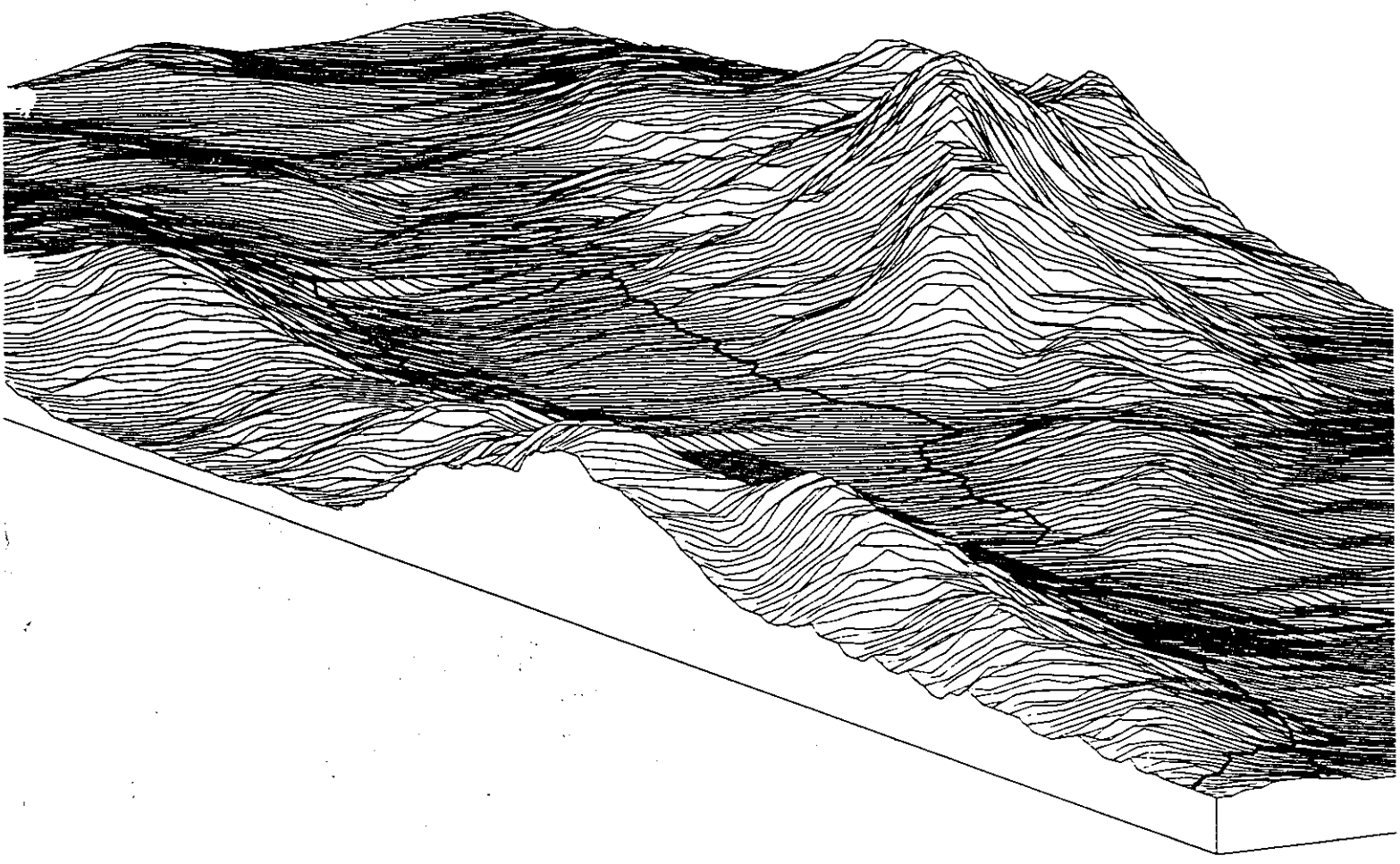
Forests Department, Western Australia

THE VIEW FROM THE ROAD



FOREST LANDSCAPE MANAGEMENT PRESCRIPTIONS FOR THE ALBANY HIGHWAY CORRIDOR

Extension Branch, Landscape Section

"Travel is not solely for the purpose of arriving - there should be pleasure along the way, and a window on the world"

The New Yorker

FOREWORD

As a resource, the visual landscape is a dynamic entity which changes both through space and time. While the changing character or mood of an area can be experienced in many ways, it is often most readily perceived as one travels at speed along a highway through a particular landscape.

It has been said that the visual enjoyment of highway travel is an experience which defies analysis. To drive under a stately arcade of towering karri or through a sun-dappled woodland of wandoo in late afternoon is to experience the forest landscape in a magical way. But such visual experiences are, as a rule, coincidental. All too often, the best views from our roadways are the result of chance or accident. Rarely has the forestscape been treated as a visual resource to be displayed to best advantage. Such is the case with the section of forest highway that is the subject of this report.

Views from and of our roadways can be deliberately planned as evolving visual sequences which reveal the beauty and diversity of the forests they pass through. Highways can be both aesthetic and functional, objectives which can be concurrently achieved through the application of sound design and planning principles. A sensitively designed highway is achieved only when both areas of design are considered jointly.

E.HERBERT
W. SCHMIDT
LANDSCAPE ARCHITECTS

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FOREST LANDSCAPE MANAGEMENT PRESCRIPTIONS FOR THE ALBANY HIGHWAY CORRIDOR

The View From The Road

THE VIEW FROM THE ROAD

INTRODUCTION 1

1. INTRODUCTION

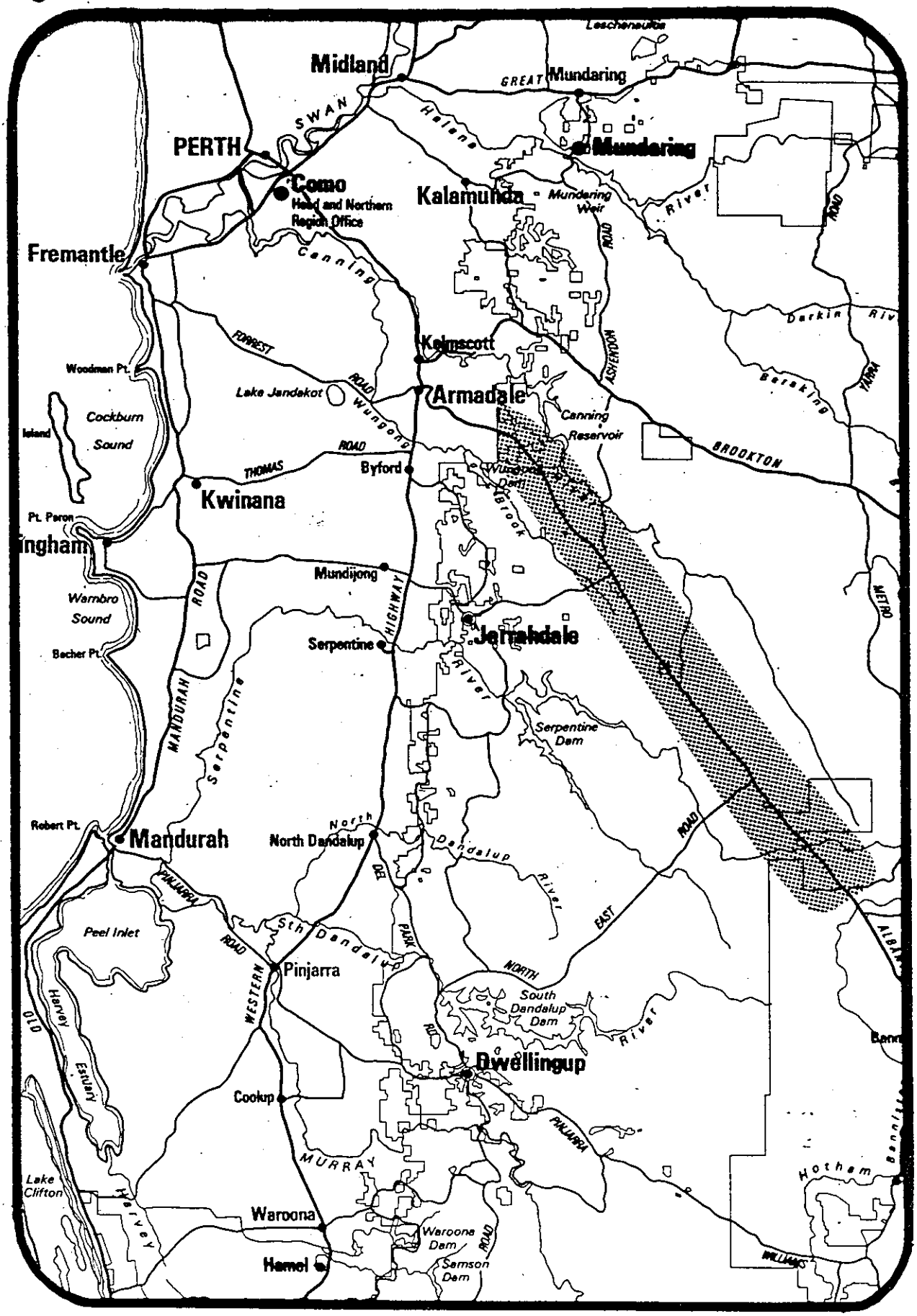
The forest areas of the southwest of Western Australia are, in the main, readily accessible as a result of a comprehensive road network. This report examines the management of the forest landscape along a section of one of the most heavily travelled roads in this network, the Albany Highway between Bedfordale Hill and the headwaters of the Serpentine River (refer to Figure 1).

The objective of this report is to recommend on how the forest adjoining this highway corridor can and should be managed to enhance, maintain and in some instances restore degraded forest landscape values. More specifically, the study contains a series of management prescriptions and recommendations covering such aspects as harvesting and thinning of roadside pine plots, the restoration of gravel pits and dieback sites and the provision and design of signage.

Many of the recommendations which have been made involve relatively minor alterations to localised areas of forest whereas other prescriptions call for more extensive modifications that will need to be implemented over a number of years. In such cases, the proposed phasing of future operations is outlined and attention is drawn to those areas and/or recommendations which should receive the highest priority for future action.

It should also be noted that discussions have been held with both divisional and regional staff prior to the development of these recommendations. This has been done to ensure insofar as is possible, that management proposals are consistent with other land use requirements as well as being sensitive to landscape values.

Figure 1



ALBANY HIGHWAY - STATE FOREST CORRIDOR

STUDY BACKGROUND

The 60 kilometre section of the Albany Highway which passes through State forest is in essence a multiple use corridor. Each day, an average of 2000 vehicles traverse this section of the northern jarrah forest on their way to and from Perth and the farming and coastal areas to the southeast. On weekends, the Highway serves as a major access route for travellers who wish to recreate in surrounding areas of State forest. Thus, the Highway serves as a "window" to what are some of the most commonly viewed forest landscapes in the southwest.

What then is the condition and appearance of the forest resource along this roadway? To the traveller, the forest no doubt provides a pleasant contrast to the urban sprawl of the coastal plain and the open agricultural landscapes further to the southeast. To the more perceptive however, it is an area of forest which has been subjected to a high degree of disturbance in recent times as the result of dieback, logging, gravel extraction and the introduction of pines. In parts it is a highly disturbed landscape.

Whether such disturbance and visual discord is readily discovered by the majority of travellers is not known. It is apparent that the present condition and appearance of the forest along this highway corridor could, in many instances, be substantially improved through the application of sound landscape design and planning principles. The remainder of this report outlines how such improvement can be achieved.

THE VIEW FROM THE ROAD

THE LANDSCAPE 2

2. THE LANDSCAPE

The landscape of the Darling Plateau as described by Havel, Mulcahy and others exhibits distinctive land form and vegetation gradients from west to east. On the western margin of the plateau where the topography is more pronounced and steeply dissected, the forest consists of tall stands of jarrah and marri with other eucalypts such as W.A. blackbutt and flooded gum occupying the lower, moisture gaining sites. Often these stands contain a separate lower tree storey of banksias, casuarinas and other minor species. Further inland, the valley systems broaden out into wide shallow flats and the tall forest community gives way to a much more open eucalypt woodland of jarrah, marri and wandoo.

Across the plateau, the countryside is punctuated by a series of exposed granite hills or monadnocks rising several hundred metres above the surrounding landscape. Flanked by the monadnock chain, the Albany Highway dissects this landscape gradient in a N.W.-S.E. direction before penetrating the western edge of the southern wheatbelt. Thus, the highway corridor passes through a forested landscape which in its own right is quite variable in appearance.

It is a landscape of potentially high scenic quality, although in many places along the corridor that quality has been diminished by the activities of man. As was indicated previously, gravel extraction, the introduction and spread of the fungal disease, jarrah dieback and the subsequent rehabilitation of old dieback sites with pine have collectively altered the character of much of this roadscape. In some cases the changes have been for the better. But more often than not, the landscape has been degraded both physically and visually.

In attempting to highlight existing landscape values and restore those which have deteriorated, there is a need to first identify what the desired character of the roadscape is or should be. This is an important and necessary prelude to formulating landscape management prescriptions and recommendations.

In the case of the Albany Highway corridor through State forest, 4 broad zones have been identified where both the character of the landscape and the proposed management prescriptions/ recommendations are distinctive. These zones are as follows:

UPLAND ZONE

Topography - gently to moderately undulating terrain.

Vegetation - jarrah/marri often with distinctive second layer of banksia and casuarina.

