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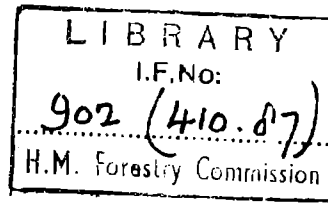
HISTORY
OF
CHIDDINGFOLD

FOREST
SE(E) CONSERVANCY

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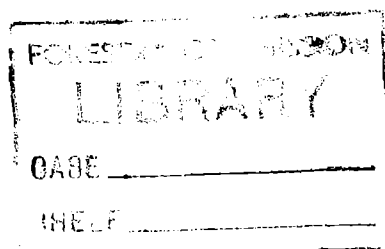
HISTORY

of

CHIDDINGFOLD FOREST

1922 - 1951

SOUTH EAST (ENGLAND) CONSERVANCY



HISTORY OF CHIDDINGFOLD FOREST

CONTENTS

	<u>Page</u>
<u>CHAIRMAN'S COMMENTS</u>	1
<u>GENERAL DESCRIPTION OF THE FOREST</u>	4
Situation	4
Area and Utilisation	5
Physiography	6
Geology and Soils	7
Vegetation	7
Meteorology	7
Risks - Fire, animals, insects, fungi.	8
Roads	9
Labour	9
 <u>SILVICULTURE</u>	 10
Note by Mr. F. C. Best	10
Preparation of Ground	11
Choice of Species	12
Oak, Ash,)	
Poplar, Sweet Chestnut, Beech, Norway spruce)	12 - 15
Sitka spruce, Douglas fir, European larch)	
Japanese larch, Pines.)	
Weeding and cleaning	15
Rates of growth	16
Thinning and Felling	17
Conclusions by (a) District Officer	18
(b) Conservator	20
 <u>APPENDICES</u>	
I Notes from Inspection and other Reports	21
II Record of staff	34
III Annual planting programmes	35
IV Meteorological data	38
V Map of the Forest.	

HISTORY OF CHIDDINGFOLD FOREST

CHAIRMAN'S COMMENTS

The history has been carefully prepared and is well documented. I minuted the Report on my inspection of 24.3.45, as follows:

"A study of Chiddingfold should well repay the cost and trouble. The percentage of success is not high and it may be that more is to be learned by our failures than by our successes. I came away with the uneasy feeling that if we had simply let the oak coppice grow up, where reasonably stocked, and had foregone all the trouble and cost of planting and weeding we might have got better results than we now have. Whether this is so or not it seems a fact that coppice shoots will have to be relied upon to complete the stocking of many of the plantations.

The few patches of old coppice which have been thinned recently now look very well.

I did not see Chiddingfold before we started work on it but recollect that the coppice was cleared as an "unemployment" job just after the last war. Mr. Taylor was in charge and should be able to describe the coppice crop as it then existed.

R.L.R. 16.4.45."

Mr. Taylor replied as follows:

"The original blocks of Chiddingfold forest were leased at the low rent of 1/- per acre for the express purpose of affording relief to unemployment. Nothing was paid for the standing crop. The work available was the clearing of coppice, primarily done to provide employment, and as a secondary consideration as preparation for replanting. Upwards of 300 men were employed over two winters and the Commissioners directed that the forest was to be re-stocked as a hardwood area.

The coppice consisted of mixed hardwoods, chiefly oak, birch and hazel with a little hornbeam, varying in age from small areas recently cut over to material of 20 or more years' growth. There were a few small standards and tellers and 8 to 10 acres of medium oak at the extreme south west end of the

forest; with this exception, and two very small plots of larch, practically the whole of the area was cut and replanted or re-sown, oak being the main species.

The bared surface dried out and cracked very severely in the following summers; growth was weakly and unsatisfactory from the beginning and insufficient provision was made for weeding to bring the new crop through the coppice and weeds.

W.L.T. 17.4.45"

to which Mr. A. P. Long added:

"There is evidence of lack or insufficiency of draining at time of planting and subsequent years.

A.P.L. 19/4."

The start, therefore, was not propitious. The difficult initial situation was further complicated by considerable use of conifers (some of which, e.g. Sitka spruce, were untried in such conditions) representing a departure from the original instruction to form a hardwood forest.

A future reader of the history may well remark, as I do myself, on the gropings to find ready solutions to the really difficult problems which arose. A similar state of affairs obtained in the Northamptonshire forests (Salcey etc.) and at Alice Holt, the histories of which should be read in conjunction with this history. Fundamentally I think that our shortcomings can be grouped under two heads :-

1. Lack of silvicultural knowledge - what species were best suited to the conditions and how best to cultivate those selected.

On the first count we can at least shed certain species; on the second there arise such points as the use of nurses and the weeding of oak, as also the possibility of converting oak coppice into high forest.

2. Lack of patience, which is an important ingredient in the early stages of the silviculture of hardwoods, and which requires special mention.

An excellent example of the value of patience is provided by the oak plantations in the Straits Inclosure, Alice Holt.

The history of Chiddingfold has consequently one further valuable function to perform. From it there should be sorted out and expressed in concise language the techniques which succeed certainly, and secondly those which are in doubt. The latter should then be passed on to the Research Branch for investigation.

R.

Jan. 22nd, 1952.

HISTORY OF CHIDDINGFOLD FOREST

GENERAL DESCRIPTION OF THE FOREST

Situation

Chiddingfold Forest is situated on the boundaries of Surrey and Sussex midway between the towns of Godalming and Petworth. It consists of five main blocks lying between the villages of Chiddingfold, Plaistow and Dunsfold.

The nearest main roads are A.283 (Guildford to Petworth), which passes to the west of the area and A.281 (Guildford to Horsham), which passes to the east. The forest itself is served by second-class roads and travel from point to point by road in certain cases involves very considerable detours.

The nearest railway station is Witley (Southern Region) which is between five and ten miles from the various blocks of the forest.

Area and Utilisation

The present area held by the Commissioners is 2089.188 acres; of this, 1123.672 acres are leasehold (999 years) and 965.516 acres are freehold.

It was acquired in 9 parcels between the years 1921 and 1940 as shown in the following table:-

Statement of Acquisitions

<u>From</u>	<u>By</u>	<u>Date</u>	<u>Acres</u>	<u>Block</u>	<u>Compts.</u>
Mrs. M.L. Birt	Lease (999 yrs)	25.12.21	302.723	Tugley	42-62
Mr. J.H. Baker (for Lord Winterton)	Lease (999 yrs)	25.12.21	86.707	Fisher Lane	37-41
Mr. J.H. Baker (for Lord Winterton)	Lease (999 yrs)	25.12.21	613.045	Kings Park Ash Park Downlands Wood (i.e. S. Fisher Lane)	1-36
Mrs. E.M. Mellersh	Purchase	31.3.25	232.306	Sidney Wood	83-94
Mrs. W. Mc A. Houston	Lease	24.1.25	(69.969)	included in No.5.	
Land Mortgage Investment Trust	Purchase	25.1.39	97.696	Sedgehurst Velhurst	95-98
Mr. E.W. Dean	Purchase	18.8.26	444.502	Lagfold Oaken Wood Canterbury Copse Tidys Copse Upper Ifold	63-82
Mr. E.F. King	Purchase	25.3.29	56.851	Hatchetts	99-100
Mrs. O.E.D. Atherton	Purchase	16.5.39	134.161	Hog Wood	107-111
Mr. J.G.S. Candy	Lease (999 yrs)	24.5.40	121.197	Pockford	101-106
Grand total			2089.188		1-111

With the exception of a very few acres the whole of the area when acquired was woodland, mainly coppice or coppice with standards in a derelict state but in certain cases notably at Sidney Wood and Pockford the standing crop (principally oak) was taken over with the land.

There is a certain difficulty in drawing up an accurate table of utilisation in that the recent policy of rehabilitation has necessitated a careful reconsideration of the classification of the area into that which

can be accepted as carrying a stock worth keeping as a crop and that on which the existing stock is regarded as worthless.

Due to lack of experience in the early years there were considerable failures, but it has now been found that in many of these cases the natural growth (of oak coppice, chiefly) can be accepted as a crop. This results in a very complicated state of affairs in that the great bulk of the area can now be accepted as stocked, but in some cases the species is the natural growth and not what was planted. In other cases where no planting has been done the natural growth has also been found to be acceptable. A careful survey is in progress the object of which is to determine which areas can be accepted as stocked with a worth while crop and which are useless scrub which must be artificially re-stocked. This survey is not yet complete, but the area is sufficiently well known to enable the table below to be drawn up. This is not perfectly accurate, but gives a fair picture of the state of affairs.

Statement of Utilisation

(a) Plantations

(Including	(i) successful F.C. plantations	1718.0.	acres
	(ii) acquired plantations.	202.5	"
	(iii) acceptable natural growth (whether an attempt at planting was made or not)	115.5	"
			2036.0 acs.

(b) In hand awaiting planting
Including scrub not worth retention
or doubtful..... 39.75 "

(c) Nursery 1.75 "

(d) Agricultural-

(e) F.W.H. -

(f) Unplantable land
(Includes housing sites and compost station)..... 8.0 "

(g) Other Land
(land carrying reserved timber not yet felled) 3.5 "

	2089.0 "
--	----------

Physiography

The terrain is generally gently undulating, traversed by numerous small streams. In many cases the banks of these streams rise steeply for thirty to forty feet and considerably impede extraction. The majority of the area lies between the 100 ft. and 200 ft. contours.

Geology and Soils

Chiddingfold woods lie on the out-crop of Weald Clay where it is at its broadest extent. The soil in general is a heavy clay, varying in colour, but generally red brown or yellow.

There are, however, patches of lighter soil, notably in Ash Park and Fisher Lane Wood due to the presence of streaks of sand or silt.

Due to the poor results obtained from some of the early plantings considerable attention was given to a study of the soil. A detailed report was prepared by G.R. Clarke of Oxford University in 1936-7 and this together with comments by the Chief Research Officer (Mr. W. H. Guillebaud) the Divisional Officer 4 (Mr. A. L. Felton) and the District Officer (Mr. W. A. Muir) are to be found in the records.

The principal comments from these reports indicate that the soil has deteriorated in the past, is deficient in humus, podsolized or gleyed in places and often badly drained.

There was not complete unanimity on the subject, but it seems agreed that efficient drainage, maintenance of canopy and building up of the humus-content of the soil were matters of first importance when considering silvicultural management.

Vegetation

The vegetation when the areas were taken over was typical of hardwood forest on heavy clay. Besides oak standards and coppice the following woody species are quite common; hazel, birch, chestnut, willow, hornbeam, hawthorn, blackthorn. Less common are aspen, dogwood and service. Beech is uncommon and is represented by a few very large trees scattered over the area. Ash is very infrequent, but an occasional group appears quite vigorous.

The ground vegetation is variable being almost absent where the thicket of coppiced woody species is dense. The usual species such as coarse grasses, bramble, briar, docks, nettles, thistles etc., are to be found. Bracken is not wide spread and heather is found in localised patches.

Meteorology

The annual rainfall is normally about 30 in. but ranges up to 40 in. in wet years such as 1950 and 1951.

The prevailing wind comes from the south-west.

Exposure is moderate in the district which is characterised by small agricultural fields and numerous woods and copses.

Temperatures range on average from 30° to 73°, but extremes of 7° and 93° have been recorded. Very hot spells are seldom of long duration, but, as they often occur in May, tend to take heavy toll of newly planted crops.

Severe frosting is a feature of the district, particularly in the many steep sided valleys which occur. The area as a whole is flat and ground frosts are frequent. Late frosts are experienced practically every year in May and sometimes in June. Damage to tree crops is usually severe and frost certainly delays establishment.

Risks

Fire. With such a large proportion of the forest under hardwoods fire would not normally be expected to be a great risk. However, a large part of the woods are in the cleaning stage and in droughty weather the cut material can become quite inflammable. The danger should lessen considerably, as the crops grow out of this stage. Access has been on the whole rather difficult, but this is now being gradually overcome by the progressive extension of a road system within the woods. Owing to the level nature of the ground and the scattered occurrence of the woods, it is not possible to practise much economy in the numbers of fire-patrols and look-outs.

Animals. Rabbits are present but are under reasonable control. Deer do some damage and, though apparently slightly on the increase, are not a serious pest.

Insects and Fungi. There is nothing particular to report under this head.

Trespass. The human element is perhaps the most troublesome damaging influence. In the days before there was adequate control of building, several woods in the neighbourhood were sold in small parcels for building plots. This has resulted in a rather unsatisfactory type of inhabitant and the fact that these neighbouring properties are constantly changing hands makes it difficult to ensure that the occupants are alive to fire danger.

A considerable source of annoyance is a gypsy colony situated on a plot of land (which they own) more or less in the centre of the area.

At the other end of the social scale, mention may be made of the popularity of fox-hunting with consequent damage to rides, culverts, gates and fences. Under the terms of the leases, the Commissioners are obliged in some cases to keep rides open and culverts in repair for the benefit of the hunt.

Roads.

Mention has already been made of this subject. The woods are served by a network of public by-roads, but a journey from one end of a wood to the other may be, for example, a mile through the wood, but up to 10 miles by road. Progress has been made, however, in recent years in driving roads through the woods in such cases and as produce warrants more expense on road work so the road is pushed further and in a few years it is hoped to complete two of these links, namely in Kings Park and in the Hog Wood - Burningfold block.

Mention has also been made of the deep gullies in which the streams run and in bridging these considerable expense is involved, but is amply repaid in the added convenience for produce extraction, fire fighting and general supervision.

Labour.

The strength of the labour force seems to have undergone remarkable fluctuation during the thirty years under review.

In the first two winters, 1922-3 and 1923-4 about 200 men were employed, very largely on preparation of ground work, the numbers falling to 7 or 8 men in the summer. It seems probable that this use of large numbers had the indirect object of relieving unemployment.

After the first few years the labour force was probably smaller and more stable, but must have dropped to quite a low figure in the early '30s. In a memorandum in 1939 the District Officer notes the gradual build up of labour strength as follows: 11 in 1936, 15 in 1937, 20 in 1938, 25 in 1939.

During the Second Great War numbers again fluctuated violently between less than 10 and more than 40. A squad of 15 to 20 conscientious objectors and up to 12 land girls helped to swell the numbers. Immediately after the war in 1946 and 1947 numbers rose as high as 55 which included 8 to 10 trainees under the Forest Worker Trainee Scheme and 27 Poles from the

Polish Re-settlement Scheme.

In 1951 numbers are now falling slightly and the total strength is about 30 including 10 or so Polish Workers.

The question of housing for workers does not appear to have received a lot of attention. The Forester's house was not built till 1936 and none at all for workers until 1949, when two were completed at Pockford; a further pair was completed in 1951 at Fisher Lane.

SILVICULTURE

General

A note prepared by Mr. F. C. Best (probably about 1945) gives an interesting summary of the overall picture. He writes:-

"Recent History. Planting started in P.23 and the bulk of the planting was done in the following ten years. In the early years pure oak was planted or sown and mixtures of ash, larch and chestnut were planted. Douglas fir, Sitka spruce and chestnut were also planted as pure crops. Later pure European larch, poplar and Norway spruce were tried and more recently group planting and sowing of oak. A very small amount of Scots pine, Corsican pine and Japanese larch has been planted.

Early growth was disappointingly slow leading to an accumulation of cleaning.

Silviculture. The intention has been to make the forest primarily an oak area, but the very slow start of oak and vast weeding expense led to attempts at cheapening the cost of establishment by using other methods or other species. Except on the steep sided banks of streams both ash and poplar have proved useless and attempts to raise ash mixed with larch have led to the failure of the ash and poor results with the larch except in one or two cases where Japanese larch was used on sloping and better drained ground. Most of these early mixtures have now reverted to coppice crops containing a scattering of planted trees and natural oak seedlings and treatment is now designed to make the best of whatever species is on the ground.

