NORTHERN RIVERS REGION

To NESFHAB representatives:

1) Georgia Beyer and Daniel Hall

2) Russ Ainley

From	Mark Carron, Harvesting Advisory Board Co-ordinator
Date	7 October 1998
Subject	FLORA and FAUNA SURVEY REPORTS



Attached please find a copy of pre-harvest flora and fauna surveys conducted in Casino Management Area Bungawalbin S.F. Compartment 48.

Koala hrensects too short

Regards

Mark Carron

.

CMA48,doc 07/10/98 12;33 A10/P10



STATE FORESTS of NSW. THREATENED SPECIES PROTOCOL PRE-LOGGING AND PRE-ROADING SURVEY REPORT - 1998.

Region	Northern Rivers	Management Area	Casino
State Forest	Bungawalbin	Compartment	48

PART A. DESKTOP REVIEW

Date of Review:

17 Aug 1998

Undertaken by: N.W. Longmore

1. Previous Surveys undertaken within 2 km or 5 km.

Survey Type	Source	Date	Distance	Reliable Survey
None known	-			

2. Results of Database Search - Species recorded within 2 km or 5 km.

Species Name	AMG E	AMG N	Date	Observation Type	Observers Name	Source
Glossy Black Cockatoo	513000	6780200	1 Jul 93	Unknown	J. Rankin	Incidental
Black-necked Stork	508500	6777500	16 Jun 80	0	Unknown	Atlas
Black-necked Stork	508300	6775900	17 Oct 91	0	er	"
Black-necked Stork	509400	6774500	23 Oct 91	0	\$2	(4
Rufous Bettong	509500	6774500	12 Sep 80	Ō	66	"
Koala	510500	6774500	8 Feb 74	0	61	٠.
Glossy Black Cockatoo	510700	6774600	1 Jul 97	0	66	44
Squirrel Glider	510700	6774500	1 Jul 97	Т	60	"
Brush-tailed Phascogale	510700	6774400	l Jul 97	Т	55	- 1
Rufous Bettong	510900	6774500	l Jul 97	0	46	46
Masked Owl	511000	6774600	1 Jul 97	0	46	46
Glossy Black Cockatoo	511000	6774500	1 Jul 97	0	56	"
Yellow-bellied Glider	511000	6774300	1 Jul 97	0	"	66
Brush-tailed Phascogale	511200	6774700	1 Jul 97	Т	6.4	**
Yellow-bellied Glider	511200	6774700	1 Jul 97	W	"	"
Brush-tailed Phascogale	511500	6774500	5 Nov 90	0	44	46
Rufous Bettong	511500	6774500	5 Nov 90	0	"	44
Koala	511500	6774500	31 Dec 90	0	44	44
Rufous Bettong	511500	6774500	31 Dec 90	0	14	ii
Rufous Bettong	511400	6774200	5 Nov 90	0	66	16
Rufous Bettong	511500	6774200	4 Mar 80	0	££	"
Yellow-bellied Glider	511800	6774000	1 Jul 97	0	"	44
Squirrel Glider	511900	6774000	1 Jul 97	Т	"	- 61
Powerful Owl	511900	6774000	1 Jul 97	W	"	61

Northern Rivers Region - Threatened Species Pre-logging and Pre-roading Survey

Brush-tailed Phascogale	512200	6774000	5 Nov 90	T	41	"
Little Bent-wing Bat	512200	6774000	5 Nov 90	T	41	"
Masked Owl	512400	6773800	l Jul 97	0	66	"
Rufous Bettong	512500	6773700	l Jul 97	0	er	"
Brush-tailed Phascogale	512700	6773500	5 Nov 90	0	rt	ii .
Squirrel Glider	512700	6773400	1 Jul 97	0		**

NPWS Atlas Date: Accessed 18 Aug 98
SF Fauna Records Updated to: Accessed 14 Aug 98
SF Flora Records Updated to: Accessed 14 Aug 98

Region	Northern Rivers	Management Area	Casino
State Forest	Bungawalbin	Compartment	48