Viewing Orientation - predominantly foreground areas with some middleground views along road corridor. Detailed visual characteristics, viz: bark characteristics, leaf textures, edges, distinctive tree forms and shrub diversity are important in this zone.

Landscape Character - landscape has been degraded in many areas due to dieback and the subsequent rehabilitation of infected areas with pine and exotic eucalypt species. Rehabilitated sites are generally small in area and have resulted in a very fragmented landscape - pines have been superimposed onto native forest with little regard as to shape and scale of planting areas. There are several cultural features of interest such as old orchard sites and building foundations adjoining the Highway.

Management Potential - numerous possibilities for opening up foreground views and creating greater variety/interest through removal of some pine plots and thinning and edge modification of others. It is a zone where future management could result in substantial improvement of the existing roadscape over an extended time period.

GLENEAGLE ZONE

Topography - as for Upland Zone; northern end of monadnock chain flanks this zone, but is not readily visible from the Highway.

Vegetation - extensive plantations of pine with some remnants of native forest; one of the few areas along the Highway where pines flank both sides of the road.

Viewing Orientation - predominantly foreground areas with occasional glimpses of Eagle Hill.

Landscape Character - landscape dominated by pines with some cultural attractions including the former Gleneagle settlement which is now a picnic area. Due to scale of plantation, this zone is visually more cohesive than is the case with the Upland Zone. The older portions of plantation surrounding the old Gleneagle Settlement are highly visible and form an attractive landscape element.

Management Potential - some scope for improving foreground views through thinning and edge modification. Existing clearings and orchard sites should be retained. Due to minimal topographic relief, only limited potential for opening up views; future harvesting of plantation areas will not result in as great an impact as in Cooke zone.

COOKE ZONE

Topography - moderately undulating terrain in foreground and framed by steeply rising land forms. Monadnock chain is clearly visible along a continuous section of the Highway and provides the most spectacular topographic relief along the entire corridor.

Vegetation - extensive plantations of pine as for Gleneagle zone; main distinction is that entire plantation area is visible from a number of points along the Highway. Plantation is flanked by open

woodlands of jarrah, marri and wandoo with broad flats supporting paperbark and grass trees.

Viewing Orientation - extensive views of surrounding landscape - orientation predominantly towards Mt Cooke - some views extend several kilometres from the roadway.

Landscape Character - highly visible and attractive zone of forest in which the landscape has been substantially altered although not necessarily degraded by the replacement of native vegetation with pines. It is a landscape of considerable diversity and visual interest.

Management Potential - zone where thinning, harvesting and edge modification will have the most obvious impact over large expanses of the roadscape. There is considerable scope for creating and managing views and improving foreground presentation of the plantation and monadnock chain. Particular attention needs to be directed at the location and orientation of internal roads and firebreaks within the plantation.

EASTERN WOODLAND ZONE

Topography - gently undulating terrain with broad,shallow valleys and flats.

Vegetation - mixture of jarrah/marri and wandoo species. Structurally, the forest is much more open than in the other zones and lacks a distinctive second storey or layer of smaller tree species. Some of the broad flats such as those found along the headwaters of the Serpentine are largely devoid of trees.

Viewing Orientation - mixture of foreground and middleground views; open nature of the forest provides greater visual penetration.

Landscape Character - the woodland zone has been subjected to the least amount of visual disturbance as a result of dieback, gravel extraction, logging etc. It is a highly attractive and diverse

landscape, particularly where there is a change in species composition between jarrah/marri and wandoo or where State forest adjoins farmland. The open nature of the forest allows for greater light penetration, with subsequent views being obtained well into the forest midground.

Management Potential - as this zone is largely intact, it will require the least amount of future modification. Major emphasis should be directed at ensuring existing character is maintained.

THE VIEW FROM THE ROAD

FOREST LANDSCAPE MANAGEMENT PRESCRIPTIONS

3

3. FOREST LANDSCAPE MANAGEMENT PRESCRIPTIONS

The character zones previously defined for the Albany Highway will each require distinctive management prescriptions in order to preserve and enhance their inherent character. For example, in the Cooke Zone with its predominating monadnocks, the creation and maintenance of views will dictate the management prescriptions (clear falling pine to provide views of Mt Cooke). In upland situations, where narrow pine strips intrude onto the otherwise native forest highway verges, the removal of pine and revegetation with native species would be the preferred management prescription.

It should be realised that although pine plantations often cause incongruous vegetation combinations along the Albany Highway corridor, it is not the objective nor the recommendation of this study to completely remove them. Conversely, most plantations with only minor manipulations can be retained as unobtruvise, and in some cases, attractive elements in the landscape. This does not mean, however, that the road edges only should be treated and the rest of the plantation forgotten. Management should consider the landscape treatment of the Albany Highway pine plantations as an integral part of an overall pine management programme which involves treatment of the total plantation area. As professional foresters we are not in the business of creating facades for our omissions.

The Highway has been analysed systematically and recommended management prescriptions have been specified in the following chapter. While these prescriptions will pertain directly to the zone in which the treatment occurs, there are additional prescriptions which should apply throughout the whole of the highway corridor. These are listed here in the form of standard treatments for all areas.

(a) All pine plots and/or plantation areas to be clearfelled will first be visually assessed to determine the amount and location of native vegetation present. This will include the areas behind current plantation boundaries. In areas where substantial native regrowth is present, care will be taken to ensure this vegetation is protected during clearfelling and subsequent burning of slash.

(b) All clearfelled material which can not be utilised will be disposed of by burning. This debris will be removed to areas out of direct view of the highway corridor, heaped and burnt. The current practice of leaving tops etc., for winter disposal burns is not acceptable in areas of high visbility.

(c) All sites and adjacent areas where revegetation is prescribed will be seeded and/or planted with indigenous species as specified. Species used must conform to the site type (refer Havel's Bulletin No 86). All planting will be in the form of irregular clumps; no linear or grid planting patterns are to be superimposed on the landscape.

(d) Clearfelled and thinned edges of plantations will be "feathered" in order to soften the harsh linearity of edge treatments (see diagram).

(e) All clearfelled and thinned rectangular edges are to be "scalloped" in order to naturalise the otherwise harsh abruptness of angular corners (see diagram).

(f) All pine plantations are to be set back a minimum distance of 10m from the highway verge. Specified prescriptions will then apply to remaining plantation areas.

(g) Existing rehabilitated gravel pits and dieback sites (non-pine) should be underplanted with native shrubs by broadcast seeding.

This treatment especially applies to those sites rehabilitated with wandoo. While wandoo and other white-barked eucalypts are native species, they are nonetheless considered as exotics when planted off-site. For example, E. wandoo is an incongruous landscape element when planted in the Upland Zone but a natural feature of the Eastern Woodlands.

(h) Certain eucalypt and pine plots have been given the recommendation "Do not protect from fire". This prescription applies to small plots which have failed and therefore do not warrant protection.

(i) The Landscape Architect will be available to assist with implementation of the works programme and with future treatments.

THE VIEW FROM THE ROAD

INVENTORY AND ANALYSIS

4

4. INVENTORY & ANALYSIS

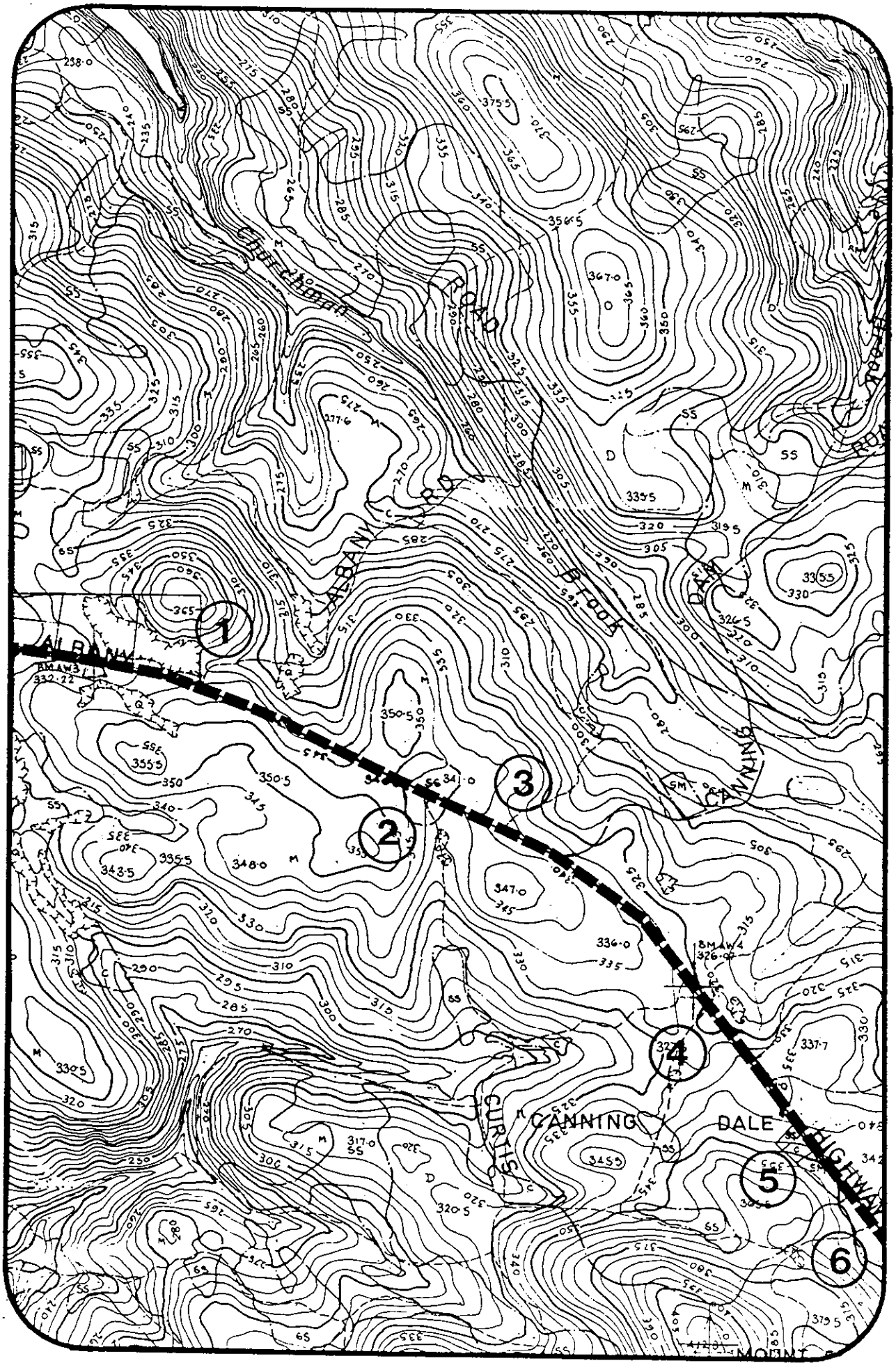
As defined in Chapter 1, this study analyses that part of the Albany Highway which traverses State forest. Several ground surveys were conducted along the highway in order to examine the condition of the adjoining corridor of State forest which require attention. These latter areas were then analysed in terms of designing management prescriptions which would facilitate their character requirements as dictated by their particular zone.

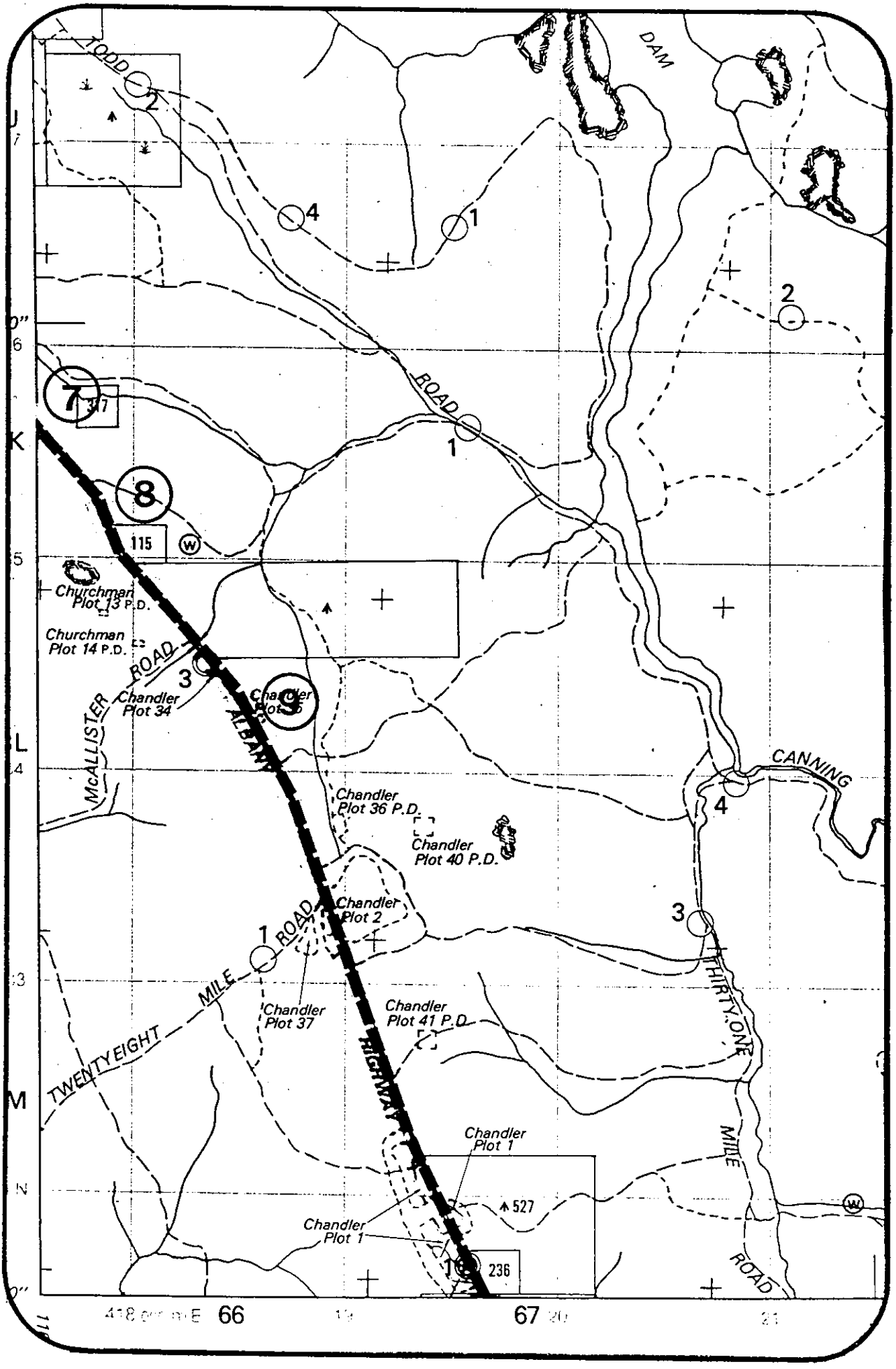
The following section lists the sites where treatment is required and gives a summary of the management prescriptions recommended for each. Opposing each page of written summary is a map keyed to the corresponding highway corridor sites. These maps may be scaled, if necessary, to deduce the treatment area if such is not specified in the text.