Of conifers Sitka spruce has proved very susceptible to frost and aphids and inferior in health and often in rate of growth to Norway spruce which has proved very reliable but slow-growing and very costly to establish.

European larch has succeeded well on one area only and that is on sloping ground with a light soil quite unrepresentative of the forest as a whole. Japanese larch has succeeded only on the more favourable sites and the same applies to Douglas fir which has been more extensively used and where it has succeeded it has probably been the cheapest species to establish but too often conditions have been not quite good enough and late failures have resulted in patchy crops. Scots and Corsican pines have been very little used but look like being the only trees that can be established in reasonable time with any degree of certainty.

Conifers have all been normally weeded from the start but after a time patchy crops of larch and Douglas fir have had to be let go to close up with coppice etc.

In the early years the hardwoods were nursed by coppice in the hope that this would help to draw them up and protect them from frost damage. Unfortunately, the early development of oak and ash on this very sticky clay was ^{so} slow and irregular that only a proportion of the crop got away in time to benefit by the nursing and the coppice growth became so strong and the cost of cleaning so high that it became impossible to keep pace with it. The subsequent method of cleaning has been the removal of all the coppice between every other row of plants followed by the removal of the intervening coppice a few years later."

Preparation of Ground

In the first year or so it appears that preparation of ground consisted of the complete clearance of natural regrowth, even, in some cases, of oak coppice 30 ft. to 40 ft. high and 8 in. in diameter. Some of this was left and is to be seen to-day in Compartments 15 and 16. Later however it was decided that when nursing was required it could be effected by retention of some of the coppice instead of introducing a planted species. No doubt also on account of expense, partial clearance commended itself and resulted in the group and strip methods mentioned above.

No kind of mechanical cultivation has been tried and indeed no suitable equipment has yet been evolved for use on ground so heavily stocked with tree-stumps and coppice-stools.

Drainage is a matter over which there appears to have been some

difference of opinion, but (no doubt as a result of the soil investigations in 1936-7) the matter received attention in the later plantings.

Draining is a difficult problem on this soil. The amount of percolation is very small, thereby limiting the vertical and lateral effects of artificially made channels. Deep drains, apart from main outfalls, therefore, do not achieve spectacularly good results commensurate with their cost. Shallow drains, however, if sufficiently close have a markedly good effect in the top soil and will lead to earlier establishment of planted trees, which, in face of strong competition from well-rooted coppice, take a long time to make an efficient root-system, particularly if the top soil is nearly water-logged and the water-table is high. This condition is general in the Weald woodlands after clear-felling.

Choice of Species

The early records are somewhat patchy and at times it is difficult to sort things out. There is, however, no doubt that the main intention was to use hardwood species, principally oak, yet from the very start conifers (such as Norway spruce, Douglas fir and Sitka spruce) were planted in fair quantities.

Oak has usually occupied from one-third to one-half or slightly more of the total area planted each year. It has been established both by planting and sowing and examples of good crops can now be seen which have originated from both methods. When plants have been used, one year or two year seedlings have given good results. In the early years preparation for planting apparently consisted of complete clearance of existing re-growth of coppice and weed species, but in later years the cost of this led to trials of group and strip planting.

Group planting (P. 34, 35, 36 and 37 in Compartments 37, 38, 42, 51, 52, 63, 67, 68, 78 and 79) was mainly in low coppice. A hundred groups per acre were planted. Each group consisted of 24 trees (6 rows of 4) spaced 1 ft. apart each way. This group planting met with a certain amount of success, but it has been a difficult matter to control the surrounding coppice, which tends to give too much side-shade and lead to suppression. Some of the most successful groups are in Compartments 67 and 52, but these are counter-balanced by many failures, such as in Compartment 37.

Strip-planting was tried in 1936 in tall coppice in Compartment 67. It consisted in alternately clearing and leaving strips about half a chain in width. The cleared strip was planted with five rows of oak spaced 5 ft. x $2\frac{1}{2}$ ft. The strip method proved a failure probably because the tall coppice had too great a shading effect.

Ash was used extensively in the early years and planting of this species was carried on up to 1937 although it has been almost universally a failure. The only successful areas are small patches alongside streams such as in Compartments 48 and 60.

The frost tenderness of the species was realized and in the first years it was planted in mixture with European larch or European larch and sweet chestnut, but later (1927) it was considered that sufficient nursing effect was provided by existing coppice. Strip and group planting was tried on the same lines as for oak, but was a complete failure. There seems little doubt that the chief reason for the failure of this species is unsuitability of the soil.

Poplar was planted in the early years presumably in the hope that it would quickly establish itself and get away from the coppice. It was used fairly extensively at first, particularly P.27 (52 acres) and in diminishing quantities to 1932 when its use was discontinued except for a very small amount in 1943 in a special site. Like ash, poplar has only succeeded on favourable ground along the water courses but in these sites is developing very well.

Sweet Chestnut is the only other hardwood to have been planted at all extensively and it does not appear to have been used after the first three seasons (i.e. after P.25). It was used as a nurse for ash and was also planted pure, but it is uncertain whether the pure crops were intended for coppice or high forest. It appears to have established itself reasonably well.

Beech is mentioned several times in the inspections and there is a constantly recurring suggestion that it would be a suitable shade bearer to establish under the coppice. Here and there over Chiddingfold pre-existing specimens of beech can be seen (Compartments 81, 99, 100, 104), the development of which seems reasonably satisfactory, but in the very few instances

(P.24, Compartment 24; P.34, Compartment 69; P.38, Compartment 52; P.39, Compartment 17) where it has actually been planted it has either failed completely or a few trees have survived but scarcely grown. It seems reasonable to suppose that, like ash and poplar, beech will only thrive on good well-drained soils.

A very small amount of sycamore (P.41, Compartment 111) and Norway maple (P.43, Compartment 87) have been planted as trials. About half an acre of red oak (P.26, Compartment 26) is promising well.

Norway spruce has been the conifer most extensively planted at Chiddingfold. It has been used in most years from the very start. Although slow in getting away it has generally been sure and once established is most effective in suppressing the coppice. In one small area Compartment 55, P.28, it has been used in mixture with oak in alternate single rows and a small area of the same mixture was planted 1939 in Compartment 95. Two small fields Compartments 54, 55 (the only afforestation at Chiddingfold) were planted very thickly with Norway spruce for production of Christmas trees. It is stated that 161,000 were planted on nine to ten acres. Norway spruce appears to be the species most generally used for replanting the failed areas (mainly poplar) where this was done.

Sitka spruce is, after poplar and ash, the largest disappointment in the selection of species. It appears to have been persevered with up to 1932 when no doubt it was finally realised that, apart from frost difficulties, it is not very well suited to the general climate of this part of the country. Low rainfall and the incidence of Armillaria in this old hardwood ground both mitigate against its success.

Douglas fir has been used to a fair extent and where successful is probably even more effective than Norway spruce as a coppice suppressor. It is of course more selective as regards soil requirements and not all the plantings have been uniformly successful.

European larch was principally planted as a nurse species for ash and time has shown that it is, in general, unsuited to the soil. There are, however, streaks of sandy soil, such as in Downlands, Compartment 35 (where it is pure) and occasional well-drained banks elsewhere, on which it has done tolerably well. In other parts (chiefly Kings Park and Ash Park) it has survived as scattered trees and may produce quite good specimens in the end.

Very little Japanese larch has been planted but a very fair plantation (P.26) is to be seen on a bank in Compartment 22.

Pines, which at the present time are regarded as the standby for any difficult area have been, unfortunately, largely neglected in the search for a successful species. It was fully realised that frost was one of the principal adverse factors and it is curious that pines were not more strongly advocated on the grounds of their frost-hardy character alone.

A small area of Corsican pine (Compartments 8 and 10) was planted in 1924 and was a partial failure. Unlike Sitka spruce, ash and poplar which are the real failures, it was not persevered with, but was immediately beaten up with other species (Sitka spruce and Douglas fir). The survivors of this early planting have done very well, but the species was never planted again until 1943, when, possibly only on account of its availability, a fair acreage was planted in Sidney Wood (Compartments 84, 85, 86) after clear-felling. Again, in this case, the crop looks very promising.

Apart from very occasional use for beating-up, the only Scots pine planted was 11 acres P.29 (Tugley) and 15 acres P.47. In both cases the plants established themselves without difficulty and now promise very well.

Other conifers which have been planted more or less experimentally include Abies grandis, Abies nobilis, Thuja, Tsuga, Picea omorika and Lawson's cypress. The last-named has been planted on the largest scale and appears to be developing successfully.

Weeding and Cleaning

These operations have been a major problem in the reforestation of the area. Being old woodland the ground was stocked with the usual woody species such as thorn, bramble, birch and willow, together with hazel coppice over a large part of the woods. When left in a devastated condition this unwanted growth takes a strong hold and the newly planted trees have to face immediate heavy competition. This state of affairs was aggravated by the slowness of the planted species to make a start. This was due to poor soil, possibly coupled with poor drainage, frost and faulty choice of species.

The weeding problem soon caused concern on account of the heavy expense on behalf of what was apparently a somewhat doubtful crop and in the early '30s consideration was given to means of cutting down on this head.

Certain crops were let go on a principle of "sauve qui peut" and modified weeding proposed in other cases. Another general principle was to concentrate on the most promising crops as being the most likely to benefit from the expense. The result was that a lot of weeding accumulated to be dealt with in later years.

From the middle '30s, however, more attention was given to weeding and cleaning and there was a steady increase in the amount of work done.

In the early '40s the neglected areas received a special treatment which was to cut back to the ground the heavy coppice weed growth between every other row of plants and to come back in a later year and cut back the alternate row which had been left. The object was to enable the neglected planted crop to accustom itself gradually to extra exposure. As time went on the crops slowly developed and of recent years the forest has appreciably begun to take shape as more and more of the crops "declare themselves" and receive cleaning treatment.

The most recent development has been the "rehabilitation" treatment. The underlying idea of this seems to have been propounded as early as 1931 and references occur subsequently in several of the inspection reports particularly in 1941, but it was not until 1950 that attempts were made at working out a technique. Very briefly stated this consists of forming a crop from the best trees that are on the ground. The process, which is being applied to all failed, semi-failed and natural crops or mixtures of all three is as follows. (1) A survey to decide whether the crop has a sufficient stock of acceptable trees (oak, ash, birch, chestnut, etc., and any planted species) and whether it has reached the stage where potentially good trees require relief from competition, (2) Preliminary cleaning for marking, (3) Selection of 100 to 130 trees per acre from which it is expected the final crop will ultimately be formed, (4) judicious cleaning and/or thinning to favour these selected trees, (5) pruning of selected trees.

Rates of Growth

A brief indication of some of the best rates of growth amongst the planted crops is indicated in the table below:

Compt.	Species	P. Year	Age	Total Hgt.	Annual Height Growth	
					Mean	Current (last 5 yrs.)
34	Douglas fir	25	26	44 ft.	21 ins.	27 ins.
35	Japanese larch	27	24	40 "	20 "	23 "
62	Sitka spruce	25	26	36 "	16 "	28 "
56	Scots pine	29	22	28 "	14 "	15 "
25	European larch	24	27	36 "	16 "	15 "
55	Norway spruce	28	23	35 "	18 "	23 "
53	Oak	28	23	25 "	13 "	14 "
26	Red Oak	26	25	30 "	14 "	18 "

Thinning and Felling

Timber felling has, of course, been confined to acquired plantations. 251 acres were felled during the war years in Sidney Wood, Pockford and Hog Wood. The greater part of this has since been replanted.

In addition, occasional small areas of chestnut coppice have been felled as they become saleable. An interesting local market is for walking sticks, for which the chestnut is grown on a three-year rotation.

Thinning has, until recently, been on a small scale, but henceforward will increase in scope. Two main types of stands may be distinguished, firstly the older acquired hardwoods in Sidney Wood and Pockford and secondly the early Commission plantations of conifer.

The following table summarises the work which has been done.

Forest Year	Hardwoods	Conifers	Remarks
1939	11.0 acres	-	P.1900? Oak C.64
1942	10.0 "	8.0. acres	C.15 and 16 coppice Conversion and C.103 acquired woods. European larch P.27, C.35.
1944		5.75 "	
1945		1.0 "	

Forest Year	Hardwoods	Conifers	Remarks
1947	1.0. acres		C.16 Coppice Conversion
1948	15.5 "	7.0 acres	Sidney Wood
1949	44.5 "	59.0 "	Sidney Wood
1950	35.0 "	14.0 "	Sidney Wood and Pockford.
1951	29.0 "	30.75 "	Sidney Wood

Conclusions

There seems to be room for two schools of thought on the line of approach to the problem of re-stocking devastated woodland such as is found at Chiddingfold.

On the one hand the basic view is that existing growth is useless scrub to be done away with and replaced with a planted crop. This is expensive but against that may be argued the advantage of having got a really satisfactory crop for the money laid out; that is, of course, presuming that wise selection of species has been made.

On the other hand the view can be taken that the existing growth is already there on the ground without any outlay and by a small expenditure can possibly be rehabilitated and made to produce something of value. The end product will no doubt be less valuable than that obtained in the first case but has cost less to produce.

Other factors are, of course, important. In the first case time is saved in attaining a state of maximum quality and quantity production but man-power is saved by adopting the second course.

Probably both methods should be used, the decision as to which to adopt resting on a careful assessment of the capability of the existing crop. Both methods have in fact been applied but it will still be many years before a really full and final judgment can be made. Certainly in the best areas rehabilitation or coppice conversion appears highly satisfactory, but is it beyond all doubt that a maiden tree will not produce a more valuable crop in the end?

In the early years the tendency was greatly in favour of the clear-and-plant theory. The present policy may be tending towards over-optimistic assessment of existing growth as acceptable. One point which appears to have been rather overlooked in the first years is that it is almost impossible to generalise about Chiddingfold. As Mr. Muir remarked in a report, "changes of stocking and growth are so numerous and sudden that exact control of labour is extremely difficult". This observation will find agreement from anyone who has had close contact with the area of recent years.

Turning to particular points, it can now be realised that no species can be expected to get away quickly on this ill-drained, heavy, compact clay soil which is subject to frosts.

As regards selection of species, Sitka spruce is now definitely ruled out and the larches will only do well where the soil is lighter or well-drained. So few areas are suitable for ash that it is really not worth considering. The whole-sale planting of poplar (presumably in the hope that it would outstrip competition) was a mistake which would not be made to-day when it is realised that poplars are very intolerant of shade and competition and require a soil with a neutral or alkaline reaction. Where poplars have succeeded (i.e. along the streams) they have done quite well and would probably have done better if modern techniques had been developed and applied in the early days. For general work, where the land is unsuitable for oak, it has been more or less accepted that the standby species is Norway spruce. Certainly Norway spruce has in the main been sure if slow. It seems a pity that the attributes of Scots and Corsican pines were very largely neglected.

One matter of considerable importance is the weeding policy. At first rather too much emphasis seems to have been laid on nursing oak and retaining coppice for this purpose; present policy is to weed hard until the oak gets a good start.

The cessation of weeding too soon and/or over-delay in beginning cleaning probably leads to disaster on such areas quicker than anything within human control. There should not be any compromise with the natural growth until the planted crop has made a well-balanced stem, well-furnished with branch and leaf. It follows that annual planting programmes must be

strictly limited to what can be thoroughly weeded.

One final point, which experience at Chiddingfold brings out, is that forestry is a long-term process and that patience and perseverance are not the least of the qualities required of a forester.

John White
District Officer,
18.11.51.

Conservator.

The failure, originally, to appreciate the full significance of the difficulties of planting in this heavy clay, coupled with the strength of the regrowth after felling has led to a wastage of money on a large scale.

It is evidently a great mistake to destroy the forest condition when it has been once established and, although the coppice regrowth may not ultimately be so valuable as a planted crop, it means that a change of species can subsequently be brought about under favourable conditions if this regrowth is properly handled.

