

BRECHFA
FOREST GARDEN

Description
and
five year

WORK PROGRAMME

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Location.

Brechfa forest garden which contains 80+ species plots (Experiment number Brechfa 15/81) extends to some 28 ha and lies 12 Km due south of Lampeter and 20 Kms west of Llandovery. The garden lies roughly in the centre of the triangle formed by the three A class roads A 40(T), A485 and A482 and at a distance of at least 11 Kms by B and unclassified roads from any of these main roads.

The nearest access point from these B and unclassified roads is at Abergorlech and it is fully 2 Km by forest road from there to the forest garden. The garden is not visible to the public from county roads.

The long axis of the garden is aligned NW - SE with most of the species plots on the NE facing slope which drops into Afon Gorlech. At the southern end of the garden a tributary of Afon Gorlech cuts across the ridge in a West - East direction thus giving fifteen of the species plot a sheltered southern aspect.

A smaller tributary at the northern end of the garden also gives four pine plots a southern aspect.

Geology.

The underlying geology is Silurian (Tarannon and Llandovery series) and the area in common with most of the rest of Wales was covered by both the glaciations of the older and newer drift. The direction of these ice movements has largely shaped the present drainage configuration in the area. Most of the main watercourses drain either southwards into the Afon Tywi which was the main glacier in the ice age or northwards into the glaciated valley of the Afon Teifi.

The Afon Gorlech roughly follows this pattern by flowing SE until it joins the south flowing Afon Cothi.

Soils.

In the forest garden there is ample evidence in the soils of the glacial influence mentioned above and this has led to a number of soil types being present. These are :-

deep acid brown soils of pHs in the range 4.5 - 5.0 overlying well broken shales, (FC Record No.69 steep brown earth 3a)

shallow acid brown soils of similar pHs again overlying broken shale (Upland brown earth, 4 or 4a)

gleyed or partially gleyed soils derived from glacial till these being mainly in the areas of gentlest slope or concave areas formed by slope changes. (Surface water gleys, 7, or peaty gleys, 8 or 8a).

Climate.

Using the Hartnup and Bendelow map gives a bioclimatic classification for the forest garden of C.2.M. which is to say moderately cool with an accumulated temperature (day °C above 5.6) of 1375 - 1650 slightly wet with a moisture deficit (mm) 40 - 60 and unexposed with an approximate average annual windspeed of less than 4.8 M/S. Climatically this is one of the most favourable classifications for tree growth which means that the Brechfa forest garden with its good soil types and favourable climate can grow a wide variety of tree species well, in a situation which is not over susceptible to windthrow.

Ecology.

Vegetation

On the fertile soils of the forest garden, vegetation growth is rapid. Natural regeneration of oak, ash, sycamore, alders, hazels and elders are common for broadleaf species whilst all of the common conifers planted in the area can be found regenerating, as well as some of the less common from the garden plots. The ground vegetation consists mainly of vigorous bracken, bramble, willowherb, mixed grasses, whilst in the wetter areas molinia and juncus are the dominant vegetation.

Ecology continued/

Wildlife

In the variety of species and crop development afforded by the mixture of species there is a wide range of ecological niches for a wide variety of species if perhaps small numbers of each species. The main species of importance in forestry terms are grey squirrel, red squirrel, hares, rabbits, *Hylastes* spp and *Hylobius* spp, sheep, *Elatobium abietinum* and *Adelges* spp. The species of most immediate significance to the forest garden is the grey squirrel which has already caused widespread and severe damage to the LP filler and LP garden plot and lesser damage to other species eg. beech, western hemlock etc.

Fungii

There are several fungii which are of prime importance in general forestry terms and it is possible in Brechfa to find examples of fomes, honey-fungus, *stereum* with perhaps less common examples of group dying of conifers. These along with white pine blister rust which has not yet infected the *P.strobus* are not of major importance in the garden, but one fungi which infects LP, *Rhamichloridium pinii*, is of particular importance to the garden as it is omnipresent and has caused widespread defoliation and most importantly some deaths of LP in the area.