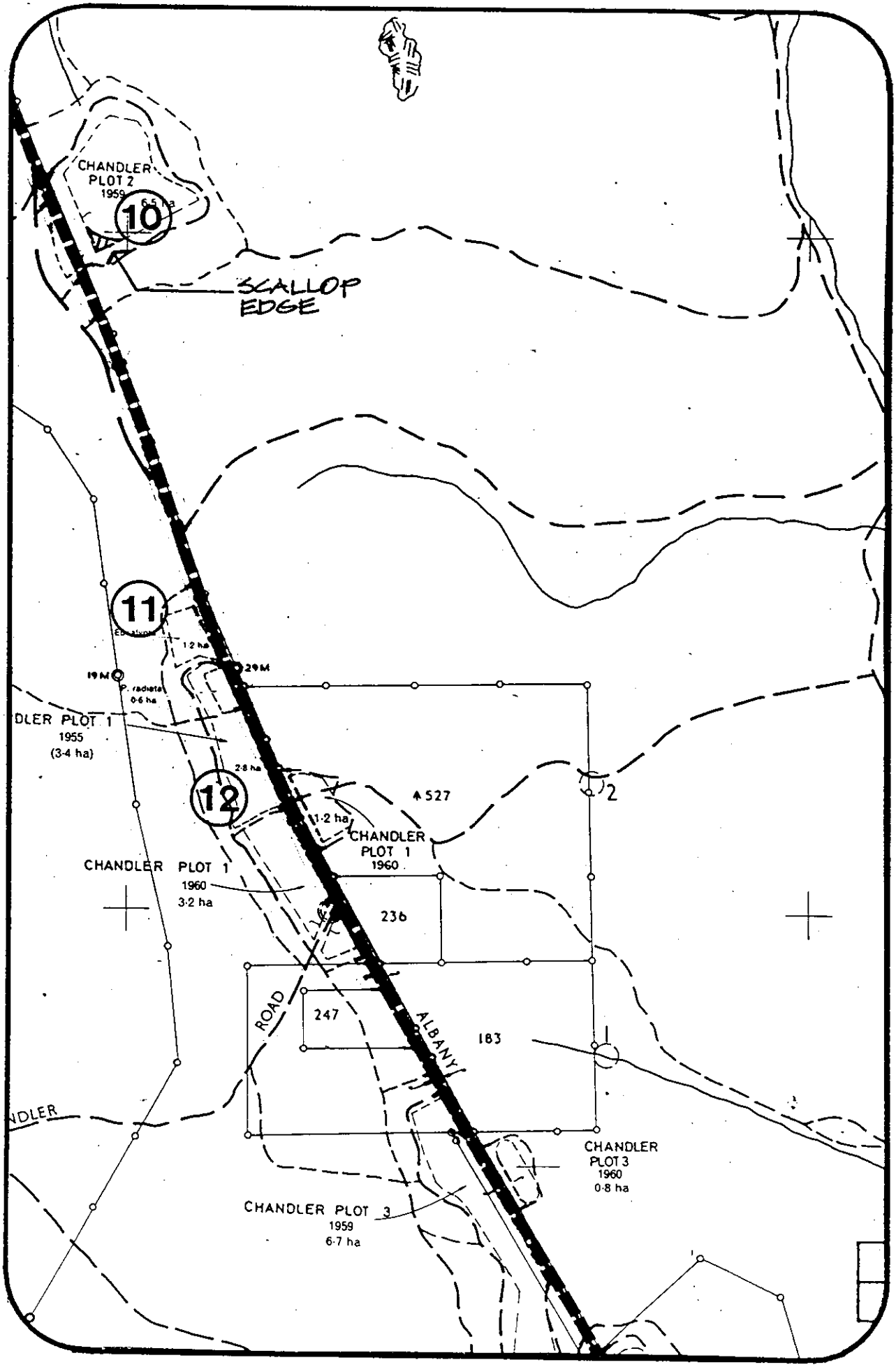
Scales:

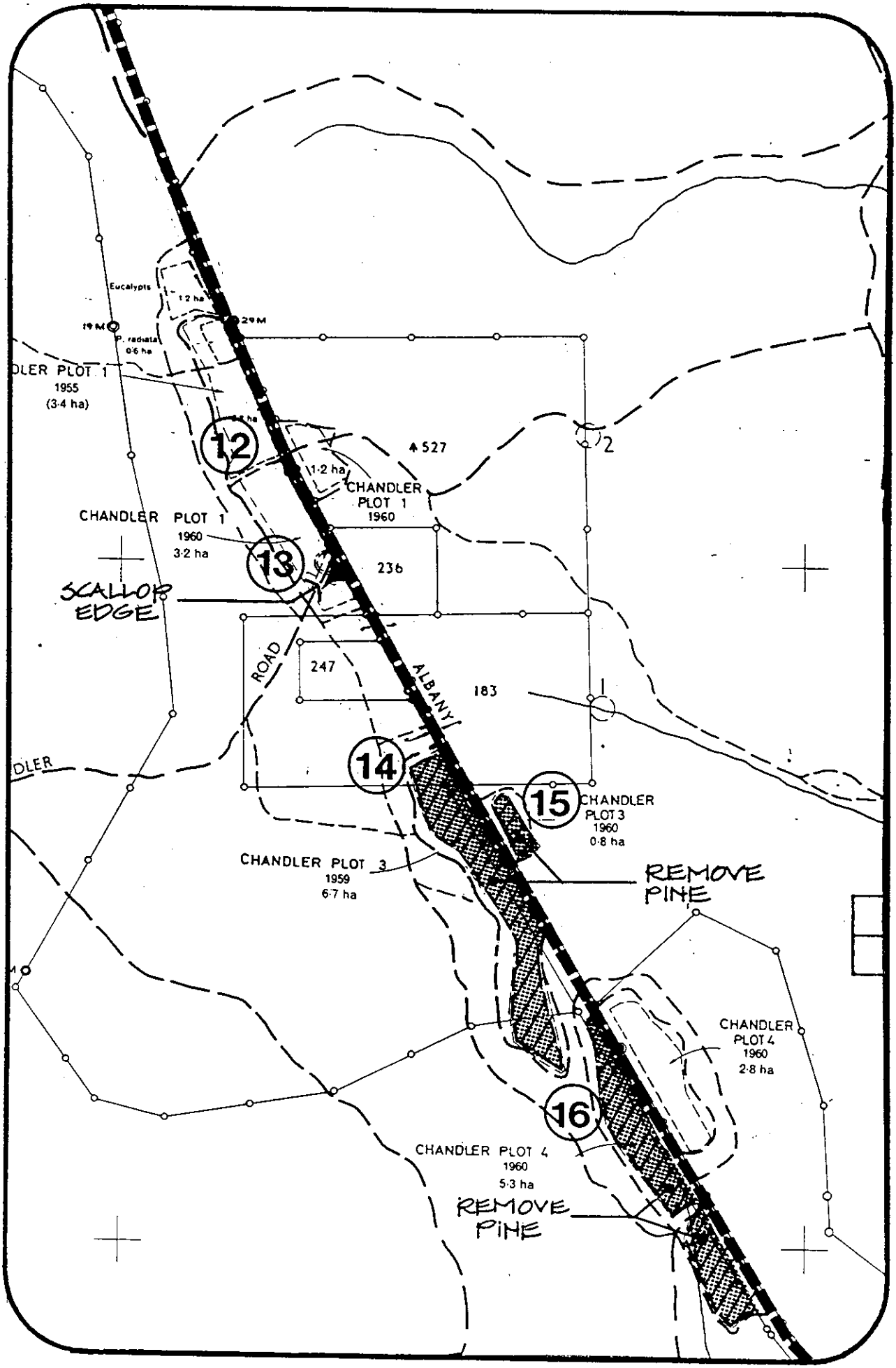
Contour maps	=	1: 50 000
Plantation maps	=	1:12 500
Sites 58-61	=	1:25 000

