FORESTRY



COMMISSION

HISTORY

OF

902 -- (410. 42) H.M. Forestry Commission

Ampleforth

**AMPLEFORTH** 

FOREST

NECE) CONSERVANCY

**FOR** REFERENCE ONLY

**Forestry Commission** 

4008047

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902 -- (410.42)
Hir Forestry Commission

# FORESTRY COMMISSION

HISTORY

of

AMPLEFORTH FOREST

1928 - 1951

NORTH EAST (ENGLAND) CONSERVANCY

# History of Ampleforth Forest

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#### HISTORY OF AMPLEFORTH FOREST

# CHAIRMAN'S COMMENTS

I have little to add to the history. I have turned up two additional notes by me on H.Q. file 443/29 and dated 30.12.29:-

"Boltby. The first year's planting work has not been well

done and we must look for greater improvement

during the current season."

"Sproxton. The plantations made to date are not very impressive and we seem again to have been in too much of a hurry."

After my last visit in 1949 I noted on the inspection report then submitted:

"Boltby. The lower parts are better than I expected to find and parts are quite good. The upper parts hang in the balance especially where Ursuline pine has been planted. Some are already dying presumably where the Oolite outcrops."

"Sproxton. The oak groups are good."

R.

22/1/52

#### NOTE BY STATE FORESTS OFFICER

This forest, much of it on old woodland and sheltered sites is growing well. The intricate topography will present extraction problems in the near future, but the high fertility of the ground will give good yields. The comparatively low yield to date from thinnings quoted in the history (150 cu.ft. - 200 cu.ft. per acre) is due to under thinning. This is now being corrected.

Sitka spruce should have been confined to clays and deep peats, and not planted, even in mixture with pines in the physically dry sites on the sands and thin soils on the upper slopes in this area of low rainfall.

Japanese larch might well have been planted at an initial spacing of 5 ft. 6 in. or even 6 ft. on the fertile valley slopes and thus saved early and sometimes uneconomic thinnings.

P. F. Garthwaite
State Forests Officer.

# HISTORY OF AMPLEFORTH FOREST

#### GENERAL DESCRIPTION OF THE FOREST

#### Situation

The forest is named after the village of Ampleforth and comprises the following three sections:-

- (a) Sproxton on Ampleforth Moor one mile to the north of the village and two miles west of Sproxton village.
- (b) Boltby on the Hambleton Hills about seven miles to the north west of Ampleforth.
- (c) Gilling lying two miles to the south of Ampleforth and extending within half-a-mile of Gilling East village.

#### Area and Utilization

Only 48 acres at Boltby and 20 acres at Gilling of the original acquisitions now remain to be planted. The new acquisitions at Sproxton and Gilling are partly heath lands and partly devastated woodlands felled during the Second World War. Two acres at Boltby and 16 acres at Gilling are acquired conifer plantations including a small area of first quality Japanese larch at Gilling.

The greater part of Sproxton was planted from 1928 to 1931, and the original area was completed in 1938. A total area of 45 acres was subsequently destroyed by fire and replanting was completed in 1946. The main species used over much of the area were Scots pine and Japanese larch in the proportion of three to one. Some compartments have been planted pure with Japanese larch, European larch or Douglas fir. About 200 beech per acre were also used throughout the early plantations. Groups of oak with pure Japanese larch or pure Scots pine were planted in two compartments in 1938.

Planting at Boltby commenced in 1929 and the greater part of the area was completed by 1941. What remains to be planted is rough pasture land.

Japanese larch, Scots pine, Sitka spruce, Norway spruce and a little

Corsican pine and European larch have been used with some beech in mixture with the Japanese larch and European larch.

Planting was commenced at Gilling in 1932 and has been continued to date. The principal species that have been used are Japanese larch, European larch, Scots pine, Norway spruce, Douglas fir, Sitka spruce and small areas of <u>Tsuga</u>, <u>Thuya</u>, and <u>Abies grandis</u>, <u>Pinus contorta</u>, Corsican pine, hybrid larch, oak, beech, ash and alder.