Man

This area of woodland is not very accessible at present to the public although motor cyclists and (on several occasions) walkers pass the southern end of the garden. The garden has been useful for forest research staff and has been visited by a fair range of specialists at various times. There is very little scope, without large scale inputs of time and money, to increase the amount of use which can be made of the garden by the general public.

Present plots & work required.

- Plot No. 1. PSEUDOTSUGA MENZIESSII
Ex Washington with many good trees. Internal assessment plot thinned in 1983. Surround thinned 1987. Good stable site on lower valley slope with a southern aspect.
Requires further thinning 1989.
- Plot No. 2. LARIX DECIDUA
Patchy plot much smaller than DF.
Thin to best trees 88/9.
- Plot No. 3. LARIX POTANINII (was L.SIBERICA)
Failed.
Replaced 196? with Picea.....?
- Plot No. 4. TSUGA HETEROPHYLLA
Reasonable form and tall trees some fluting can be seen. Squirrels have been stripping bark in the upper crowns. The internal assessment plot was thinned in 1983 and then allowed to stabilize before the surround was thinned in 1987. This plot will require a further light selective thin in 1989.
- Plot No. 5. TSUGA MERTENSIANA
The trees in this plot are very poor, small and bushy. The plot will not require any foreseeable work but is a viewpoint to admire the neighbouring plots.
- Plot No. 6. CHAMAECYPARIS LAWSONIANA
This is very dense caused by the multi stemmed nature of the trees. The central assessment plot was thinned in 1983. This plot requires selective thinning and singling, but it may not be possible for this ever to have acceptable forest trees.
- Plot No. 7. THUJA PLICATA
This plot has trees of excellent form and vigour. The central assessment plot was selectively thinned in 1983 and the remainder lightly thinned in 1987. The whole plot now requires a further selective thinning to maintain the vigour of the best individual trees.

Plot No. 8.

ABIES FRASERI

This plot has both natural broadleaves and planted SS growing along with the small A. fraseri. These species should be removed in order to maintain the rarer Abies. Removal should be carried out by 1990 at the latest or there will be a danger that the Abies will be smothered.

Plot No. 9.

CUPRESSUS MACROCARPA

This plot is a virtual failure with any surviving trees multi-stemmed and in poor health. It may be possible to replace this with a more suitable seed lot. Size of trees to be recorded before removal.

Plot No. 10.

SEQUOIADENDRON GIGANTEUM

This plot of wild origin is half stocked with good specimen trees. No thinning required at present but with continued good growth may require thinning 1992.

Plot No. 11.

SEQUOIA SEMPERVIRENS

This plot is very vigorous and requires immediate thinning despite the species ability to stand close spacing and the fact that the central assessment plot was thinned in 1983 and the surround lightly thinned in 1987. Interestingly this plot is often blasted red during the winter but flushes and regrows strongly the following summer. This blasting has led to some multi-stemmed trees in the plot, but with selective thinning will provide a stand of excellent trees which at present is providing a basal area mean annual increment of $3.67\text{m}^2/\text{ha}$.

Plot No. 12.

EUCALYPTUS (DEBEAUZEVILLEI)

This plot has failed twice in the past, once with Cedrus libani and then with common Alder (an unsuitable species on this dry rich bank). The plot has now been replanted with eucalyptus which are growing extremely well but will continue to require bracken weeding for the next two seasons.

Plot No. 13. CEDRUS DEODARA

This plot is now almost in need of thinning/cleaning and should be selectively thinned around 1990.

Plot No. 14. PICEA ABIES

This plot suffered from vandalism through christmas tree removal in its early years, most of the multi-stemmed trees caused by this operation have been removed in the thinnings of 1983 and 1987, but some still remain. Thinning should be necessary by 1990-91.

