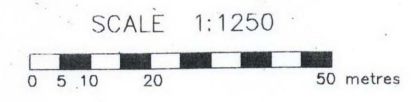
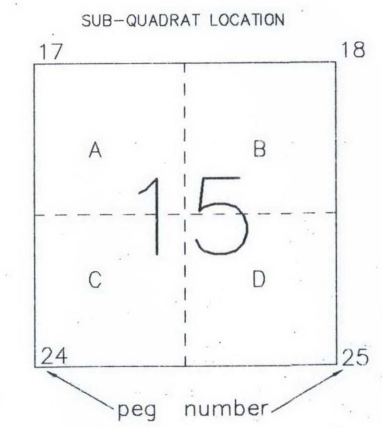


# LEGEND

- DRAINAGE LINE
- 4WD LOGGING TRAIL
- NET STATION

QUADRAT LOCATION

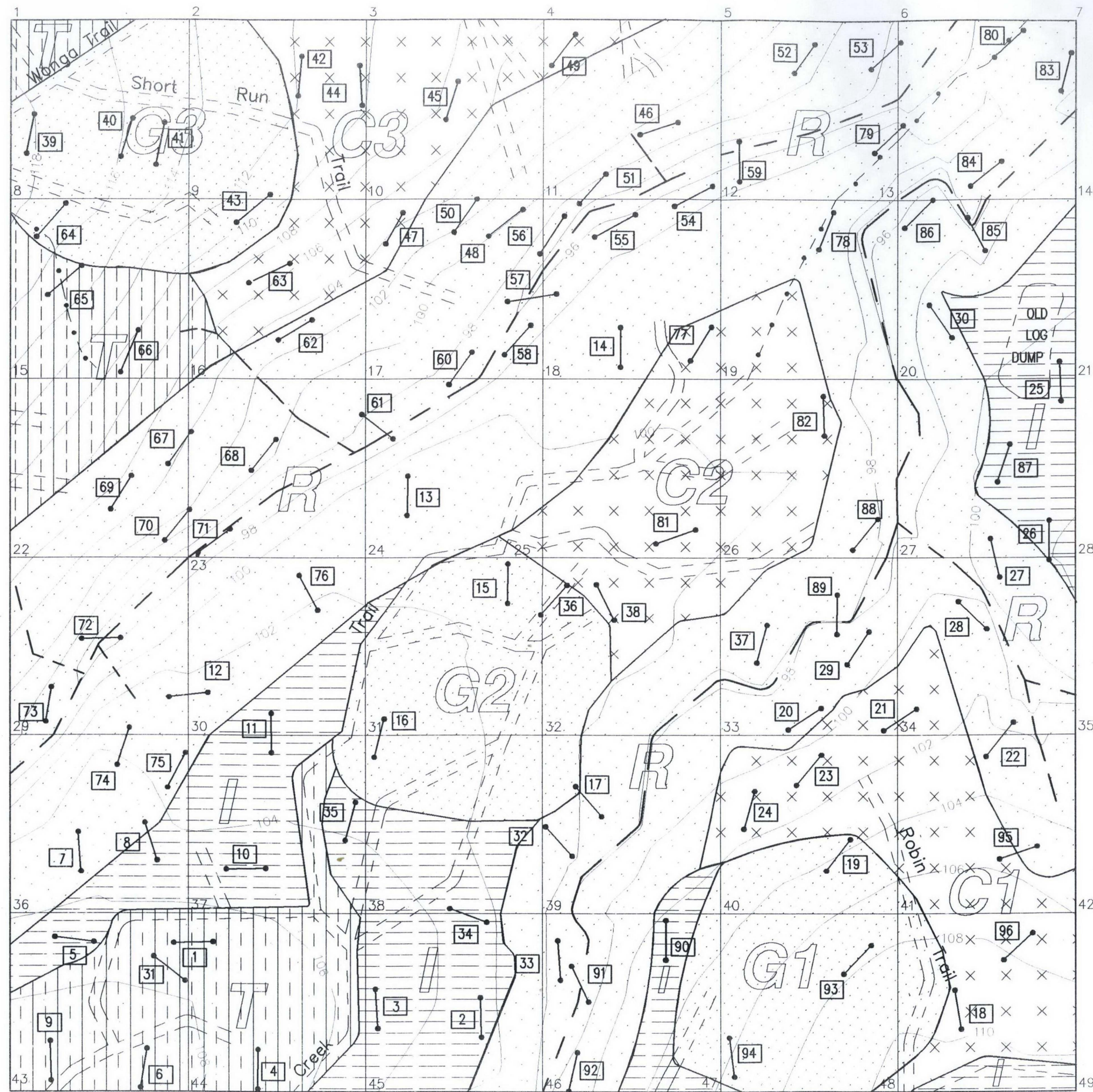
1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36



CONTOUR INTERVAL : 2 METRES



Figure 2.6 Detailed map of the Year 1 control plot in part of Compartment 589, Lower Bucca State Forest, showing net stations, drainage, old logging trails and topography



# LEGEND

C1  
G2

CLUSTER

GAP

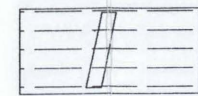
NET STATION



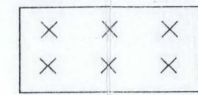
WOOD PRODUCTION ZONE 1 (gaps)



WOOD PRODUCTION ZONE 2 (thinning from below this operation)



INTERSTITIAL ZONE (no logging or burning this operation, minimal disturbance)



BIODIVERSITY CONSERVATION ZONE (clusters)