Totals	Newburgh Estate from V. M. Wombwell	Gilling Woods from Ampleforth College Trustees	Ampleforth Forest from Lord Feversham	Boltby Moor from F.E. Walker and Others	College Moor and Royalty from R. Pearson	(1)		From	
	Lease	Lease	Lease	Purchase	Lease	(2)		Ву	
	25.8.50	1, 8, 31	17. 9. 28	<b>28.</b> 3. 28	28.11.27	(3)		Date	
18			18			(4)	Plant acq	atior uired	ns L
3,144		Plantable excl. Col. 4.				. 4.			
,	<b>-</b> 66				Nurs	eries			
109					Agri	cultu	raļ		
33			33			(8)		F. W. H.	
3			W			(9)	Unpl excl	antak . Col	ole 4.
				24.27 • OC	Sub-lease to Ampleforth College	(01)	Description	Land permanently transferred	
27					27	(11)	Acreage	ntly d	Other
	Low Paradison Farm to Ministry of Agriculture 11.10.50	of Agric- culture 25.3.50	Pry Rigg Farm to Ministry			(12)	Description Acreage	Land temporarily transferred	Other Land
222	113		109			(13)	Acreage	arily	
3			W					Trans- ferred	Land not
				3559		(41)			Total

# AMPLEFORTH

# Table II

(a)	Plantations:-		
	Acquired Forestry Commission	18 1,806	1824 acres
(b)	In hand, awaiting planting		
	Blanks after felling Burnt areas Other land		697 acres - 641 acres
(c)	Nurseries		-
(a)	Agricultural		
	Number of tenancies 1	Area	109 acres
(e)	F. W. H. Number 3	Area	33 acres
<b>(f)</b>	) Unplantable land in hand		
(g)	Other land		
	Land transferred to Minis Streams, lakes etc.	try of Agriculture, etc.	249 acres 3 acres
			3559 acres
			<del></del>

#### Physiography

Much of the area at Sproxton is almost flat but there are deep gills. The elevation is from 400 ft. - 875 ft. above sea level (including Byland). The eastern block faces east and the western block with Byland mainly west and north-west. Exposure is not severe except on the moorland to the north.

Boltby is mainly steep slopes divided by gills. It forms the catchment area for the Thirsk Water Company Reservoir which is situated within the forest at the southern end. The elevation is from 650 ft. - 1190 ft. above sea level. The general aspect is south. The plantations are very exposed to the northerly and westerly winds at the top elevation but well sheltered in the gills.

The general aspect at Gilling is north-east but much of the area is divided by deep gills forming a very intricate topography. The elevation is 200 ft. - 500 ft. above sea level. Exposure is not severe.

#### Geology and Soils

The underlying rock at Sproxton is collitic with some limestone (mountain) near Pry Rigg Farm and some Millstone Grit. The high ground carries a thin layer of peat overlying light sandy soil somewhat gravelly or stony in places. On the higher land there is a moor pan at varying depths. On the lower and steep slopes the soil varies from a sandy to a clay loam with large boulder outcrops.

At Boltby the rock formation is colitic and mountain limestone of the carboniferous series with some Millstone Grit. There is peat in the high ground rather deeper than Sproxton. There is also an area of peat overlying calcareous grit and clay above the reservoir. Elsewhere there is fairly deep loam mixed with rocks in parts.

The greater portion of Gilling is in the Lower Oolite impinging upon the Corallian towards the north east of the original acquisition. The soil conditions are very variable. It is very light and dry on the hill tops with a bracken peat to a depth of 8 in. or more in places. On the lower slopes and valley bottoms there are clay loams to pure clay.

#### Vegetation

At Sproxton the vegetation is mainly heather with some grasses on the moorlands and bracken, brambles, birch, hazel and grasses on the slopes and in the valleys.