Chiddingfold offers a very clear example of the folly of trying to fight against nature but also demonstrates at the same time the benefits to be obtained by moulding nature to a desired end.

R. H. S.

19.12.51.

Chiddingfold Forest History 1922 - 1951

APPENDIX I

Notes from Inspection and other Reports

(Verbatim extracts given in inverted commas)

3.7.1922

Mr. R. L. Robinson, Technical
Commissioner.

Mr. H. A. Pritchard

Mr. W. L. Taylor

Notes of meeting at Headquarters

"It was decided to keep the area under hardwoods, principally oak, ash and chestnut with poplars over such portion of the area as cannot be dealt with in a reasonable time on the lines of the Technical Commissioner's minute. The method of establishing the oak was considered and it was decided to sow if possible and the acorns were available for this season".

8/9.6.27

Mr. R. L. Robinson
Technical Commissioner.

Report of Visit:-

Sidney Wood to be kept under oak; oak to be planted using coppice for nursing; groups of oak tellars to be underplanted with beech.

Kings Park, Ash Park. P.23, 24, 26. Oak considered good. Decided best results obtained from planting one-year seedlings.

No larch nurses to be planted with ash as existing coppice gives sufficient nursing. Sitka spruce (P.24 Compartment 7) badly frosted.

19.3.28

(Meeting at Headquarters)

Planting Programme P.29-33

"The bulk of the planting will be hardwoods (oak and ash). Proposed to use 2 year oak seedlings. Beating up is two years in arrear."

(Meeting at Headquarters)

Planting Programme P.30-34

To be 130 acres per annum. "Plantings are really going on quite well,

but the general appearance is not very good, oak is growing spasmodically. Some of the 2-year seedlings planted here are about 18 in. but the average is 9-10 in. Conifers (Sitka and Douglas) are still being cut back by frost at the south end of the area. These are now being beaten up with Scots in the worst places. Very little Douglas is being put into the new planting.

14.8.30

Mr. H. A. Pritchard

Assistant Commissioner (E & W)

Divisional Officers notes:-

Group planting of oak, Japanese larch and poplar proposed for P.31 (Ifold Wood Compartments 80, 81, 82).

Oak and beech to be planted in "drifted" coppice proposed for P.32 (Tidys Copse Compartments 76, 77).

Coppice weeding in oak (Kings Park) to be confined to necessary patches to be marked out by the Forester. Considered that sweet chestnut in this area required no further weeding.

19.1.31

Mr. R. L. Robinson
Technical Commissioner

Success with oak sowing noted (Compartment 66, P.29).

In devastated areas regeneration to be by groups; taller coppice left after felling to be retained. Cleaning and thinning experiments to be made with 40 year old oak/birch mixture (Compartment 64).

In the P.23, 24, 25 oak areas (Kings Park) best results appear to have been from use of 1-year seedlings but best results seen in P.27 (Fisher Lane) were from 2-year oak seedlings.

"Resulting from the inspection, the general line for treatment recommended, was to allow the coppice to close up. It was considered that new oak plantations or sowings should be weeded the first year and then left for 3 or 4 years."

"The older oak plantations, now 6 and 7 year old might safely be left without further weeding, probably for 2 years. After that time the coppice should be cut right back..." "It was realised that weeding of oak was in the experimental stage and that plantations would need careful

watching as it is impossible to lay down a hard and fast rule." Failed poplar areas to be replanted with oak. Further small scale experimental planting of poplar to proceed.

23.10.31.

Mr. H.A. Pritchard
Assistant Commissioner (E & W).

Mr. Sanzen-Baker to make a survey of plantations with particular reference to failures and natural regeneration.

In Compartments 46, 47, 48 ash P.28, 29 to be beaten up.

"When tall birch or chestnut are present, this is to be cut hard back. Natural oak, ash or good ash stool shoots to be utilized to form part of the crop". "(Compartment 59)...area to be left alone as the oak coppice will help to form part of the crop." Decided to coppice $\frac{1}{4}$ acre of oak/birch (40 years old - Compartment 64) - some birch to be left for shelter.

16.1.33

Sir Roy Robinson
Chairman.

Mr. W.L. Taylor,
Assistant Commissioner (E & W).

Stress laid on need to retain shelter of coppice and broom over P.29 oak in Compartments 65, 66 (Lagfold). In Compartment 64 (40 year old birch/oak) coppicing not approved - future treatment to be thinning of birch (and Scots pine.)

Further emphasis on need for nursing of oak (Compartment 41 P.26): in this case on account of frost-check. Similar remarks re Compartment 39, P.27 oak; soil thought to be reason for poor crop and better growth noted on bracken areas. Poor growth of European larch P.27 attributed to heavy soil (Assistant Commissioner) and excessive side shade (Chairman).

In Compartments 19, 24, 25 the general idea is to discontinue weeding, "let the crop rip" and later make a crop of what results. A final summary states:- "There are three types of older plantations at Chiddingfold:-

- (1) Where part of the crop has got away.
- (2) Where there is no real crop on the ground.
- (3) Where the crop is present but is not getting away.

Types 1 and 2 must be let go as it is not economic to tend them further at

the present stage. The third type should be weeded again if it is considered that this will save the crop. Oak has been planted in many places that are not good enough for this species, the soil is too wet and sour. A larger area should have been put under conifers, Norway spruce in particular should have been used more freely. In future the ground for oak planting should be chosen with very great care."

Chairman's Observations

"This is a difficult and consequently a disappointing area, but with patience I expect that reasonably good crops of oak will ultimately be obtained in most places where it has been planted. "...weeding treatment should be preceded by a careful summer assessment."

"I do not wish the views I have expressed to be applied too rigidly. The Divisional Officer and District Officer must study the place in detail and apply from time to time the treatment which their observations suggest".

18.6.35

Mr. W. R. Day
Imperial Forestry Institute.

Mr. Day mentions two points about Chiddingfold which tend to hinder rapid growth, (1) The topography of flat hill tops and valleys tends to collect cold air with resultant frosting and (2) the heavy nature of the soil causes poor drainage and poor root formation. He, therefore, suggests (1) experiments to improve drainage with a view to accelerating growth to take the tree out of the frost level quickly and (2) the use of late flushing types or species (Scots pine). He suggests that overhead shelter is more effective than side shelter but in frost hollows shelter of any kind has little effect.

5.3.36

Mr. J. Macdonald,
Research Officer.

Object of the visit was to find a checked oak area suitable for experiments but he could not find one which had been kept weeded. He notes an ash plantation (P.28. Compartment 56) however and makes the comment that lack of drainage is a general trouble throughout the forest.

District Officer's comment

"I also think that lack of weeding has adversely affected the oak and

ash in a good many areas". He also puts some of the blame for checked oak on rabbits which could not be caught easily in thick coppice.

29.4.36

Dr. J. Burt Davy,
Imperial Forestry Institute.

Reports on rate of growth (presumably of oak in Compartment 64) and concludes (1) the age is 34 (equivalent to P.1901) and (2) there has been an improvement in growth since 1921. This agrees with the forester's statement that a thinning took place about that date.

8.6.37

Mr. G. R. Clarke,
Lecturer in Soil Science,
Oxford University.

Investigation was confined to Fisher Lane and Tidys Copse. Very full details of soil provided and chemical analysis are given.

The main field observations as regards the poorer areas are:-

1. Removal of old standards has resulted in lack of deep root channels and a rise in the water table.
2. Considerable leaching in the surface layers.
3. Drainage is bad and underground water tends to stagnate on an impermeable clay bed.
4. Former coppice system of working has resulted in removal of ash constituents which are normally returned to the soil.
5. These soils are of the gleyed Podsollic group.

Conclusions reached are that the soil is in very poor heart with deficiency of potash, calcium, phosphate and clay and great deficiency of leaf litter and incorporated humus. Certain figures of the analytical data may be misleading and ... "it is the drainage, the management and the soil site characteristics which are of the greatest importance..." The recommendations put emphasis on drainage and maintenance of canopy in order to improve the soil and to prevent further degradation. It is also suggested that experiments with fertilizers could be tried.

Comment by Mr. W.H. Guillebaud
(Chief Research Officer) on
Mr. Clarke's report.

Notes the unusually high acidity (p.H = 4.5) which probably explains

the failure of ash and poplar. As regards Mr. Clarke's observation No.4. (above) points out that current weeding must enrich the surface layers but agrees that ... "former utilization of the land as coppice was" (probably) "the worst possible treatment of the area. The loss of mineral nutrients resulting from the complete removal of the coppice shoots, as well as the barring of the land... must have led to a great reduction of fertility in an initially infertile soil such as this." Doubts whether lack of drainage is really the crucial factor, suggests that new drains would be too expensive and points out that growth is just as poor on sloping ground with natural drainage as on the flat. Agrees that establishment of canopy is the most important factor. "... I think the best policy would be to allow the coppice to grow up and ultimately after say 30-40 years, to establish a crop of beech in those areas where coppice was not suitable for conversion to high forest." If this is not practicable (in view of the need of contributing to the planting programme) all but the best areas should be planted with Norway spruce or with Scots pine (in the frosty hollows).

In view of the established fact of degraded soils suggests that coppice should be allowed to grow up in badly checked (12-15 year old) plantations of oak and ash so as to cut losses and improve forest conditions.

Comment by Divisional Officer on Mr. Clarke's report.

Regrets that the scope of the analysis was rather confined. Agrees that drainage is probably an important factor. Agrees regarding canopy and points out that current policy is strip or group planting but draws attention to slow growth in early oak plantations where coppice was kept dense. Agrees in general with Mr. Guillebaud regarding selection of species.

Comment by District Officer on Mr. Clarke's report.

Suggests that an investigation of flora would be useful and that the reasons for good or bad growth locally are not clear. Agrees that drainage should be carefully considered. As regards species suggests Norway spruce in areas of poor coppice but with retention of any birch and oak; Scots pine in Calluna areas. In areas of good coppice this should be retained to provide soil cover and improvement: treatments could be tried experimentally in older areas such as Compartment 16 (Kings Park).

7/5/38

Lord Winterton
Col. L. Ropner, Commissioner.

The visit was to Kings Park. Lord Winterton considered litter from clearance should have been burnt and not left lying.

Col. Ropner noted Norway spruce, Sitka spruce and Douglas fir were successful on the whole but that larch and ash were poor and failures. "I suggested the best treatment might be to clear the poor areas except for the best of the young oaks, and plant again with Norway spruce."

Forester's report

Col. Ropner thought that "practically the whole of Kings Park should be given a rest from oak and spruce crops grown." Lord Winterton agreed that the ground was "oak sick."

Divisional Officer's Comments

"I must agree that Chiddingfold is not a successful operation. It is now generally admitted that oak and ash were not the right species to plant on the greater part of the Chiddingfold area..."

Ash/larch areas had made a bad start and, on account of high cost and low-stocking, weeding was discontinued. Considers complete clearance and replanting with Norway spruce as ideal but too expensive and suggests leaving for a while and later underplanting with beech or other shade bearer.

Some conifer areas need further weeding but there had been shortage of labour. "My present policy is to keep weeded areas where there is definitely the making of a crop ... it is no good spending large sums of money on weeding where an ultimate crop cannot be obtained..."

27.10.38

Sir Roy Robinson,
Chairman.

A well detailed description of many crops visited and the varying success noted.

Treatment proposed for ash/larch, sweet chestnut/larch and pure sweet chestnut, P.23 to P.26 in Kings Park is ..." to secure a mixed crop by cleaning and thinning to give the best conditions for the development of all tree species as they occur."

Weeding policy to be (a) Conifers - complete weeding (b) Ash - no weeding unless a definite crop exists (c) Oak - best areas to be dealt with first; any groups in generally bad areas to be rescued; no money to be spent on areas not considered to bear a crop. "It was pointed out that the changes in stocking and growth are so numerous and sudden at Chiddingfold that exact control of labour is extremely difficult..." Strip planting of tall coppice considered unsatisfactory as either too much or too little shade was given. Better results could be obtained by cleaning and thinning to favour seedling oak or birch or young coppice shoots together with possible introduction of beech in ill-stocked patches.

It was decided that a good deal of Sidney Wood should remain under oak. Where oak was unsuitable Norway spruce (wetter ground) and beech (drier ground) should be used for planting. Norway spruce/oak mixture should be planted as an experiment to see if Norway spruce Christmas trees would offset the weeding cost.

Chairman's Comment

Chiddingfold was intrinsically a most difficult subject to handle and the early mistakes have made it more so. Gradually the problems have been or are being sized up and suitable methods devised for overcoming them. It is all a very costly business. We must persevere, however ..."

29.6.39

Mr. O. J. Sangar,
Assistant Commissioner (E & W)

Divisional Officer's Comments

Poor results due to (i) wrong choice of species (i.e. hard woods) in the early years (ii) high cost and shortage of labour for weeding. Present weeding policy is to give preference to plantations which are or promise to be a full crop.

2.7.40

Sir John Sutherland,
Commissioner.

Mr. A. P. Long,
Assistant Commissioner (E & W.)

Kings Park, Ash Park and Fisher Lane visited. Failure of oak, European larch, etc., locally and ash and poplar generally noted. Decided maintenance had been somewhat neglected in the past. "Extra labour first essential

Finance to be no impediment." Proposed to increase labour force from less than 20 to 30.

Divisional Officer's Comment

Noted steady progress in weeding and cleaning shown by expenditure of £254 in 1936 to £942 in 1940 and proposal of £2050 for 1941.

Assistant Commissioner's Comment

Considered strip method of regeneration unsuccessful due to insufficient weeding and cutting back of coppice and that strips should be wider if this method used.

(Divisional Officer remarks that these strips of coppice appeared after planting).

15.8.41

Sir Roy Robinson,
Chairman.

General description of the state of the crops in Kings Park, Tugley, Oaken Wood and Sidney Wood.

"Sitka spruce does not seem to thrive and has been abandoned in favour of Norway spruce introduced P.26." Some Sitka spruce P.24 noted as only 5 ft. high at 17 years of age. Some criticism that cleaning has been too heavy in Douglas fir areas.

General conclusion was that crops that had reached the age when they should be established would now have to be accepted and a crop made out of the best available trees.

Divisional Officer's Comment

Noted that a compartment record book was in process of preparation the object of which was to prescribe treatment for each uniform stand.

"Chiddingfold has proved most expensive..."

"The Chairman pointed out that had the whole 2,000 acres been planted with Scots pine, we should now have had very much more to show for a much smaller expenditure, but one would hardly acquire this kind of land to grow Scots pine on." "It is necessary to make the best of what we have with as little expenditure as possible..." "Wherever we have a natural crop, whether it be of coppice or seedling origin, of valuable or weed species we should not go to the great expense of replacing it with a planted crop but should tend it and try to bring it to a useful size..."

Retention of Sidney Wood desirable (fair quality middle aged oak) although about 10 times the purchase price could be realized by felling it.

16.4.44

Mr. A. P. Long,
Assistant Commissioner (E & W).

Regrowth left on the current years planting (Douglas fir Compartment 96) should be cut right back and the area kept well weeded. Retention of individual natural oaks in Norway spruce P.34 (Compartments 70, 71) criticised. Groups of oak might have been useful but not single trees which should be cut out.

A general note states that out of 1500 acres of plantations it is difficult to find any really successful examples in the earlier hardwoods. It is suggested that the first planting programmes were too large and embarked upon without a realization of the amount of subsequent maintenance work involved. Planting of oak groups in heavy coppice "was only half doing the work and predoomed to failure." Future fellings should be confined to such areas... "as can be immediately regenerated and the felling must be very definitely clear felling." Species to be used should be oak if hardwood required, otherwise Norway spruce.

24.3.45

Sir Roy Robinson,
Chairman.

Divisional Officer's notes.

Lagfold - Failure of response to cleaning noted in old (P.1900?) oak in Compartment 64.

Group planting method regarded with disfavour. When weeding coppice it should be cut to the ground not to 3 ft. or 4 ft. as was the practice a few years ago.