Plot No. 15. ABIES KOREANA

On the advice of J White the remaining trees of this species will be retained although the row of Eucalyptus of origin No.101/3 will also be left (planted 1986).

Plot No. 16. ABIES GRANDIS

This plot requires further thinning before 1989 growing season even though the central assessment plot was selectively thinned in 1983 and the remainder lightly thinned in 1987. The trees remaining are of excellent form and vigour but do contain some individuals with stem cracks.

Plot No. 17. ABIES PROCERA

The comments on the Abies Grandis plot apply to this plot which is growing very well and requires thinning.

Plot No. 18. ABIES CEPHALONICA

There are many gaps in this plot with trees generally not too healthy. Access brashing and a low cleaning would allow individuals to be seen more easily.

Plot No. 19. ABIES NORMANNIANA

This plot has some dead trees over 10 cms BHD but is more complete and in better health than plot 18. A light thinning/cleaning would make the plot more accessible especially if coupled with a brashing operation.

Plot No. 20. ABIES CONCOLOR

This plot has very few trees surviving and much bramble and weed re-growth which will require to be cleared and maintained as weed free if the remaining trees are to be kept as specimens.

Plot No. 21. ABIES VEITCHII

These trees are healthy and have received a light thinning in 1987. The plot should have a heavy thinning to maintain the foliage of the best individuals. This operation should be fitted in as soon as possible.

Plot No. 22. ABIES CONCOLOR VAR LOWIANA

There are some deaths of large diameter trees, however a more fully stocked plot than the A.concolor. This plot should be cleaned/thinned to maintain the crown and appearance of the best trees in 1989.

Plot No. 23. ABIES HOMOLEPIS

Tall healthy trees which have been lightly thinned. This plot will require further thinning within the next three years.

Plot No. 24. ABIES AMABILIS

This crop should be treated in the same way and at the same time as plot 23.

Plot No. 25. ABIES DELAVAYI

This is a home collected lot from Benmore which shows some contamination from other species. This plot should be thinned/cleaned in conjunction with plots 23 and 24.

Plot No. 26. PINUS NIGRA VAR PALLASIANA

This plot is poor but would benefit from cleaning.

Plot No. 27. PINUS NIGRA VAR AUSTRIACA

As plot 26.

Plot No. 28. PINUS MURICATA

Very rough plot caused by low survival, although those which survive are of large diameter. Cosmetic surgery would provide a more balanced view of how this species could provide large sawlogs at an early age if pruned.

Plot No. 29. PINUS STROBUS

This plot is well stocked and healthy and although not the most vigorous of provenances, does show the growth potential of the species if cronartium free. This plot should be heavily thinned as per American silvicultural practice and pruned at an early date to maintain health and vigour.

Plot No. 30.

{ PINUS RESINOSA (*now partially filled
PICEA SITCHENSIS (with Washington Sitka spruce)

Plot No. 31.

PINUS UNICATA

Plot No. 32.

PINUS THUNBERGII

} All in poor condition but clearing would allow those remaining to continue to provide examples of the slow growth of these origins.

Plot No. 33.

QUERCUS PETRAEA) }

Plot No. 34.

QUERCUS ROBUR) }

local seed lots of reasonable form requiring thinning/ cleaning and removal of those stems suffering from squirrel damage. The timing of this operation is of less importance than operation in some of the other plots.

Plot No. 35.

QUERCUS RUBRA

Vigorous and tall requires thinning and pruning by growing season 1990.

Plot No. 36.

TILIA CORDATA

Bushes.

Plot No. 37.

NOTHOFAGUS OBLIQUA

Large rough trees which require thinning and cosmetic surgery by 1990 growing season.

Plot No. 38.

FAGUS SYLVATICA

A very dense plot which requires immediate thinning with deliberate removal of squirrel damaged stems.

