FORESTRY COMMISSION

HISTORY

OF

LYMINGE

FOREST

SE(E) CONSERVANCY

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HISTORY

of

LYMINGE FOREST

1925 - 1951

SOUTH EAST (ENGLAND) CONSERVANCY

HISTORY OF LYMINGE FOREST

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LYMINGE FOREST HISTORY

CHAIRMAN'S COMMENTS

This is a well-written and well-illustrated history.

The first inspection of which I have a note was in February 1925 when I said that I was favourably impressed with the potentialities of the area as a hardwood forest of oak, ash and beech. I thought that replanting should proceed relatively slowly, working the considerable areas of good coppice (ash and chestnut) as such and gradually converting the whole to high forest. I asked for a survey and classification of growing stock, on which basis we would proceed to draw up our silvicultural and planting programme. A rabbit trapper was to be employed forthwith.

Presumably (I have no record) the planting with conifers arose out of that investigation. The early growth of Douglas fir in particular was indifferent and I was particularly interested to note at my last inspection (1951) how well it has developed. Undoubtedly the European larch on coppice sites was not weeded heavily enough.

This planting of beech under cover at Denge was some of the earliest work of that sort and, until the vole trouble arose, was very promising.

R.

Feb. 27th, 1952.

HISTORY OF LYMINGE FOREST

GENERAL DESCRIPTION OF THE FOREST

Situation

This unit consists of Lyminge and Denge Forests situated almost equidistant from the towns of Canterbury, Folkestone and Ashford in East Kent and takes its name from a village on the main Hythe - Canterbury road.

Both areas are well served with metalled roads although some of them are very narrow. The nearest railway station for Lyminge is Elham which is about two miles away and Chartham which is about three miles away from Denge.

Area and Utilisation

The area carried very variable crops of coppice, some being chestnut, some chestnut/birch/hazel in which the chestnut tended to dominate, some very rough hornbeam oak/chestnut and hazel of poor quality and some very poor mixtures of stunted oak, hornbeam and hazel. There was a scattering of oak, beech and chestnut standards - about 12 per acre - left from various "picking-over" by merchants. These trees were generally stunted and averaged about 5 cu.ft. each on the Lyminge block. At Denge there were several better standards and some nicely stocked chestnut coppice which had been maintained on a thirteen year rotation.

At the time of acquisition, although a certain value was placed on undefined areas of the crop, the whole woodland area was classed as "plantable" land. It was envisaged that certain areas would be maintained under chestnut coppice, which after improvement by cleaning and/or beating-up after rotational felling would rank as planted. This has been the policy adopted and there is now a chestnut Working Circle of 628 acres, which for the purpose of Table II is shown therein as Acquired Plantations.

TABLE I

From	By	Date	Plant. Acqd.	Plantable ex C.4.	Nurs.	Agric.	F.W.H.	Other Land	Total
C. Morris, Esq.	Purchase	31.1.25		922					922
Erle Drax, Esq.	"	31.3.25		798					798
Erle Drax, Esq.	"	6.10.25				62			62
Mrs. M. Topham	"	5.12.30		73					73
Wentworth Estates	"	24.6.32		573					573
H.A. Day, Esq.	"	29.6.32		66					66
Totals				2432		62			2494

TABLE II

a) Plantations

Acquired (Chestnut Coppice)	628 acres	
Formed by the Commission	1625 "	2253 acres
b) In hand awaiting planting -		
Blanks after felling	-	
Burnt areas	-	
Other land	167 acres	167 acres
c) Nurseries		7.0 acres
d) Agriculture .....)		55.0 acres
e) F.W.H. Number 3.....)		
f) Unplantable		12.0 acres
(Saw mill site and Wayleave of Electricity Line)		
Total		2494.0 acres

Physiography

Lyminge

The northern block (Covert and Covet) lies at a general elevation of 400 ft. to 450 ft.; it is divided by two valleys running north and south with a central plateau and two minor ridges. The valley sides are steep and flint covered. A certain amount of exposure may be expected on the west facing slopes.

The central block (Elham Park) is mainly flat in the western two thirds; the eastern third having a moderate slope to the east. The area is sheltered by rising ground to the south west.

The southern block (Park Wood and West Wood) is mainly flat at an elevation of 500 ft. to 600 ft. West Wood is exposed at times to severe gales coming off the Romney Marshes from the south-west.

Denge

The area as a whole is on a fairly flat plateau at about 400 ft. elevation. The ground drops away fairly sharply on the north and west boundaries however, giving north and west aspects to these compartments. A few fairly gentle sloping valleys occur which run mainly north and south so that these areas have an east/west aspect.

Geology and Soils

Lyminge

The geological formation is chalk and this tends to come to the surface on the valley slopes of Covet and Covert Woods where the soil is very shallow.

The overlying soil is mainly plateau loam with flints. The Lenham Bed formation does occur in parts of Park Wood and West Wood (roughly Compartments 51, 52, 54, 56, 57, 60, 68).

