2.8 "
					<u>655.6</u> "

The whole plantable area has now been afforested or reafforested. As regards nurseries there is a very small temporary nursery of 0.1 acres which has not been shown separately on account of its relative unimportance. An area of 1.5 acres arable ground is let to Mr Gilroy, Craigbreck.

"Other land" is 2.8 acres of rough ground with some scrub adjoining the 1.5 acres of arable land. It is un-utilised at present.

The land described as unplantable in the acquisition report is of poor quality but has been reforested, mainly for shelter purposes.

Where discrepancies occur between acreages in Tables 1 and 11 the latter can be held as accurate.

3. Boundaries:

These are in general well defined. There is one notable exception. Reference should be made to the tracing relative to the Minute of Agreement of 25/5/28, wherein the Commission was allowed to erect a stretch of fence, for convenience, on ground belonging to Mr MacNeill of Craigton, instead of on the boundary.

4. Tenure:

There are no restrictions affecting the normal working of the forest. The sporting rights of the Allangrange section are let to the Superior and work in that section is arranged at certain times so that sport shall be interfered with as little as possible.

5. Physiography:

See previous working plan. The forest is in three sections. One is the Ord Hill, rising from sea level to 633 feet. The main slopes are to north-west and south-east. A second block is of flat moorland and the third and most westerly section is the north-eastern slope of the Gallowhill, with an average elevation of 350 feet. Slopes and relief are low except on the south and south-east sides of the Ord Hill where there are steep descents to sea level.

6. Geology:

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The rock is old red sandstone conglomerate. Where uncovered by drift soils are poor and shallow as a rule. The rock on the major part of the forest is covered by drift of the usual Black Isle type. This is a hard boulder clay, usually leached but with little definite pan. It gives poorly drained conditions on low lying flat parts. In certain parts (Comps. 86, 87, 88, 89) the soil is sandy and of considerable depth and fairly free from the usual mixture of boulders. In these conditions Scots Pine, of good race, promises well. Peat, where present, is of shallow type and does not give much difficulty.

7. Meteorology:

Rainfall is about 36 inches annually. Snow and frost are not serious. The prevailing wind is southwesterly and is severe at times. Very dry east winds are experienced in springtime but danger from that quarter was serious only while afforestation was in progress.

8. Summary description of the Forest:

The bare land has now been planted. Work was begun as P.27 and completed as P.33. Growth is slow on the whole and establishment is delayed by strong growth of whins. A small amount of beating up remains to be done, including replanting of 3 acres in P.29 (C. 16) burned in the summer of 1934.

Certain standing woods were taken over. These are almost wholly of Scots Pine and are described as follows :-

C.25, 26, 27, 28:

47.1 acres S.P. planted

Previous to acquisition, treatment consisted of the harmful local method of thinning, wherein the best stems were removed. This is being gradually corrected by removal of undesirable trees for produce, including firewood. Open spaces have been underplanted with Tuga het. (in 1931 and 1932) and a fair crop will result in time. Volume at present is about 2200 cub. ft. per acre. It is suggested that the medium size telegraph pole market be kept in mind during future treatment.

C. 2 B, 5 B, 6 B:

17.7 acres S.P. planted 1890.

This is a poor wood. It includes a few larches but the main crop is Scots Pine, rather thinly stocked. Open spaces have been filled up with planted Douglas Fir and with Pine regeneration. Trees are injured by squirrels and are further damaged to a height of 4 to 6 feet by a fire which occurred some years before acquisition. Some of the worst trees were removed for fencing purposes. The stand is somewhat inaccessible from the extraction point of view, but the trees could readily be delivered on the shore of the Moray Firth, about 400 feet below. It is suggested that if it can be sold, even at a low figure, the stand should be clear felled.