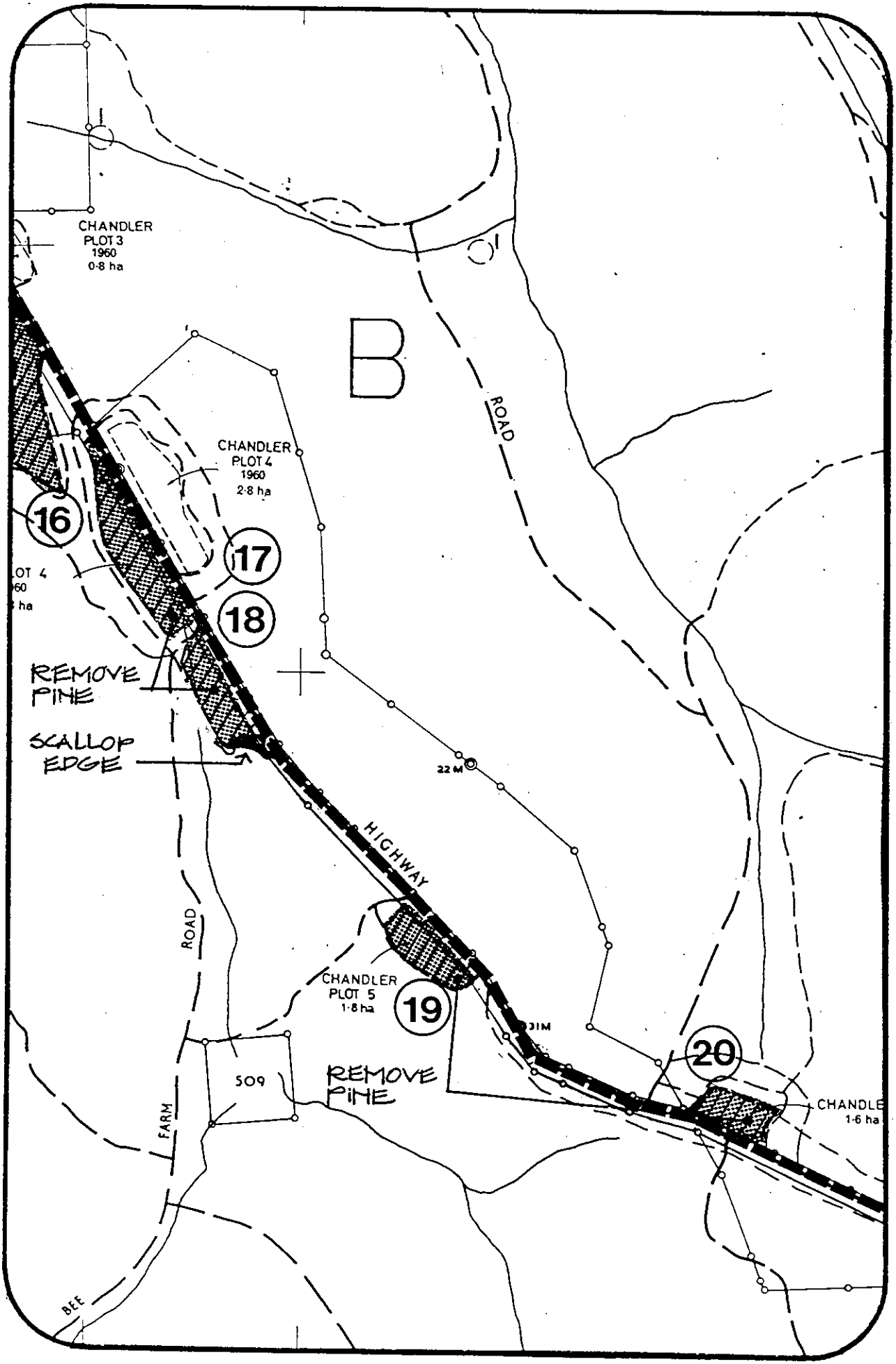
 Areas to be clearfelled

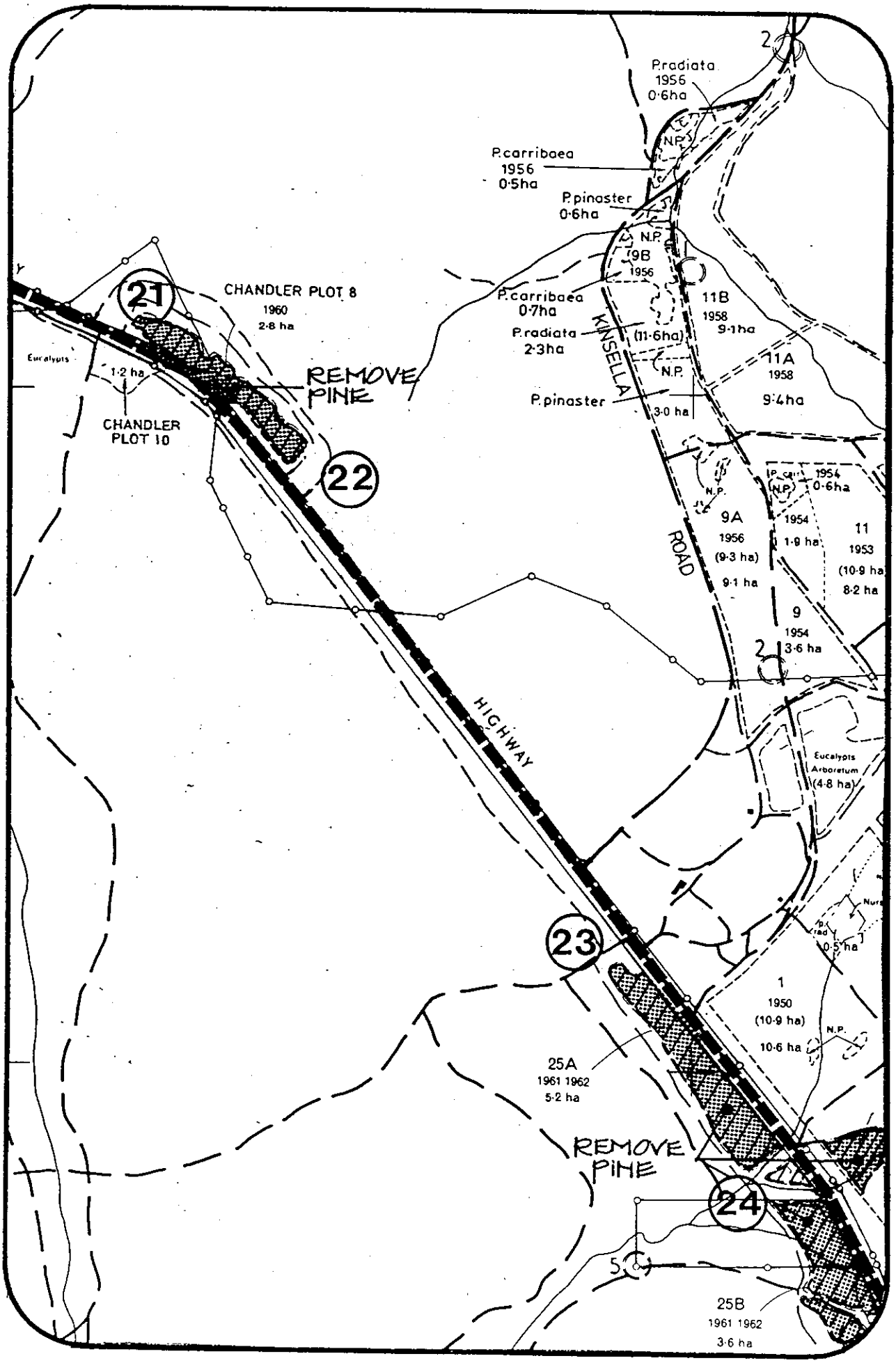

ALBANY ROAD
CHESTERMAN
BROOK
DARLINGTON
CANNING
CURTIS
DALE
HIGHWAY
MOUNT
1
2
3
4
5
6
BMAW3
332·22
BMAW4
326·0

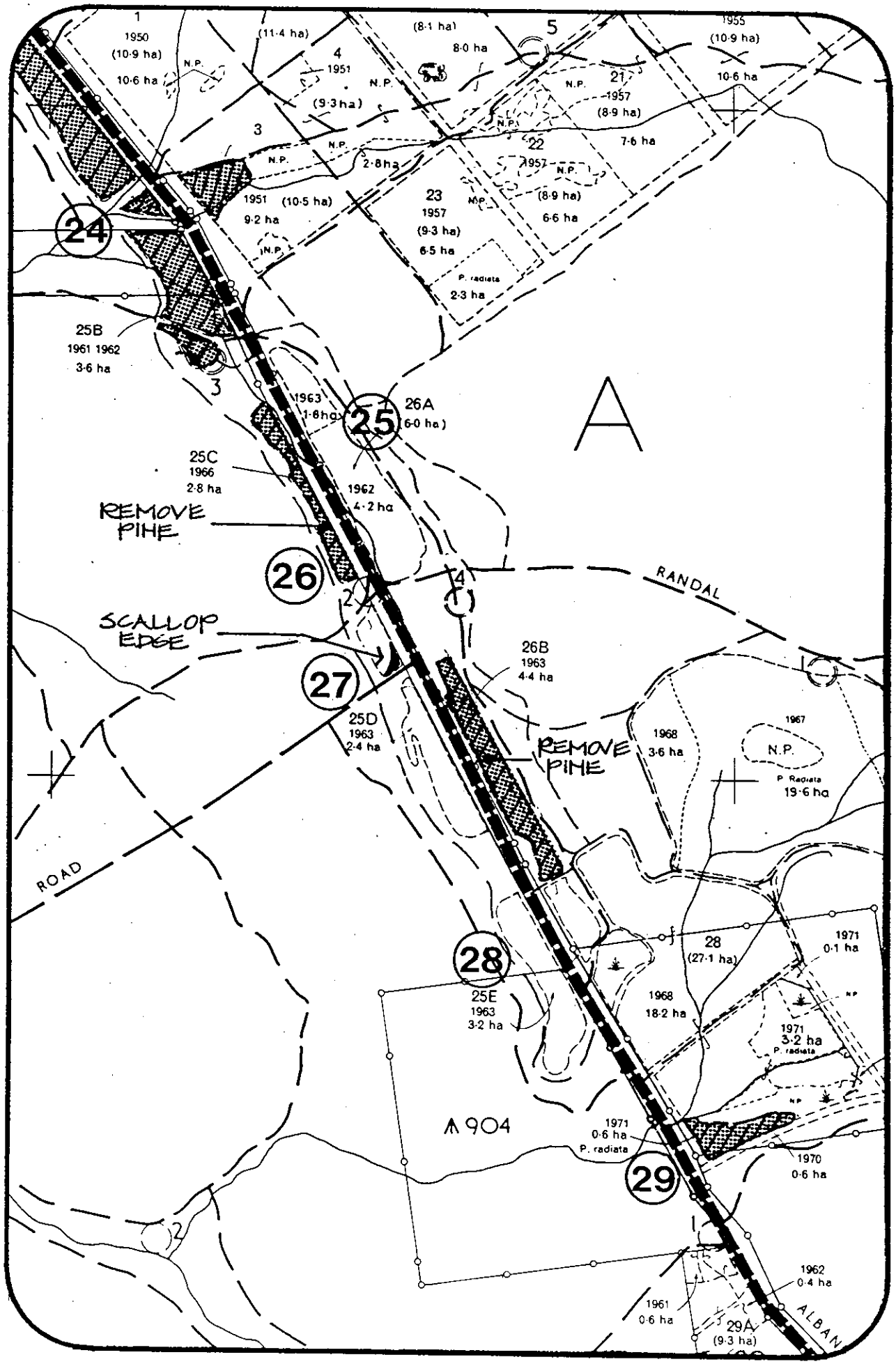

DAM
TODD
ROAD
1
2
3
4
7
8
9
317
115
W
Churchman Plot 13 P.D.
Churchman Plot 14 P.D.
McALLISTER ROAD
Chandler Plot 34
ALBANY HIGHWAY
Chandler Plot 36 P.D.
Chandler Plot 40 P.D.
Chandler Plot 2
CANNING
THIRTY-ONE MILE ROAD
TWENTY-EIGHT MILE ROAD
Chandler Plot 37
Chandler Plot 41 P.D.
Chandler Plot 1
527
236
66
67

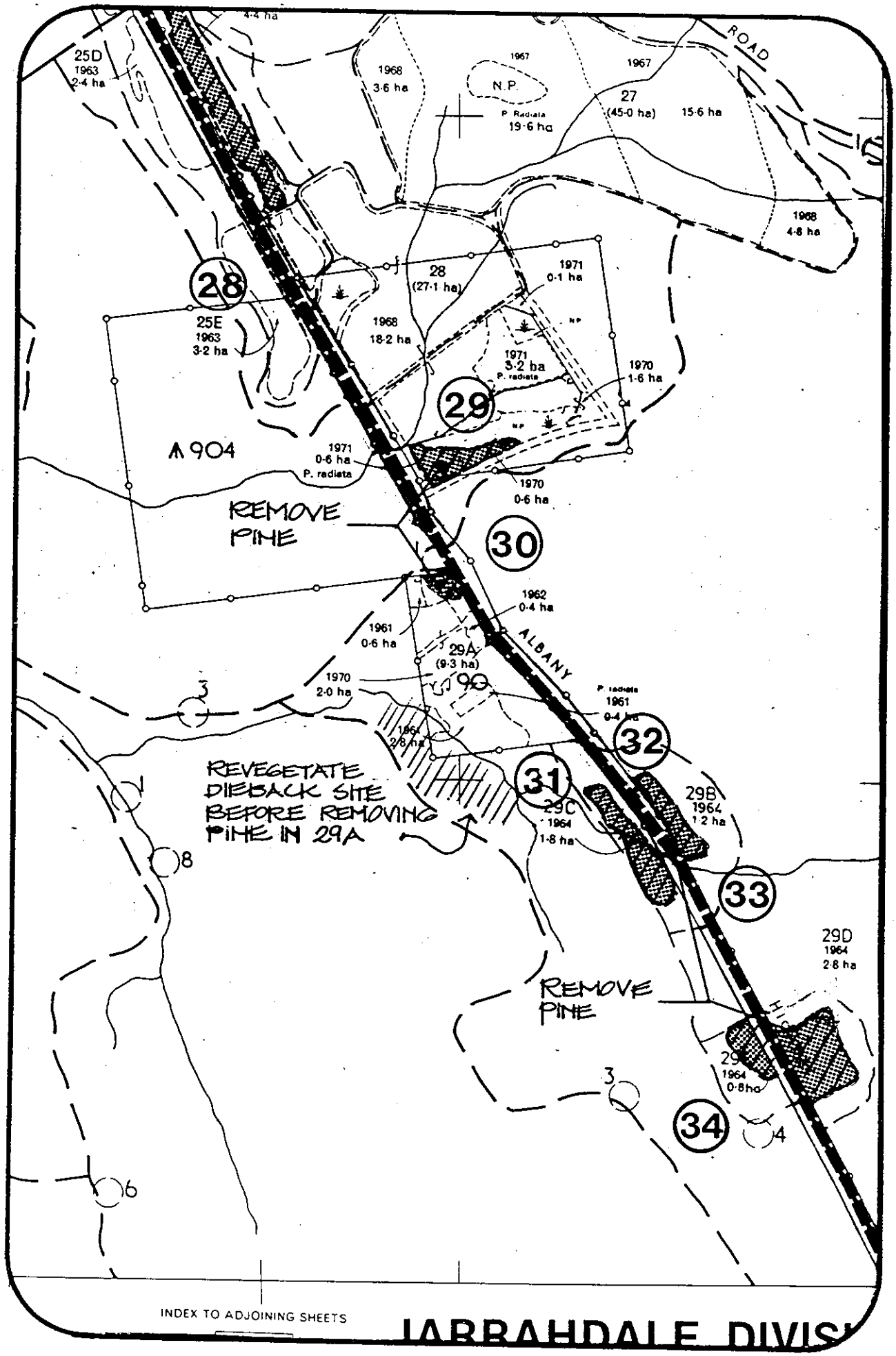

CHANDLER
PLOT 2
1959
6·5 ha
10
SCALLOP
EDGE
11
1·2 ha
29M
19M
P. radiata
0·6 ha
DLER PLOT 1
1955
(3·4 ha)
2·8 ha
12
527
1·2 ha
CHANDLER
PLOT 1
1960
CHANDLER PLOT 1
1960
3·2 ha
236
247
ROAD
ALBANY
183
NDLER
CHANDLER
PLOT 3
1960
0·8 ha
CHANDLER PLOT 3
1959
6·7 ha

