

FORESTRY COMMISSION (SCOTLAND) NORTHERN DIVISION

FORT AUGUSTUS DISTRICT

INCHNACARDOCH FOREST

WORKING PLAN FOR PERIOD 1931 - 1935

Note:

The Working Plan prepared in 1927 is given as an appendix.

FORESTRY COMMISSION
Fort Augustus District
Inchnacardoch Forest

PART 1
General Description

1. Situation:

The forest of Inchnacardoch is situated in the Parish of Boleskine and Abertarff in the County of Inverness. It extends along the N.W. slope of Glen Khor from the Invervigar Burn to the S.W. till it joins Portclair Forest at Allt na Criche Burn which is the march between the two.

2. Area Statement:

By the Acquisition Report the total area of the forest was given as 9168 acres, of which 4320 acres were classed as plantable. After three years planting the difficulty of establishing a crop on the higher peat ground was realised and the plantable area was cut down to 2062 acres. Of this area there remains only 70 acres of the Sanatorium Wood to plant. It is now considered that some further land on the hill ground mostly outside the present deer fence may be regarded as afforestable. There are some 150 acres at the west end of the forest and 30 acres N.W. of P.24 which is good plantable land, but which was formerly excluded, partly to give shelter for deer, and partly owing to its inaccessibility. Further there are some 300 acres of what may be termed "secondary land": that is, land which cannot be planted by ordinary methods, but which will need extensive draining, or on which experiments must first be carried out. There are also 362 acres of plantable land on Auchterawe moor not formerly included in the plantable land, but reserved for grezing. Thus the area statement shows an increase in plantable land over the former figure of 2062 acres :-

Afforested up to F.Y. 30	1991 acres
To be afforested :-	
Sanatorium Wood	70 "
Above Auchterawe House and along road	20 "
Auchterawe Moor	362 "
Outside present deer fence	<u>180</u>
Total plantable	2623 acres
Secondary land (inside and outside deer fence)	*300 "
Unplantable	5986 "
Nursery	42 "
Other land (holdings, arable, buildings &c.)	<u>217</u> "
Total	<u>9168</u> "

*This figure can only be approximate as the extent of secondary land afforested will depend largely on the results of experiments.

3. Boundaries:

The forest is bounded as follows :-

On the S. and S.W. by the whole length of the Invervigar Burn.

On/

On the N.W. by the Allt na Criche Burn and a fence running N.W. from the burn to join the Parish march at Loch Lochan.

On the S.E. by the N.W. edge of Loch Ness and from there a line following a fence from the Inverness-Fort Augustus road, behind Inchnacardoch Lodge running in a S.E. direction till it crosses the Bunoich-Achterawe road at the junction with General Wades road and joins the River Oich. From there the march follows the River Oich to the junction of the Invervigar Burn which forms the S. and S.W. march as stated above.

4. Tenure:

By Feu Charter this forest was conveyed to the Forestry Commission at an annual feuduty of £400 as from Martinmas 1919, with grazing rights. The Commission were bound to provide grazing for the Bunoich crofters to the number of eight, who previously had the right to graze on the hill land between Creag-an-Iarlain and the plantation at Inchnacardoch Lodge. Sporting rights are leased by the agreement to Lord Lovat at his option.

5. Physiography:

The area forms part of the ridge which runs along the N.W. side of Glen Mhor. With the exception of the part between the Bunoich to Achterawe road and the River Oich, which is a flat moor, the ground rises in a series of slopes separated by depressions or flats to the watershed, which is also the march. Only at Thor Dhuin and for some distance S.W. of it is the first slope from the River Oich Precipitous. Numerous burns running in a S.E. direction cut through the area. The general aspect is S.E.

6. Geology & Soil:

The rock formation is metamorphic, of the gneissose type. The soil condition varies with the physiographical formation. On the moor below the Bunoich to Achterawe road on slopes and knolls there is a layer of non-fibrous peat over hard yellow stony sand, rather sterile. In hollows where drainage is cut off there is a deep fibrous peat. The same applies on the rest of the area: on the slopes there is a skin of peat sometimes only 1" deep over the mineral soil which consists of a stony sandy loam. Where drainage is cut off on the hollows and flats between the slopes, the peat may be of several feet in depth the first foot being of a fibrous nature.