Kings Park. Oak, sweet chestnut, ash and larch planted in the early '20's show varying success and the general conclusion is that "such crops as are on the ground must be made the best of."

Conifers (with the exception of Sitka spruce) now begin to show some signs of improvement. A small area of Corsican pine (Compartment 10.P.24) and another of Japanese larch (Compartment 22 P.23) noted as promising but success of the latter ascribed to exceptional ground.

Tugley. Poplar, ash and European larch all noted as failures. Other conifers generally are fair with poor patches. Suggested Scots pine would have been a better choice than Norway spruce Compartments 49, 50, P.28 and noted that Scots pine P.29 (Compartments 53, 56, 57) shows "growth which is probably more rapid than that of anything else on the poorer soils."

Sidney Wood. Noted that species trials such as P.43 Compartment 87 are worth trying but only on a small scale.

Chairman's Comments

..."I came away with the uneasy feeling that if we had simply let the oak coppice grow up, where reasonably stocked and had foregone all the trouble and cost of planting we might have got better results than we now have. Whether this is so or not it seems a fact that coppice shoots will have to be relied upon to complete the stocking of many of the plantations."

"The few patches of old coppice which have been thinned recently now look very well." (Presumably Compartments 15, 16, Kings Park).

25.4.47

Mr. O. J. Sangar
Director (E)

Kings Park. It was considered that P.20-30 plantations had greatly improved in the last 10 years and that it should be possible to get a satisfactory crop if beech, chestnut and coppice shoots were accepted in some cases.

Sidney Wood. Progress of species trials noted. Some such as Tsuga and Abies grandis, suffering from frost.

"The importance of keeping oak areas hard-weeded was stressed."

13.3.48.

Mr. W. L. Taylor,
Director - General.

Conservator's Notes It had previously been proposed to make a road to serve the greater part of Kings Park. It was now decided to restrict this to the construction of the four major culverts and to stop all surfacing.

A general inspection of Kings Park and Lagfold was made.

"The Director-General expressed his opinion that over a great part of Chiddingfold it would have been wiser to plant a first crop of Norway spruce, which would have killed out the coppice. Although it has been a very slow process, he thought that there was a considerably heavier stocking of oak generally than at one time could be anticipated. The use of other species must be made to fill up where the oak has failed in a plantation. A major problem, however, arises on parts of the area in Kings Park on the low ground where dense thorn has come in as it will obviously not pay to clear."

Director's Comments

"I entirely agree with all this, (quotation above), as does the Conservator with whom I have more than once discussed it."

Director-General's Comments

"There is better stocking of oak in Kings Park than might have been expected. There has been heavy cutting of tall coppice some of which might have been retained (temporarily) to augment canopy which will be slow to re-form. In parts of Oaken Wood (Compartments 65 and 66) stocking is good; all possible measures to induce height growth should be taken; the former tendency over much of this area was for oak to make short bole..."

11.5.50

Lord Robinson,
Chairman of Commission.

Lord Radnor,
Chairman of National Committee (E)

Sir Richard Cottrell,
Commissioner.

Major C. Mitchell,
Hon. J. Best,
Members of National Committee (E)

Sir William Taylor,
Retired Director-General.

Mr. A. H. Gosling,
Director General.

Mr. O. J. Sangar,
Director (E).

Recent experimental work on "rehabilitation" was visited in Tugley
Compartment 42 and Fisher Lane Compartment 38.

This work was done to find the cheapest and most effective method of selecting and looking after the trees which would make up the final crop in stands where the planted crop has failed and/or where natural regrowth is accepted as the crop.

The procedure is briefly (1) preliminary cleaning for access and vision (2) marking selected stems 100-130 per acre (3) thinning to relieve selected stems (4) pruning selected stems.

The comment of the meeting was that the poorer areas such as Compartment 42 Tugley should not be expected to develop into good areas such as Compartment 38 Fisher Lane and should therefore be treated now. It was felt that a preliminary cleaning might not be essential and that only necessary rack-cutting should be carried out in order to reach and treat the selected trees.

APPENDIX II

Supervision

Divisional Officers

Mr. W. L. Taylor	
Mr. A. L. Felton	1926 - 1939
Mr. F. C. Best	1939 - 1946

Conservators

Mr. F. C. Best	1946 - 1947
Mr. A. L. Felton	1947 - 1949
Mr. R. H. Smith	1949 - to date

State Forest Officers

Mr. R. H. Smith	1946 - 1948
Mr. J. M. Ross	1948 - to date

District Officers

Mr. R. G. Sanzen-Baker	1931 - 1935
Mr. W. A. Muir	1935 - 1939
Mr. C. A. J. Barrington	1939 - 1940
Mr. M. F. Adams	1940 - 1941
Mr. T. Clear	1941 - 1945
Mr. C. A. J. Barrington	1945 - 1946
Mr. J. F. Goodwin	1946 - 1947
Mr. J. White	1947 - to date

Foresters

Mr. R. Butler	1922 - 1936
Mr. J. E. Maund	1936 - 1938
Mr. L. H. Williams	1938 - 1939
Mr. R. E. Francis	1939 - to date

APPENDIX III

Tabular statement of Planting

P. Year	Area planted		Compartment numbers	Species used	Remarks
	Original	Surviving 1.10.51. (includes replants)			
1923	177 acs	151 acs	3,4,6,7,9, 10,11,13, 19,20,21, 22,23,24,	Oak, Ash/EL Ash/JL, Ash/Cht Ash/Cht/EL Cht,NS, DF, EL.	
1924	124 acs	121 acs	7,8,10,11 12,13,14, 15,16,17, 18,19,20, 22,23,24, 25.	Oak, Cht, Pop, Be, Ash/EL CP, DF, SS, NS,	
1925	86 acs	60 $\frac{1}{2}$ acs	7,8,17, 18,19,20 23,34,35, 36,40,58, 59,62.	Oak, Ash/EL, Cht, DF, SS, EL, Pop.	
1926	113 acs	118 $\frac{3}{4}$ acs	3,4,5,6,7, 8,10,26,27, 28,30,34, 41,54.	Oak, Ash/EL, DF,SS,NS,Pop, Red Oak.	
1927	170 acs	125 $\frac{1}{2}$ acs	3,4,16,17, 28,29,32, 33,35,37, 38,39,42, 44,45,51, 52.	Oak, Ash/EL, Pop, EL, DF, NS, SS.	
1928	164 $\frac{1}{2}$ acs	144 $\frac{1}{2}$ acs	15,16,27, 29,32,43, 45,46,47, 48,49,50, 51,53,54, 55,56,57, 58,59,60, 62.	Oak, Oak/Be, Oak/NS, EL, DF, NS, Pop, Ash	
1929	123 $\frac{1}{2}$ acs	114 acs	29,30,31, 43,46,47, 48,52,53, 55,56,57, 62,65,66.	Oak, Ash, Pop NS,EL,SP,DF,SS.	
1930	106 acs	110 $\frac{3}{4}$ acs	27,31,46, 61,72,73, 75,76,78	Oak, Pop, NS,SS, Ash.	

P. Year	Area planted		Compartment numbers	Species used	Remarks
	Original	Surviving 1. 10. 51 (includes replants)			
1931	75 acs	75 $\frac{1}{4}$ acs	61, 72, 74, 75, 76, 78, 80, 81, 82, 96, 97, 98.	Oak, Ash, Pop, NS, JL.	
1932	96 $\frac{1}{2}$ acs	102 $\frac{1}{4}$ acs	18, 24, 34, 76, 77, 80, 96, 97, 98, 99, 100.	Oak, Ash, Pop, SS, JL, NS.	
1933	35 $\frac{1}{4}$ acs	30 $\frac{3}{4}$ acs	63, 64, 67, 68.	Oak, Ash.	
1934	40 acs	33 acs	67, 68, 69, 70, 71.	Oak, Be, Ash, NS.	
1935	43 acs	44 acs	25, 32, 33, 35, 36, 38, 41, 63, 67, 68, 70, 71 82, 46.	Oak, Ash, NS, SP.	
1936	35 $\frac{1}{4}$ acs	35 $\frac{3}{4}$ acs	25, 35, 37, 40, 57, 67, 68, 69, 70, 71.	Oak, NS.	
1937	25 $\frac{3}{4}$ acs	62 acs	32, 37, 38, 40, 41, 42, 46, 69, 70, 71, 78, 79, 80, 81, 42.	Oak, Ash, A. grandis, NS.	
1938	12 $\frac{1}{4}$ acs	44 $\frac{3}{4}$ acs	23, 25, 30, 32, 37, 40, 45, 51, 52, 53, 57, 75, 80, 81.	Oak, Be, NS, JL.	
1939	21 $\frac{1}{2}$ acs	22 acs	40, 94, 95, 96.	Oak/NS, NS	
1940	29 acs	35 acs	3, 6, 13, 27, 52, 64, 111	Be, NS.	
1941	19 acs	21 acs	3, 111.	Oak, Syc, NS	
1942		1 $\frac{1}{4}$ acs	22, 23.	Oak	
1943	56 acs	65 acs	83, 84, 85, 86, 87.	Oak, Syc, Pop N. Maple, CP, JL, P. Omorika, NS, SP, DF, AG, AN, LC, Th.	Replant of war felling.

P. Year	Area planted		Compartment numbers	Species used	Remarks
	Original	Surviving 1.10.51 (includes replants)			
1944	15 acs	15 acs	94,96.	NS,DF.	C.94 was re- plant of war felling.
1945	7 acs	7 acs	71.	NS,HL,EL.	Replant of burnt area.
1946	25 acs	25 acs	102,104 105,106	NS,LC,Th. P.Omorika	Replant of war felling.
1947	55 acs	$54\frac{3}{4}$ acs	88,89,90 92,94,95.	NS,LC,Ts,SP P.Omorika	"
1948	$35\frac{3}{4}$ acs	$35\frac{3}{4}$ acs	96,97,108, 109,110.	Oak, NS.	"
1949	31 acs	31 acs	108,109.	NS, LC.	"
1950	$24\frac{1}{2}$ acs	$24\frac{1}{2}$ acs	81,82 107,108.	JL, NS, Red Oak	
1951	7 acs	7 acs	101, 102	DF, NS.	Be underplant in C.16.

APPENDIX IV

Meteorological Office, Air Ministry, London

Average Values of Rainfall and Temperature at Selected Stations

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
<u>Rainfall Inches</u> Farnham (Langley Road) 8 Miles N.N.W. of Godalming Period 1881-1915	2.4	2.2	2.2	1.7	1.9	2.1	2.2	2.5	2.1	3.6	3.0	3.3	29.2
<u>Temperature °F</u> <u>Milford (Godalming)</u> Period 1941-1945													
Mean daily Max.	41.8	45.5	52.7	59.6	64.3	69.4	72.2	71.2	66.2	59.5	49.3	45.2	58.1
" " Min.	30.4	33.6	32.3	38.3	40.7	47.2	51.2	50.9	47.0	42.2	35.4	33.7	40.1
Mean Temp.	36.1	39.5	42.5	48.9	52.5	58.3	61.7	61.1	56.6	50.9	42.3	39.5	49.1
<u>Grayshott</u> Period 1881-1915													
Mean daily Max.	42.3	43.7	47.6	54.0	60.9	64.8	68.5	67.6	63.3	55.9	47.4	43.9	55.0
" " Min.	33.1	33.3	35.1	37.7	43.4	48.2	51.9	51.6	48.5	44.1	37.0	35.4	41.6
Mean Temp.	37.7	38.5	41.4	45.9	52.2	56.5	60.2	59.6	55.9	50.0	42.2	39.7	48.3
<u>Absolute extremes of temperature °F</u>													
<u>Milford (Godalming)</u> Period 1941-1948													
Maximum	55	64	73	80	90	89	91	88	79	75	65	57	91
Minimum	7	14	15	21	21	33	38	35	25	23	21	9	7
<u>Grayshott</u> Period 1901-1930													
Maximum	54	59	70	74	84	87	90	93	89	80	62	56	93
Minimum	11	12	17	23	29	35	40	40	30	27	21	13	11

METEOROLOGICAL OFFICE, AIR MINISTRY, LONDON

Values of Number of days of ground frost within certain limits
at Grayshott: 1922-1931

<u>°F.</u>	<u>Jan.</u>	<u>Feb.</u>	<u>Nov.</u>	<u>Dec.</u>
1922 (10° - 14° 15° - 19° 20° & over	2 20	1 2 14	1 18	11
1923 (10° - 14° 15° - 19° 20° & over	2 20	11	4 19	1 5 13
1924 (10° - 14° 15° - 19° 20 & over	14	2 3 12	1 10	11
1925 (10° - 14° 15° - 19° 20° & over	10	16	1 1 16	3 14
1926 (10° - 14° 15° - 19° 20° & over	2 10	1	9	20
1927 (10° 10° - 14° 15° - 19° 20° & over	2 18	2 12	12	1 3 4 5
1928 (10° - 14° 15° - 19° 20 & over	14	11	7	3 20
1929 (10° 10° - 14° 15° - 19° 20 & over	1 2 23	2 4 15	14	12
1930 (10° - 14° 15° - 19° 20 & over	11	19	11	15
1931 (10° - 14° 15° - 19° 20° & above	21	19	10	1 12

Snow: South Farnborough

(Period 1915-38)

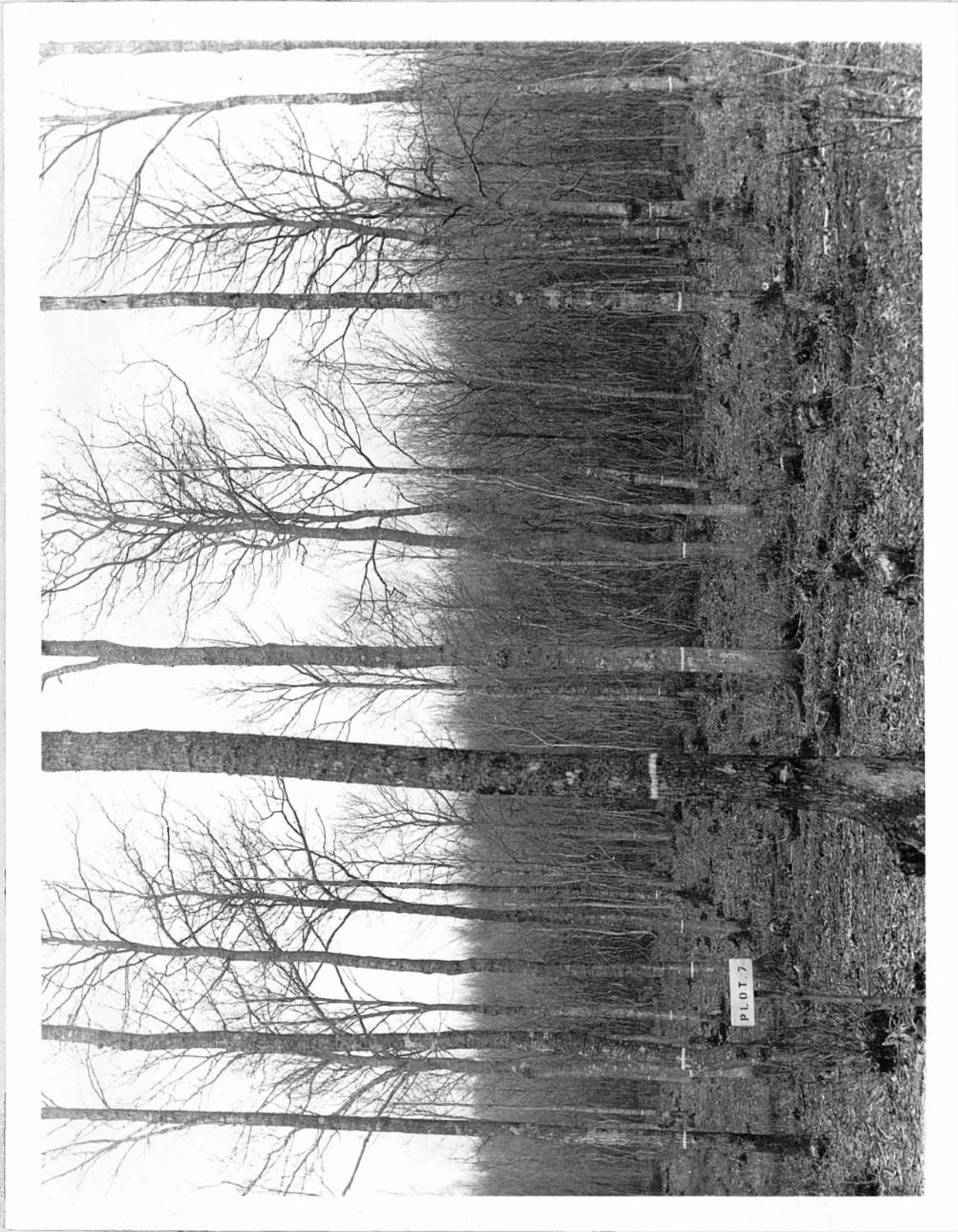
	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>	<u>Year</u>
No. of <u>days</u> with <u>snow</u>	4.2	3.6	3.7	1.9	0.1	1.0	3.2	17.7
No. of <u>mornings</u> with <u>snow lying</u>	1.5	1.1	0.7	0.4	0	0.1	1.5	5.3

METEOROLOGICAL OFFICE, AIR MINISTRY, LONDON.