RIPARIAN ZONE

--- DRAINAGE LINE

--- 4WD LOGGING TRAIL

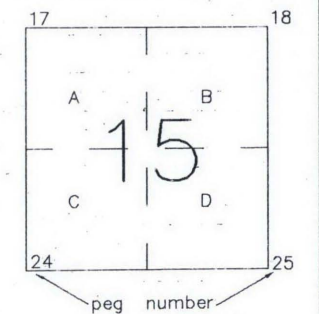
--- FOOT/BULLOCK TRACK



Quadrat Location

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

Sub-Quadrat Location

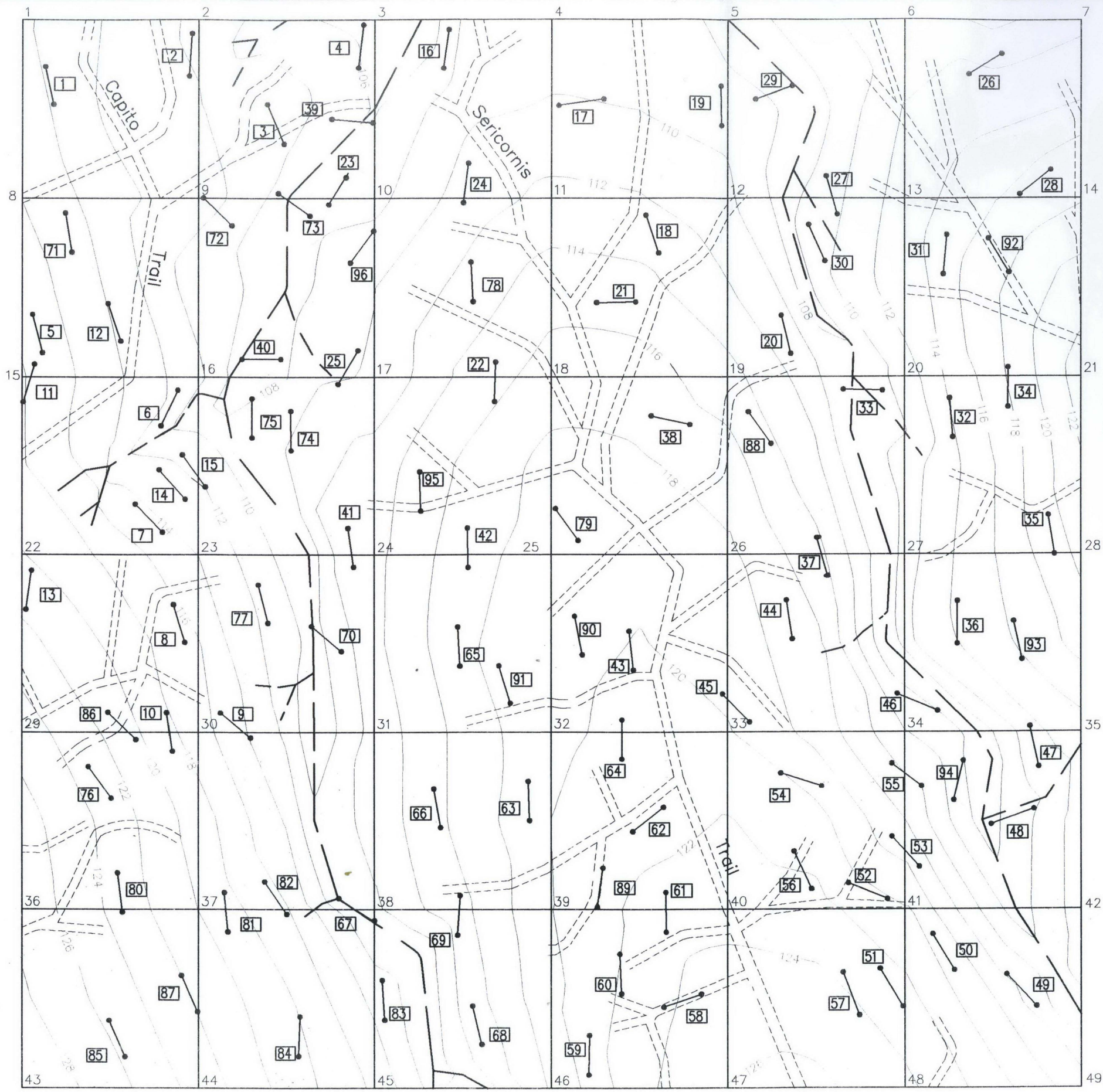


SCALE 1 : 1250

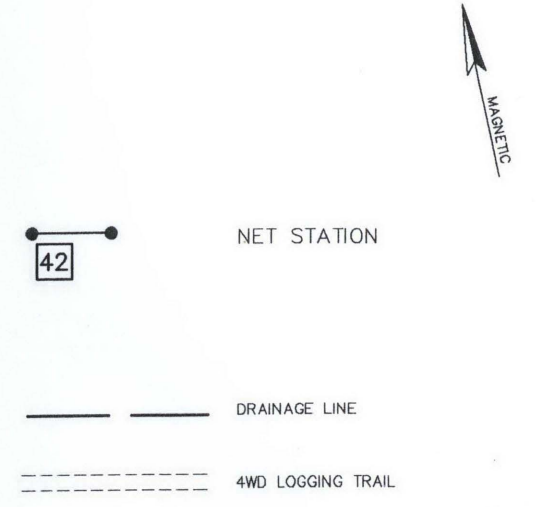


CONTOUR INTERVAL : 2 metres

Figure 2.7 Detailed map of the Year 2 experimental plot in parts of Compartments 595 and 596, Lower Bucca State Forest, showing gaps, clusters, thinning and interstitial areas, riparian zones, net stations, drainage, old logging trails and topography