The plateau loam is somewhat stiff and brick earth in colour and as a rule is of moderate depth. In Elham Park Wood, however, the soil is deeper but rather heavier and passes into clay at about 18 in. depth.

The Lenham Beds consist of a quite fertile sandy soil, which overlies clayey loam with flints.

Denge

The geology and soil is very similar to that of Lyminge proper. The underlying rock is chalk and this comes very near the surface in parts of Compartments 1 and 4. The rest is a medium stiff clayey loam with flints.

Vegetation

The original crop consisted of coppice with standards, the standards being oak and coppice of chestnut, hornbeam, hazel, oak, birch and ash. Hornbeam was especially abundant in Elham Park Wood. Past neglect, however, in filling up gaps in the coppice and the gradual removal of standards left the coppice somewhat thin in places and of poor quality. On part of the sandy soil of West Wood conifers (European larch and Norway spruce) had been grown and a few open grown ones of 70-80 years remained. This was the state of affairs when the Forestry Commission purchased the land.

The ground vegetation at the time was the normal fertile woodland type - grass, bracken, plentiful brambles, willow herb, woodsage, etc. It is worth noting that on the sandy soil of West Wood (Lenham Beds) Lily-of-the-Valley was most prolific.

The present position shows that of the original crop remaining there are 628 acres of chestnut coppice (being worked as such) and 167 acres of other coppice awaiting treatment. The new crop consists of some 1082 acres of conifer (mainly Douglas fir, European larch and Scots pine with some Corsican pine, Japanese larch, Norway spruce and Sitka spruce) and 543 acres of hardwood all beech (except for a few acres of ash).

Most of the Douglas fir was planted between 1926 - 30 and most of the European larch between 1926 and 1936. The beech was planted between 1934 and 1939 and 1944 and 1951.

Meteorology

The rainfall averages 28 in. per annum and is fairly well distributed throughout the year. There is a danger of drought on the shallow soils of the steeper slopes, particularly those facing south.

Late spring frosts are a danger in comparatively insignificant shallow hollows on the plateau and also in valley bottoms

Risks

Wind

Generally speaking the forest is fairly well protected. There is considerable danger of windblow along the west side of West Wood, however, as it is completely exposed to severe south-westerly gales.

Frost

Frost is not likely to be a danger except for young plantations in the shallow basins on the plateau and in the valleys. It should be noted, however, that the establishment of a crop in these apparently insignificant shallow basins proved a source of difficulty due to frost damage.

Voles

This is by far the most serious pest. A serious outbreak of damage by these animals started at Denga about four to five years ago and has continued ever since, girdling and killing many beech trees. If, however, the attack now lessens there may still be sufficient trees left to form a crop.

Rabbits, Squirrels and Badgers

Rabbits though locally abundant and a problem in some planting areas are not a general menace. In fact some areas are almost completely free of them.

Squirrels are not very numerous and have not caused any damage of note.

Badgers have been a nuisance in some areas by ripping up the wire netting and giving access to rabbits.

Cockchafers

This pest has in the past caused considerable damage in the nursery.

Fungi

Canker on European larch is the most prevalent fungus disease and no doubt much of this was probably greatly assisted by the dense coppice growth which was allowed to grow up with the larch.

It was reported in 1933 that the current years planting of European larch in Compartments 38-39 was a complete failure due, it was considered, to Meria laricis.

Honeysuckle and Clematis

Honeysuckle is a very prevalent weed and is responsible for a great deal of damage in neglected plantations.

Clematis is also a scourge - particularly in Compartment 3 of Denge.

Fire

The fire hazard cannot be considered great at this unit. The forest is not visited to any great extent by the public except early in the spring when the Lilies-of-the-Valley are flowering. However, many of the plantations are at present in a somewhat inflammable state due to the fair amount of dry brash on the ground.

Rides are apt to become very wet and rutted so that a short spell of drying winds after a wet winter may make the undergrowth inflammable without drying out the rides, causing difficulty of access for fire fighting equipment.

Roads

There is a good system of metalled public roads throughout the area. The rides through the forest, though plentiful, are not in a satisfactory condition. Prior to 1949 all rides except the very main ones were completely overgrown with dense coppice. Practically all are open now and it is intended that the coppice stools will be bulldozed out so that the rides may be kept trimmed by means of a mechanical mower.

Labour

During the latter part of the 1930's and the war years, Lyminge suffered from a very definite labour shortage with the result that there has been much neglect in essential forest operations such as weeding and cleaning.

Between 1941 and 1946 the average labour strength was only about 15 and

many of these were females. Between 1947 and 1949 the labour strength increased to an average of 45. That it was maintained at that for three years is a very good indication of the arrears of work.

Since 1950 the numbers of workers have fluctuated between 30 and 35. This number is adequate and the type of worker good on the whole.

There is not much planting left to be done and the nursery is closing down. This is compensated by the increased amount of thinnings and cleaning requiring to be done. Consequently the labour strength of 30 to 35 should remain stable.