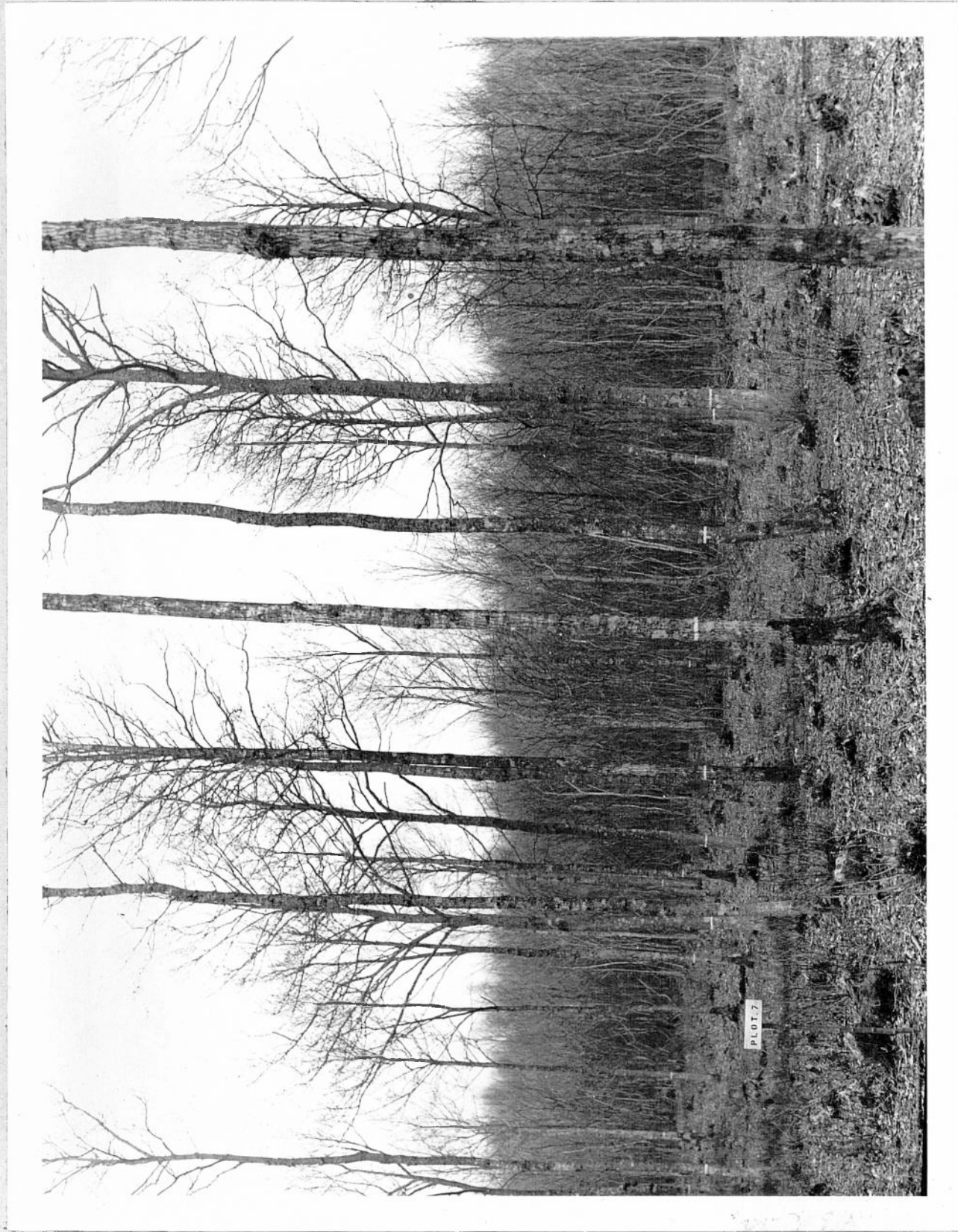
Values of Number of days of ground frost within certain limits
at South Farnborough: 1935-1944

	<u>°F</u>	<u>Jan.</u>	<u>Feb.</u>	<u>Nov.</u>	<u>Dec.</u>
1935	(10° - 14°				3
	(15° - 19°	2	1	2	
	(20° & over	14	9	9	14
1936	(10° - 14°	1	2		1
	(15° - 19°	2	4		3
	(20° & over	9	16	11	10
1937	(10° - 14°				1
	(15° - 19°		1		1
	(20° & over	9	9	5	10
1938	(10° - 14°				1
	(15° - 19°		1		1
	(20° & over	9	9	5	10
1939	(10°				2
	(10° - 14°				1
	(15° - 19°	1			4
	(20° & over	9	14	3	4
1940	(10°	3	1		
	(10° - 14°	4	0		
	(15° - 19°	5	2	1	2
	(20° & over	13	8	9	12
1941	(10°	1			
	(10° - 14°	2			1
	(15° - 19°	1	2	1	2
	(20° & over	11	13	7	9
1942	(10°	2			
	(10° - 14°	2	1	2	
	(15° - 19°	3	5	2	1
	(20° & over	14	18	11	6
1943	(10° - 14°		1		
	(15° - 19°	1	6	4	6
	(20° & over	9	7	8	10
1944	(10° - 14°	1	2		2
	(15° - 19°	2	0	2	3
	(20° & over	11	14	11	9
1945	(10°	2			
	(10° - 14°	1			
	(15° - 19°	5			
	(20° & over	14	5		

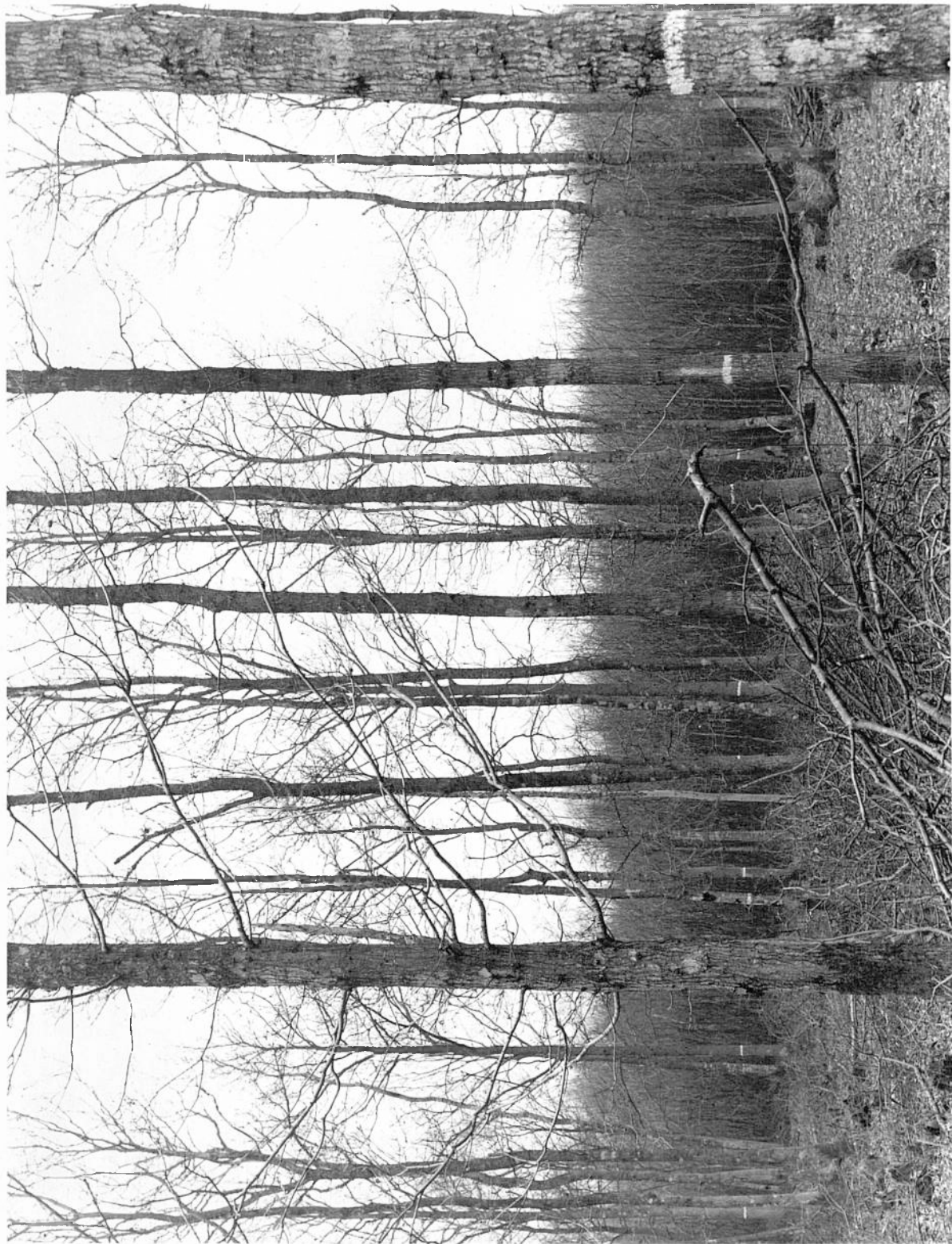
Chiddingfold



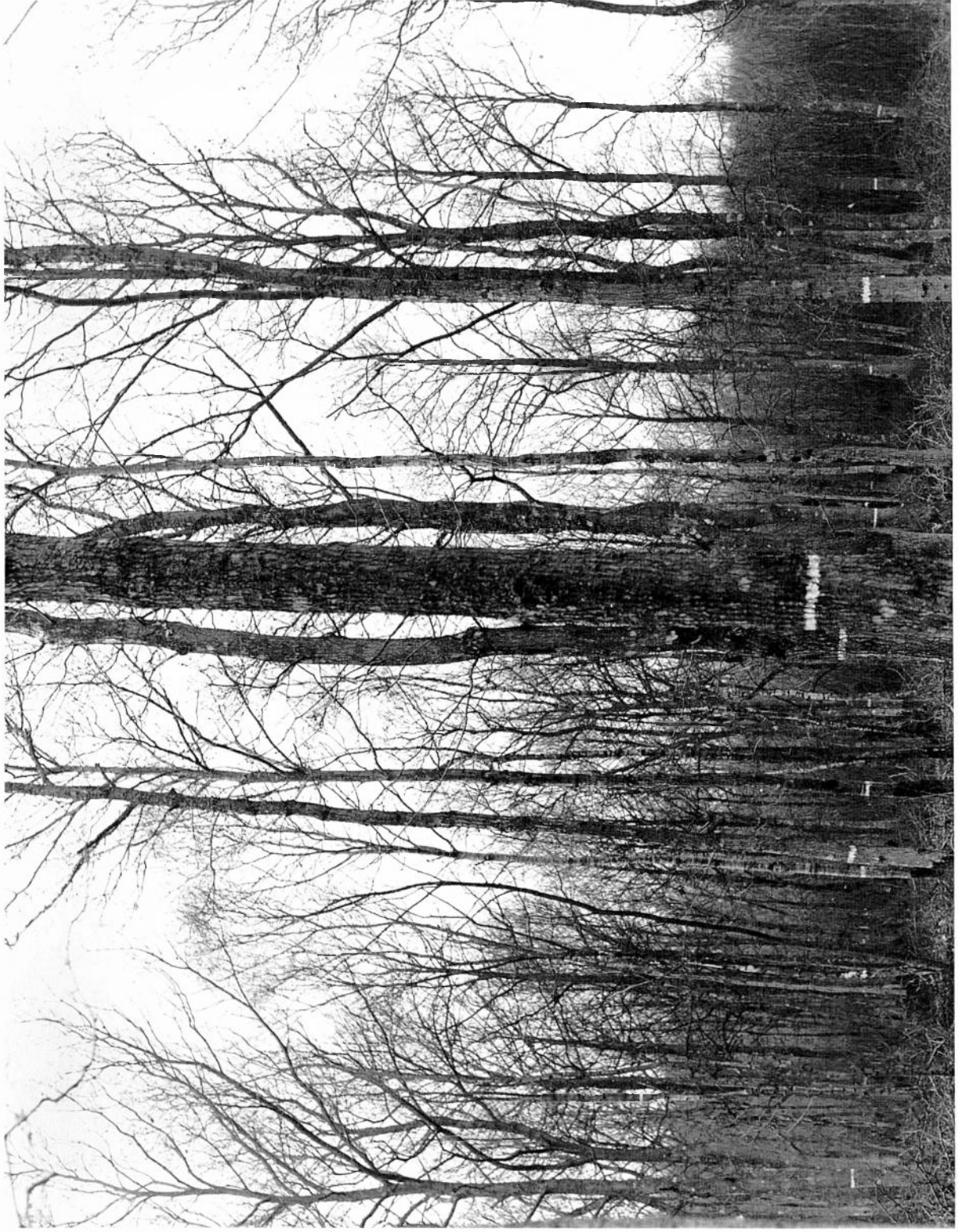
No. 2. Compartment 16, Plot 7. Oak-thinned 1951 underplanted with Beech in 1951.