# LEGEND



QUADRAT LOCATION

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

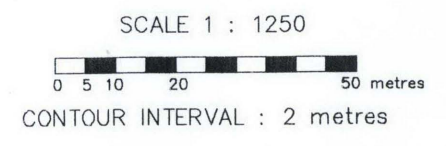
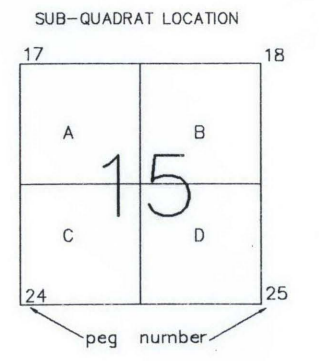
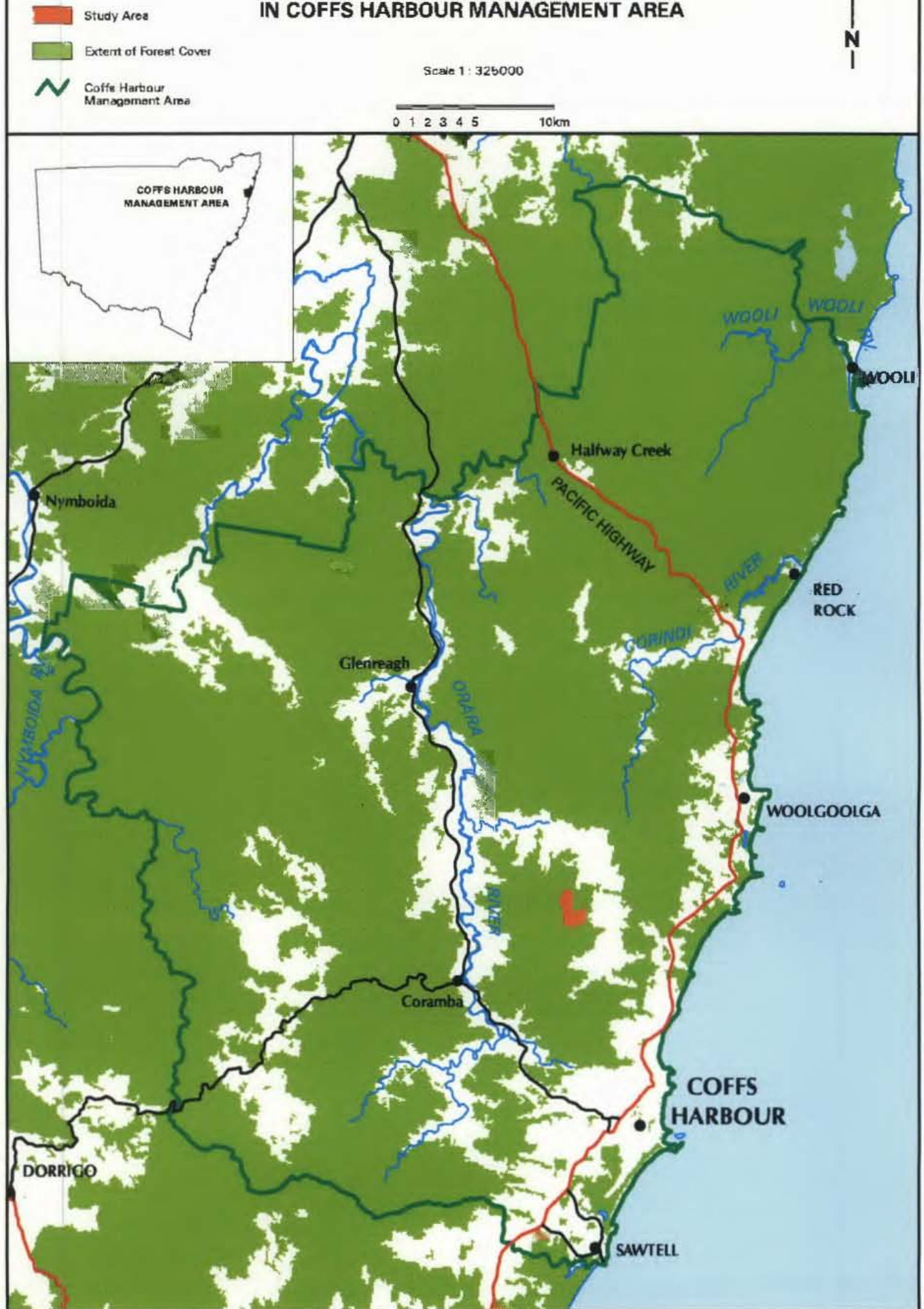





Figure 2.8 Detailed map of the Year 2 control plot in part of Compartment 595, Lower Bucca State Forest, showing net stations, drainage, old logging trails and topography