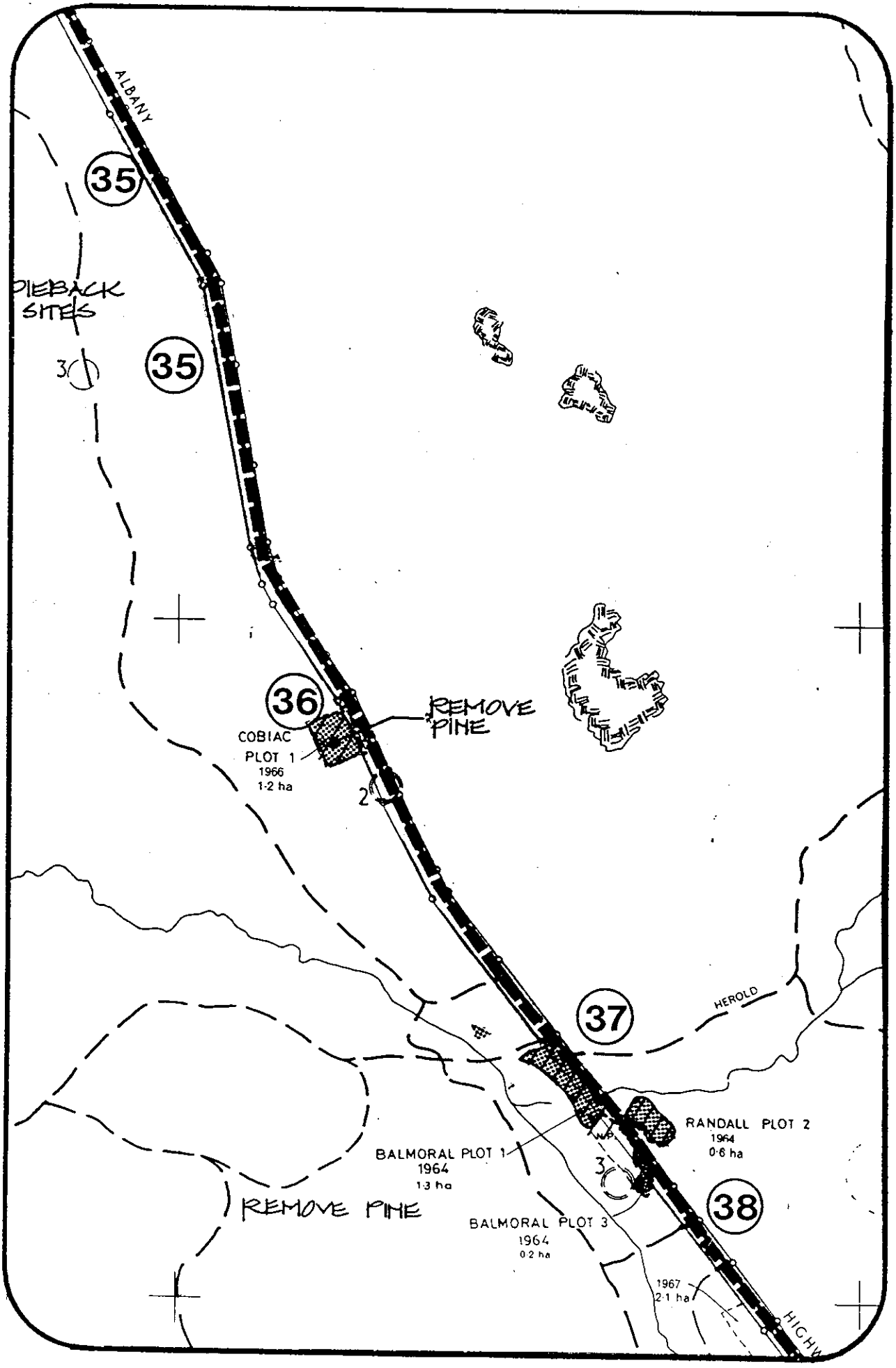

Eucalypts
1·2 ha
19M
29M
P. radiata
0·6 ha
DLER PLOT 1
1955
(3·4 ha)
12
1·2 ha
527
CHANDLER
PLOT 1
1960
CHANDLER PLOT 1
1960
3·2 ha
13
236
SCALLOP
EDGE
ROAD
247
ALBANY
183
DLER
14
15
CHANDLER
PLOT 3
1960
0·8 ha
CHANDLER PLOT 3
1959
6·7 ha
REMOVE
PINE
CHANDLER
PLOT 4
1960
2·8 ha
16
CHANDLER PLOT 4
1960
5·3 ha
REMOVE
PINE

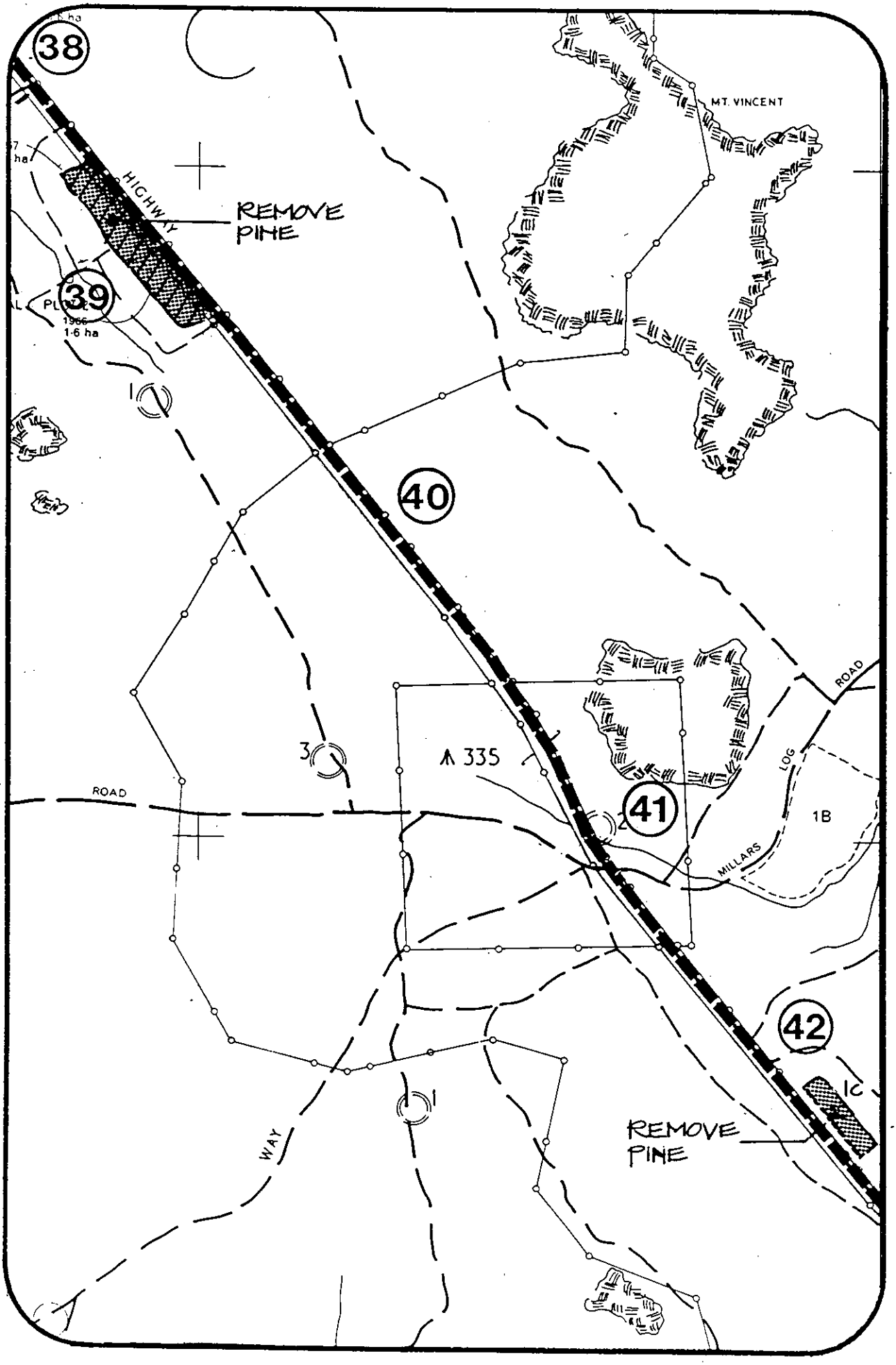

CHANDLER
PLOT 3
1960
0·8 ha
B
ROAD
CHANDLER
PLOT 4
1960
2·8 ha
16
17
18
REMOVE
PINE
SCALLOP
EDGE
22 M
HIGHWAY
ROAD
CHANDLER
PLOT 5
1·8 ha
19
20
509
REMOVE
PINE
FARM
BEE
CHANDLE
1·6 ha

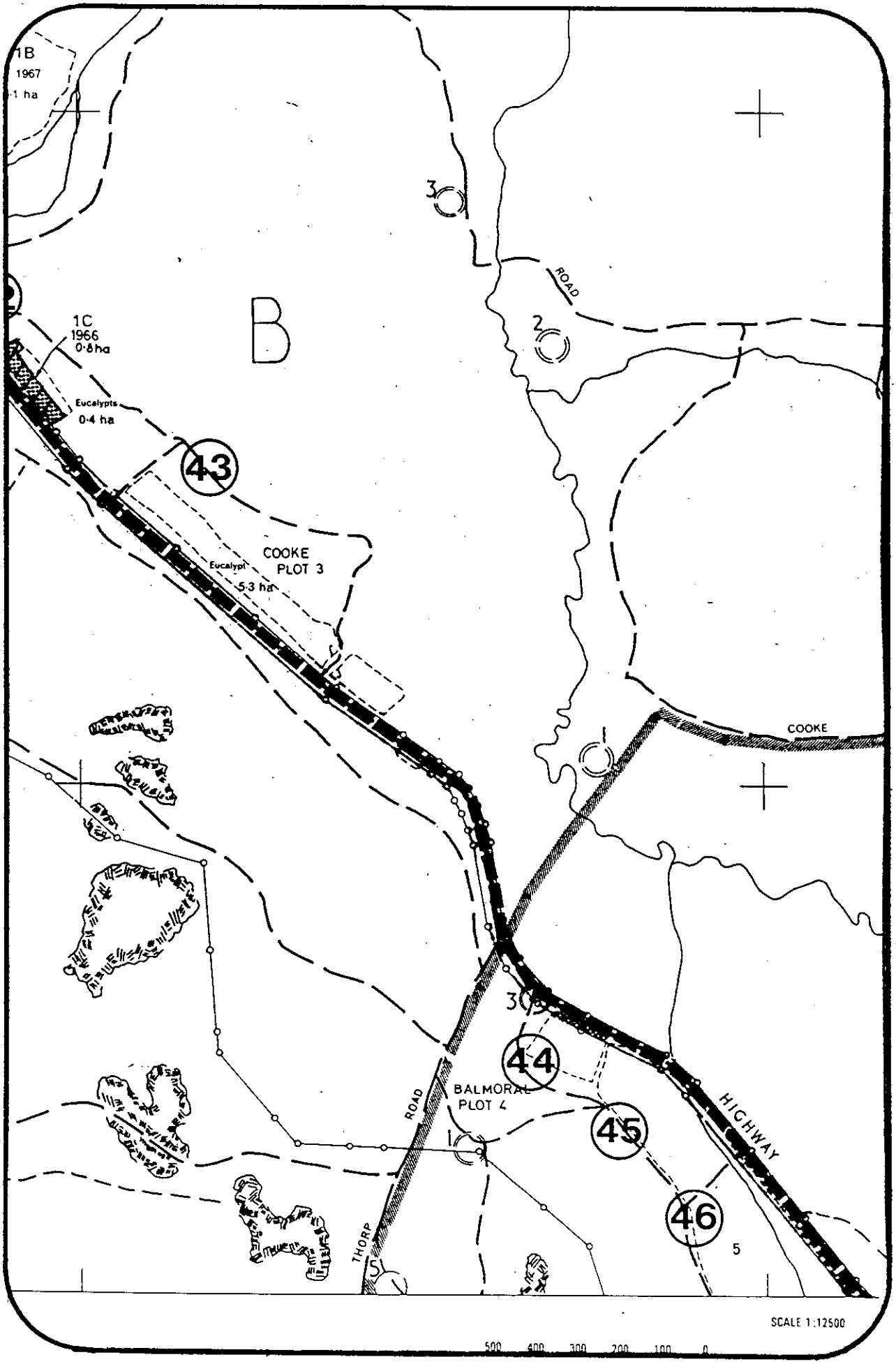

P.radiata
1956
0·6ha
P.carribaea
1956
0·5ha
P.pinaster
0·6ha
N.P.
9B
1956
P.carribaea
0·7ha
P.radiata
2·3ha
11B
1958
9·1ha
(11·6ha)
KINSELLA
ROAD
11A
1958
9·4ha
P.pinaster
3·0 ha
N.P.
1954
0·6ha
9A
1956
(9·3 ha)
9·1 ha
1954
1·9 ha
11
1953
(10·9 ha)
8·2 ha
9
1954
3·6 ha
CHANDLER PLOT 8
1960
2·8 ha
REMOVE PINE
CHANDLER
PLOT 10
1·2 ha
Eucalypts
HIGHWAY
Eucalypts
Arboretum
(4·8 ha)
0·5 ha
1
1950
(10·9 ha)
10·6 ha
25A
1961 1962
5·2 ha
REMOVE
PINE
25B
1961 1962
3·6 ha
21
22
23
24
2
5