C.38/

G. 38 10.5 acres S.P. }
 1.5 " C.P. } planted 1914.
 1.5 " C.P. and P. Strobus }

A fairly thriving stand. An open space in the centre was stocked with S.P. and Ta. het. in P.Y. 34. The P. Strobus will be removed gradually on account of blister. The plantation received a cleaning in P.Y. 34 and the average height is now about 16 feet and the stand should receive a first thinning in P.Y. 35 or 36, as the crowns are rather small.

G. 39 5.9 acres S.P. planted 1872 (Approx.)

A stand of trees about 62' high, much underthinned before acquisition. The trees are of a fine type and have been thinned in the years 1932 - 34, but it is doubtful if they will respond fully to the treatment, as the crowns had become very small. A second thinning should be carried out in the plan period and the stand could then be left alone with the object of letting the girth increase. Underplanting with beech, after the next thinning, is also recommended. At present the average quarter girth, at breast height, is rather less than 7".

Plantations formed by the Commission:

Table 111

<u>P. Year</u>	<u>Existing Area</u>	<u>Reestablished</u>	<u>Requiring additional treatment</u>	
37	70.6 ac.	70.6 ac.	-	ac.
28	87.6 "	84.9 "	2.7	"
29	68.2 "	49.7 "	18.5	"
30	222.7 "	163. "	57.7	"
31	84.9 "	70.2 "	14.7	"
32	32. "	-	32.	"
33	1. "	-	1.	"
	4565.0 "	440.4 "	124.6	"

+ All conifers.

9. Probable Production:

Generally, the forest should provide timber of low volume but good quality, particularly in Scots Pine, which is the main crop. The only other species of importance is Douglas, which is planted on better quality soils. The following is a production estimate :-

S.P. Quality Class 111 4750 c.ft. per acre @ 90 years
 Dg. " " 111 6430 " " " @ 50 "

A few acres of Tunga het. in P. 39 are thriving on a very dry southerly slope. No data of production are available.

10. Risks:

The outstanding local risk is fire. The area is a dry one. Herbage is of an inflammable type and the ground is visited by numerous persons who are not fully aware of the dangers of fires, matches, and so on. A considerable amount of damage has already been done by fire. The forest is now fairly well provided with fire lines, both internal and boundary ones, but these can only help to localise fires, which will provide a hazard until the fire line species have formed dense canopy.

Other/

Other risks are normal. The need for concentrating on rabbits and hares is decreasing but squirrels and roedeer continue to be troublesome. A full time trapper is employed. Insects and fungi have not proved serious, though Pine Sawfly has had to be dealt with.

11. Markets:

The local market is a very restricted one and can absorb only small quantities of firewood and farm wood at poor prices. The main body of produce must be sold in the southern markets.

12. Roads and Rides:

These are fairly convenient. Reference should be made to the plan.

13. Labour Supply:

There is an ample local supply of efficient labour. One man is now accommodated on a F.W.H. wall placed for keeping a look out for fires.

PART 11

14. Objects of Management:

The objects during the 10 year period include the efficient management of existing plantations and the economic marketing of such produce as may be obtained during that time.

15. Allocation of Area:

TABLE IV

Anticipated final utilisation:

				acres
(a)	Plantations	...	...	649.5
(b)	Nurseries	...	...	-
(c)	Agriculture	...	...	1.5
(d)	F.W.H.	...	...	1.8
(e)	Unplantable	...	...	-
(f)	Other land (timber dump)	...	...	3.8
				<u>655.6 acres</u>

16. Rate of Working:

During the plan period the forest will be on a maintenance basis, dealing with cleaning, fire and vermin protection, some beating up, draining, thinning of acquired plantations, and a possible first thinning to small areas of Commission plantations. No rate of working need be laid down.

17. Clear Felling:

No clear felling is contemplated, unless there is an opportunity for disposing of P.1890 at a remunerative figure.

18. Natural Regeneration: Nil

19. Planting (and Sowing): Nil

20. /

20. Thinning and Pruning:

See Appendix (Working Plan Control) also Para. 8, 1.