7. Meteorological Data:

Rainfall is on an average about 45" in the year and is distributed extraordinarily evenly throughout the year.

The prevailing wind is S.W. to which the area is considerably exposed.

Heavy falls of snow are rare and snow seldom lies for long at altitudes below the planting limit.

Frost can be very severe but its effects are more likely to be felt on the moor near the river than on the slopes.

8. Summary Description of the Forest: /

8. Summary Description of the Forest:

(a) Afforestable land: Vegetation:

Before acquisition the area was a deer forest and also carried a sheep stock. Fairly regular burning had been carried out particularly at the west end, though in some parts the heather had been allowed to grow to a considerable height. After acquisition it was considered necessary to burn the whole area in order to facilitate planting. This burning, combined with the former partial burning, has tended to cause a deterioration in the vegetation type. Where formerly calluna was the dominant species with bracken on the lower slopes and molinia coming through in the wetter flats, after burning a large part of the area deteriorated to a scirpus erica-tetralix association. The slopes have now reverted to a calluna type but a large area of the higher flats remain mostly under scirpus and tetralix, though it would seem that calluna and molinia are coming in again, particularly wherever some drainage has been carried out. All over the area there are patches, sometimes of considerable extent, of bog myrtle, in the wetter type of ground. This description applies to the hill ground. Auchterawe moor consists of areas of calluna, bracken and grasses along the slope down to the river, of areas of pure calluna on the knolls, and areas of scirpus-erica tetralix association on the undrained flats. To the east of the Golf Nursery there is a considerable area in which bog myrtle is the dominant plant.

(b) Existing Woods:

All the birch on the area has been felled with the exception of a small amount on P.24 which was girdled. There was a crop of fairly good ash and some birch of about seventy acres in the Coille Torr Dhuin, all of which has been girdled.

There is a small plantation of about 2 acres of Scots Pine N.W. of Bunoich about 20 years old. An extent of about 64 acres N. of Inchnacardoch Lodge was planted up with Douglas Fir, European and Japanese Larch and Sitka Spruce a few years before the Commission took over the area. It was much damaged by deer but growth particularly of Douglas Fir was good. Chermes (adelges) Cooleyi first attacked these Douglas Fir in 1929 and the attack is spreading and increasing in severity.

9. Probable Production:

There is no data from which an estimate of timber production can be made.

10. Risks:

The risk of fire on the area is small. There is no railway and only a short length of main road touching the area.

Chermes (adelges) Cooleyi appeared on Douglas Fir in P.20 in 1928 and the attack is rapidly spreading.

Exposure to S.W. wind is fairly severe over most of the area. Snow does not as a rule fall heavily or lie long; on the sloping ground frost damage is not severe, but on the flat ground between the River Oich and the Bunoich to Auchterawe road, damage to any frost tender species must be expected.

(Revision) Forest Years 1930 - 1935

Argument, Prescriptions and Procedure

11. General Argument:

The present revision of the Working Plan covers the Forest Years 1931 - 1935 inclusive. The revision became necessary as no provision had been made for planting beyond F.Y. 30.

Ten years have elapsed since planting was first carried out on the area, and it is now possible to determine those areas that may be considered fully stocked and those areas where the plantations are total or partial failures. It is proposed to take the best of the ground where stocking is not complete, and in the light of past experience thoroughly to beat these areas so as to ensure complete stocking in the future. In places the process will amount to a replant. This beating up will consist of

- (a) Planting dry slopes and knolls where spruce have failed, with Scots Pine by ordinary methods.
- (b) Planting the better types of flats and hollows with Sitka Spruce by intensive draining and turfing with the application of slag.