There is a resident force of 6 men at Denge, 4 of these living in Commission houses. Lyminge proper is badly off for housing but additional houses are planned. The completion of these additional houses is important as workers are no longer prepared to cycle from Folkestone and surrounding villages as in the past.

SILVICULTURE

Preparation of Ground

The original crop was coppice with a few small standards. For the early plants (P.26-33) the standards were apparently felled and the coppice drifted, European larch or Douglas fir being planted in the drifts. In some instances the planting was in gaps in the coppice, no preparation of ground being done at all; e.g. Compartment 26 where European larch was planted in gaps in chestnut coppice.

With the plantings of beech (P.34 onwards), the coppice crop was thinned out, a fairly dense top cover being retained. At first the top cover was kept very dense indeed, but this was remedied (F.Y.37) by the removal of more stems per stool. Mention is again made in F.Y.40 of even a greater reduction in the amount of canopy retained prior to planting.

From 1943 to 1945 Covert and Covet Woods were used as a tank training ground. The plantations in Covet Wood (beech, Scots pine, Corsican pine, Scots pine/beech mixture P.40-42) were practically all destroyed. This ground was tackled from F.Y.48-51. Where any reasonable top cover was present it was retained and beech planted beneath but, for the most part, Scots pine was used for replanting.

In F.Y.50 a small area (12 acres) was ploughed with the R.L.R. to a

depth of 18 in. in Compartment 72. The vegetation was very coarse matted grass and was a site of previously failed beech planting. Beech was again planted on the ridges of the furrows.

Choice of Species

The choice of species in the early days seemed to rest between Douglas fir or European larch. Between F.Y.26 and F.Y.33 these were the only two species planted (except for a few acres of Sitka spruce and Corsican pine and some poplar which practically all failed and was replanted with Norway spruce in P.37).

From F.Y.34 onwards the main choice has been beech, with Scots pine being used in difficult areas for beating up older Douglas fir and European larch plantations and for planting on shallow, flinty, dry slopes.

A little ash was planted between 1932 and 1937.

Japanese larch was planted on a small scale in F.Y.35 (on a burnt area) and again in F.Y.39 and F.Y.47. Sitka spruce was planted on parts of the burnt area in F.Y.35. A little Corsican pine was also planted in F.Y.46.

Thus, summing up, the choice of species was Douglas fir or European larch from 1926 to 1933 and then beech from 1934, with Scots pine being used in difficult areas.

Planting

The spacing of the older plantations (1926 - 1933) appears to have varied considerably. This is most noticeable in P.27 Douglas fir in Compartment 54 where even lines alter direction. It appears that a shortage of plants was overcome by increasing the planting distance - in some cases to 8 ft. to 9 ft. As an average the spacing was probably about 5 ft. x 5 ft. or 6 ft. x 6 ft.

With the more recent plantations the spacing was $4\frac{1}{2}$ ft. x 3 ft. for beech and $4\frac{1}{2}$ ft. x $4\frac{1}{2}$ ft. for Scots pine. There is no record of the type of plants used in the early plantations. The F.Y.47 plantations of Japanese larch were a universal failure due to the fact that they were too large a plant. Scots pine 1+1, beech 1+1 or 1+2 and Corsican pine 1+1+1 are considered the best type of plants for the area.

The "T" notch method of planting has proved as satisfactory as any. In some flinty areas it is a little difficult. In areas covered with coarse grass a mattock has been used for screefing.

The average annual rate of planting for the first seven years (F.Y.26-32) was 112 acres, varying from 178 acres in F.Y.28 to 78 acres in F.Y.32. The next four years showed a marked decrease where the average annual rate was only 45 acres (F.Y.33-36) but a large amount of beating-up with Scots pine - in many areas practically replanting - was done in frost-damaged Douglas fir and European larch plantations. F.Y.37-39 showed a gradual build up from 64 acres to 93 acres per annum. The war years of F.Y.40-42 showed another drop to an average of 33 acres per annum (much of this was destroyed by tank training). During F.Y.43 no planting at all was done. During F.Y.44-46 the average rate was 40 acres and F.Y.47-50 78 acres per annum. The planting area for F.Y.51 was 30 acres.

The establishment of the early plantations of Douglas fir and European larch was not an easy matter. The reasons were probably two-fold. Firstly the severe frost damage that was experienced in comparatively insignificant hollows on the plateau; and secondly the original practice of planting in coppice drifts (particularly European larch) and also the retention of this coppice for three or four years with the subsequent neglect of weeding. These plantations were continually talked of as "hanging fire" and "looking sickly". It was, in fact, not until between 1936 and 1939 that these Douglas fir plantations began to really be classified as established, whilst the European larch to this day are not a very good crop.

The early plantings of Corsican pine (P.26) seemed to have taken well from the start and quickly became established.

The poplar plantings of 1929 and 1930 were never a success and could not be classified as established. The areas were replanted in 1937 with Norway spruce which quickly established itself.