**FIGURE 2.9**  
**EXTANT FOREST COVER**  
**IN COFFS HARBOUR MANAGEMENT AREA**

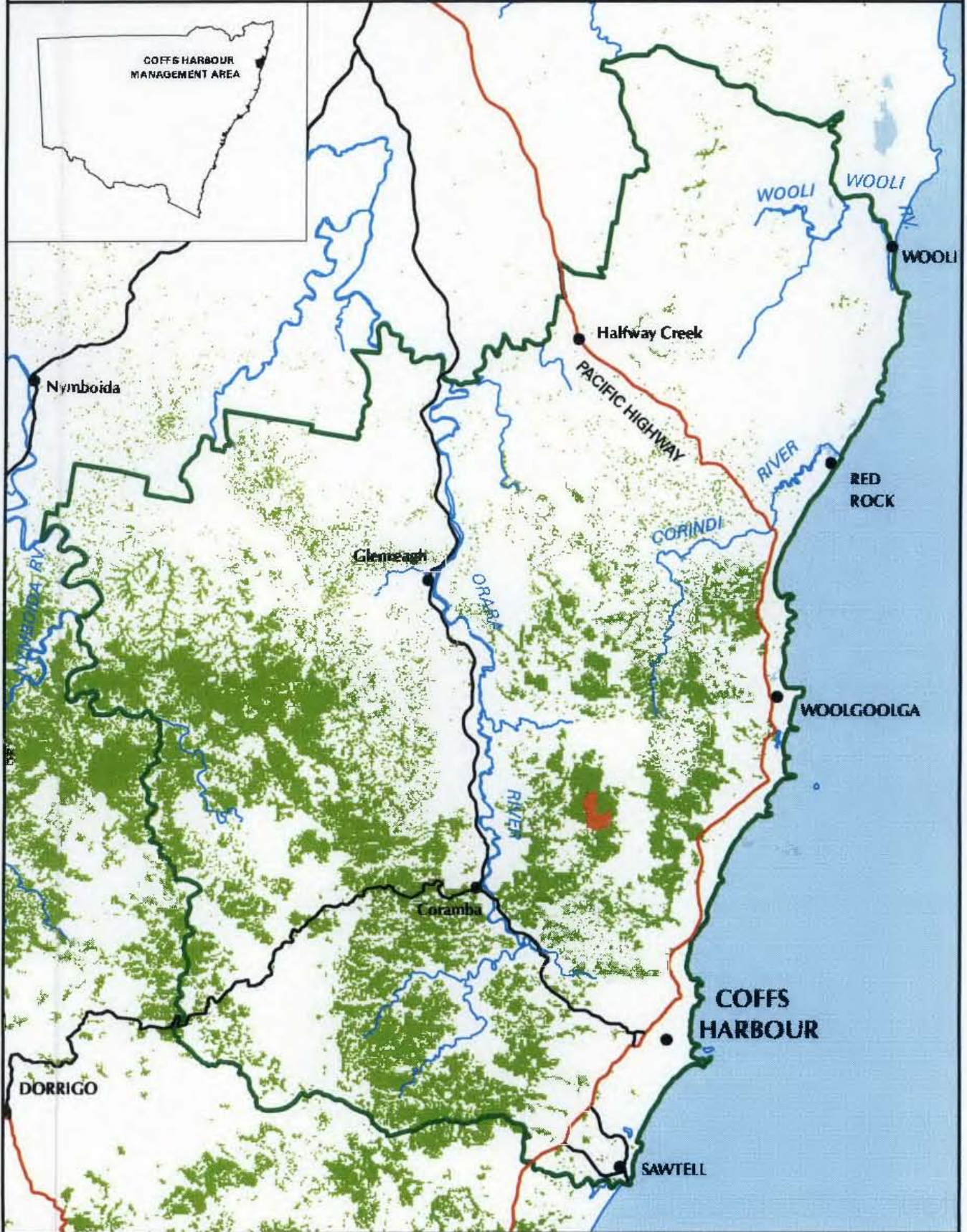


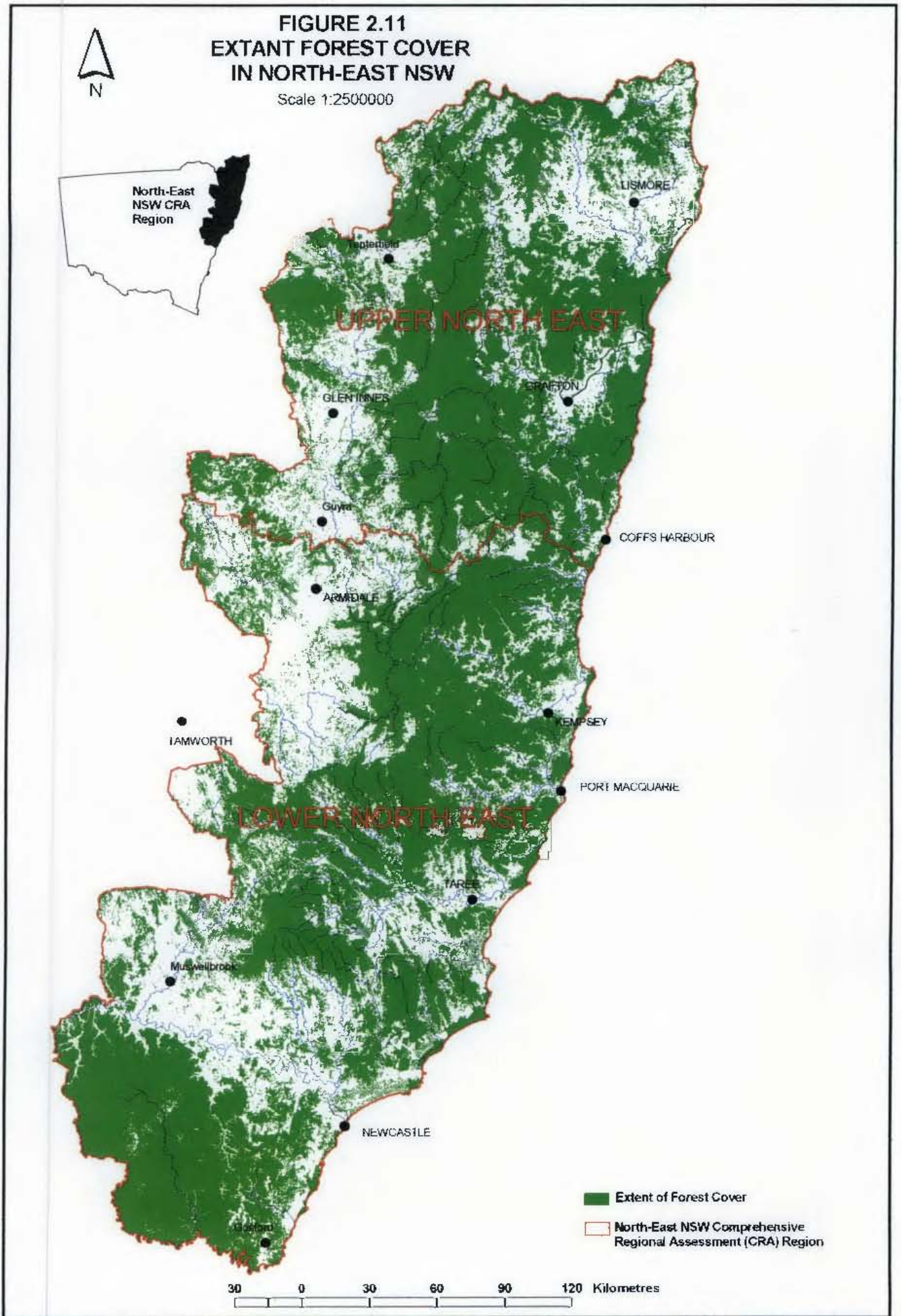
**FIGURE 2.10**  
**EXTANT MOIST HARDWOOD FOREST COVER**  
**IN COFFS HARBOUR MANAGEMENT AREA**

-  Study Area
-  Extent of Moist Hardwood Forest Cover
-  Coffs Harbour Management Area