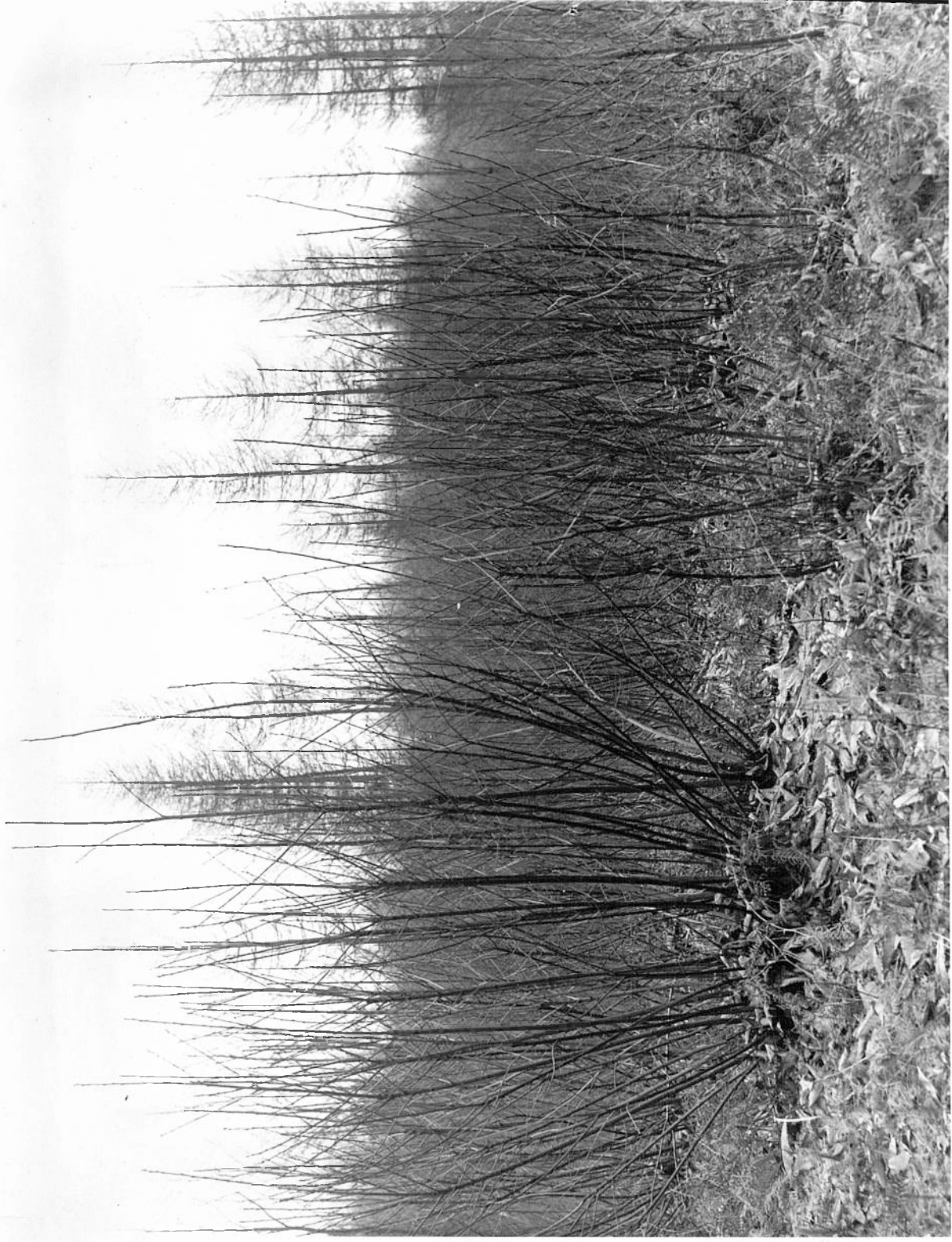
No. 3. Compartment 16, Plot 7. Oak-thinned 1951 underplanted with Beech in 1951.



No. 4. Compartment 16. Oak-thinned 1951.



No. 5. Compartment 16. Oak-thinned 1951.



No. 6. Compartment 20. Chestnut Coppice 2 years (for walking sticks).



No. 7. Compartment 104. Beech 80 years approx.

CHIDDINGFOLD FOREST HISTROY



No. 8. Compartment 39. Oak - P. 27



No. 9. Compartment 39. Oak P. 27.

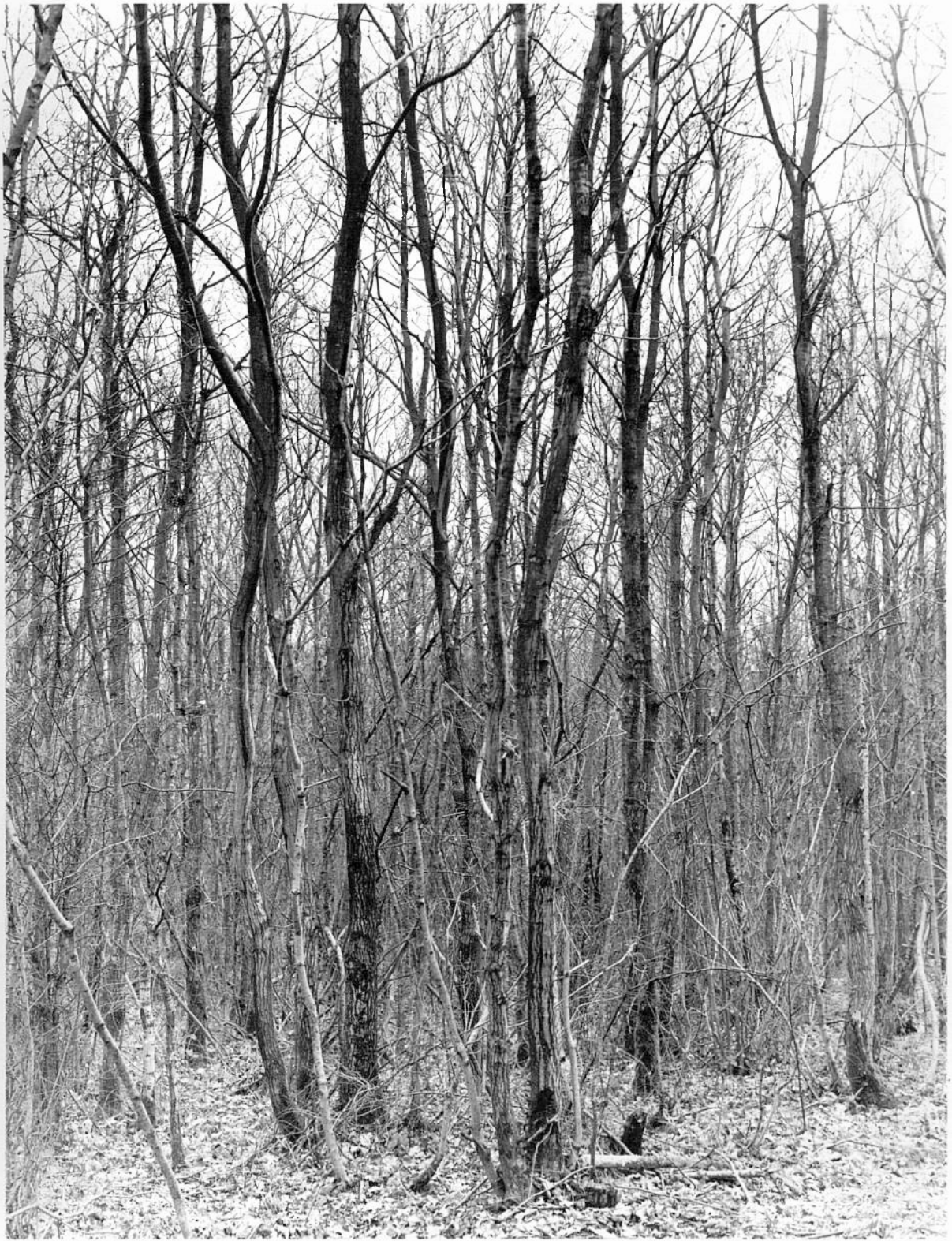


No. 10. Compartment 38. Plot 6.

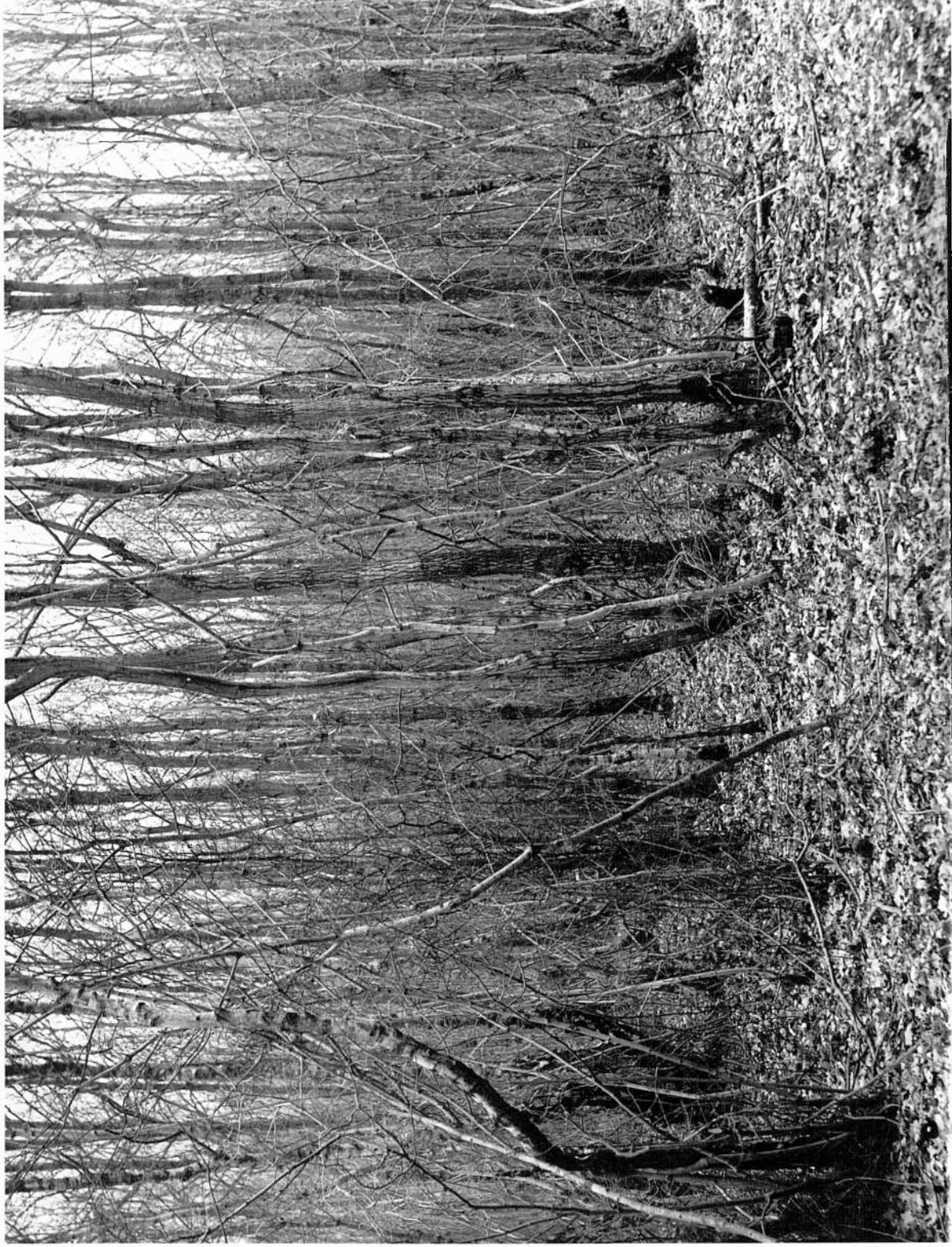
Rehabilitated in 1950. Oak now approx. 27 years.



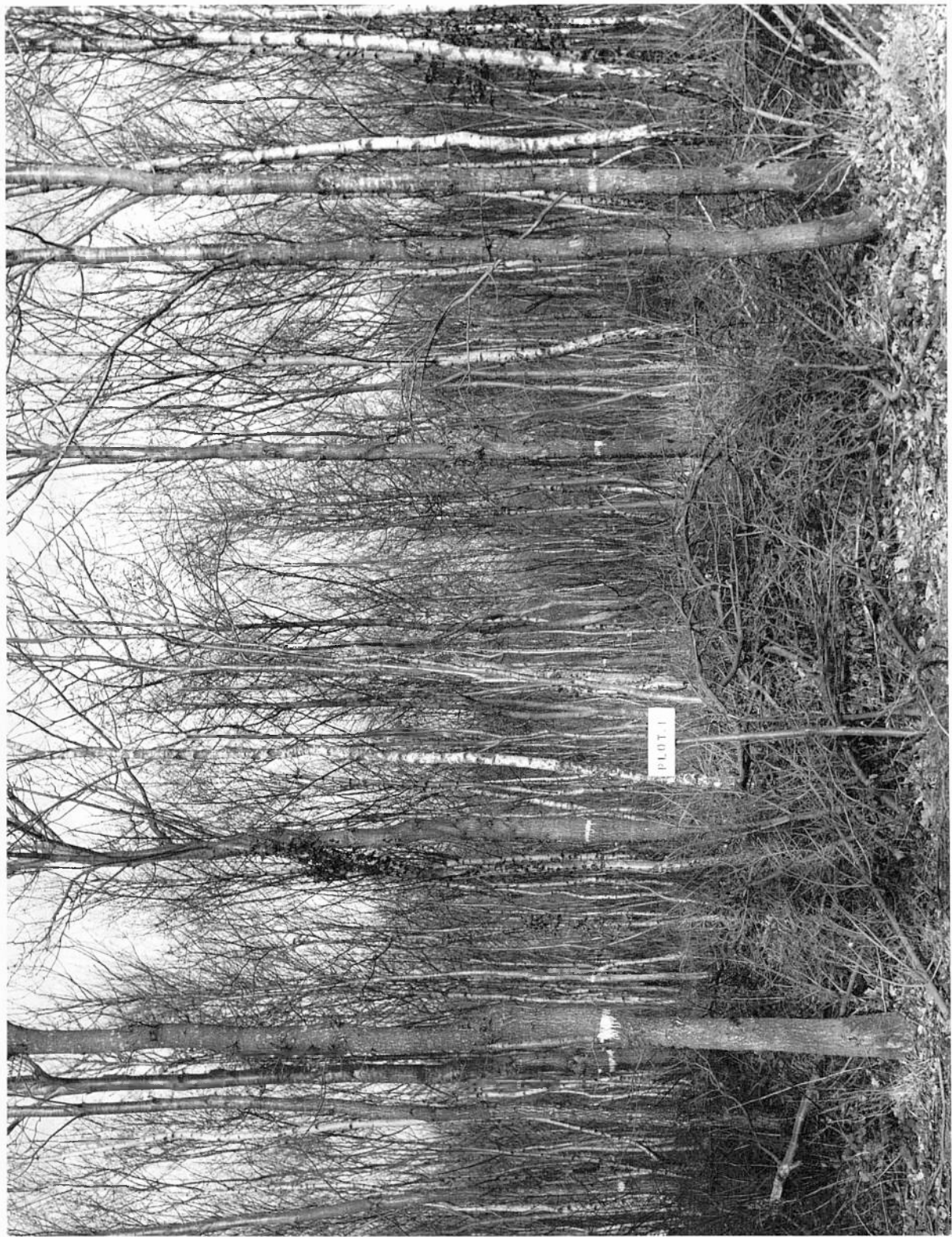
No. 11. Compartment 38. Plot 6.
Rehabilitated in 1950. Oak now approx. 27 years.