The plantings of Japanese larch and Sitka spruce in F.Y.35 on the burnt area took well and were soon established.

The beech plantings under top cover seemed to have had a good take generally, but whether the older plantations (P.34-39) can even now be called truly established is debatable due to the considerable damage done by voles and canker.

The new plantations of Scots pine (P.48-50) have taken well on the whole.

Beating-Up

Beating-up was usually found to be necessary and the rule was generally to use the same species as in the original planting. This was at first carried out with the older European larch and Douglas fir plantations but at about 1934 Scots pine was used for beating up the bad frost hollows. This has resulted in almost a pure crop of Scots pine on parts of the Douglas fir and European larch.

A change of species in beating up also took place with the poplar plantations. This must have been almost a complete replant as the present crop is virtually pure Norway spruce.

As regards present practice beating up is found to be especially necessary on the shallow flinty soils with chalk close to the surface. Elsewhere weed growth is also normally very strong, so that a strong well grown three year old plant with a good fibrous root system is preferable.

Weeding

It is rather difficult to arrive at a true picture of the amount of weeding done with the older European larch and Douglas fir plantations. It would seem that with the retention of drifts of coppice and the fear of frost if this cover was removed led to considerable neglect of weeding, say for the first three or four years. After this period there is mention of removing alternate rows of coppice and in places where the crop was more vigorous to cut the coppice right back. One must presume that this was done. With the plantations P.30 say to P.33 reference is made of weeding being on the lines of cutting coppice growth right back for the first three years after planting; but there again in F.Y.37 mention is made of the good response of Douglas fir in Compartments 42 and 46 to heavy weeding. The Douglas fir in question was P.30 and it would seem that weeding must have been neglected for the plants to still be in the weeding stage after seven years. One must come to the conclusion that weeding generally must have been somewhat neglected in the early years.

The weed growth on the area must be classed as very bad with coppice regrowth, bramble and bracken being the most noxious. As a general rule one can expect that with continued hard weeding for the first three to four years, weeding can stop. It is most important to remember, however, that

only a gap of one to two years is possible before it is necessary to go in again and clean, cutting back the coppice. This possibly would appear to be the mistake made with the earlier plantings, namely that the plantations were in fact weeded to a certain extent until they were about 5 ft. to 6 ft. high and the coppice then cut right back and then the plants left to fend for themselves. This was probably due to the continued large planting programme and a weeding programme which quickly reached large proportions.

Mixture of Species, Underplanting

No mixture of specied planted contemporaneously has been carried out.

In Compartment 65 a little P.39 beech planted under very poor ash and subsequently badly damaged by rabbits has since been planted with a little Thuja and Tsuga in F.Y.51.

Planting beech under a cover of birch, ash and sweet chestnut pole crops has been widely practised and proved generally very successful. Beech under ash in particular seems to thrive very well. Whether this is due to the particular cover afforded by the ash or the fact that ash is more prevalent on a better soil is not certain, but the latter is probably more likely.

Hornbeam is the least suitable form of cover and sweet chestnut also casts too dense a shade. Ash and birch are certainly the most suitable.

Rates of Growth

The rate of growth of the same species varies a great deal with soil conditions. The underlying rock formation is chalk which is covered with loam and clay with flints to varying depths.

But in addition to this there are small patches of a sandy loam known as Lenham Beds in West and Park Woods, and it is on this formation that the best growth of Corsican pine, Douglas fir, European larch and Japanese larch is to be found. (See Appendix III).

Past Treatment of Established Plantations

Beech. About 192 acres of this species, planted mainly between P.34-39 can be considered as in the cleaning stage. There can be little real doubt that cleaning and reduction of the overhead shade was neglected in the past, due in all probability to shortage of labour during the war years.

Mention of the necessity of reducing overhead cover with beech was first made in 1936 by the Chairman and there is no doubt that a certain amount of this work was carried out in 1937-9. Again in 1942 there is mention of a partial removal of top cover in Compartment 49 beech P.38. A little more cleaning and removal of top cover was done in F.Y.43. Then there appears to be a gap till in 1947 when it was recorded that the beech plantations were congested with coppice regrowth, honeysuckle and Clematis in addition to having too dense an overhead cover of birch, ash and sweet chestnut.

Cleaning operations with complete or partial removal of overhead cover commenced in F.Y.48 and have gone on ever since. There is still some work to be done on these lines but by far the greater majority of the area has been treated.

A small plot of beech P.30 in Compartment 46 was thinned for the first time in F.Y.51. The form of the beech is definitely poor.

Conifers - Douglas fir and European larch

In 1937 and 1938 there would appear to have been a heavy cutting back of coppice growth in the older European larch plantations and a marked improvement in these crops was noted in 1941. Also in 1937 the Corsican pine P.26 (Compartments 60, 58 and 57) was cleaned and also probably brashed.