The areas to be so treated are in P.21, P.22, P.23. Parts of P.21 and P.23 were treated in this way in F.Y. 30 and it is proposed to carry on the beating up in P.22 in F.Y. 31, in P.23 in F.Y. 32 and then to go back to P.21 in F.Y. 33, and so on.

It is further proposed to plant yearly 10 acres of land lying inside the deer fence but which has not been planted up to date, being considered as doubtful. The Experimental Branch has been working on bad types of peat and has evolved methods of intensive treatment which justify their adoption in normal afforestation. The treatment is by extensive draining and turf planting with the application of basic slag. Cost should be kept below £10 per acre, but it is owing to this high cost that no more than 10 acres a year will be treated.

By these two operations all the hill land of Inchnacardach, inside the fence, that is afforestable, should be fully stocked.

Further the normal planting programme on the hill land having been completed by F.Y. 30, it is proposed to afforest as much as possible of the Auchterawe Moor - the flat ground between the Buncich to Auchterawe road and the River Oich. This extends to about 400 acres, of which 27 acres have been taken over by the Experimental Branch, 33 acres (approximately) are unplantable leaving about 340 acres for afforestation. This area will be completed by F.Y. 34. In F.Y. 35 the 70 acres of Oak scrub above the Sanatorium, which has already been girdled, will be planted together with the ground between Auchterawe Nursery and the fence on the bottom of the hill ground. This land is now grazed by John Cameron, Head Forester.

This completes the operations covered by this revision of the Working Plan. A further revision will be necessary in 1935.

Future Proposals:/

Future Proposals:

Outside the deer fence, particularly at the west end of the area is a considerable area of land that now appears afforestable by more intensive methods than was formerly employed. It is hoped that the Experimental Branch will take in one or two small areas in this ground in F.Y. 31, and ascertain the best method of treating it, and it is proposed that this land should come in for afforestation after F.Y. 35. As regards fencing, the existing wooden fence will not last indefinitely and when the permanent iron fence to take its place is erected a new line will be chosen to include all the land within the boundaries of Inchnacardoch Forest which are then considered afforestable.

If Inverwick forest were to be acquired the most economical way of fencing it and renewing the Inchnacardoch fence would be to include both in a ring fence. This fence would run along the S.W. march burn of Inchnacardoch, then due north to meet the Moriston River, and along the river to join the existing Portclair fence. Inchnacardoch, Portclair and Inverwick forests would then be surrounded by a joint ring fence. Besides this new land to be taken in the planting of 10 acres within the old deer fence should be continued as in the period covered by this plan.

12. Allocation of Area:

Planting carried out on Auchterawe moor within the period of the plan will constitute Planting Series No. 5. P.35 will fall into Series No. 4 and the other 10 acres of planting carried out each year will fall in the series in which they lie according to the Division made in the original working plan.

13. Prescriptions:

(a) Clear felling - none

(b) Replanting - none

(c) Afforestation

*335 acres afforestable land on Auchterawe Moor to be planted in F.Y. 31 to F.Y. 34 inclusive.

70 acres of Sanatorium Wood and 16 acres above Auchterawe House to be planted in F.Y. 35.

50 acres in Series 11, 10 acres to be planted yearly, F.Y. 31 to F.Y. 35 inclusive.

There will further be about 350 acres of intensive besting up, in places amounting to a replant, in P.21, P.22 and P.23 to be carried out over and above the normal programme of besting up.

(d) Natural regeneration - none

(e) Thinning

The area, extending to about 64 acres above Inchnacardoch Lodge, which was planted with Dg. J.L. S.L. and S.B. when the Commission took over the forest should be given a first thinning during the period. The 23 acres of Douglas Fir is most in need of thinning.

(f) Underplanting - none.

*Exclusive of 27 acres taken over by the experimental branch.

14. Future Position:

14. Future Position:

Area Statement: giving anticipated acreages (Species and Age Classes etc.) at the end of the plan period, if prescriptions are carried out.