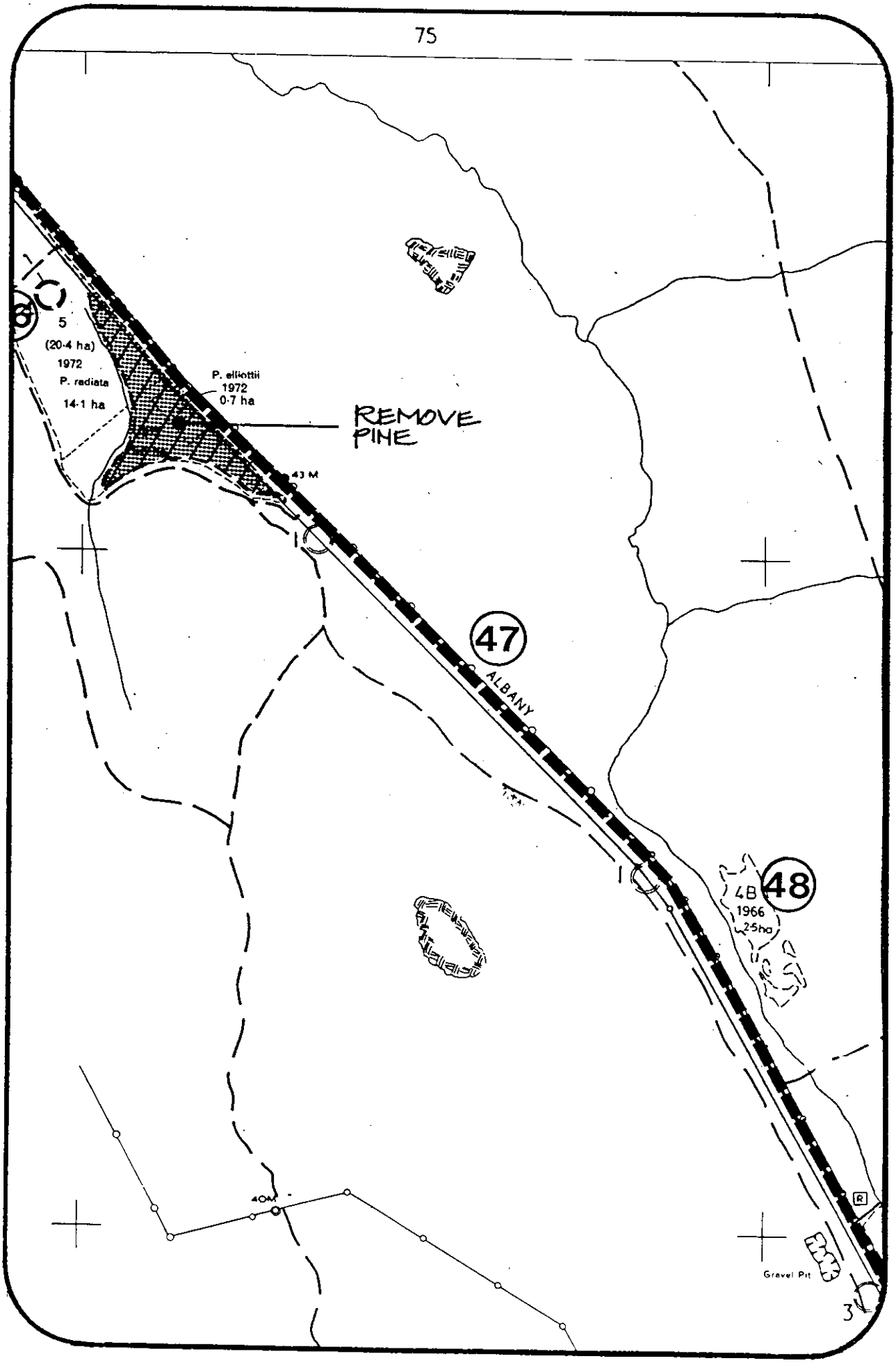

1
1950
(10·9 ha)
10·6 ha
N.P.
(11·4 ha)
4
1951
(9·3 ha)
N.P.
3
N.P.
N.P.
2·8 ha
1951
(10·5 ha)
9·2 ha
N.P.
(8·1 ha)
8·0 ha
5
N.P.
21
1957
(8·9 ha)
7·6 ha
22
1957
N.P.
(8·9 ha)
6·6 ha
23
1957
(9·3 ha)
6·5 ha
P. radiata
2·3 ha
1955
(10·9 ha)
10·6 ha
24
25B
1961 1962
3·6 ha
3
1963
1·8 ha
25
26A
(6·0 ha)
A
25C
1966
2·8 ha
1962
4·2 ha
REMOVE PINE
26
2
4
RANDAL
SCALLOP EDGE
27
26B
1963
4·4 ha
25D
1963
2·4 ha
REMOVE PINE
1968
3·6 ha
1967
N.P.
P. Radiata
19·6 ha
ROAD
28
(27·1 ha)
1971
0·1 ha
28
25E
1963
3·2 ha
1968
18·2 ha
1971
3·2 ha
P. radiata
N.P.
A 904
1971
0·6 ha
P. radiata
29
1970
0·6 ha
1
2
1962
0·4 ha
1961
0·6 ha
29A
(9·3 ha)
ALBAN

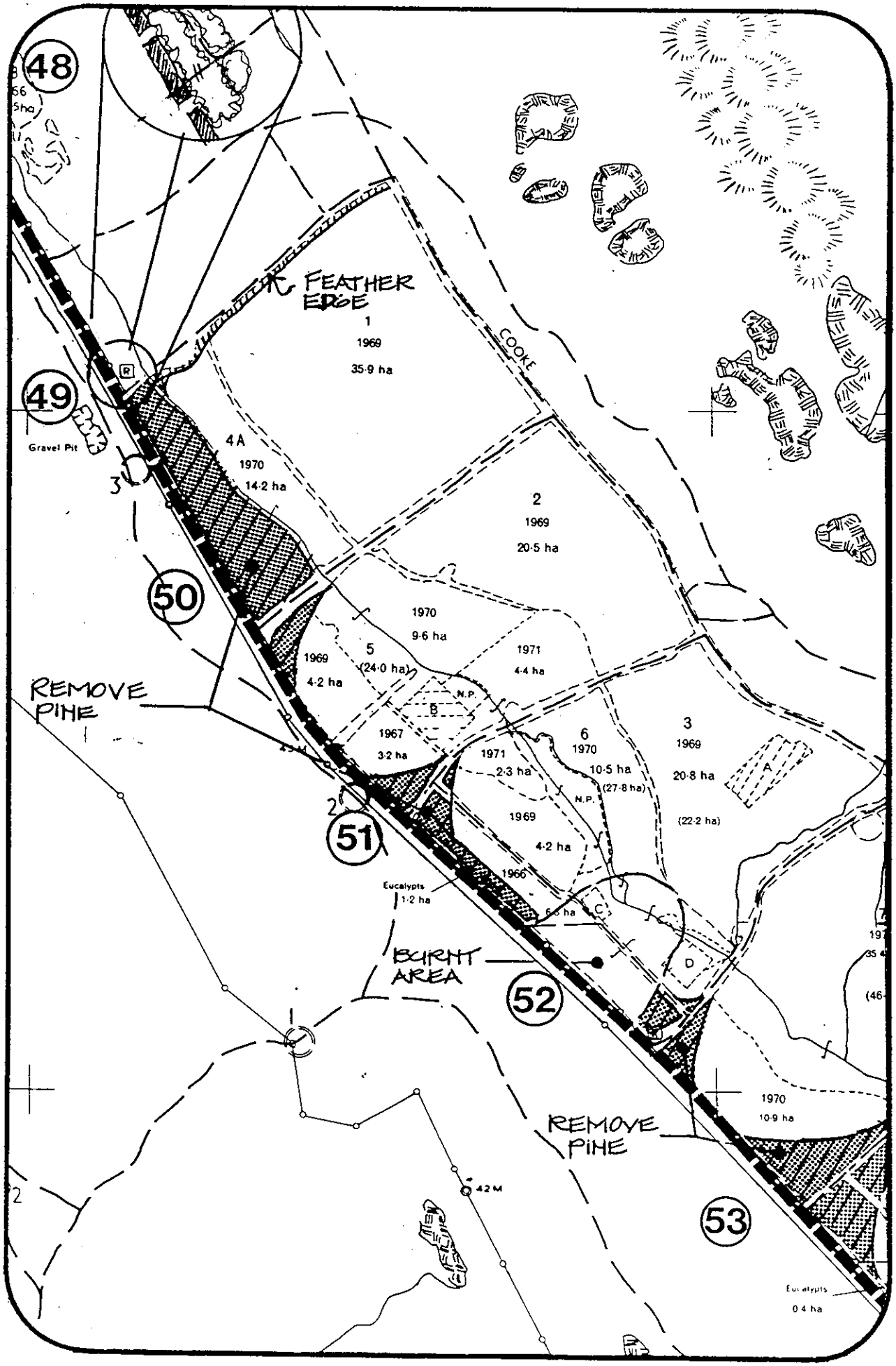

ROAD
25D
1963
2·4 ha
1968
3·6 ha
1967
N.P.
P. Radiata
19·6 ha
1967
27
(45·0 ha)
15·6 ha
1968
4·8 ha
28
(27·1 ha)
1971
0·1 ha
28
25E
1963
3·2 ha
1968
18·2 ha
1971
3·2 ha
P. radiata
1970
1·6 ha
29
904
1971
0·6 ha
P. radiata
1970
0·6 ha
REMOVE
PINE
30
1962
0·4 ha
1961
0·6 ha
29A
(9·3 ha)
ALBANY
1970
2·0 ha
90
P. radiata
1961
0·4 ha
32
1961
2·8 ha
REVEGETATE
DIEBACK SITE
BEFORE REMOVING
PINE IN 29A
31
29C
1964
1·8 ha
29B
1964
1·2 ha
33
29D
1964
2·8 ha
REMOVE
PINE
29
1964
0·8ha
34
INDEX TO ADJOINING SHEETS
JARRAHDALE DIVIS

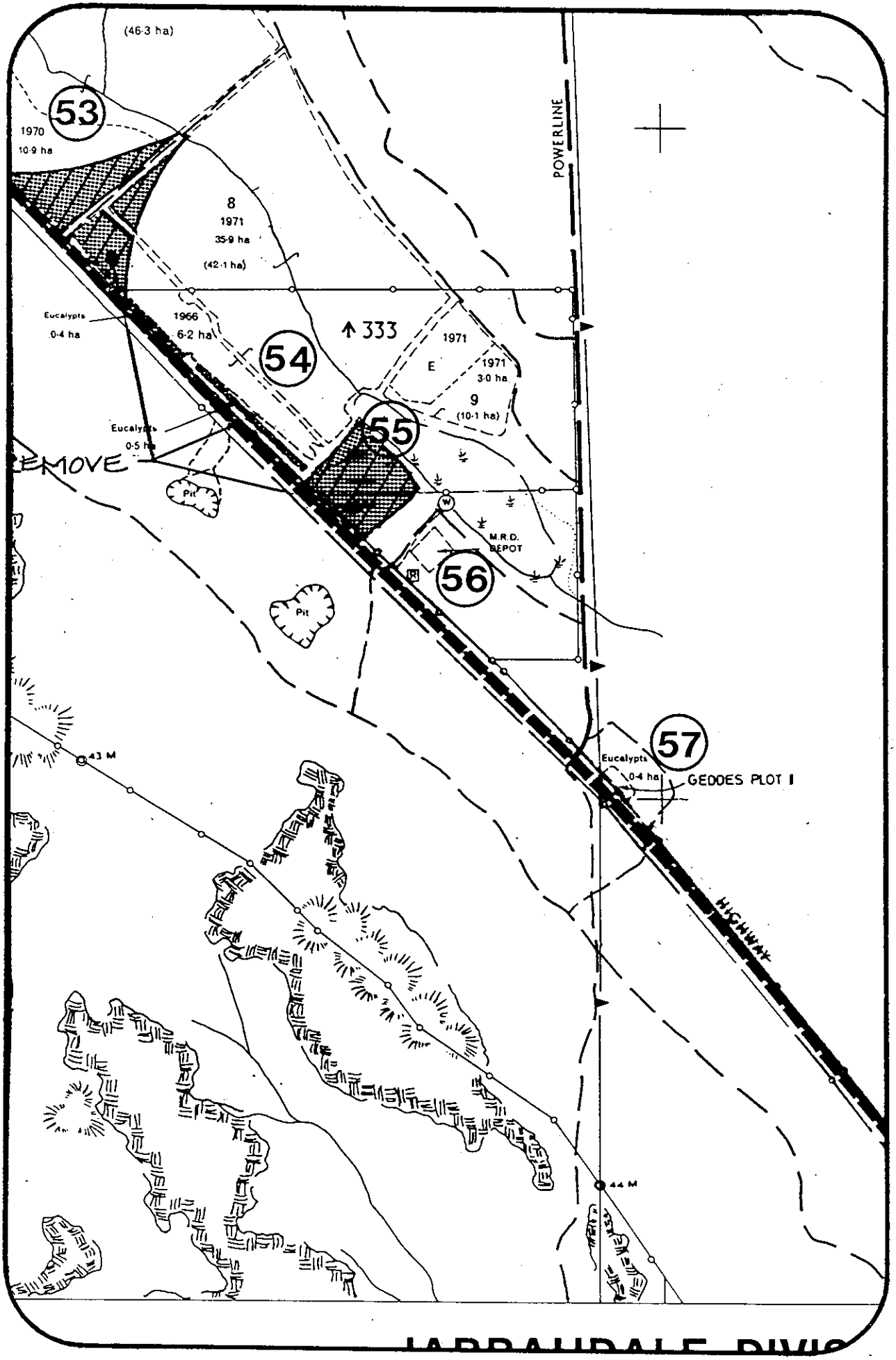

ALBANY
35
35
DIEBACK SITES
3
36
REMOVE PINE
COBIAC PLOT 1
1966
1·2 ha
2
37
HEROLD
RANDALL PLOT 2
1964
0·6 ha
BALMORAL PLOT 1
1964
1·3 ha
REMOVE PINE
BALMORAL PLOT 3
1964
0·2 ha
38
1967
2·1 ha