- Plot No. 39. PINUS DENSIFLORA
Retain one remaining individual.
- Plot No. 40. PINUS PEUCE
This plot was lightly thinned in 1987 following the thinning of the core plot in 1983. A further thinning in 1990 would maintain this species growth potential.
- Plot No. 41. PINUS PUNGENS
A poor plot with trees still dying - no work required.
- Plot No. 42. PINUS PONDEROSA
Poor plot with unhealthy cankered dying trees.
Perhaps a cleaning would benefit the look of this plot in the future if any healthy individuals can be identified and isolated.
- Plot No. 43. PICEA ASPERATA
A small plot but could be cleaned and perhaps brashed.
- Plot No. 44. PINUS BANKSIANA
Some squirrel damage on trees in this plot.
The outside trees are very rough and some access is required to see the better form of the trees inside the plot, thin in 1991.
- Plot No. 45. PINUS MUGO) Flattened form which are so
Plot No. 46. PINUS MUGO VAR PUMILO) bushlike - would not benefit
from thinning. Access brash/cut
in 1988.
- Plot No. 47. PINUS CONTORTA (Long Beach)
A rough windblown plot which requires an access route if only to remind everyone of the vigour and instability of this seed origin.
- Plot No. 48. PINUS RADIATA
A failed plot with the 3 remaining trees (5 in 1983) still hanging on, but only just. No work except perhaps to try a new planting of Radiata.

- Plot No. 49. PINUS JEFFREYI
 Unhealthy plot which should be brashed and cleaned for access. This operation could be carried out at any date to tie in with work programmes.
- Plot No. 50. CRYPTOMERIA JAPONICA
 Although thinned in 1987 will require a further selective thinning by growing season 1991. This should allow most of the poorer stems to be removed and a plot of fair form to remain.
- Plot No. 51. PICEA GLAUCA
 As half of the plot was removed by the road little work needed in this plot.
- Plot No. 52)
 53) removed by the road.
- Plot No. 54. PICEA ORIENTALIS
 Fair plot which requires access brashing but thinning/cleaning can be delayed till 1992.
- Plot No. 55. PICEA RUBENS
 As per plot 54.
- Plot No. 56. PICEA OMORIKA
 This may be a wild origin of an endangered species (J White 1987). This healthy plot should be selectively thinned/cleaned by 1991 growing season to maintain the crop vigour.
- Plot No. 57. PICEA MARIANA
 Although of slow growth - healthy - should be thinned/cleaned in about five years time if growth continues at present rate.
- Plot No. 58. PICEA SMITHIANA
 Failed.
- Plot No. 59. ABIES LASIOCARPA
 A gappy plot but remainder of trees healthy. Brash access 1988 and operations of brashing/cleaning/thinning 1990-91.

- Plot No. 60. ABIES BALSAMEA
A poor plot suffering repeated dieback which can be regarded as a no work plot.
- Plot No. 61. ACER PENNSYLVANICUM
This plot would benefit from an early cleaning 1989.
- Plot No. 62. ULMUS GLABRA
A few bushes remain which will require no work input.
- Plot No. 63. QUERCUS CANARIENSIS (MERBECKII)
A Cleaning/thinning should be carried out 1989 to allow this fairly good plot to continue to develop.
- Plot No. 64. ACER SACCHARINUM
A cleaning would benefit this plot, although of poor number and form there are sufficient trees to make a reasonable stand. 1989-90.
- Plot No. 65. QUERCUS LUSITANICA
A poor plot in growth terms - little work needed at present.
- Plot No. 66. QUERCUS CERRIS
This plot is growing quite well and requires a thinning 1988.
- Plot No. 67. ACER PSEUDOPLATANUS
This plot contains birch scrub as well as trees of fair form - will require a cleaning and thinning in 1988.
- Plot No. 68. ACER PLATANOIDES
This is a very good plot and requires immediate thinning to maintain crown form and vigour of the best trees.
- Plot No. 69. POPULUS T X T
No work required on these plots except to remove the worst of the trees 1990-1.
- Plot No. 70. TILIA CORDATA
This fairly healthy plot should be cleaned/thinned in 1990-1.