Species	1/10	11/20
M.L.	12.	21.
J.L.	35.	18.
Hy. L.	2.5	-
N.S.	76.	844.
S.S.	224.	235.
Dg.	163.5	100.
S.P.	521.	25.
Mt.P.	8.5	2.
P. Cont.	23.5	-
C.P.	2.	-
Various	7.	6.
	1075.	1251.

15. Procedure:

(c) Afforestation:

1. Roads & Rides:

(see original plan)

2. Choice of Species:

On Auchterawe moor the majority of the ground is of the poor calluna type and Scots Pine will be used almost entirely. To the east of the Golf Course Nursery, S.S. will be planted with some Pinus Contorta in the bog myrtle ground and larches on the sloping ground above. On the deeper peat on the moor Pinus Contorta with 500 S.S. per acre will be used, and at the west end where grass and bracken come in and the situation is sheltered, Dg. will be planted. In the Sanatorium Wood Dg. will be almost entirely used with N.S. in wetter hollows. The grass and bracken and gorse ground above the Auchterawe Nursery will be planted up with Douglas and Larch.

3. Preparatory Work:

Clearing of Scrub:

A little clearing will be necessary in the Sanatorium Wood, and regirdling of any trees not already dead. Gorse will require to be cleared from the ground above the Auchterawe Nursery.

Fencing:

A permanent iron deer fence to replace the present wooden one will eventually be necessary. The wooden fence was strengthened in 1930 and should stand for some years more. The new iron fence will run on a new line which will include all plantable land now outside the fence. The exact line of the fence will depend upon whether Inverwick forest is acquired or not. If it is acquired a single deer fence to include both should be erected. If not acquired the/

Fencing (Contd.)

the Inchnacardoch fence should run from the S.W. march burn at the 800' contour line in a N.E. direction to join the present fence line at the N.W. corner of P.22. From there it would follow the present line. The fence should be begun not later than P.Y. 35 so that by P.Y. 36 an area may be enclosed on which further planting can be carried out. Besides this uppermost fence a deer fence along the Intervigar burn will be necessary: for this the existing stock fence may be heightened.

Drainage:

Over the better parts of the Auchterawe Moor little draining will be necessary, but extensive draining must be carried out if the wet areas and deep peat areas are to be afforested. In the 10 acres planted each year on the hill ground very intensive draining will be necessary, the ground being thoroughly intersected by turf drains, contour drains, side drains and leading drains. In those areas to be beaten up in P.21, P.22 and P.23 all the hollows will be similarly drained as very little draining was done before the original planting was carried out.

4. Method etc.

Pines will be planted as 2+1 transplants.

Other species as 2+2 transplants. If available Dg. transplants 2+1+1 are the most satisfactory category. Pines will be notched direct in the best sites. Where the ground is very hard or peat very firm, pits will be made in advance, the peat and soil being well broken up, & the plants then notched into these. Douglas and Larches will be pitted; S.S. notched into turves; H.S. shallow pitted.

Planting distances are :-

Scots Pine	4½'	(possibly 4' in bad localities)
Pinus Contorta	5½'	
H.S.	5'	
S.S.	5½'	
E.L.	5½'	
J.L.	6'	
Dg.	6'	

5. Weeding and Cleaning:

See original plan.

6. Beating Up:

See original plan.

(c) Thinnings:

The 64 acres of S.S. Dg. E.L. and J.L. plantation, planted originally in 1914 and filled up as regards the blank and deer damaged sections in forest year 20, will receive a first thinning during the period of the plan. The Dg. Fir section (23 acres) and the J.L. section (8.7 acres) will be treated in forest years 31 and 32. The remainder will be dealt with in the following two years. The treatment will consist in the case of the Dg. of the removal of whips, wolf trees will either be removed or topped. A certain amount of stem pruning will be carried out to facilitate the tending of/

of plantation and the removal of such thinnings as may be of value. In the J.L. section the stems will be pruned after the removal of whips and badly shaped trees. In the K.L. section badly cankered stems will be taken out and whips.

The work of thinning and pruning in this plantation will be carried out as a standby job for permanent workers during weather when other operations are held up.