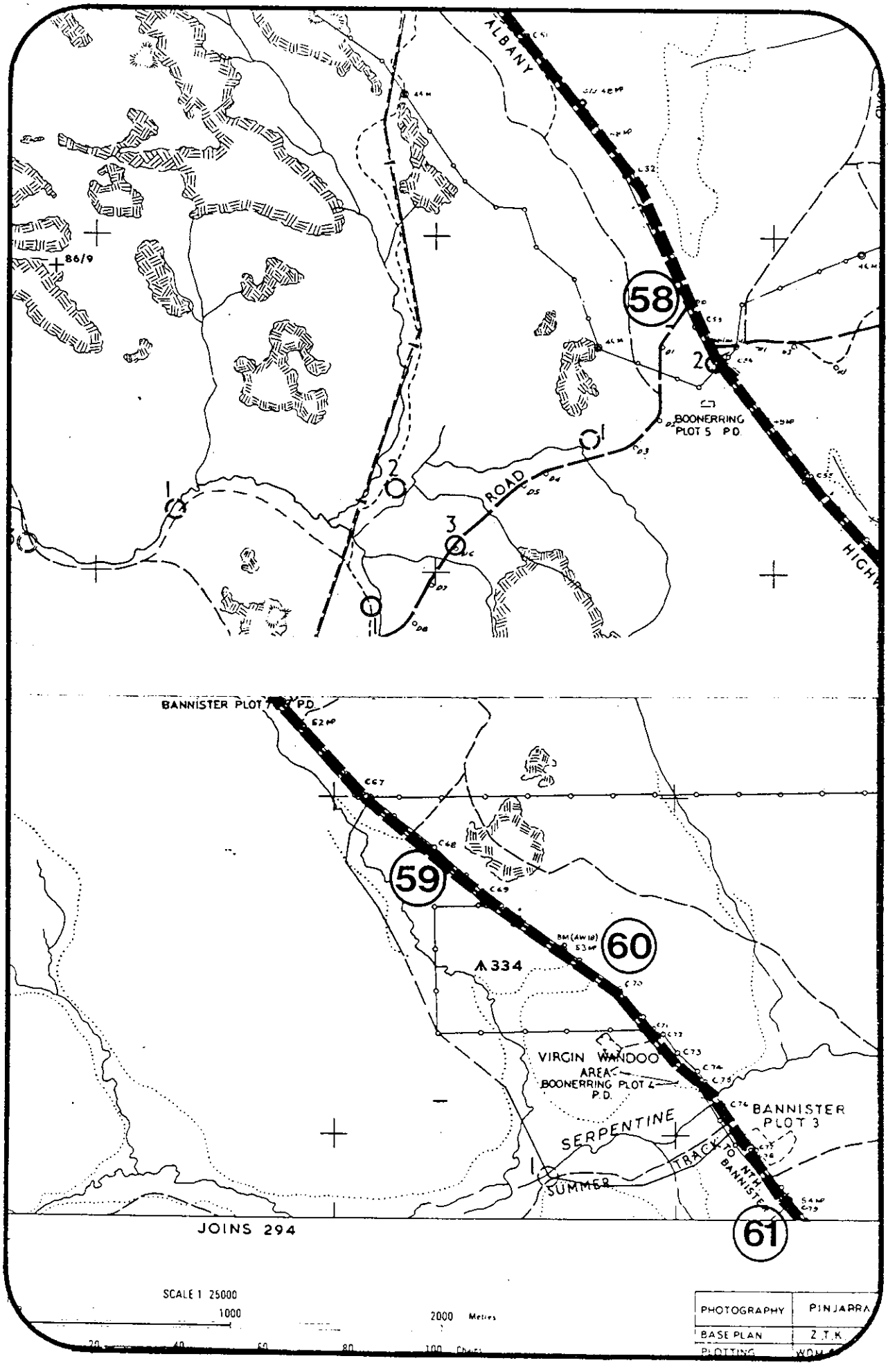

38
MT. VINCENT
HIGHWAY
REMOVE PINE
39
1966
1·6 ha
40
ROAD
335
41
LOG
1B
MILLARS
42
1C
REMOVE PINE
WAY


1B
1967
·1 ha
1C
1966
0·8 ha
Eucalypts
0·4 ha
B
ROAD
43
COOKE
PLOT 3
Eucalypt
5·3 ha
COOKE
44
BALMORAL
PLOT 4
ROAD
45
HIGHWAY
46
THORP
SCALE 1:12500
500 400 300 200 100 0


5
(20·4 ha)
1972
P. radiata
14·1 ha
P. elliottii
1972
0·7 ha
REMOVE PINE
43 M
47
ALBANY
48
4B
1966
4·5ha
40M
Gravel Pit
R
3


48
49
50
51
52
53
FEATHER EDGE
1
1969
35·9 ha
COOKE
Gravel Pit
4A
1970
14·2 ha
2
1969
20·5 ha
1970
9·6 ha
5
(24·0 ha)
1969
4·2 ha
1971
4·4 ha
REMOVE PINE
B
1967
3·2 ha
1971
2·3 ha
6
1970
10·5 ha
(27·8 ha)
3
1969
20·8 ha
(22·2 ha)
A
1969
4·2 ha
1966
Eucalypts
1·2 ha
BURNT AREA
C
D
REMOVE PINE
1970
10·9 ha
42 M
Eucalypts
0·4 ha


(46·3 ha)
53
1970
10·9 ha
8
1971
35·9 ha
(42·1 ha)
POWERLINE
Eucalypts
0·4 ha
1966
6·2 ha
54
333
1971
E
1971
3·0 ha
9
(10·1 ha)
55
Eucalypts
0·5 ha
REMOVE
Pit
M.R.D.
DEPOT
56
Pit
43 M
57
Eucalypts
0·4 ha
GEDDES PLOT I
HIGHWAY
44 M


ALBANY
58
BOONERRING PLOT 5 P.O.
ROAD
HIGH
BANNISTER PLOT 7 P.O.
59
60
A334
VIRGIN WANDOO AREA
BOONERRING PLOT 4 P.O.
BANNISTER PLOT 3
SERPENTINE
TRACK TO NTH. BANNISTER
SUMMER
61
JOINS 294
SCALE 1 25000
1000
2000 Metres
PHOTOGRAPHY
PINJARRA
BASE PLAN
Z.T.K.
PLOTTING

5. TREATMENT PRIORITIES AND PHASING

The previous chapter listed some 61 areas which require treatment in accordance with the objectives of this study. Not all areas will have the same treatment priority and it is realised that there are other demands on the Department's budget in the Jarrahdale Division. For these reasons a system of priorities and phasing of treatments is necessary. The management zones are listed below in terms of their treatment priority.

1. COOKE

This zone contains the best features and associated viewsheds of the total corridor. It also contains a large and highly visible cluster of pine plantations with fringing exotic eucalypts. These plantations currently act to block views from the highway to Mt Cooke and the monadnock chain. Firebreaks and access roads are also highly visible due to their sharp colour contrasts and superimposed linearity on an otherwise non-linear landscape. Such road alignments also act to highlight the linearity of the pine plantations.

Phasing

Of immediate concern is the Cooke plantation area, with its attributes and problems outlined above. Work should focus initially on opening up the pine to provide views to Mt Cooke. This should be followed by improving the presentation of the access road/firebreak system. All pine should eventually be removed to the creek line with the resultant natural regeneration forming filtered views to the pine mid-ground and Mt Cooke background. At the same time the remaining pine (between the creek and Mt Cooke) should be thinned in preparation for its eventual removal at a later date. Sites not within the main plantation area should then be treated.

2. GLENEAGLE

This zone contains the second major cluster of pine plantations. They are highly visible as such and while not blocking any significant views, they none the less form a conspicuous exotic element in an otherwise natural environment. Unlike the Cooke situation, the pines here abut the highway on both sides for a limited distance.

Phasing

Concentrate initial efforts in those areas which contain pine on both sides of the highway. Sites with strip plantations of pine adjacent to the main Gleneagle plantation should receive subsequent treatment. Similar situations but which are further removed from the main plantation should be considered after the above phases have been completed.

3. UPLAND

The upland sites comprise strip plantations of pine interspersed with native bush, various dieback areas, old settlements, and a relatively new length of road alignment. Foreground views predominate with resultant emphasis being placed on the condition of the immediate highway verges.

Phasing

The recent upgrading of the Albany Highway adjacent to a relatively old pine strip plantation merits immediate attention in this zone (site 10). The M.R.D. should be consulted with regard to treatments in this area, e.g. scarifying embankments in new road cutting prior to revegetating with native shrubs. The remaining pine strip plantations should then be considered with phasing being guided by the size of the plantation and its visual impact. Dieback sites should only be considered after all pine sites have been treated.

4. EASTERN WOODLAND

This zone has no pine plantations and is relatively intact. The only treatments are concerned with cleaning up dieback sites in which case phasing would be dictated by the extent and severity of infection.

THE VIEW FROM THE ROAD

CASE STUDY: COOKE VIEWSHED ANALYSIS

6

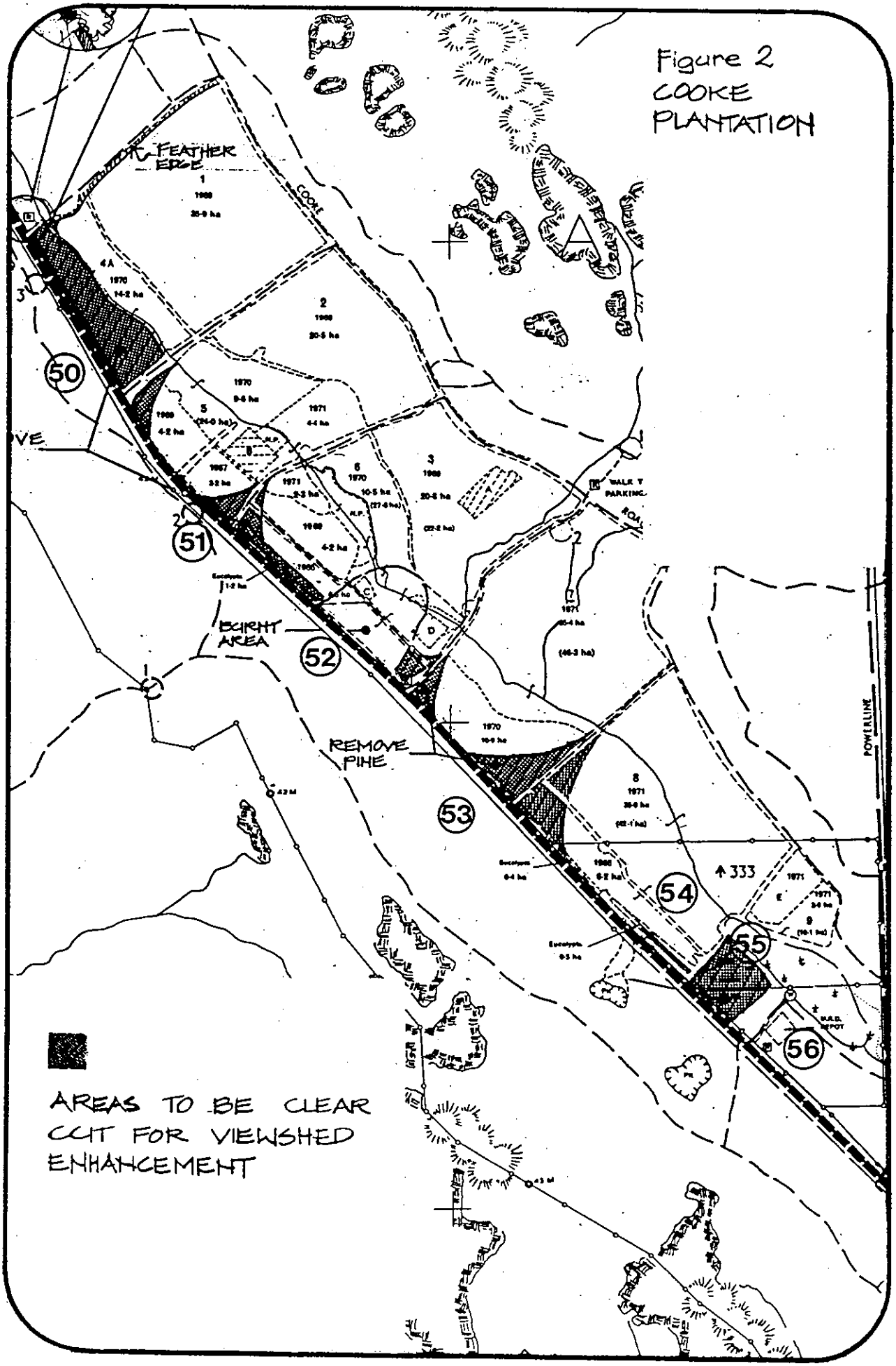
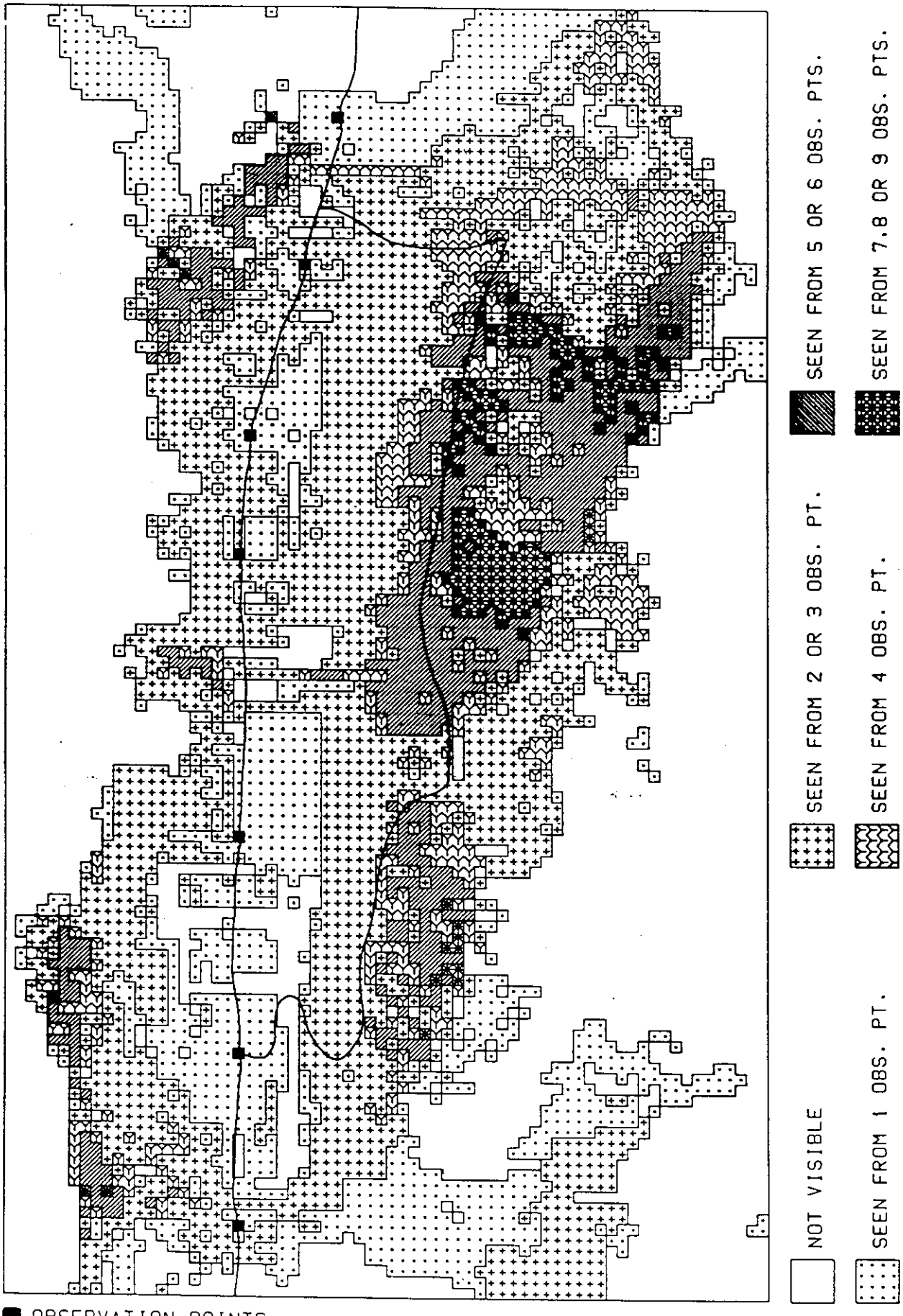