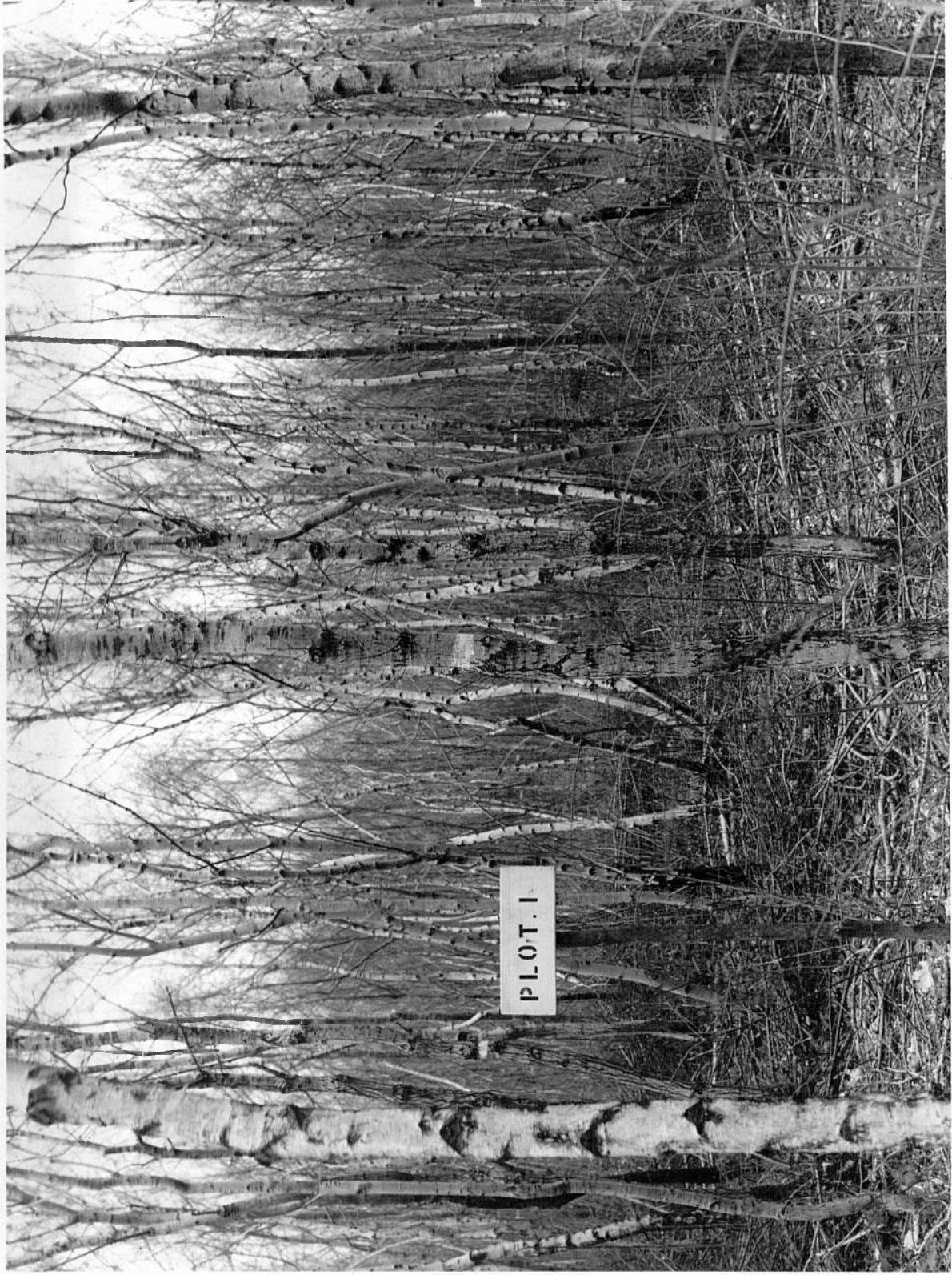
No. 12. Compartment 37. Natural and Coppice Oak - untreated.



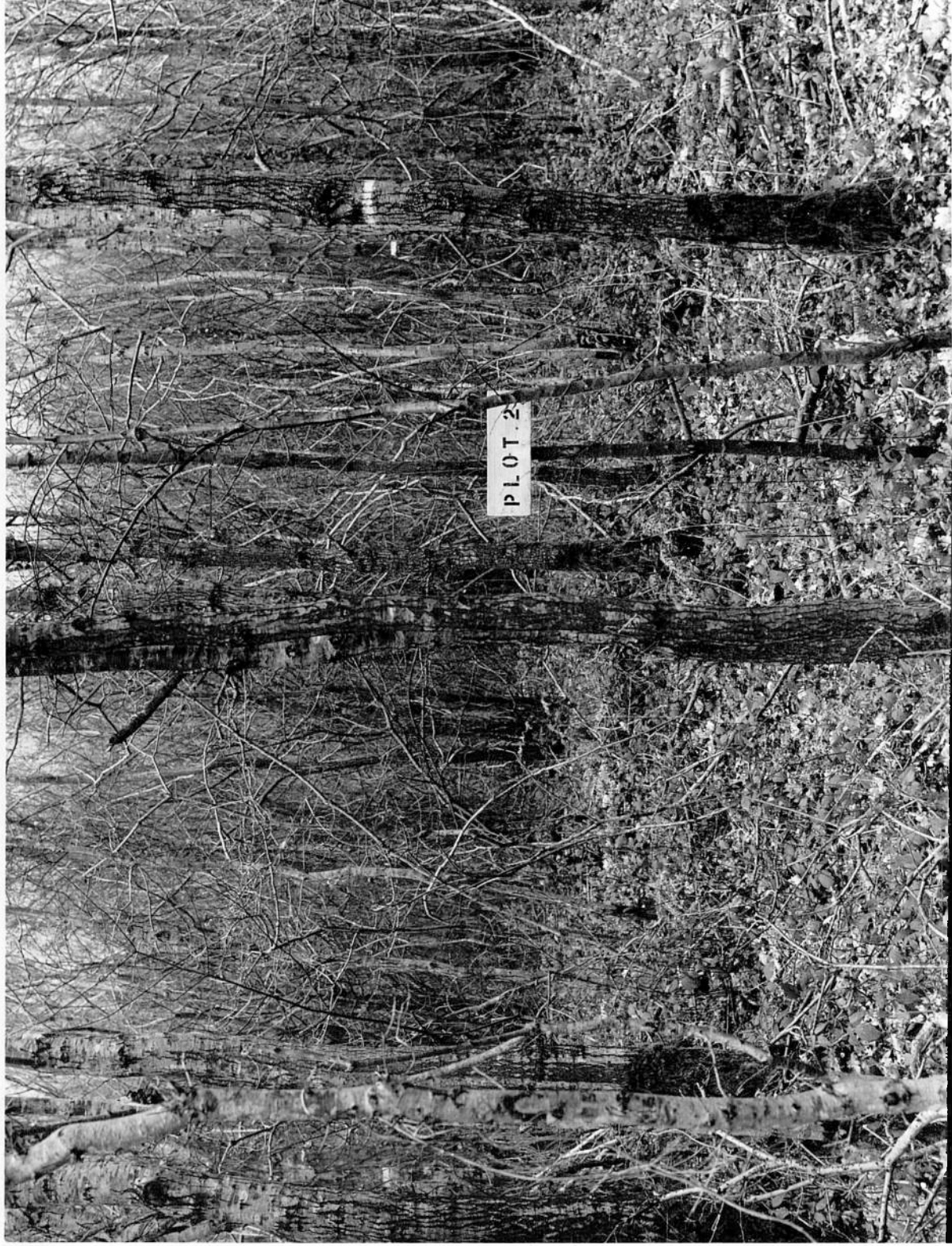
No. 13. Compartment 37. Natural and Coppice Oak - untreated.



No. 14. Compartment 42, Plot 1. Oak, Ash and Birch.
Rehabilitated 1950.



No. 15. Compartment 42, Plot 1. Oak, Ash and Birch. Rehabilitated 1950.



No. 16. Compartment 52, Plot 2.
Selected Oak 120 to acre, pruned up to 18 ft.
Rehabilitated and thinned 1950.



No. 17. Compartment 42. Plot 3.
Selected Oak 120 to acre approx. Pruned to 18-20 ft.
Showing ring barking of interfering trees.



No. 18. Compartment 52. Norway spruce P. 26, thinned 1950.



No. 19. Compartment 54. Norway spruce, P. 26, thinned 1950.



No. 20. Compartment 42, Plot 4.
Selected Oak 120 to acre pruned 18-20 ft. and cleaned showing
ring barking of interfering trees.



No. 21. Compartment 42. Plot 5.
Selected Oak 120 to acre pruned to 18-20 ft. cleaned and thinned.



No. 22. Compartment 57, Scots Pine, P. 29.



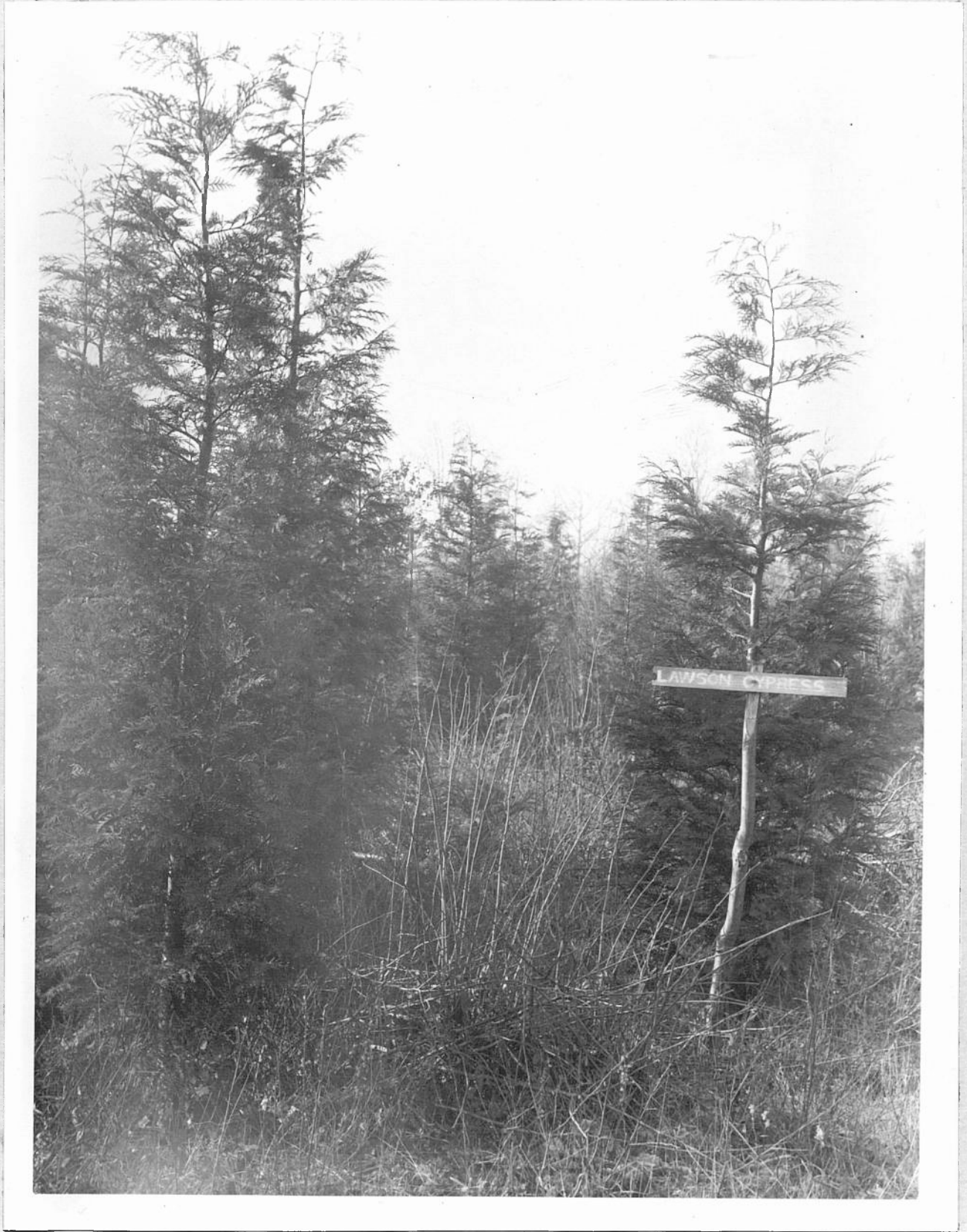
No. 23. Compartment 52 - Poplar.



No. 24. Compartment 96. Sydney Wood.
Natural Oak 150 years approx.



No. 25. Compartment 96. Matured Oak 150 years approx.



No. 26. Compartment 87, Lawson Cypress, P.43.



No. 27. Compartment 87, Lawson Cypress, P. 43.



No. 28. Compartment 87, Lawson Cypress, P. 43.



No. 29. Compartment 91. Oak 60-80 years approx. Thinned F. Y. 51.



No. 30. Compartment 91. Oak 60-80 years approx. Thinned F.Y. 51.



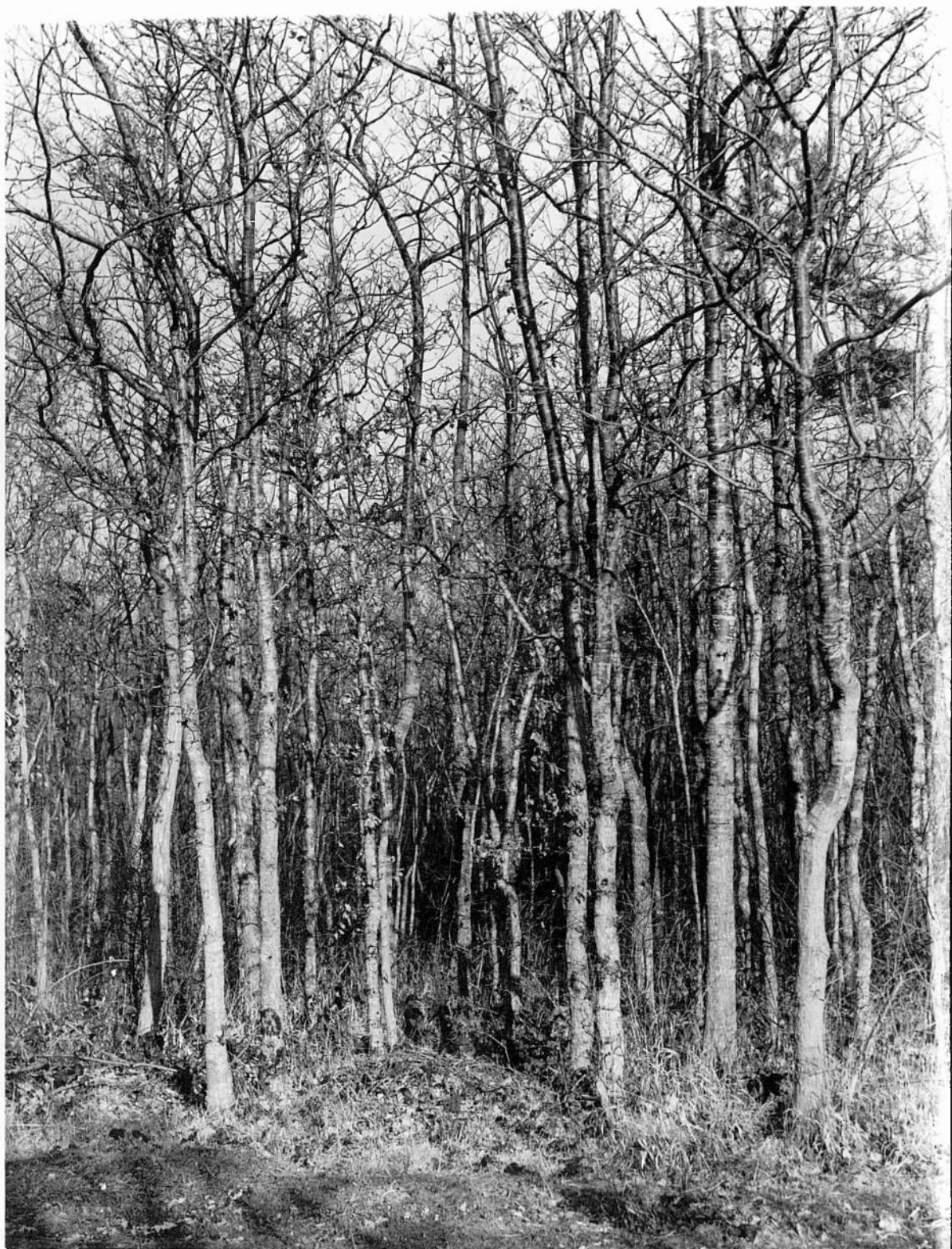
No. 31. Compartment 89 - Norway spruce P.47



No. 32. Compartment 66. Lagfold Copse, Oak sown, P. 29.



No. 33. Compartment 66, Lagfold Copse, Oak planted, P. 29



No. 34. Compartment 64. Lagfold Copse. Oak 52 years approx.
Worst selection - compare with numbers 36 and 37.