16. Forest Protection:

Red deer are no great danger so long as the fence is kept in repair. Roodeer are bound to keep coming through the fence, particularly from the west, but are kept down by the trapper. Rabbits can be successfully kept down though they are difficult to exterminate as fresh ones keep coming in from the west, and they are difficult to kill in the broom on the crofters' grazing ground. Voles did considerable damage in F.Y. 29 in P.27 and further damage must be anticipated. Trapping is to be carried out, and birds and animals preying on voles etc. are preserved.

Blackgame are a constant source of damage and all S.P. show marks of their attention. Unless an arrangement can be reached with the shooting tenant to kill more than he has formerly done, the Commission should take steps to keep the numbers much lower than they are at present.

White hares coming down from the high ground in winter must be watched for and killed.

Fire protection is dealt with in a special "Fire Plan". There is no obvious source of outbreak from outside agency; the main danger is from smoking and dinner fires of the employees. It is proposed that in danger periods all dinner fires should be prohibited and smoking limited to the lunch hour and ten minutes in the morning and afternoon. No smoking whatever should be allowed when men are going to or returning from work.

17 Planting

PROGRAMME.

Forest Year 1931

Forest Incheourdoch

Working Circle

Reference W.P. para. sub para.

Nature of Operation.	Location.	Description, including species and spacing, or types of drains, or special felling procedure, and so forth.	Area and/or Quantity.	Estimated Cost.	ACTUALS.		REMARKS, including estimate of requirements as to plants and material; or yield from fellings and thinnings and so forth. Also explanation of excess or deficit in actual performance.
					Area and/or Quantity.	Cost.	
(5) Prescribed Operations:	Series V.	W.L. 5 1/2' spacing	3 ac.				W.L. 2+2 4.300
	P.31	J.L. 6' "	4 1/2 "				J.L. 2+2 5.500
(11) Afforestation		H.L. 5 1/2' "	1 1/2 "				H.L. 2+2 700
		M.S. 5' "	3 "				M.S. 2+2 5.200
		S.S. 5 1/2' "	7 "				S.S. 2+2 10.000
		P. Cont. 5' "	2 1/2 "				P. Cont. 2+1 4.400
		S.P. 4 1/2' "	52 "				S.P. 2+1 112.000
		D.G. 6' "	7 1/2 "				D.G. 2+2 9.000
			80 "				Total 151.100
Series 11		J.L. 4' 6" spacing	1 1/2 "				J.L. 2+2 1.000
P.31 (above P.23)		S.P. 4' 6" "	5 1/2 "				S.P. 2+1 11.500
		P. Cont. 5' "	1 "				P. Cont. 2+1 1.700
		M.S. 4' 6" "	1 1/2 "				M.S. 2+1 1.100
		S.S. 5' 6" "	4 "				S.S. 2+2 6.000
			13 1/2 "				21.300

17 Planting

PROGRAMME.

Forest Year **1931**

Forest

Inchmearloch

Working Circle

Reference *W.P. para.* *sub para.*

PROGRAMME.					ACTUALS.		REMARKS. Including estimate of requirements as to plants and material; or yield from fellings and thinnings and so forth. Also explanation of excess or deficit in actual performance.
Nature of Operation.	Location.	Description, Including species and spacing, or types of drains, or special felling procedure, and so forth.	Area and/or Quantity.	Estimated Cost.	Area and/or Quantity.	Cost.	
(b) <u>Incidental Operations (cont.)</u>	P.22	S.S. 5½' spacing on turf) @ 35/- } per 1000	14			S.S. 16,000 (2+2)	
		S.P. 4½' " " " }	60			S.P. 75,000 (2+1)	
(V) <u>Weeding</u>	P.25	S.S. 5½' " " "	10			S.S. 3,000	
		DG. 6' " " "	10			DG. 1,000	
	P.26	DG. 6' " " "	12			DG. 3,000	
		S.P. 4½' " " "	20			S.P. 4,000	
	P.27	S.L. 5½' " " "	1			S.L. 150	
		J.L. 6' " " "	2			J.L. 300	
		Hy.L. 6' " " "	2			Hy. L. 200	
		S.S. 5½' " " "	20			S.S. 5,000	
		DG. 6' " " "	30			DG. 3,000	
		S.P. 4½' " " "	20			S.P. 5,000	

17 Planting

PROGRAMME.