A certain amount of brashing of racks in Douglas fir was carried out between 1941 and 1944 and a chain wide strip adjoining the road brashed in Compartment 54 Douglas fir P.28 during 1941. A little brashing and cleaning continued to be done - mention is made in 1947 of a small area of Douglas fir P.27 in Compartment 60 having been cleaned and pruned. There is little doubt, however, that very little progress was made with brashing and cleaning during the war years and immediately afterwards. It was not until 1948 that a systematic start was made in the brashing and cleaning of the 600 or so acres of Douglas fir and European larch necessary before the thinning of these plantations could start.

The bulk of this cleaning and brashing was done in F.Y.49 and 50 and continued into F.Y.51. All the Douglas fir is now brashed and cleaned. The European larch will need going over again in places as the cleaning was kept to a minimum.

Mention of the necessity of thinnings in some of the older Douglas fir

and European larch plantations was first made as early as 1942. In fact the Corsican pine P.26 (Compartments 58 and 57) was actually marked for thinning in 1942 but was not done. Thinning did not commence in reality until F.Y.49; and this year only saw an area of 21 acres thinned. The necessity of immediate thinnings was clearly recognised by F.Y.47 but the need of a prior brashing and cleaning delayed the actual start until F.Y.49.

The following statement of cleaning and brashing which includes that for beech (mainly done in F.Y.48) gives the full picture.

F. Year	Cleaning	Brashing
	Acres	Acres
48	201	Nil
49	273	524 Corsican pine and European larch
50	258	36 Douglas fir and Japanese larch
51	126	Nil Douglas fir

The opinion to start with was to thin the larch first but on inspection it was seen that much of the larch had undergone a natural thinning due to competition with coppice. The Douglas fir on the other hand was on the whole a very congested crop and this was given priority.

The first 5-year thinning programme is as follows:-

F.Y.	50	51	52	53	54
Acreage	122	127	107	186	173

It is anticipated that the thinning of the Douglas fir plantations will be completed in F.Y.52 and then the European larch will be tackled. This will not nearly be such a heavy job and it may be expected that the area will be covered much more quickly.

Mention should be made of the Japanese larch P.35, which was thinned in F.Y.50, as being the one plantation where thinning was not over-delayed.

Thinnings were at first converted into pitwood for the Kent coalmines. Now, however, all produce is being absorbed by the great demand for pulp and boardmill material. The output from the Douglas fir areas is in the region of 20 tons per acre or 600 cu.ft.

Chestnut Coppice

The chestnut coppice, comprising about 630 acres, was worked for many years on a basis of cutting about 30 acres of the most mature material per annum. This is below the normal annual cut worked on a fifteen year rotation. Consequently in 1949-50 there was a great accumulation of over-mature chestnut present on the area. This is being rectified by cutting in excess of the normal area for the next few years and in fact it will be a whole 15-year rotation before a sustained equal annual cut will be achieved.

The chestnut is sold by auction and the felling is done by the purchaser.

Fellings during the war consisted of two small areas of European larch and Douglas fir overwhelmed by chestnut coppice, for pitwood. In addition many of the oak and beech standards were felled by the Home Grown Timber Production Department from 1942 to 1944. Fellings at present are limited to standards on chestnut coppice areas when the coppice is cut.

Conclusions

It would appear that the continued large planting programme in the early years without realisation of the future accumulation of maintenance work, the budget cut of 1932, and the shortage of labour during the war years led to serious neglect of weeding, cleaning and brashing. Consequently much damage was done by coppice regrowth. On these heavy coppice areas once the plants are clear of weeding it would seem that at the most only a two to three year interval is permissible before cleaning of coppice regrowth is necessary.

The original failure to recognise shallow frost depressions which subsequently had to be heavily beaten up with Scots pine was a mistake but, there again, only one of the prices paid to attain experience.

The choice of European larch was definitely not a good one but Douglas fir on present appearances would appear to be sound.

The planting of beech under top cover is sound silviculture but the cover was kept too dense for too long and the cleaning was also neglected. The attack by voles and canker could not be foretold. If this attack begins to abate before long there may yet be sufficient for a crop.

The planting of poplar was a mistake, either in choice of species, planting distance or maintenance, or all three.

However, in spite of all these disadvantages the forest will one day be fully stocked with quite a good quality final crop although the immediate stages will not be so good.

Conservator's comments

There is a lot to be learned from past mistakes at Lyminge both from the silvicultural and management points of view. Very expensive consequences follow when maintenance builds up, with inadequate staff, after a series of heavy planting programmes.

The strenuous efforts made in the last few years to overtake arrears of urgent maintenance work and thinnings, have now markedly improved the appearance of the forest.

R. H. Smith

30.1.52.

APPENDIX I

Notes from Inspection Reports

16.7.26. Assistant Commissioner

"- the greater part of the ground which has been and will be planted is covered with coppice there will always be the danger of suppression -". "In future the filling up of oldish coppice (over say two or three years) must be done with the greatest care ..... present work faulty in that in some places larch plants have been put in too small gaps while the planting in the larger groups required filling up with some more larch at 5 ft. apart in many cases."