Scale 1 : 325000

0 1 2 3 4 5 10km





**FIGURE 2.12**  
**EXTANT MOIST HARDWOOD FOREST COVER**  
**IN NORTH-EAST NSW**

Scale 1:2500000

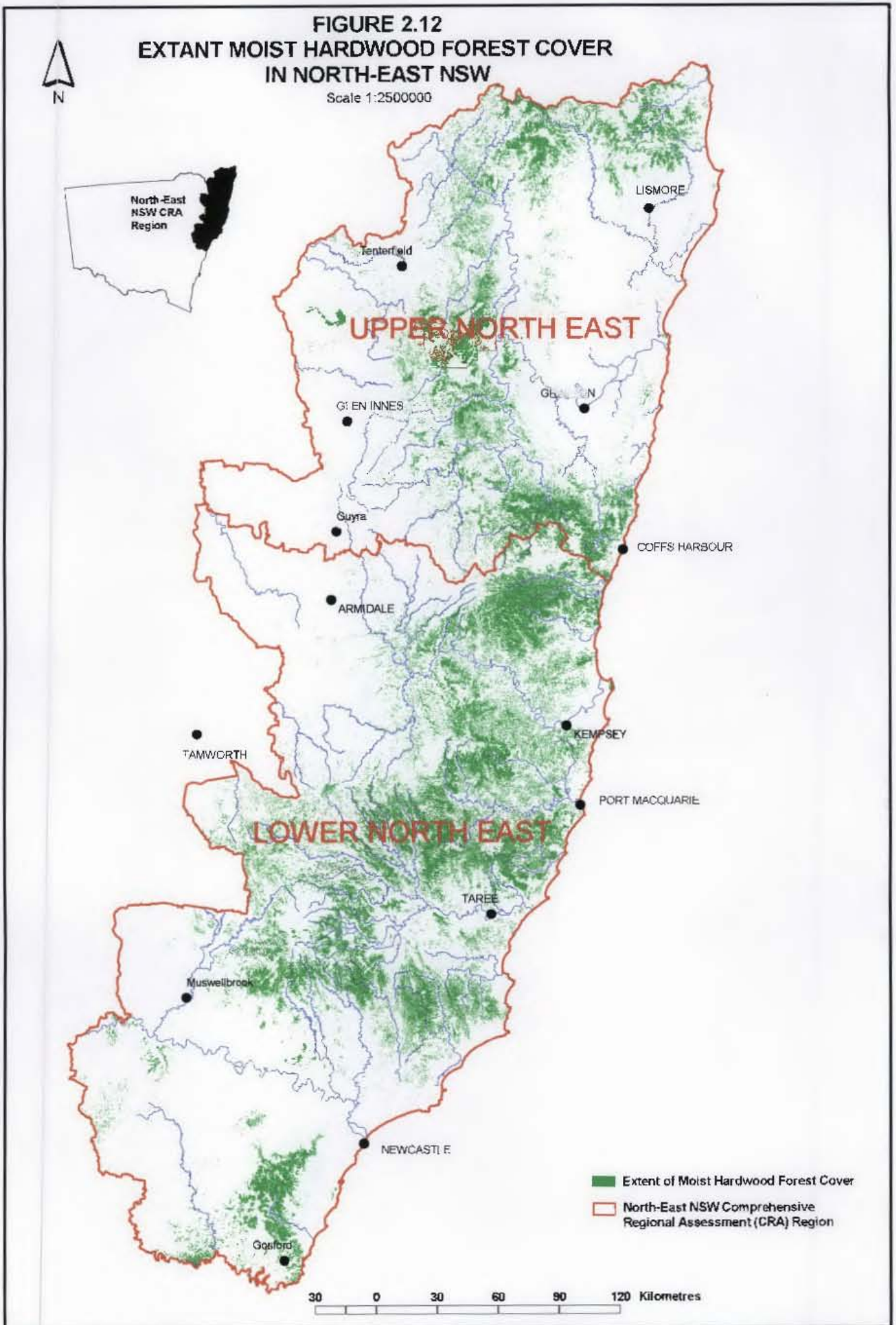


Figure 2.13 A representation of the effects of thinning and gaps and clusters logging on forest stand structure. The first scenario (A) shows a stand prior to logging with an area ('redistribution forest') suited to the redistribution of growth to larger, quicker growing trees by thinning out smaller, less efficient trees (ie. thinning from below), and an area ('gap and cluster forest') suited to the restarting of growth by gapping (but not by thinning) to stimulate regeneration. The second scenario (B) depicts the structure of the same stand after thinning ('redistribution forest') and gaps and clusters logging. Trees most suited to gapping are those that have reached their point of maximum economic value (ie. end-point). The gapping cycle thus perpetuates itself when thinned areas and former gaps attain their respective end-points. Hatched areas below trees in clusters depict shrubs and leaf litter. Diagrams are from SFNSW (1995d).

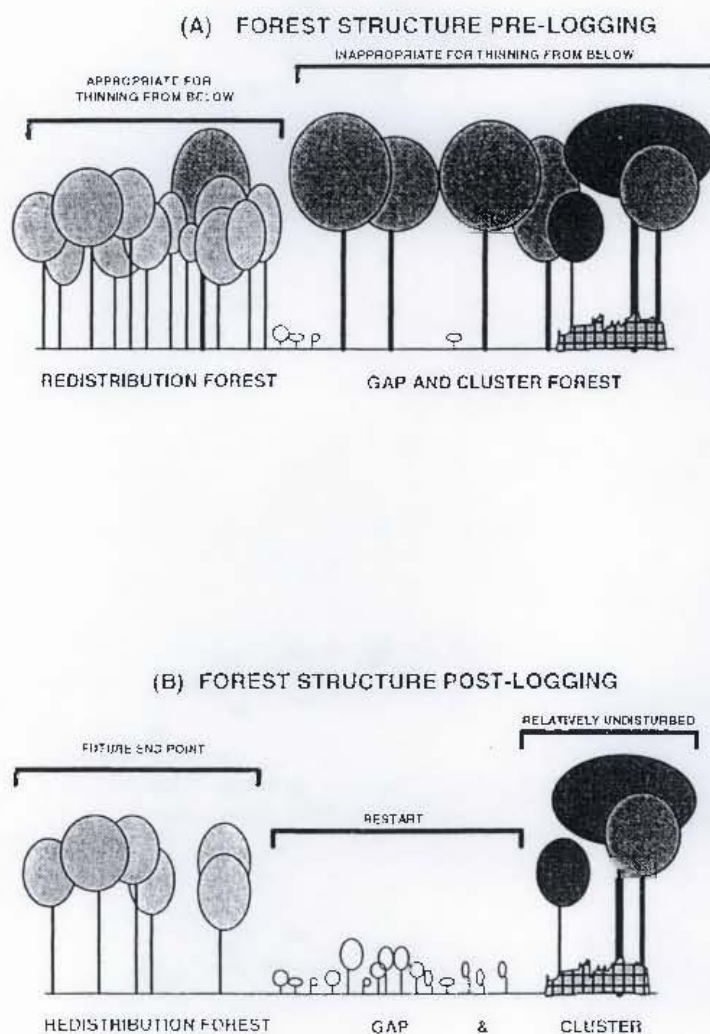




Fig. 2.14 The disturbance/wood productivity continuum, showing six silvicultural zones. In Zones I and II all forest is reserved from logging. Zones III and IV represent attempts to balance wood production with biodiversity conservation while Zones V and VI focus on producing quick-growing commercial tree species. Zones III and IV currently apply to commercial NSW north coast forests. Mean annual increment (=mai) is an index of productive wood growth and relates to quota sawlogs (m<sup>3</sup>/ha/year). Diagram is from SFNSW (1995d).