Forest Year 1932

Forest Inmmeceerdooh

Working Circle

Reference W.P. para. sub para.

Nature of Operation.	Location.	Description, including species and spacing, or types of drains, or special felling procedure, and so forth.	Area and/or Quantity.	Estimated Cost.	ACTUALS.		REMARKS, including estimate of requirements as to plants and material; or yield from fellings and thinnings and so forth. Also explanation of excess or deficit in actual performance.
					Area and/or Quantity.	Cost.	
(e) <u>Prescribed Operations:</u>	<u>Series V.</u>	S.F. 4 1/2' spacing	72 ac.				S.F. 2+1 155,000
	P.32	P. Cont. 5 1/2' "	5 "				P. Cont. 2+1 7,000
(11) <u>Afforestation:</u>		S.S. 5 1/2' "	4 "				S.S. 2+2 6,000
	<u>Series 1A</u>	S.P. 4 1/2' spacing	80 "				S.P. 2+1 13,000
	P.32 (above P.23)	S.S. 5 1/2' "	4 "				S.S. 2+2 5,700
			10 "				
(b) <u>Incidental Operations:</u>	P.23	S.S. 5 1/2' spacing planted on tufts } @ 35/1000	10 "				S.S. 2+2 12,000
		S.P. 4 1/2' "	60 "				S.P. 2+1 66,000
(V) <u>Seedling nur.</u>	P.23	J.L. 6' "	13 "				J.L. 2+2 2,000
		S.S. 5 1/2' "	20 "				S.S. 2+2 5,000
		S.P. 4 1/2' "	50 "				S.P. 2+1 5,000
	P.23	J.L. 6' "	12 "				J.L. 2+2 2,000
		S.S. 5 1/2' "	20 "				S.S. 2+2 5,000
		S.P. 4 1/2' "	30 "				S.P. 2+1 5,000
	P.30/						

17 Planting

PROGRAMME.

Forest Year 1932

Forest Inchmearloch

Working Circle

Reference W.P. para. sub para.

PROGRAMME.				ACTUALS.		REMARKS. Including estimate of requirements as to plants and material; or yield from fellings and thinnings and so forth. Also explanation of excess or deficit in actual performance.
Nature of Operation.	Location.	Description. Including species and spacing, or types of drains, or special felling procedure, and so forth.	Area and/or Quantity.	Estimated Cost.	Area and/or Quantity.	Cost.
(V) <u>Planting</u>						
W: (Cont.) P.30		N.S. 6' spacing planted on turfs	20			N.S. 2+2 5,000
		S.S. 5 1/2' " 35/- per 1000	15			S.S. 2+2 4,000
		S.P.1	15			S.P. 2+1 4,000
(V2) <u>Thinning: P.20</u>		DE. Light thinning	11			None
		DE. " "	5			"

PROGRAMME.

Forest Year 1933

Forest

Innocentsoch

Working Circle

Reference W.P. para. sub para.