In addition to acquired plantations, it is likely that certain small areas of Douglas Fir in P.27 will require a first thinning or cleaning.

21. Underplanting:

After C.39 (P.1872) has received a final thinning, it may be underplanted. The area is 3.9 acres and the species may be Beech or Ts. het.

22. Forecast of position at end of Plan-period:

<u>Area of Plantations:</u>		<u>Thinned</u>	<u>Underplanted</u>
<u>Age</u>			
0 - 10 years	- Nil	-	-
10 - 20 "	- 565.0	45.0	-
20 - 30 "	- 15.8	15.8	-
50 - 60 "	- 64.8	64.8	20.
71 "	- 3.9	3.9	3.9
		(under blanks) not essential	
	649.5	129.5	23.9

During the following period it is likely that an increasing amount of work will be required. First thinning will be required on the most of the area unthinned by September 1944, i.e. 520.0 acres, and a considerable acreage will be in need of a second or subsequent thinning. The area statement at the end of the present plan will be as under :-

TABLE V

(a) Area planted	...	565.0
(b) Blanks after felling		-
(c) Other land allocated to forest	...	84.5
Total allocated to forest		649.5 acres

23. Protection:

A full time trapper is kept. At present his main duties are rabbit killing and fire patrol. In a few years it is probable that less time on rabbits will be necessary but roe deer and squirrels will require more attention. All plantations are enclosed by rabbit netting. Vermin, on the whole, do not present an abnormal danger.

Fire measures are rather elaborate on the Ord Hill section. In addition to the usual warning notices, fire lines and traces are laid out where they will do most good in arresting an outbreak or checking its spread. Fire patrol is necessary on local holidays. No fire plan is attached, but the locality of fire beaters is known to all forest workers and to local people.

24. Establishment:

The forest forms part of the charge of a Grade 11 forester. He lives at Craighadrig forest but a ganger is resident on the ground in the Forest Worker's Holding. The trapper and two other employees also live in close proximity to the forest and can readily observe the outbreak of fire and get to the spot.

25. Housing:

The only house is on a F.W.H. established in F.Y. 34.

26. Finance:

Data can be obtained from Finance Branch.

27. Revision of Plan:

No special provision for revision is made and it is unlikely that any will be necessary unless the forest be extended.

"P. Oliver"

12. 11. 1934

Jam Hume
10/2/35

APPENDICES

Re paras 8 and 20, for General Description of Compartments see Census of Plantation forms as at 30/9/34.

Re Prescriptions, the following compartments will require treatment, other than normal maintenance.

Comp. No.	F. Year	Suitable for		Requiring						Degree of Urgency
		Clear-felling	Nat. Regn.	Cleaning	Thinning			Pruning	Under-planting	
		ac.	ac.	acres	ac.	ac.	acres	ac.	ac.	
25, 26, 27, 28	P. 1888	-	-	-	47.1	-	-	-	-	Normal
2b, 5b, 6b	1890	10.7	-	-	7.	-	-	-	-	"
38	'14	-	-	-	-	13.3	-	13.3	-	"
39	1872	-	-	-	3.9	-	-	-	3.9	"
1, 2A, 3, 4	27	-	-	70.6	45.	-	-	-	-	"
5A, 6A, 7, 8, 9) 10, 11, 12, 13b) 14b, 15b, 13a) 14a, 13a)	28	-	-	84.9	-	-	-	-	-	"
16, 17, 18	29	-	-	66.2	-	-	-	-	-	"
19, 20, 21, 22) 23, 24, 29, 30) 31, 32, 33, 34)	30	-	-	222.7	-	-	-	-	-	
25, 26, 27) 28, 35, 36)	31	-	-	84.9	-	-	-	-	-	
37 (part)	32	-	-	32	-	-	-	-	-	
37 (part)	33	-	-	1.	-	-	-	-	-	