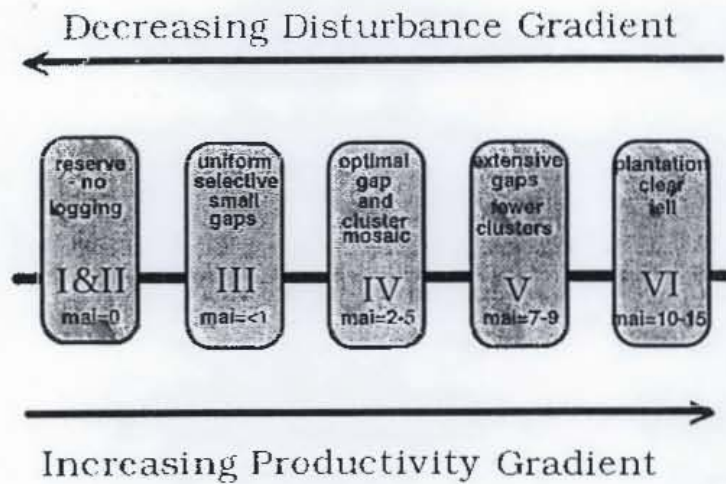
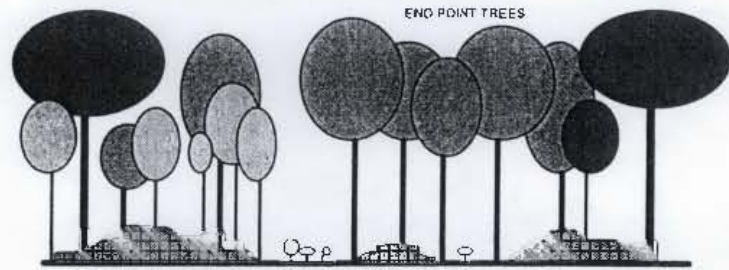
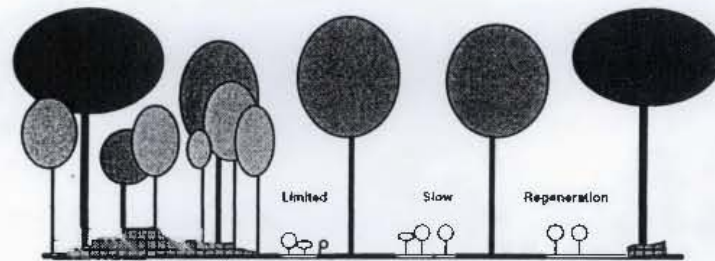


Fig. 2.15 A representation of the outcomes for forest stand structure of four silvicultural zones along the disturbance/wood productivity continuum. Gaps created in my study are closest to the optimum gap and cluster scenario. Diagrams are from SFNSW (1995a).



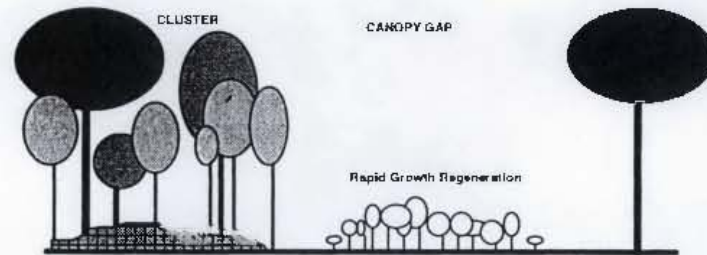
SENESCENT     
  ADVANCE GROWTH     
  SHRUB & LITTER LAYER  
 MATURE REGROWTH     
  REGENERATION

**Area of previously logged regrowth forest**



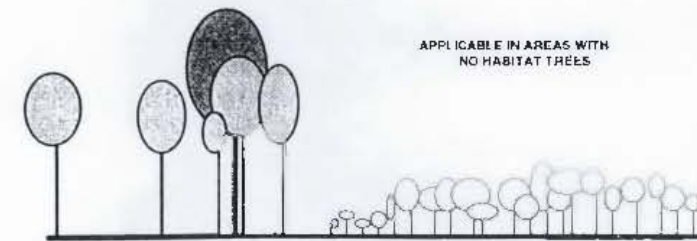
SENESCENT     
  ADVANCE GROWTH     
  SHRUB & LITTER LAYER  
 MATURE REGROWTH     
  REGENERATION

**Small gaps**



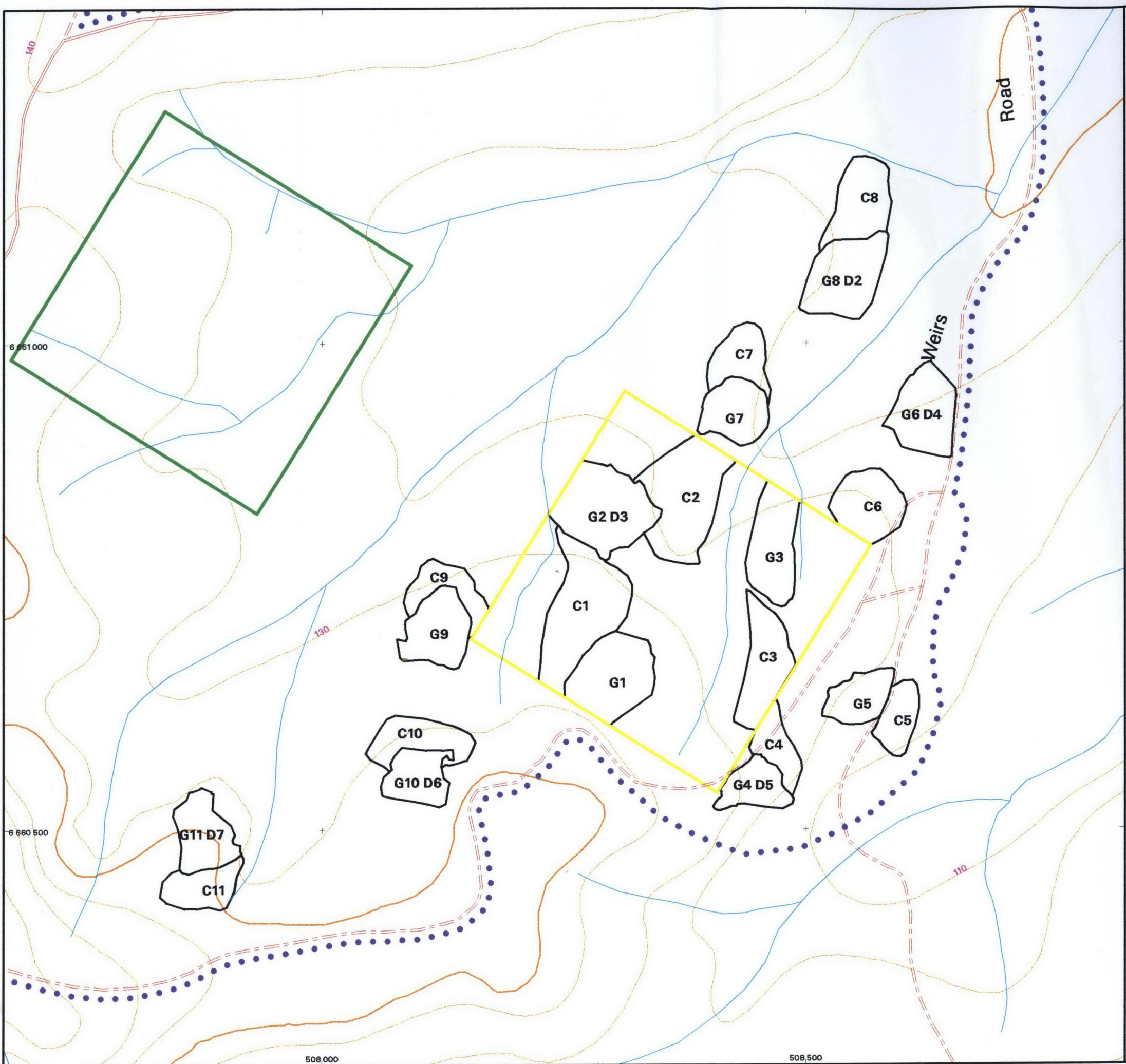
HABITAT TREE     
  ADVANCE GROWTH     
  SHRUB & LITTER LAYER  
 RECRUIT TREE     
  REGENERATION