PROGRAMME.				ACTUALS.		REMARKS. Including estimate of requirements as to plants and material; or yield from fellings and thinnings and so forth. Also explanation of excess or deficit in actual performance.
Nature of Operation.	Location.	Description. Including species and spacing, or types of drains, or special felling procedure, and so forth.	Area and/or Quantity.	Estimated Cost.	Area and/or Quantity.	Cost.
(a) <u>Prescribed Operations</u>	<u>Series V</u>	<u>S.P. 4 1/2' spacing</u>	<u>80 ac.</u>			<u>S.P. 2+1 172,000</u>
	<u>P.33</u>	<u>DG. 6'</u>	<u>5 "</u>			<u>DG. 2+2 6,000</u>
(11) <u>afforestation</u>		<u>N.S. 5'</u>	<u>1 "</u>			<u>N.S. 2+2 1,700</u>
	<u>Series 11</u>	<u>S.P. 4 1/2'</u>	<u>86 ac.</u>			<u>S.P. 2+1 13,000</u>
	<u>P.33 (above P.23)</u>	<u>S.S. 5 1/2'</u>	<u>4 "</u>			<u>S.S. 2+2 5,700</u>
			<u>10 "</u>			
(V) <u>beeting</u>	<u>P.21</u>	<u>S.S. 5 1/2' spacing on turfs</u>				<u>S.S. 22,000 (2+2) @ 35/-</u>
	<u>W:</u>	<u>S.P. 4 1/2'</u>				<u>S.P. 54,000 (2+1) "</u>
	<u>P.31</u>	<u>10' beet up</u>				
	<u>(Series V & 11)</u>	<u>S.L. 2+2</u>	<u>3 ac.</u>			<u>S.L. 2+2 400</u>
		<u>J.L. 2+2</u>	<u>5 "</u>			<u>J.L. 2+2 600</u>
		<u>N.S. 2+2</u>	<u>3 "</u>			<u>N.S. 2+2 500</u>
		<u>S.S. 2+2</u>	<u>11 "</u>			<u>S.S. 2+2 1,600</u>
		<u>DG. 2+2</u>	<u>7 1/2 "</u>			<u>DG. 2+2 900</u>
		<u>S.P. 2+1</u>	<u>57 1/2 "</u>			<u>S.P. 2+1 12,400</u>
		<u>P. Cont.</u>	<u>3 1/2 "</u>			<u>P. Cont. 2+1 600</u>
(V1) <u>Thinning</u>	<u>P.20</u>	<u>S.L. to be pruned and dead trees</u>	<u>16</u>			<u>None</u>

17 Planting

PROGRAMME.

Forest Year 1934Forest Inchmearloch

Working Circle

Reference W.P. para. sub para.

PROGRAMME.

ACTUALS.

REMARKS.

Nature of Operation.	Location.	Description, including species and spacing, or types of drains, or special felling procedure, and so forth.	Area and/or Quantity.	Estimated Cost.	Area and/or Quantity.	Cost.	Remarks, including estimate of requirements as to plants and material; or yield from fellings and thinnings and so forth. Also explanation of excess or deficit in actual performance.
(a) <u>Prescribed</u>	Series V P.34	S.P. 4 1/2' spacing S.S. 5 1/2' "	76 ac. 5 "				S.P. 2+2 163,500 S.S. 2+2 7,000
<u>Operations</u>		N.S. 5' "	3 "				N.S. 2+2 5,200
(11) <u>Aforestation</u>		P. Cont. 5 1/2' "	5 " 89 "				P. Cont. 2+1 7,000
	Series 11	S.P. 4 1/2' spacing	6 "				S.P. 2+1 13,000
	P.34 (above P.23)	S.S. 5 1/2' "	4 " 20 "				S.S. 2+2 5,700
(b) <u>Incidental</u>		S.S. 5 1/2' spacing	30 "				S.S. 2+2 29,000
(v) <u>Operational</u>	P.22	S.P. 4 1/2' "	40 "				S.P. 2+1 64,000
	P.23	10' best up	8 "				S.S. 2+2 1,200
		S.S. 5 1/2' spacing	77 "				S.P. 2+1 16,800
		S.P. 4 1/2' "	5 "				P. Cont. 2+1 700
		P. Cont. 5' spacing	5 "				
(VI) <u>Thinning</u>	P.20	W. to be brushed and dead trees removed	12				None
		S.S. "					"

17 Planting

PROGRAMME.