Figure 2
COOKE
PLANTATION
FEATHER EDGE
COOKE
50
51
52
53
54
55
56
BURNT AREA
REMOVE PINE
POWERLINE
WALK T PARKING
333
AREAS TO BE CLEAR CUT FOR VIEWSHED ENHANCEMENT

Figure 3



VISIBILITY USING GROUND-LEVEL DATA

Figure 4

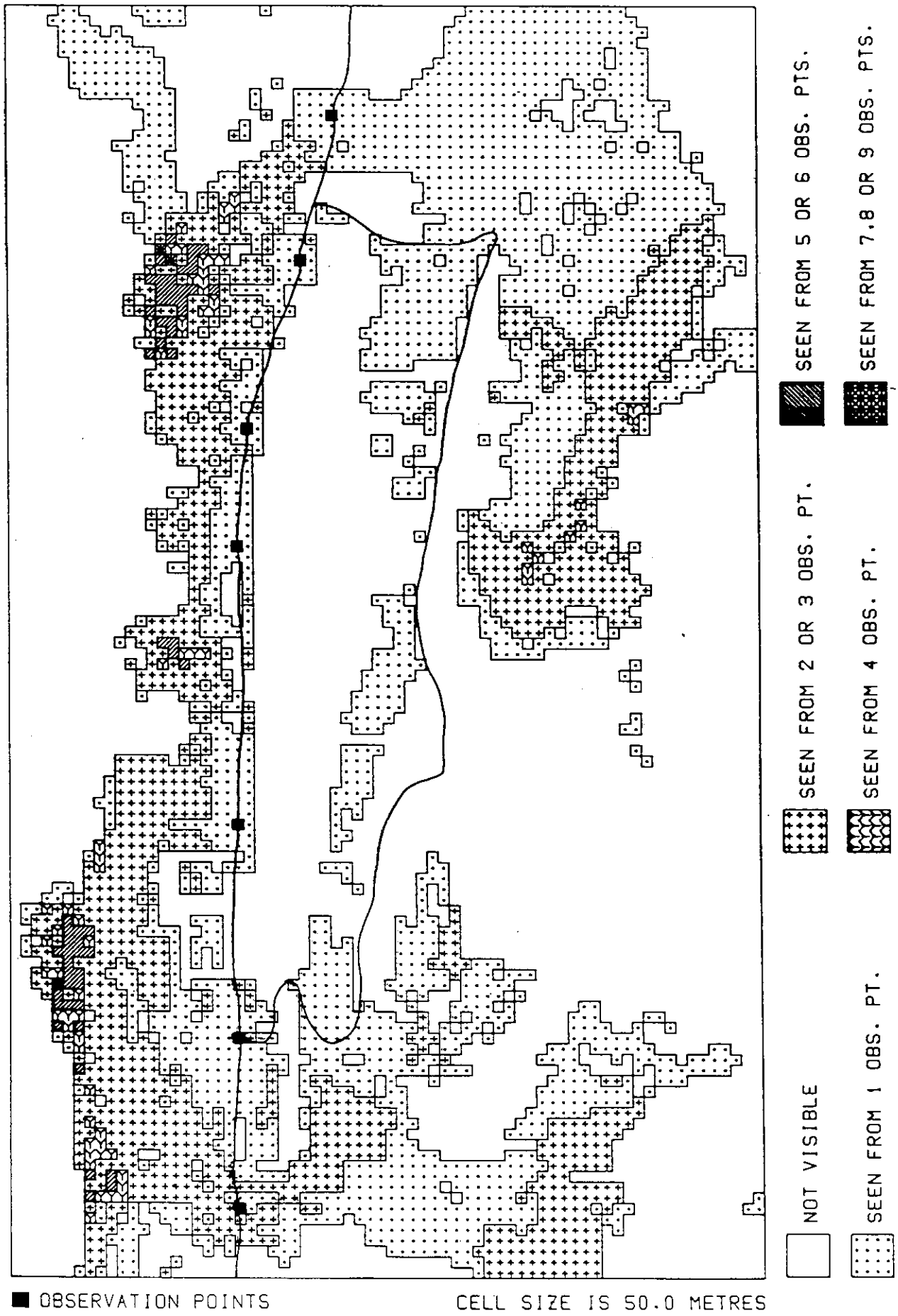
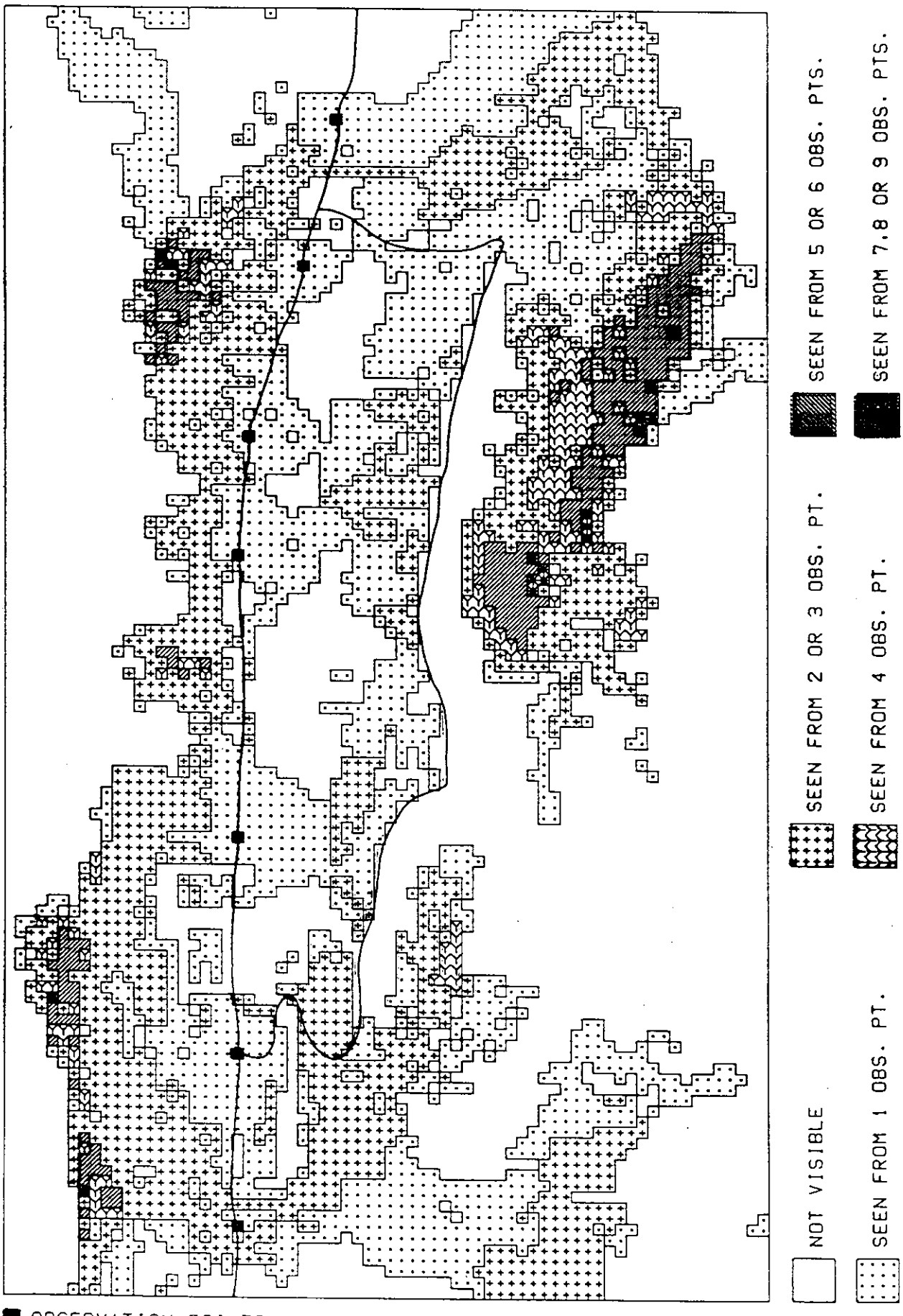

SEEN FROM 5 OR 6 OBS. PTS.
SEEN FROM 7,8 OR 9 OBS. PTS.
SEEN FROM 2 OR 3 OBS. PT.
SEEN FROM 4 OBS. PT.
NOT VISIBLE
SEEN FROM 1 OBS. PT.
OBSERVATION POINTS
CELL SIZE IS 50.0 METRES
PLANTATION AREA PLUS 20 M

Figure 5


SEEN FROM 5 OR 6 OBS. PTS.
SEEN FROM 7,8 OR 9 OBS. PTS.
SEEN FROM 2 OR 3 OBS. PT.
SEEN FROM 4 OBS. PT.
NOT VISIBLE
SEEN FROM 1 OBS. PT.
OBSERVATION POINTS
CELL SIZE IS 50.0 METRES
VISIBILITY AFTER CUTTING

CONCLUSION

This report should be regarded as both a practical aid to forest managers in the Northern Region and as an educational tool for demonstrating forest landscape management/computer applications. With the increasing development of the Department's computer facilities, together with the F.M.I.S. mapping system, it will soon be possible to utilise programmes such as VIEWIT throughout the whole of State forest. Such a programme will also calculate slope and aspect maps which can be used for modelling fire and dieback behaviour and general land use planning.

From a landscape application viewpoint, the computer offers the forest manager an efficient and realistic aid to planning. Optimisation of strategies relating to long term manipulations of the forest environment (clearfelling for woodchip and pines, effects of farmland reafforestation, bauxite mining, reservoir location, road and scenic corridor alignment) can be quickly and pragmatically achieved without the need for destructive experimentation.