At Boltby the vegetation is mainly heather on the slopes and top elevation with areas of grasses and patches of bracken in the valleys and lower slopes.

Much of Gilling is dense bracken and grass with some heather on the higher elevations. There is coppice and natural regeneration of birch, hazel and sycamore in the valleys and on the slopes.

#### Meteorology

The average rainfall at Sproxton and Gilling is about 27 in. per annum and at Boltby 32 in. per annum.

#### Risks

The main sources of danger at Sproxton and Gilling are alongside the public roads crossing the heathlands which are visited by many visitors during the summer months. In this respect Boltby being more remote there are not so many visitors. Some danger exists during dry weather around the lakes enclosed in the Gilling section.

There may be slight pollution on the high ground to the western side at Gilling carried by the westerly winds. At all three sections damage by frost is never severe except in some valley bottoms. Rabbits on private lands neighbouring Sproxton and Gilling are very numerous and constant inspections of fencing are necessary.

#### Roads

In the past the removal of early thinnings from some compartments at all three sections has proved difficult and expensive. Good progress, however, in the development of roads and rides is now being made.

#### Labour

Generally labour has been adequate though not easily obtainable. More men will be required for the new acquisitions.

#### SILVICULTURE

#### Preparation of Ground

Generally old woodland sites have been cleared of lop and top prior to planting but at Gilling a number of large Scots pine and some hardwoods have been left scattered about the compartments and consequently have become an embarrassment in establishing the new plantations. Some small areas of coppice growth mainly birch and sycamore have been used for underplanting at Gilling. The boundaries of all three sections have been

fenced against rabbits and stock.

### Choice of Species

Scots pine. This species was introduced at all three sections at the commencement of planting. On the whole growth has been satisfactory though slow on the higher and exposed areas.

Corsican pine. Only introduced in recent years. So far results are satisfactory.

European larch. Slow growing. Liable to severe damage by late frost. Some canker is evident at Sproxton in P.29.

Japanese larch. Rapid growing on well selected sites. Signs of heart rot at Sproxton in P.30. At Gilling there have already been three moderate thinnings in P.34.

Douglas fir. Moderate growth. Healthy appearance.

Norway spruce. Growth is satisfactory on well selected moist sites but trees do not look healthy where planted on light sandy land.

Sitka spruce. On well drained land with good soil depth in sheltered gills growth is on the whole satisfactory so far. On dry lands Scots pine and Pinus contorta are outgrowing the Sitka spruce. Generally the area is no doubt too dry for Sitka spruce.

Tsuga heterophylla. On moist soils at Gilling this species is making satisfactory growth.

Thuya plicata. There is only a small plot at Gilling. Growth moderate.

Pinus contorta. At Gilling on poor and dry soils. Growth is moderate.

Ash. With the exception of one or two patches this species has done badly probably due to frost damage.

Beech. Single trees in mixture with Scots pine and larch are growing

moderately well where they have been opened out in good time. A few acres of hardwood coppice and natural regeneration were underplanted with beech at Gilling in P.50.

Oak. In pure blocks growth is satisfactory but shows possible setback by late frosts. Groups in Japanese larch (P.38) doing well at Sproxton and dominant trees are up to 20 ft.

Sycamore. Making very slow growth on lower slopes at Boltby.