3-7.1.30. Technical Commissioner

"- Corsican pine P.26 showed promise but ..... many plants were blown and were socketing. ..... plants where necessary to be staked". "European larch P.27 planted in high "coppice drifts", to be carefully watched ..... may be advisable to cut coppice right back next spring where it is in near proximity to a plant, similar to what has been done in P.26 plantations."

21.7.32. Assistant Commissioner

Denge Wood. "It was thought beech or ash would do well". Chestnut coppice - "Blank places after cutting ..... European larch and chestnut be planted alternately $4\frac{1}{2}$ ft. x $4\frac{1}{2}$ ft. The European larch to be thinned after second coppice rotation and finally cut when the coppice is fully stocked".

Lyminge. P.28 Douglas fir Compartment 54 - "Douglas fir appeared to be quite satisfactory."

P.29 European larch Compartment 52 - "growing well and gave general satisfaction ..... would be fully established soon". Compartment 45 P.30 Douglas fir - "disappointing ..... growth generally poor and rather irregular ..... needed some attention in respect of weeding ..... workman using his common sense and only freeing plants where necessary."

13.1.33. Chairman and Assistant Commissioner

Compartments 43, 44, 45 and 46 P.30 Douglas fir - "considered quite satisfactory ... how best to open up the crop without overdoing it..... dangers of frost to smaller trees and wind blow to the larger ones. In Compartment 45 a portion of the crop has had every other line of coppice cut out.....appears to open up the crop all right. More advanced portion (Compartment 46)...cut the coppice right back, when weeding is again necessary probably in one or two years time.....this weeding will be the last".

Compartment 45 Beech P.30 - "completely smothered until September 1932 when it was opened out.....majority have grown well. - best way to grow beech.....full use must be made of existing shelter."

Compartments 48, 49 and 50 P.29 Poplar - "no use planting poplar in tall coppice".

Compartment 56 European larch P.26 - "Dense coarse grass in frost hollow.....suffered severely from frost check.....beat up here with Scots pine." - "Birch and other coppice occurs with crop.....not worth while cutting back the coppice now.....let the crop rip and fill up with beech at a later date. - no use trying to shelter larch from frost by leaving coppice to grow with the crop".

Compartment 55 P.26 Douglas fir - "patches getting away elsewhere hanging fire, frost check severe in places - examples.....not been weeded heavily enough.....harder weeding in the early stages.....best treatment".

Compartment 62 P.28 European larch "Weeded early 1932.....Better if the crop had been weeded harder".

16.5.33. Mr. A. L. Felton

Compartments 32 and 33 P.33 "Douglas fir severely checked by drying winds and frost, but recovering. European larch a failure."

15.1.36. Chairman and Assistant Commissioner

Compartment 58 Douglas fir P.26 - "Heavy frost damage in places - keep coppice well back".

Compartment 57 European larch P.27 - "Coppice not kept back in early years.....growth poor and irregular".

Compartment 45 Beech P.30 - "growth very good.....now reached stage when they require more light."

Compartment 41 P.31 European larch - "good growth and stocking noted.... coppice in this area had been kept cut back regularly since planting."

Compartment 71 Beech P.35 - "good survival.....no real development can be expected until canopy is considerably opened."

Compartment 34 P.33 European larch and Douglas fir "very poor appearance - badly frosted".

Chairman's observations

1. "Conifers as a whole are somewhat disappointing.....Douglas fir is thin and foliage short, though growth in length is not bad. - European larch has suffered in earlier plantations from under weeding and in places from frost".
2. "Little use persevering with poplar....."poplar" sites.....Norway spruce only species likely to do well."
3. "Raising beech under birch or thin coppice.....sound silviculture. We do not yet know exactly how quickly to admit light to the young beech..... as much light as they can use (even at risk of some frost damage).....size of bud and twig will indicate whether beech have enough light".

28.2.39. Chairman

P.34 Beech (Denge) "Growth poor.....weeding had been overdone" - Chairman stressed necessity of taking advantage of all possible shelter for beech.

General Remarks:- Both European larch and Douglas fir P.26 - 30 irregular and somewhat gappy but beginning to grow and looked considerably better. Where general height and growth falls off thought that some further weeding might pay.

Chairman's Observations

"There has been a great improvement in growth (especially in the Douglas fir areas) since my visit of January 1936".

3.4.42. Chairman

Compartments 57, 58 and 60 Corsican pine P.26 - "thinning of this area was approved.....confined to removal of wolves and such under trees that might yield some produce".

European larch P.27 Compartment 56 - "Chairman felt that it would soon

be time to strengthen the crop by underplanting".

Compartment 6 Beech P.38 "- high birch shade.....Chairman repeated his desire that birch should be developed with the view to getting produce suitable for plywood".

"No systematic pruning of the beech at this stage was considered necessary".

Chairman's Observations. : - "Lyminge has undoubtedly improved since my last visit (January 1936) and in spite of the initial errors in choice of species etc. will go on improving if timely attention is given to thinning".