Forest Year **1935**Forest **Inchmearloch**

Working Circle

Reference W.P. para. _____ sub para. _____

PROGRAMME.				ACTUALS.		REMARKS. Including estimate of requirements as to plants and material; or yield from fellings and thinnings and so forth. Also explanation of excess or deficit in actual performance.
Nature of Operation.	Location.	Description. Including species and spacing, or types of drains, or special felling procedure, and so forth.	Area and/or Quantity.	Estimated Cost.	Area and/or Quantity.	Cost.
(a) <u>Prescribed Series IV</u> <u>Operational</u> P.35		DG. 6' spacing H.S. 5'	67 ac. 3 "			DG. 2+2 21,000 H.S. 2+2 5,000
(11) <u>Afforestation:</u> (ventilatorium wood)			70 "			
<u>Series III</u> P.35 (above Auchterave House)		DG. 6' spacing S.L. 5'	8 " 8 "			DG. 2+2 10,000 S.L. 2+2 11,500
<u>Series II</u> P.35 (above P.23)		S.P. 4½' spacing S.S. 5½'				S.P. 2+1 13,000 S.S. 2+2 5,700
(V) <u>Resting</u> P.23 <u>W</u>		S.S. 5½' spacing on turfs S.P. 4½' " } S.P.) DG.) H.S.) S.S.)	20 50			S.S. 2+2 21,000 S.P. 2+1 65,000 S.P. 2+1 18,500 DG. 2+2 600 H.S. 2+2 200 S.S. 2+2 600

18. Supply of Plants:

(a) Nursery Area:

The Auctersawe and Strotheich nurseries extend to about 38 acres of nursery ground. Plants will be entirely supplied to the forest from these nurseries. S.P. is the main species needed and a good quality of this species comes from these nurseries. These nurseries also help to supply most other forests in the division.

(b) New Nurseries:

None.

(c) Nursery requirements (seedlings)

Year of lining out	E.L.	N.S.	S.S.	Dg.	S.P.	P.Cont.	Remarks
1931	2.5	2.5	36.	7.5	288.	8.5	Pines for P.32, others for P.33
1932	-	6.5	54.	-	300	1.	" " P.33 " " P.34
1933	11.5	6.5	34.	112.	308	9.	" " P.34 " " P.35
1934					102.		" " P.35

Pines for P.31 and other species for P.31 and P.32 are already lined out.

About 500 each of E.L. and J.L. should be lined out in 1931 for besting up in W.Y. 33.

PART V

Organization and Finance

24. Establishment:

The permanent staff consists of :-

1 Head Forester, who also supervises Portclair and
Cresg-nan-Bun forests.

1 Grade 11 Forester.

In the forest - 1 foreman and 8 forest workers	} permanent
In the nursery 1 " " 15 " "	

In the Spring the number of nursery workers is increased to about 70 or 80. Beyond this no increase in the permanent staff should be necessary to carry out the programme of work.

25. Housing:

Permanent :-

A farmhouse at Auchterawe occupied by the Head Forester.

a 60 ft. Army hut " " " 2nd Grade "

A 60 ft. " " divided in two " 2 forest workers

A 60 ft. improved Army hut occupied by Angus Cameron

8 Forest Workers' Holding houses

At Strathelich is a 60 ft. Army hut, half of which is used as an office by the District Officer and Head Forester, and half as a house by the Experimental Foreman.

At the west end of the forest is a shepherd's house which is let with the grazing.

Temporary :-

At Auchterawe are four 60 ft. army huts used as bothies and a recreation hut to be erected in 1930.

27. Revision of the Working Plan:

The plan should be revised in 1935. By the end of that year Auchterawe moor will be planted as will the Sanatorium Wood. The greater part of P.21, P.22 and P.23 will have been intensively beaten up. There remains in Inchnacardoch forest, outside the present deer fence, a considerable area of plantable land and it is to provide for the planting of this land that the working plan must again be revised in 1935. It is hoped that the Experimental Branch will take over several small areas outside the deer fence and plant them in F.Y. 31, in order to ascertain the best method of treating this land. Further, by 1935, it will be possible to see whether the yearly planting of 10 acres by intensive treatment within the deer fence on land hitherto untouched is successful, and if so, this process should be arranged to continue.