# Planting

- (a) The spacing for pines pure has been  $4\frac{1}{2}$  ft. x  $4\frac{1}{2}$  ft; larch pure 5 ft. x 5 ft; pines, larch and beech in mixture  $4\frac{1}{2}$  ft. x  $4\frac{1}{2}$  ft; Douglas fir pure 6 ft. x 6 ft. Oak in groups of 16 in larch and Scots pine matrix, plants  $1\frac{1}{2}$  ft. apart. Groups 16 ft. apart, larch 5 ft.
- (b) Types of Plant used and Source of Supply. The ages of the conifers vary from 1 + 1 to 2 + 2. Beech 1 + 1, 2 + 2 and 2 + 3. Mainly from North East (England). Most of the plants for Sproxton in P. 28 were from Windsor and the Forest of Dean.
- (c) Methods of Planting. Much of the planting at all three sections has been done by screefing and sub-soiling with mattocks. Spruce has been planted on turves in the wet areas. Some notching has been done on the steep hillsides.
- (d) Annual Rate of Planting. Planting was started at Sproxton in 1928 and completed in 1939. More than 100 acres annually was done during the first three years, 60 acres in 1931, none from 1932 1936 and an average of 30 acres annually during the remaining three years. An area of 45 acres was replanted in 1944 following fires.
- (e) Manuring. In 1938 North African phosphate was applied to some Sitka spruce at Boltby, elsewhere there has been no manuring.
- (f) Success or otherwise of Establishment. The greater parts of the areas at all three sections have been successfully established. The growth of Sitka spruce on some dry patches at Boltby and Gilling is very poor. At Sproxton height growth of Scots pine is slow. Japanese larch

and Douglas fir are growing very well on the lower slopes especially at Gilling. The small areas of European larch both at Gilling and Sproxton are poor and many trees are badly cankered. Groups of oak in Japanese larch planted in 1938 are making very satisfactory growth. A small area of <u>Tsuga</u> at Gilling P.36 is good. Norway spruce is growing well in the moist hollows.

#### Ploughing

At Sproxton deep ploughing was first carried out in 1937 on some heather land following burning. Planting was done on the sides of the furrows by spade with 2 + 1 transplants with satisfactory results.

The only ploughing recorded at Boltby in 1938 is on the high exposed heather land where the Killifer Sub-soiler was used following burning.

Transplants mainly 2 + 1 or 2 + 1 + 1 were used by spade notching in the bottoms of the furrows. Growth has been slow but on the whole establishment is successful.

At Gilling shallow ploughing was carried out in 1933 and 1934 on some poor grey sandstone areas. 2 + 1, 1 + 1 and 2 + 2 European larch, Japanese larch, Norway spruce and Sitka spruce transplants were notched. The establishment of larch particularly Japanese larch is successful; the growth of Sitka spruce is poor.

#### Beating Up.

Generally at all three sections beating up has not been great. In places where Sitka spruce has been used on poor dry soils beating up has been repeated over several years without much success. On the exposed high ground at Boltby Sitka spruce has been used to replace Scots pine badly damaged during snow storms and so far growth has been good. At Sproxton some ash was planted in Compartment 8 but failed and was replaced by Scots pine. Very little beating up has been necessary on the rich soils at Gilling and in the valleys at Boltby and Sproxton.

# Weeding

It has been necessary to weed at least twice in each year for three or four years in the dense bracks areas at all sections, without which plants would have been smothered.

Some heather and grass weeding has been necessary for two or three years in all compartments. Birch, brambles and other growth has to be 'checked' until the plants are well established and canopy is closing.

#### Mixture of Species

At Sproxton a considerable area was planted in 1928 with a two thirds mixture of Scots pine and one third larch and approximately 200 beech per acre. The Scots pine and larch have grown fairly evenly on the good soils. Elsewhere the larch has failed or has become suppressed. The beech has mostly failed, though this may be due to suppression by the conifers. There are some bunches of oak, 16 ft. between bunches, in Compartments 2 and 4 in mixture with Scots pine and Japanese larch respectively which are growing very well.

At Boltby, some beech has been planted in mixture with Japanese larch and the rate of growth is good where the trees have not been suppressed by the Japanese larch. In a 75% Scots pine, 25% Sitka spruce mixture, the growth of the Scots pine is usually much faster than the Sitka spruce except on good moist soil sites.

At Gilling, there are mixtures of Scots pine and Sitka spruce planted in 1932 and Pinus contorta and Scots pine planted as a 50% mixture in alternate rows in 1932 and 1933. At present the rate of growth is such that the two pines are dominating the spruce. Norway spruce was introduced with an area of pure oak which was rather open and slow growing but now the oak is doing well and keeping pace with the Norway spruce. A small area of ash has been underplanted with Norway spruce in a wet hollow subject to frost.