- Plot No. 71. LIRIODENDRON TULIPIFERA
Very few bush like trees left - no immediate work required.
- Plot No. 72. CASTANEA SATIVA
This plot is coppice like because of early damage? Thin out 1991-2.
- Plot No. 73. AESCULUS HIPPOCASTANUM
Very few remain and no work required.
- Plot No. 74. POPULUS T X T
Some thinning might benefit stem diameter-thin 1990.
- Plot No. 75. PICEA KOYAMAI
A fairly good complete plot on this molinia site. Further thinning will be required in about three years following the light thinning of 1987.
- Plot No. 76. PICEA SITCHENSIS
*now replaced with Oregon Sitka spruce.
- Plot No. 77. TILIA PLATYPHYLLOS
The few trees left will require no immediate work.
- Plot No. 78. DAVIDIA VILMORIANA
Failed.
- Plot No. 79. ROBINIA PSEUDOACACIA
The few unhealthy trees which remain will require little immediate work.
- Plot No. 80) POPULUS ROBUSTA) The few remaining trees will
Plot No. 81) POPULUS SEROTINA) require no immediate work.
- Plot No. 82. CUPRESSOCYPARIS LEYLANDII
This plot will require thinning by 1990 as the crop is growing vigorously.
- Plot No. 83. BETULA PENDULA
Not a very impressive plot but would benefit from a light thinning 1992.

Plot No. 84. STRANVAESIA DAVIDIANA

This plot is best viewed from the outside and little work is necessary.

Plot No. 85. BETULA ?

This could be cleaned up but work of low priority.

Plot No. 86. Failed.

Plot No. 87. BETULA PENDULA (MILDENHALL)

As 85.

Plot No. 88. BETULA MAXIMOWICZIANA

As 85.

Plot No. 89. BETULA LENTA

As 85.

Plot No. 90. ABIES VARIOUS

This is the plot where extra firs were planted and shows their potential well - should be selectively thinned to leave examples of the various species present. The thinning should be light and almost continuous starting in 1989.

Plot No. 114. PINUS CONTORTA (7117)

This plot is part of the conservancy filler but used as a 'control' for the garden. The plot and surround should be selectively thinned in 1992.

* S.S.plots
P88

Two plots of S.S. one of which is Washington seed origin and the other Oregon have been established above and below the P. peuce plot to fill the main species gap in the garden. Normal forest operations will be required till successful plots are established.

General work required.

A track has been dozed through the garden and there are several cuttings which are now so steep as to require "ladders" to be constructed i.e. to plots 1 - 15, at plot 16, at plot 56, at plot 19, at plot 25, at plot 40 and at plot 77. These should be constructed as a matter of priority to ensure access to the plots for work and inspection.

The path which was constructed in 1984 to walk round all the plots should also be reinstated and improved where landslips and dozing have caused damage. This should also be given priority.

The track itself has been partially blocked by a landslip and should be cleared and a culvert put in to prevent further problems. There is also a need for a drain to be cut to lead the surface water, which gathers at times of high rainfall, through the plots and down to the stream. The drain is of more importance than the track clearance and should be carried out before winter 1988.

The track dozing has put some debris into various plots, these should be cleared where necessary. This operation is not of prime importance but should begin in 1989.

Clear labelling of plots and paths should begin as and when possible and the construction of signs can be carried out during periods of inclement weather. The timing of this operation is therefore weather dependent.

Paths should be maintained weed free (especially brambles) and out of date chemicals which are unsuitable for experiments could be usefully employed for this function.

Thinning poles should be removed from plots as and when possible, this again is of lower priority than carrying out the thinning operations.

A path should be constructed from plot 3 to plot 20. This is not essential but would allow a tour circuit to be established. This should be carried out in 1989.