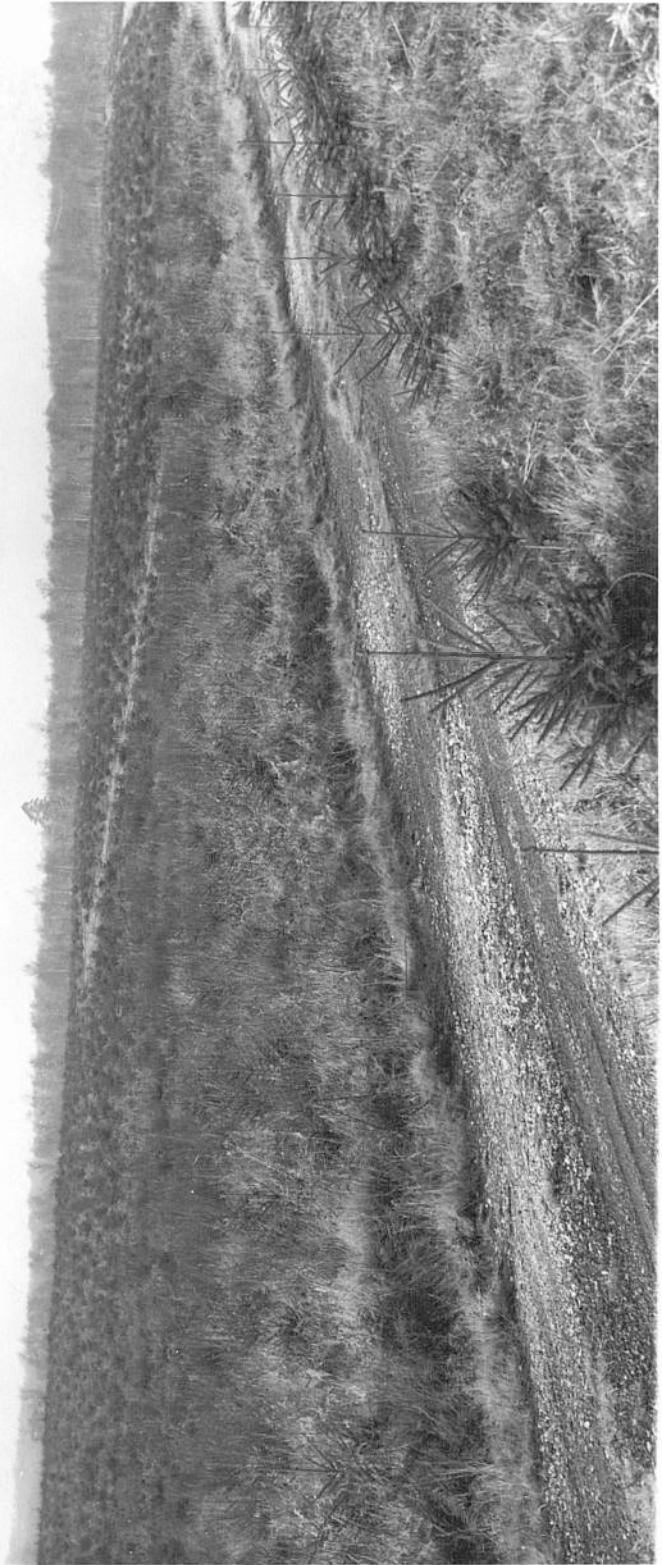
No. 35. Compartment 67. Lagfold Copse. Oak groups, P. 36.



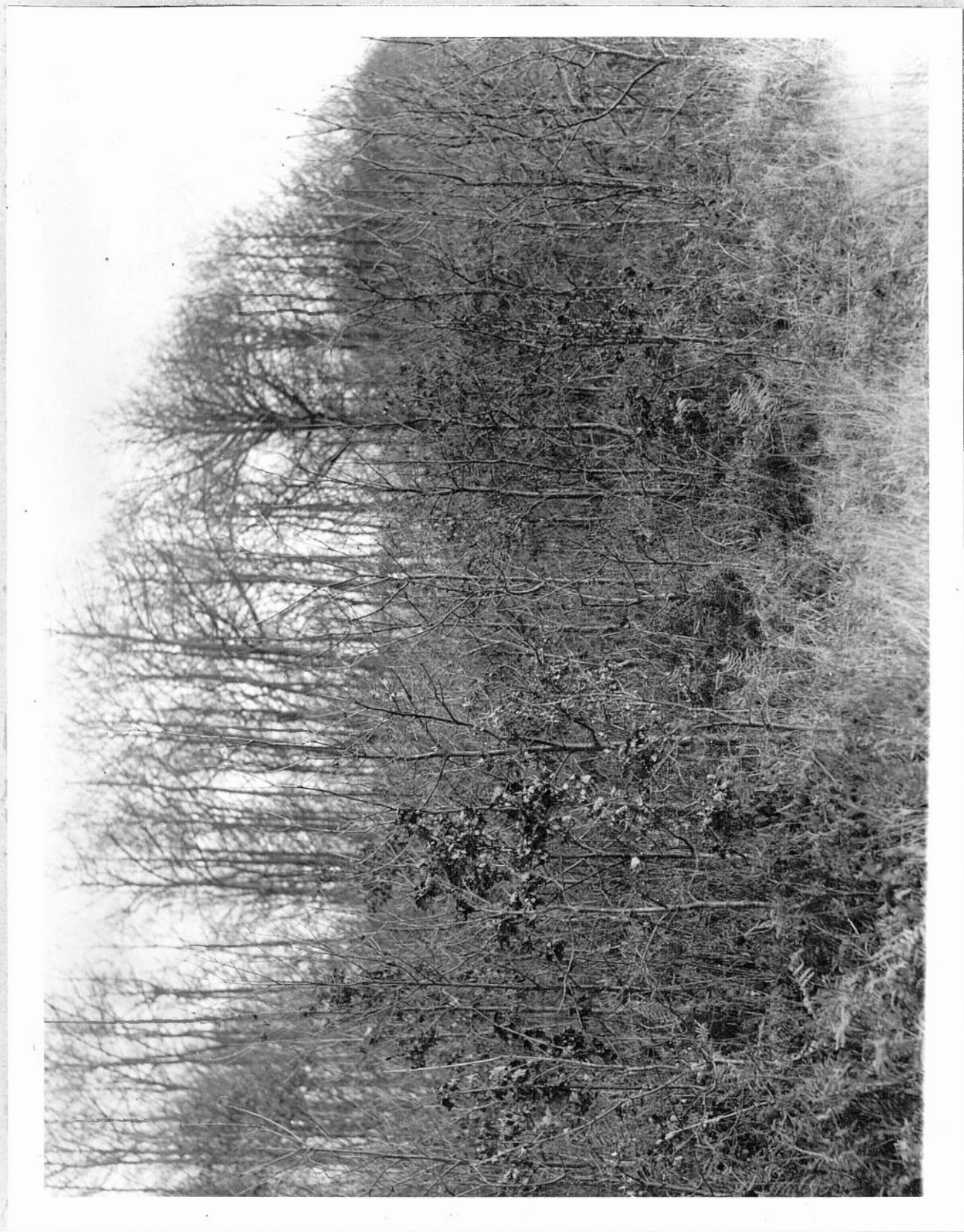
No. 36. Compartment 64. Oak 52 years approx.
Better section - compare with No. 34.



No. 37. Compartment 64. Oak 52 years approx.
Better section - compare with No. 34.



No. 38. Compartment 109 - Hogs Wood. Norway spruce
P.48 (looking towards Ifold Wood).



No. 39. Compartment, III - Hog Wood, Oak P.41.



P.40. Compartment 49 - Tugley Wood
Douglas Fir, P.28, thinned F.Y. 51.



No. 41. Compartment 104 - Pockford. Lawson Cypress P.46.



No. 42. Compartment 104 - Pockford. Lawson Cypress P. 46.

CHIDDINGFOLD FOREST

1

No.1. Compartment 18. Chestnut Coppice 1 year (for walking sticks)

2

No.2. Compartment 16, Plot 7. Oak thinned 1951 under-planted with Beech in 1951

3

No.3. Compartment 16, Plot 7. Oak thinned 1951 under-planted with Beech in 1951.

4

No.4. Compartment 16. Oak thinned 1951

5

No.5. Compartment 16. Oak thinned 1951

6

No.6. Compartment 20. Chestnut Coppice 2 years (for walking sticks)

7

No.7. Compartment 104. Beech 80 years approx.

8

No.8. Compartment 39. Oak – P.27

9

No.9. Compartment 39. Oak P.27

10

No.10 Compartment 38. Plot 6. Rehabilitated in 1950. Oak now approx 27 years

11

No.11. Compartment 38. Plot 6. Rehabilitated in 1950. Oak now approx 27 years

12

No.12. Compartment 37. Natural and Coppice Oak – untreated.

13

No.13. Compartment 37. Natural and Coppice oak – untreated.

14

No.14. compartment 42, Plot 1. Oak, Ash and Birch. Rehabilitated 1950.

15

No.15. Compartment 42, Plot 1. Oak, Ash and Birch. Rehabilitated 1950.

16

No.16. Compartment 52, Plot 2. Selected Oak 120 to acre, pruned up to 18ft. Rehabilitated and thinned 1950.

17

No 17. Compartment 42. Plot 3. Selected Oak 120 to acre approx. Pruned to 18 – 20 ft. Showing ring barking of interfering trees.

18

No.18. Compartment 52. Norway spruce P.26, thinned 1950.

19

No.19. Compartment 54. Norway spruce, P.26, thinned 1950.

20

No.20. Compartment 42, Plot 4. Selected Oak 120 to acre pruned 18-20 ft. and cleaned showing ring barking of interfering trees.

21

No.21. Compartment 42. Plot 5. Selected Oak 120 to acre pruned to 18 – 20ft. cleaned and thinned.

22

No.22. Compartment 57, Scots Pine, P.29.

23

No.23. Compartment 52 - Poplar

24

No.24. Compartment 96. Sydney Wood. Natural Oak 150 years approx.

25

No.25. Compartment 96. Matured Oak 150 years approx.

26

No.26. Compartment 87, Lawson Cypress, P.43

27

No.27. Compartment 87, Lawson Cypress, P.43.

28

No.28. Compartment 87, Lawson Cypress, P.43.

29

No.29. compartment 91. Oak 60 – 80 years approx. Thinned F. Y.51.

30

No.30. Compartment 91. Oak 60-80 years
approx. Thinned F.Y.51

31

No.31. Compartment 89 – Norway spruce P.47

32

No.32. Compartment 66. Lagfold Copse, Oak
sown, P.29.

33

No.33. Compartment 66, Lagfold Copse, Oak
planted, P.29

34

No.34. Compartment 64. Lagfold Copse. Oak
52 years approx. Worse selection – compare
with numbers 36 and 37.

35

No.35. Compartment 67. Lagfold Corpse. Oak
groups, P.36.

36

No.36. Compartment 64. Oak 52 years approx.
Better Section – Compare with number 34.

37

No.37. Compartment 64. Oak 52 years approx.
Better section – compare with No.34.

38

No.38. Compartment 109 – Hogs Wood.
Norway Spruce P.48 (looking towards Ifold
Wood)

39

No.39. Compartment III – Hog Wood. Oak
P.41.

40

No.40. Compartment 49 – Tugley Wood
Douglas Fir, P.28, thinned F.Y.51.

41

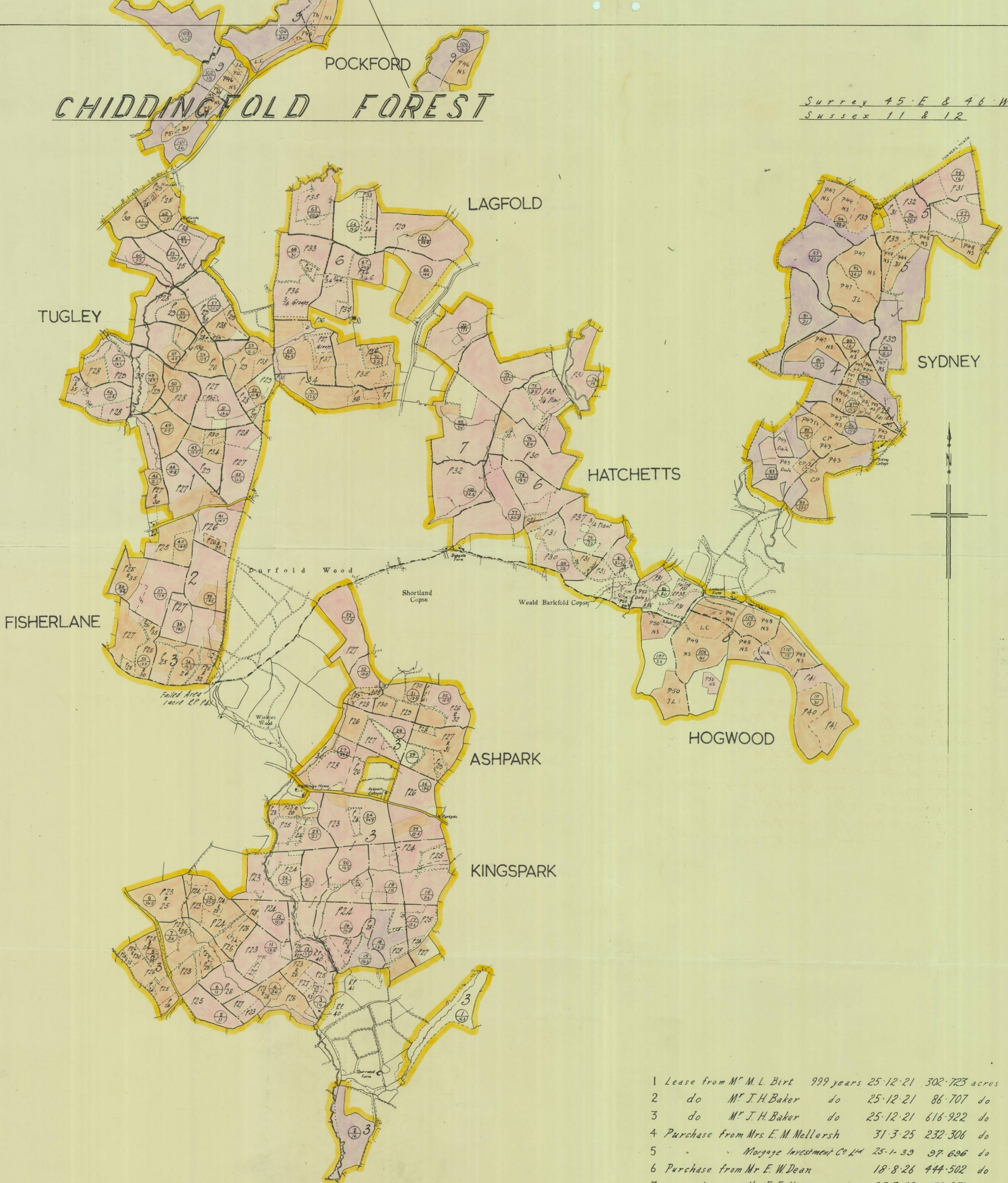
No.41. Compartment 104 – Pockford. Lawson
Cypress P.46.

42

No.42. Compartment 104 – Pockford. Lawson
Cypress P.46.

CHIDDINGFOLD FOREST

Surrey 45 E & 46 W
Sussex 11 & 12



FISHERLANE

HOGWOOD

ASHPARK

KINGSPARK

- 1 Lease from M^r M. L. Birt 999 years 25.12.21 302.723 acres
- 2 do M^r J. H. Baker do 25.12.21 86.707 do
- 3 do M^r J. H. Baker do 25.12.21 616.922 do
- 4 Purchase from Mrs. E. M. Mellersh 31.3.25 232.306 do
- 5 Mortgage Investment Co. Ltd 25.1.39 97.696 do
- 6 Purchase from Mr. E. W. Dean 18.8.26 444.502 do
- 7 do Mr. E. F. King 25.3.29 56.851 do
- 8 M^{rs} J. E. Dalrymple Atterton 16.5.39 134.161 do
- 9 Lease from J. G. S. Candy 999 yrs. 24.5.40 121.197 do

Scale Six Inches to One Mile.