#### Rates of Growth

Graphs showing the height of growth of Scots pine (P.28), Sitka spruce (P.29), Japanese larch (P.34) and <u>Tsuga</u> (P.34) are attached to this Forest History.

### Past Treatment of Established Plantations.

Brashing has usually been done 100% up to 6 ft. about 18 - 20 years in the case of larch and Douglas fir and at a rather older age in the case of other conifers. There has been no pruning. The work of cleaning has

been considerable on the rich soils where birch and honeysuckle growth is rapid.

Thinnings have been carried out at intervals of three to five years according to species and rate of growth. The out-turn is approximately 150 cu.ft - 200 cu.ft. per acre, and the produce has been mainly round mining timber, stakes and boxwood. The area thinned annually has risen to about 300 acres at the present time.

#### Conclusions

Scots pine and Japanese larch seem to be the most suitable selection of conifer species with Douglas fir and Norway spruce on rich moist soils. Norway spruce is a useful species in wet and low lying hollows. Oak and beech should do very well on the old hardwood areas in particular at Gilling. The intricate topography of each section, especially at Boltby and Gilling has necessitated very careful planning of access routes for fire fighting and extraction of produce.

#### HISTORY OF AMPLEFORTH FOREST

#### APPENDIX I

#### NOTES FROM INSPECTION REPORTS

#### 1. The Technical Commissioner's Visit. 11.12.29

- (a) Sproxton. The Technical Commissioner noted the large percentage of failures of larch in P.28. It was pointed out that this was chiefly due to late planting. The Technical Commissioner observed that Japanese larch might have been planted in preference to European larch.
- (b) <u>Boltby</u>. The Technical Commissioner criticised the putting of Scots pine under the edge of the plateau, where exposure is severe. He would have preferred Sitka spruce or Corsican pine.

#### 2. The Assistant Commissioner's Visit. 7.9.30

(a) Sproxton. In planting up narrow valleys larch is not to be carried too far down where they will be likely to suffer from lack of free circulation of air. No more larch to be put in in beating up. Fill up blanks in larch with Scots pine. On grass area south of Mason Gill beat up entirely with Japanese larch.

### 3. The Assistant Commissioner's Visit. 20.8.31

Gilling. Larch is growing well on the lower slopes on shallow soils overlying a stiff clay. It would be interesting to obtain comparative figures for Japanese larch and European larch.

#### 4. Visit by Assistant Technical Commissioner. 1.9.32

All plantations are promising with the exception of P.28 Sproxton (College Moor) which is difficult ground probably requiring patience more than anything else and P's 29 and 30 (Boltby) where dense weed-growth, type of plant, and in places species and method of planting have apparently all contributed to the result.

### 5. Visit by the Assistant Commissioner. 23.8.33

- (a) <u>Boltby</u>. The Sitka spruce area and sycamore belt in Compartment 4 were examined. Here the plants are growing well, but on the lower slope originally planted European larch/beech, since beaten up with Japanese larch growth is much slower. It looks as if the Japanese larch will outgrow the original European larch.
- (b) Gilling (P.32). Japanese larch were seen to be starting to grow well.

#### 6. Visit by Sir Alexander Rodger. 8.7.35

- (a) Sproxton. It was noted that Scots pine (P.28) was making fair progress but had improved considerably. In most areas beech in mixture had largely failed.
- (b) Gilling. It was considered that a considerable area of the forest was suitable for growing hardwoods.

### 7. Visit by Assistant Commissioner. 8.10.37

Gilling. P. 35 - 36. Good progress of the oak was noted. P. 32 incomplete stocking and irregular progress of some Douglas fir was observed. It appeared to be due either to neglect, at one time of bracken weeding, or to frost, or in places both. It was considered very satisfactory.