A map showing the plot layout, paths and species should be constructed and erected on site to allow interested parties to view the experiment. This is a "wet weather" job for the R & D industrials who have the necessary skills.

Plan of Work for Garden

<u>Year</u>		<u>Man Days</u>		
<u>1988</u>	Repair of paths	6		
	Ladders construction & placement (See note on general work required)	6		
	Thinning of plots 2, 7, 11, 16, 17, 21, 66, 67, 68, 28, 29 (including cosmetic pruning of 28)	17		
	Weeding + Cleaning in plots & paths	2		
	Access to plots from paths	2		
	Drain (cutting of scrub etc)	3	TOTAL	36
<u>1989</u>	Track clearance (start of)	4		
	Labelling of plots	2		
	Clearance of debris	4		
	Weeding & Clearing of paths & plots	2		
	Path from plot 3 - 20	4		
	Thinning of plots 1, 4, 35, 37, 38 61, 90 (+ prune 35, 37) (23, 24, 25)	16		
	Access brash & clean plots 18, 19, 20, 22, 33, 64	3	TOTAL	35
<u>1990</u>	Track clearance	4		
	Labelling of plots	2		
	Map erection	1		
	Clearance of debris	4		
	Weeding & Clearing of paths etc	2		
	Thin plots 6, 13, 14, 40, 74, 57, 75, 82	13		
	Access brash & clean 26, 27, 33, 34, 70, 59	5	TOTAL	31
<u>1991</u>	Thin plots 42, 44, 50, 56, 72, 90	7		
	Clear debris	4		
	Remove poles from previously thinned crop	10		
	Access brash & clean plots 43, 49	2		
	Labelling of plots	5		
	Weed paths & plant & maintain new plots (new plants should be available as 1 + 1s if selected now)	5	TOTAL	33
<u>1992</u>	Thin plots 10, 54, 55, 57, 83, 85, 87, 88, 89, 114	13		
	Remove poles	5		
	Weed paths & plots	5		
	Plant & maintain new plots	5		
	Rethin plots 1, 11, 16, 17	4	TOTAL	32

General comment on work programme

As the work schedule shows by 1991 manpower resources have been allocated to commence a planting programme to fill gaps both in the layout of the plots and the species represented. *See below. There is also scope for felling areas of filler L P and planting available/desirable species. This would increase the workload for this experiment from the estimated, but this may be necessary/desirable in the light of how easily such collections are lost through catastrophic events like hurricanes. There may be a case for starting further more planned forest gardens elsewhere in Wales and Britain.

* Species recommended for planting (a far from exhaustive list)

Alnus various (if correct plot chosen)

Araucaria araucana

Fraxinus excelsior (to replace original plot but not planted as in 1956 in a frost hollow)

Juniperus communis

Nothofagus procera

Pinus nigra var *calabrica* (collected at 1000' in Radnor and planted in correct plot.)

Pinus pinaster

Pinus radiata (to make up plot which is failing)

Pinus sylvestris (perhaps of local collection)

Prunus avium

Quercus ilex

Sorbus aria

Sorbus hybrida

Sorbus torminalis

Tsuga mertensiana (replacing failed plot with perhaps a better provenance)

Ulmus various (resistant strains?)

General comment on work programme.

Continued/

As there must be planning both for seed procurement and nursery sowing, it may be necessary for a further management decision on how important it is to extend the range of species and how much increased input is acceptable/desirable.



S Corcoran
10.6.88

Appendix 1

List of species present.