**Optimum gap and cluster**



SEED TREE     
  ADVANCE GROWTH  
 REGENERATION

**Larger (extensive) gaps**



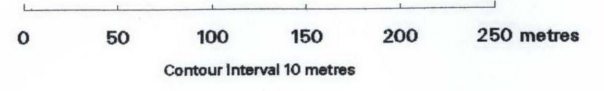
**FIGURE 2.16**  
**LOCATION OF GAPS AND CLUSTERS**  
**YEAR 1 TRIAL AREA**

- Study Area
- 589E Year 1 Experimental Plot
- 589C Year 1 Control Plot
- Drainage Line
- Major Sealed Road
- Major Unsealed Road
- Minor Unsealed Road
- Four Wheel Drive Track

- Gap 1
- Gap 2 Log Dump 3
- Cluster 1



Scale 1 : 4000



140

6 661 000

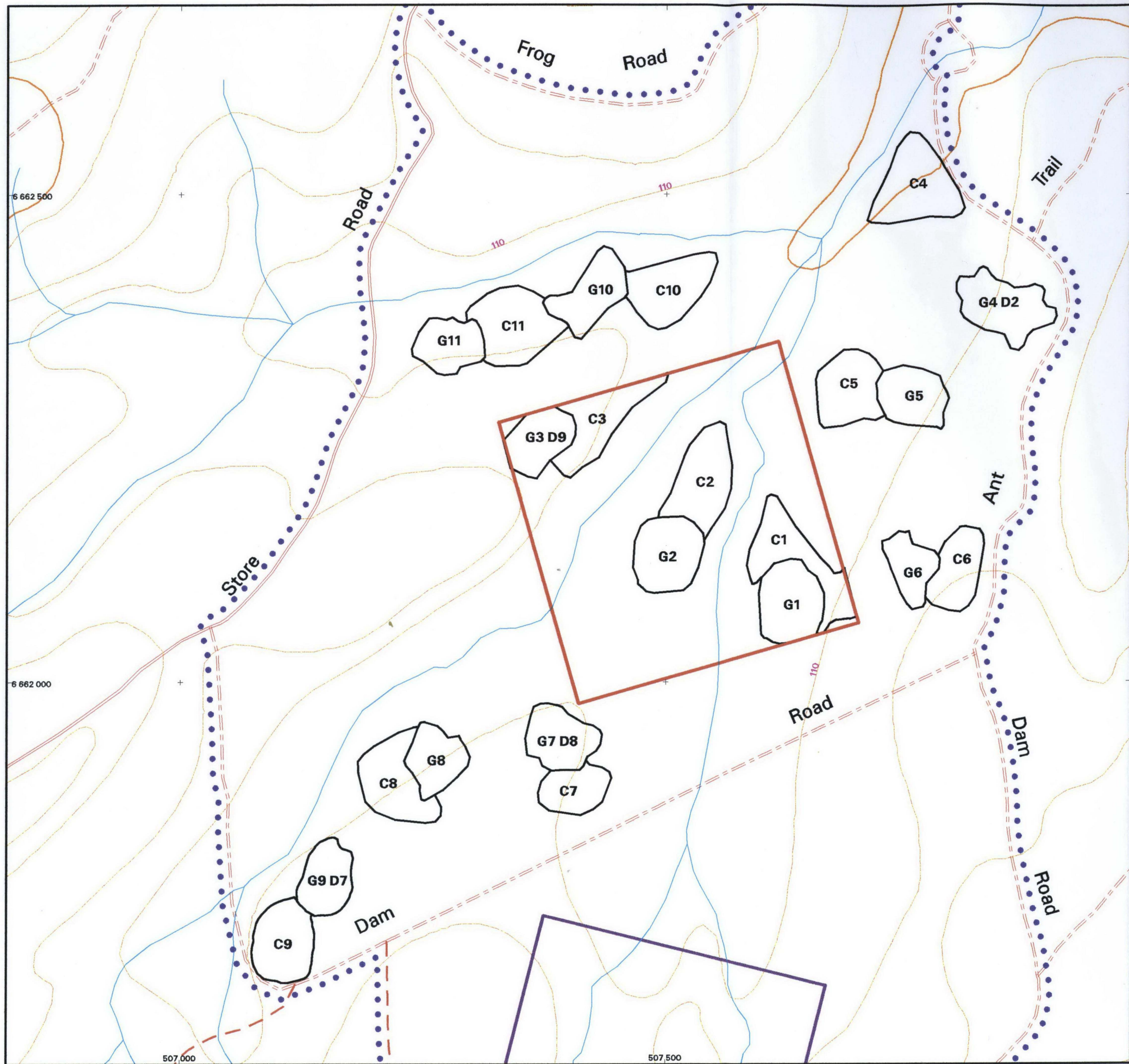
130

6 660 500









508 000

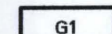
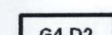