### 8. Visit by the Commissioners. 29.5.39

Gilling. P. 32. Japanese larch, Douglas fir; P. 34. Japanese larch and ash. These crops were noted and approved.

- P. 32. Scots pine, <u>Pinus contorta/Sitka spruce</u>, Japanese larch. The vigorous growth of the contorta was particularly striking.
- P. 36. Scots pine and <u>Tsuga</u> under old Scots pine. These crops were approved.
- P.35. European larch, oak, ash, European larch beginning to get away. Hardwoods variable, the ash being much better where larger plants were used.

Oak, some of which began extremely slowly, were considered promising, with patience.

P. 35. European larch: for the most part the European larch was looking well and there appeared every reason to anticipate a continuance of this satisfactory position.

#### 9. Visit by Acting Assistant Commissioner. 2.4.41

Boltby. P. 30. Sycamore belt considered to be mostly a failure.

- P. 31. Growth of Norway spruce and Sitka spruce on this area considered satisfactory. Norway spruce producing a more even crop than Sitka spruce.
- P. 30. General condition of mixed plantation of Japanese larch, European larch and beech considered satisfactory; very few beech surviving and conclusion reached was that the ground is not suitable for this species.

Snow damage to Scots pine in Compartments 4 and 5 very severe; this area to be heavily beaten up with Sitka spruce.

# 10. The Chairman's Visit. 10.7.44.

- P. 30. Boltby. Sycamore belt making very slow growth. Failure of beech in a mixed crop of beech and European larch had resulted in a very open crop of larch.
- P.31. Sitka spruce making good growth in patches, but crop very uneven; this also applied to pure blocks of Norway spruce. Weaker patches beaten up with Scots pine.
- P. 30 and P. 31. Scots pine. Uneven crops now making satisfactory growth on the better drained and aerated ground.

# 11. Visit by Conservator State Forests (E). 11.12.46

Gilling. P. 34. Japanese larch. The excellence of this crop, both the very good quality and the extremely rapid growth, were noted.

# 12. Director General's Visit. 20.9.47

- (a) Sproxton. P. 30. Mainly Scots pine. Compartment 19 is a fair sample of many of the adjoining compartments where the growth is slow and the trees are of poor quality.
- (b) <u>Boltby</u>. P. 29. Scots pine. Great damage by wind and snow along the upper part of Compartment 5 noted. These had been beaten up with Sitka spruce in recent years. There seems little doubt from results so far that Japanese larch and Sitka spruce are the most promising species.

### 13. Chairman's Visit. 12.5.49.

- (a) Sproxton. P. 38. Oak groups in mixture with Japanese larch inspected. Method for further treatment was demonstrated by the Chairman.
- (b) <u>Boltby</u>. P. 38 40. Scots pine fair except where damaged by snow; progress of Sitka spruce satisfactory.
- (c) Gilling. Oak making fair growth and should not be pruned.

#### APPENDIX II

# SUPERVISION

# Conservators

1946 - 47 Mr. R. E. Fossey (acting)