"Denge has also come on nicely since my last visit - attach considerable importance to raising beech.....under birch which can be carried on to plywood dimensions."

18 - 19.6.42. Acting Assistant Commissioner, Mr.A.P. Long.

General good condition of beech under shade. Compartments 60, 58, 57 Corsican pine P.26 - "early thinning of dominant trees confirmed to be under arrangement". "On the whole a satisfactory crop of Douglas fir was on the ground.....Thinning of the crop and cleaning was already indicated."

"European larch in Beveridge Wood - a close inspection inside plantations was not possible."

Acting Assistant Commissioner's Observations:- "Dominants in Corsican pine P.26 - if he means the removal of wolves.....suggestion is agreed."

12 - 13.6.45. Assistant Commissioner

Compartments 56, 57, 58 and 60 mainly P.26 Douglas fir, European larch and Corsican pine. "The Douglas fir requires light wolfing, the European larch is mostly patchy and poor, the Corsican pine is quite good but needs thinning".

General. Beech P.37 and 38 - weeding and partial removal of overhead cover necessary.

Assistant Commissioner's Observations:- "marked improvement in the plantations in recent years and the forest as a whole now promises to turn out much better than appeared likely even a few years ago."

12.4.47. Chairman.

Norway spruce P.38 Compartment 48 - "exceptionally good growth.....if anything, faster than in the true Norway spruce country." European larch

P.29 Compartment 48 - "obvious that, owing to lack of labour, the cutting back of the ash, chestnut and other coppice had been too long delayed."

Compartment 49 Beech P.38 - "clear that the lightening of the overhead cover was now an urgent matter.....cleanest birch say 20 to the acre should be left to grow on to maturity for providing birch for veneers".

Compartments 55 and 56 - "Chairman pointed out to what a degree slight depressions, which at time of planting could not have been suspected of being frost holes, had affected the growth and condition of the larch." "Throughout the tour the urgency of getting the cleaning of the plantations and cutting of honeysuckle done at an early date was noted."

Compartments 2 and 3 Beech P.37 and 38 - "very urgent need of attention... in addition to the high shelter, there are large areas where low coppice growth is also competing. - Hornbeam and chestnut will be cut out from the top shelter and birch and ash reduced where necessary".

Chairman's Comments. "The coniferous plantations now look quite well".

29.11.47. Director, Mr. O.J. Sangar

Compartment 58, P.26 Corsican pine - "should be included in the areas which should be assessed as to the relative urgency of thinning."

Compartment 60, P.35 Japanese larch - "now almost reached the thinning stage".

General. "The Director emphasised the importance of working to a plan in which priorities had been assessed."

Director's Comments - "very impressed with the development of Douglas fir since my visit of September 1932, and the healthiness of many of the European larch; areas of this species are, however, much understocked."

European larch P.26 and 29, Douglas fir P.26 - "in need of early thinning."

"We have now.....sufficient or even ample labour supply.....may not last.....imperative therefore to assess priorities and plan work, and get on with it, whilst we have the labour (and the markets)."

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

- "examined the control map prepared by the forester indicating a programme of priority cleanings."

Compartment 1, P.34 and 35, Beech. "choked with weeds and damaged by voles .....cutting 2 - 3 racks and then doing selective weeding to free the plants but at the same time make use of the coppice to provide cover between the plants. Wolfing of beech will soon be necessary".

Compartment 3, P.37, Beech - "Overhead cover of chestnut and birch to be thinned gradually, chestnut to be removed in preference to birch."

Compartment 4 - "Beech smothered with honeysuckle and Clematis to be cleaned."

7.7.49. Conservator, Mr. R.H. Smith.

Douglas fir P.28 Compartment 54 - "The Douglas fir now 21 years old without ever having been thinned is very dense..... considerable number of large rough wolf trees as well as whips, damaged and diseased trees."

Corsican pine P.26 Compartments 57, 58 and 60 - "thinned for the first time this year".

Conservator's Comments. - "It is important to note that the best formed trees - not necessarily the biggest trees - should be cared for as the final crop".

31.1.50. Conservator, Mr. R.H. Smith.

Compartments 1/6, P.36 Beech - "Vole damage had been severe ..... remains to be seen whether the decrease in incidence of damage continues and how many of the 50% of trees attacked last year will recover".

Compartments 2/3, Beech P.38 - "Signs of fresh vole damage noticed." "Poor form of many of the beech was noted."

15.6.50. Conservator, Mr. R.H. Smith.

Compartment 55 Douglas fir P.26 - "doubts.....about the marking having been rather heavy were dispelled".

14.3.51. Conservator, Mr. R.H. Smith.

Beech P.38/9 Compartments 48 and 49 - "more of the overhead cover needs to be removed."

Compartment 59 Douglas fir P.28 - "Some windblow in a recent gale was inspected."