<u>Species</u>	<u>Plot No.</u>
ABIES AMABILIS	(24)
ABIES BALSAMEA	(60)
ABIES CEPHALONICA	(18)
ABIES CONCOLOR	(20)
ABIES DELAVAYI	(25)
ABIES FRASERI	(8)
ABIES GRANDIS	(16)
ABIES HOMOLEPIS	(23)
ABIES KOREANA	(15)
ABIES LASIOCARPA	(59)
ABIES LOWIANA	(22)
ABIES NORDMANNIANA	(19)
ABIES PROCERA	(17)
ABIES VARIOUS	(90)
ABIES VETCHII	(21)
ACER PENNSYLVANICUM	(61)
ACER PLATANOIDES	(68)
ACER PSEUDOPLATANUS	(67)
ACER SACCHARINUM	(64)
AESCULUS HIPPOCASTANUM	(73)
ALNUS GLUTINOSA	(12)
ALNUS RUBRA	(86)
BETULA ALBA	(85)
BETULA LENTA	(89)
BETULA MAXIMOWICZIANA	(88)
BETULA MILDENHALL	(87)
BETULA PENDULA	(83)
CASTANEA SATIVA	(72)
CEDRUS DEODARA	(13)
CEDRUS LIBANI	(12)
CHAMAECYPARIS LAWSONIANA	(6)
CRYPTOMERIA JAPONICA	(50)
CUPRESSOCYPARIS LEYLANDI	(82)
CUPRESSUS MACROCARPA	(9)
DAVIDIA VILMORINIANA	(78)
EUCALYPTUS Spp	(12)
FAGUS SYLVATICA	(38)
FRAXINUS EXCELSIOR	(82)
JUGLANS REGIA	(76)

<u>Species</u>	<u>Plot No</u>
LARIX DECIDUA	(2)
LARIX PONTANINII	(3)
LIRIODENDRON TULIPIFERA	(71)
NOTHOFAGUS OBLIQUA	(37)
PICEA ABIES	(14)
PICEA ASPERATA	(43)
PICEA GLAUCA	(51)
PICEA KOYAMAE	(75)
PICEA MARIANA	(57)
PICEA OMORIKA	(56)
PICEA ORIENTALIS	(54)
PICEA RUBENS	(55)
PICEA SITCHENSIS	(76 RSS)(30 WSS)
PICEA SMITHIANA	(58)
PINUS BANKSIANA	(44)
PINUS CONTORTA	(47)(114)
PINUS DENSIFLORA	(39)
PINUS JEFFREYI	(49)
PINUS MUGO	(45)
PINUS MUGO VAR PUMILO	(46)
PINUS MUGO PROSTRATA	(31)
PINUS MURICATA	(28)
PINUS NIGRA VAR AUSTIACA	(27)
PINUS NIGRA VAR PALLASIANA	(26)
PINUS PEUKE	(40)
PINUS PONDEROSA	(42)
PINUS PUNGENS	(41)
PINUS RADIATA	(48)
PINUS RESINOSA	(30)
PINUS STROBUS	(29)
PINUS THUNBERGII	(32)
PINUS UNCINATA	(31)
POPULUS ROBUSTA	(80)
POPULUS SEROTINA	(81)
POPULUS TACA/TRIC	(69)(74)
PSEUDO TSUGA MENZIESII	(1)
QUERCUS BOREALIS	(35)
QUERCUS CANARIENSIS	(63)
QUERCUS CERRIS	(66)
QUERCUS LUSITANICA	(65)
QUERCUS MERBECKII	(63)
QUERCUS PETRAEA	(33)
QUERCUS ROBUR	(34)
QUERCUS RUBRA	(35)
ROBINIA PSEUDOACACIA	(79)