1947 - 50 Mr. G.J.L. Batters

1950 - to date Mr. C. A. Connell

# Divisional Officers

1921 - 27 Mr. A. P. Long

1927 - 39 Mr. A. D. Hopkinson

1939 - 48 Mr. R. E. Fossey

1948 - 50 Mr. W. Forsyth

1950 - to date Mr. P. F. Garthwaite

# District Officers

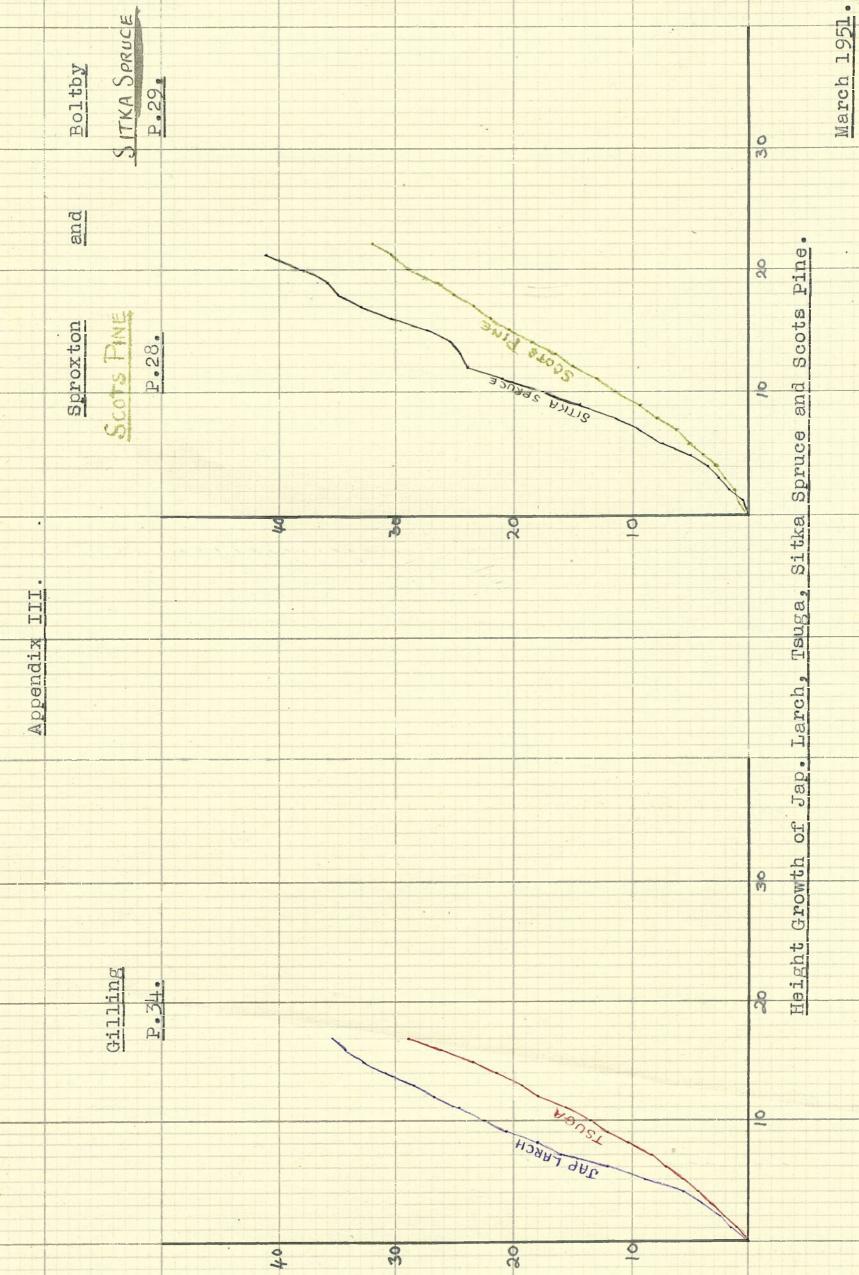
1925 - 26 Mr. G. B. Ryle

1926 - 33 Mr. A.H.H. Ross

1933 - 39 Mr. R. E. Fossey

1939 - 47 Mr. A. Paterson

1947 - to date Mr. T. G. Wood



Appendix III AMPLEFORTH III YORKS 105 S.W. Lease from the Reverende Edward Vanheens, Thomas Eyenton, Benedict Milburn & Thomas Celdart 999 yrs . 1 -8-31 809 268 acres 39.5 38.2 P50 LIBRARY 902 -- (410.42 H.M. Forestry Commission 34.8 Amplefor the Scar 30 2 20.0 Rigg Ruddm. 31.6 P.47 25.8 28 Acquired-17 P48 P32 56.1 P33 51.1 32.0 Piper Plantation 201 P46 042 19 20.7 P.42 8.3 P.40. 23 P.41 38.4 38.9 949 P50 49.4 35.0 Total -748.2 acres P34 22.2 20.9 CROWN COPYRIGHT. RESERVED. FORESTRY COMMISSION N. E. E. CONSERVANCY SCALE: - SIX INCHES TO ONE MILE. DATE: 18/6/51 INITIALS - TKahay