APPENDIX II

Record of Supervisory Staff

Divisional Officers (Conservators)

1927 - 1939	Mr. A. L. Felton
1939 - 1946	Mr. F. C. Best
1946 - 1949	Mr. A. L. Felton
1949 to date	Mr. R. H. Smith

District Officers

- 1930	Mr. Mackie-Whyte
1930 - 1931	Mr. R.E. Fossey
1932 - 1935	Mr. Sanzen-Baker
1936 - 1939	Mr. Muir
1939 - 1942	Mr. Adams
1943 - 1946	Mr. Peace
1946 - 1948	Mr. Hillman
1948 - 1951	Mr. Burton
1951 to date	Mr. Mithen

Foresters

1933 - 1935	Mr. Johnson
1935 - 1946	Mr. McKenzie
1946 - 1949	Mr. Wimbush
1949 to date	Mr. Watkins

APPENDIX III

Rates of Growth

Compt.	Species	P.Year	Age	Geology and Soil	a) Altitude b) Aspect c) Slope d) Exposure	Mean Ht. of Dominants (ft.)	Mean Annual Ht. Increment (in.)	Current Annual Increment Average Annual Growth during last five years. (in.)
54	D.F.	28	24	9" dark sandy loam over light sand with a small % of clay.	a) 516 b) South-east c) Slight d) Fairly sheltered	45	22	26
48	E.L.	29	23	6" dark loam followed by mixture of sand and clay over flints	a) 500 b) South-east c) Slight d) Somewhat exposed	39	20	17
46	Be.	30	22	Dark clay loam	a) 508 b) South-east c) Flat d) Sheltered	39	21	14
33	S.P.	39	13	4" dark loam followed by light loam with a mixture of clay over clay with flints.	a) 490 b) South-west c) Flat d) Somewhat exposed	20	18	24
33	S.P.	39	13	4" dark loam followed by light loam with a mixture of clay over clay with flints.	a) 508 b) South-west c) Flat d) Somewhat exposed	18	17	19
65	D.F.	28	24	Light sandy loam with sandy clay with flints	a) 500 b) South c) Slight d) Sheltered	34	17	17
52	E.L.	29	23	Dark clay loam	a) 502 b) South-west c) Slight d) Fairly sheltered	30	16	14
31	Be.	37	15	Friable darkish brown loam to a depth greater than 20" over chalk.	a) 420 b) North-west c) Very Slight d) Fairly sheltered	17	14	18
73	Be.	37	15	8" of friable darkish brown loam over chalk.	a) 350 b) North-west c) Fairly steep d) Somewhat exposed	12½	10	12
57	C.P.	26	24	Lenham Beds	a) 540 ft b) - c) Flat d) Exposed to S.W. Gales	38	19	
41	E.L.	31	18	Loam	a) 470 ft b) - c) Flat d) Fairly sheltered	25	16	
55	D.F.	26	25	Mix. Lenham Beds and Loam	a) 540 ft b) - c) Flat d) Fairly sheltered	49	23	
60	J.L.	35	16	Lenham Beds	a) 540 ft b) - c) Flat d) Fairly sheltered	32	24	

Lyminge

Be. C.6 (Denge) P.39 - Severe vole damage is widespread.

Typical vole damage in C.6.

Be. C.48, P.38 under tall coppice cover. Top cover removed June, 1951.

Be. C.49, P.39 under tall Birch/ash cover. Poor development because of severe shading.

D.F. C.46. P.30.
Brashed for immediate thinning. Crop variable due to ash coppice damage in places. Considerable honeysuckle damage.

D.F. C.55. P.26. Original spacing varied from 7' - 12' in dripled coppice. Thinned January, 1950.

D.F. C.55. P.26. Original spacing varied from 7' - 12' in dripled coppice. Thinned January, 1950.

D.F. C.60. P.27. Thinned
May 1951. 184 trees per acre high
pruned September 1951.

D.F. C.60. P.27. Thinned
May 1951. 184 trees per acre high
pruned September 1951.

D.F. C.65. P.28.
Frost hollow B.U.
with S.P. in 1932.
Area thinned September
1951.

E.L. C.37. P.32.
Larch much above average in vigour has largely suppressed original coppice.
Thinning due F.Y.52.

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Much suppression by coppice. Surviving larch will probably make a mediocre crop.

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J.L. C. 60 P.35. Thinned March 1950.

S.P. C.32. P.37 replanted after original P.32 E.L. had been killed by frost.

Interior of Cpt. 32 (see previous photograph).

LYMINGE FOREST

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Severe vole damage is widespread.

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Typical vole damage in C.6.

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under tall coppice cover. Top cover removed June, 1951

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J.L. C.60 P.35
Thinned March 1950

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S.P. C.32 P.37
Replanted after original P.32 E.L. had been killed by frost.

17
Interior of Cpt. 32 (see previous photograph)

DENGE

LYMINGE FOREST

N

Nursery

F.W.H.'s AND AGRICULTURE

Work House

Coppice Belt

Coppice Belt

CONIFERS

HARDWOODS

CHESTNUT COPPICE

MIXED COPPICE AWAITING TREATMENT

Oct. 1951
D.A.M.