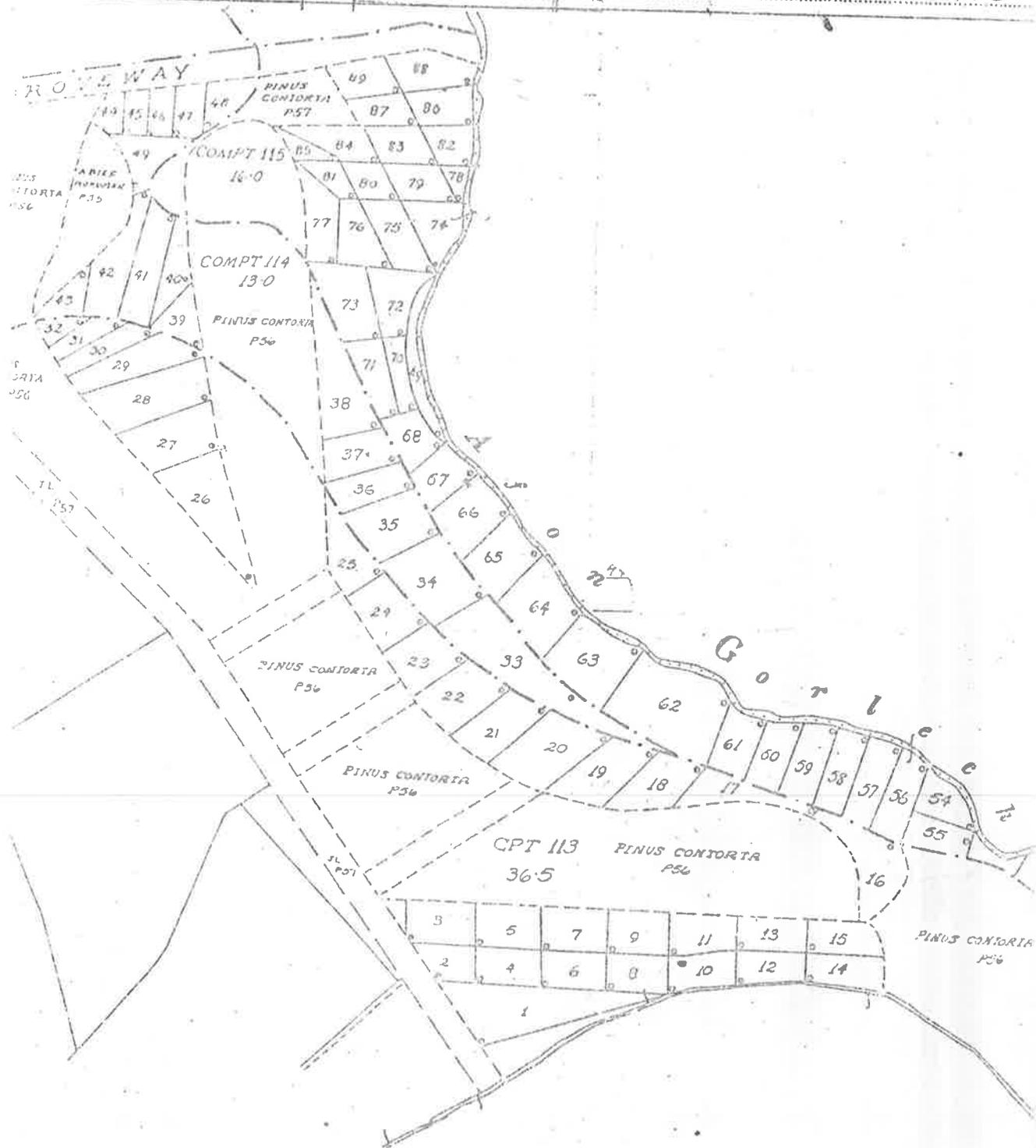
<u>Species</u>	<u>Plot No.</u>
SEQUOIA SEMPERVIRENS	(11)
SEQUOIIDENDRON GIGANTEUM	(10)
STRANVAESIA DAVIDIANA	(84)
THUJA PLICATA	(7)
TILIA CORDATA	(36) (70)
TILIA PLATYPHYLLOS	(77)
TSUGA HETEROPHYLLA	(4)
TSUGA MERTENSIANA	(5)
ULMUS GLABRA	(62)

Compt No: 133

Forest/Expt: BRECHFA 15/81

Grid ref: 572 357

Series and Sheet No: 1st SERIES METRIC 146



INITIALS SL

DATE 3/6/83

Sheet No.....