Appendix III AMPLEFORTH N.S. II. - A (11) Yorks 725. (BOLTBY) Lease from F.E. Walker 28-3-28. 776-898 acres. Ravenethorbe Estate LIBRARY 902 - - (410. 42) H.M. Ferestry Commission Ampleforth 13 P.33 P38 19 P.39. 20 15 28-1 P.33. P.32 27.3 5 23·2 P30 P.29. Planted Areas P. Year Acreage 47.5 52.4 50.3 50.0 51.5 48.4 16.5 28 Poxodise 312 334 335 335 339 416 49 28.8 20.2 4 0 2 8 2 2 6 8 2 2 15.5 24 270 (P41.)

Scale: 6"= |Mile.

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FORESTRY COMMISSION N. E. E. CONSERVANCY.

DATE: 18/6/51

INITIALS - We Lay

- AMPLEFORTH. W.S.I. (SPROXTON.)

Appendix III.,
A - (i)

LIBRARY
I.F.No:
902 - - (HIO. H2)
H.M. Forestry Commission

Ample forth

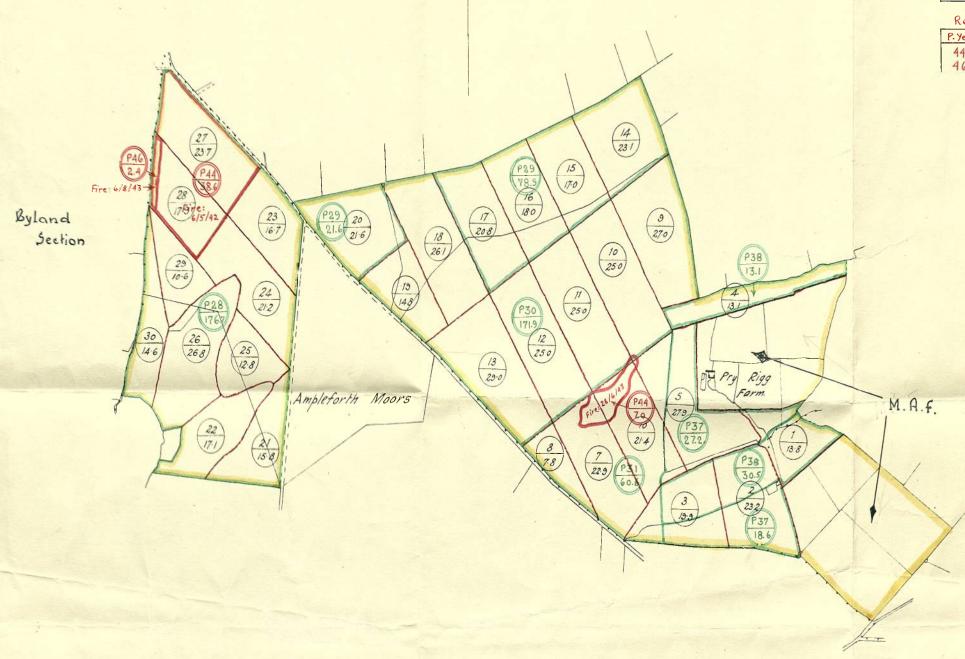
Yorks. 895W. 105NW.

Planted Areas

P. Year	Acreage
28	176.7
29	100.5
30	171.9
31	60.6
37	45 .8
38	43.6
Total	599.1

Replant Fire

P. )	lear	Acreage
4	4	45.6
4	6	2.4



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DATE: 18/6/51

Scale: 6" = IMile.