508 500

110



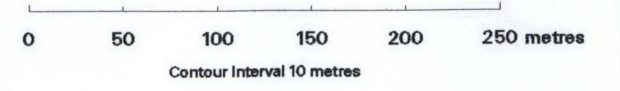
**FIGURE 2.17**  
**LOCATION OF GAPS AND CLUSTERS**  
**YEAR 2 TRIAL AREA**

-  Study Area
-  595-596E Year 2 Experimental Plot
-  595C Year 2 Control Plot
-  Drainage Line
-  Major Sealed Road
-  Major Unsealed Road
-  Minor Unsealed Road
-  Four Wheel Drive Track

-  Gap 1
-  Gap 4 Log Dump 2
-  Cluster 1



Scale 1 : 4000



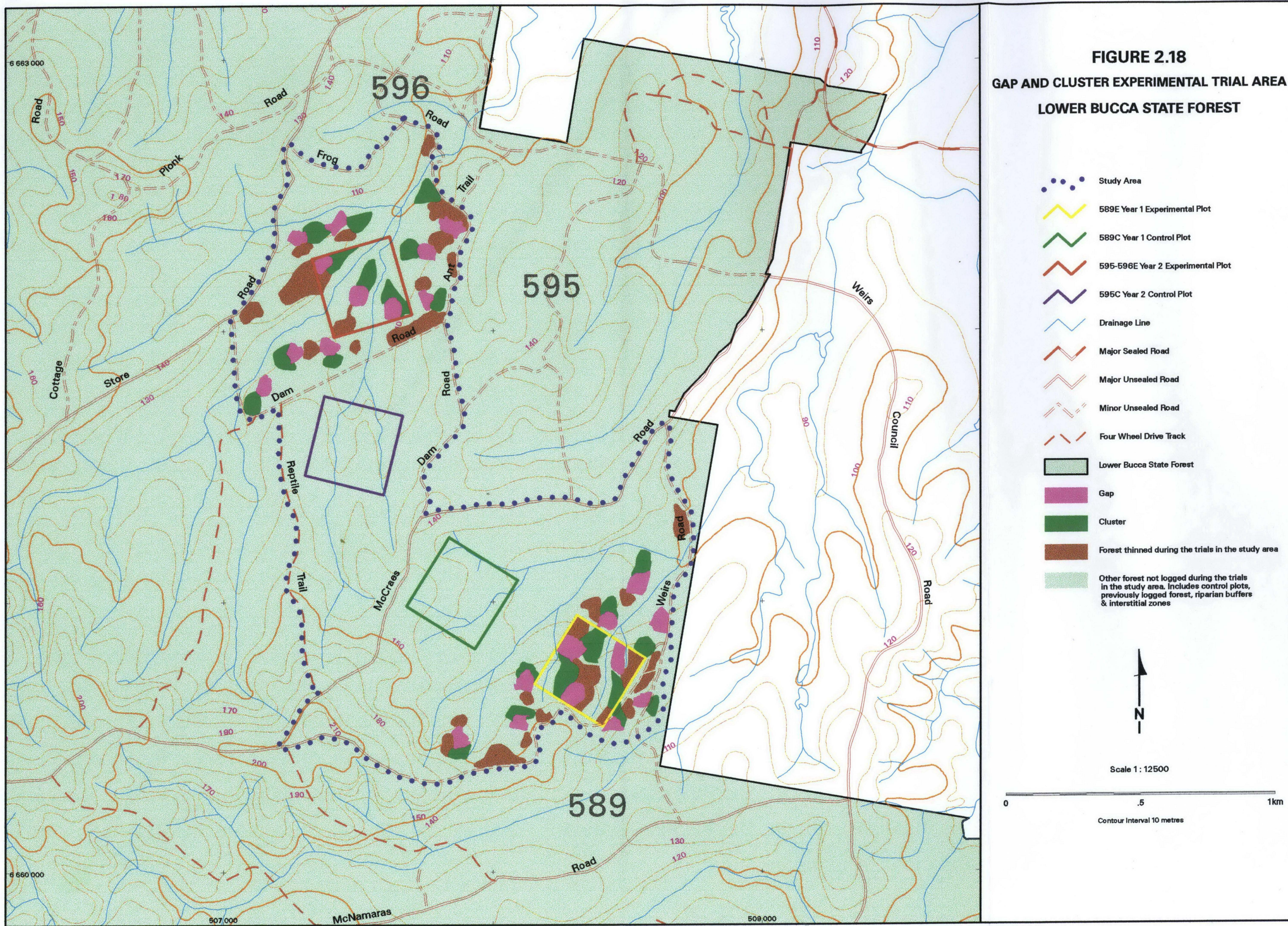


Fig. 2.19

A schematic representation view of the full complement of the gaps and clusters silvicultural system. Areas numbered 1 to 3 represent gaps that are created in each of three sequential logging cycles. However, current stand conditions in commercial north-east NSW forests would require 6-10 cutting cycles to install this full complement. PMP=Preferred Management Priority zone (a classification system that identified and defined the priority use or special emphasis needs of particular areas of forest, e.g., locations of rare plant or animal species or sites of Aboriginal or European heritage - now replaced by the Forest Management Zone system). Diagram from SFNSW (1995d).

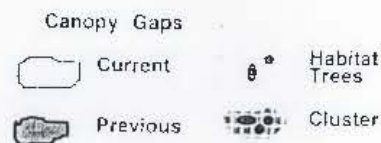
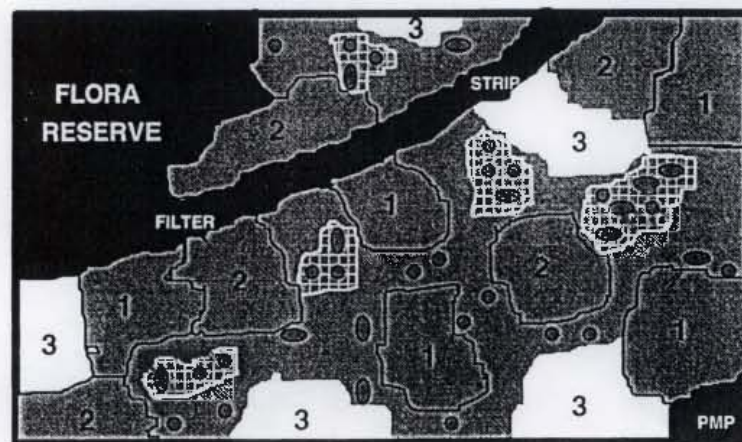


Figure 2.20 Results of discriminant function analysis of 13 vegetation structure variables showing the degree of overlap of plots