PART B. Flora and Threatened Fauna Features Traverse

Net Area:

F235

Hectares

Traverse Length:

Km (traverse routes mapped) 10.9

Surveyed By:

Duration of Traverse:

A. Benwell (5.6km – 7hrs); K. Harvey, R. Herklots (5.3km – 5:30hrs) 12:30hrs

A. Benwell [7hrs]; K. Harvey (5:30hrs), R. Herklots

(5:30hrs) [11:00 person hours]

1. Conservation Protocol Appendix 1 Flora Detections

Species Name	AMG E	AMG N	Locality Description	Date	Observers Name	Number Observed	Count/ Estimate
Eucalyptus glaucina	508700	6778600	Near track south central area of compartment FT (70/74 31/92)	18 Aug 98	A. Benwell	10+	Estimate
Eucalyptus glaucina	507900	6780900	Along narrow tongue in northwest compartment	29 Sep 98	A. Benwell	3+	Estimate

Location of detections shown on attached map.

Threatened Flora Individuals or Populations are marked in the field.

A local, possibly significant, species (Phyllanthus sp.) was detected during the survey. Its location is indicated on flora traverse map

2. Conservation Protocol Threatened Fauna Features Detected

Feature Type	Marked in Field	Marked on Map
Nil		

Notes: No threatened fauna or threatened fauna feature detected during traverse surveys

Region	Northern Rivers	Management Area	Casino	
State Forest	Bungawalbin	Compartment	48	

PART C: TARGETED FAUNA SURVEYS

1. Assessment of Surveys Required

Survey Required (Y/N/IP¹)
Y
Y
Y/IP
Y
Y/IP
Y/IP
Y/IP
N
Υ
N

¹IP = implement prescription without survey

2. Surveys Undertaken

	Survey Type	Date Undertaken	Time Spent	Undertaken By
ſ	Spotlight T1 (0.5km walked)	18 Aug 1998	0:40min	K. Harvey, R. Herklots
()		19 Aug 1998	0:40	N. Douglas, N. Harvey
\ \	Spotlight T2 (1.0km walked)	19 Aug 1998	1:20hr	K. Harvey, R. Herklots
a√		2 Sep 1998	0:40	N. Douglas, R. Herklots, N.
- 11			_	Harvey
\	Spotlight T3 (0.5km walked)	18 Aug 1998	0:35	K. Harvey, R. Herklots
l l		19 Aug 1998	0:50	
\	Spotlight transect (2.4km	15 Sep 1998	1:50	N. Harvey, W. Longmore
Ų	_walked)	17 Sep 1998	1:40	R. Herklots, W. Longmore
ſ	Call Playback Site 1	18 Aug 1998	1:20	K. Harvey, R. Herklots
9		19 Aug 1998	1:15	N. Douglas, N. Harvey
2 -	Call Playback Site 2	18 Aug 1998	1:15	K. Harvey, R. Herklots
§, (19 Aug 1998	1:15	
I	Scat and track (1.1km)	19 Aug 1998	2:05	B. Thornhill, N. Harvey
044	Scat and track (1.19km)	19 Aug 1998	1:30	N. Harvey, B. Thornhill
0.0	Scat and track (0.9km)	16 Sep 1998	0:35	R. Herklots, W. Longmore
	Micro Bats (Harp trap Site 1)	18 Aug 1998	Two nights	K. Harvey, R. Herklots
		20 Aug 1998		·
	Micro Bats (Harp trap Site 1a)	22 Sep 1998	One night	N. Douglas, R. Herklots
	Micro Bats (Anabat Site 1a)	22 Sep 1998	0:30	N. Douglas, R. Herklots
~/ L	Diurnal Birds	25 Aug 1998	1:00	W. Longmore
0/ 7	Diurnal Birds	14 Sep 1998	1:00	W. Longmore
	Koala Traverse T1 (1.1km)	19 Aug 1998	1:30	K. Harvey, R. Herklots
	Koala Traverse T2 (0.9km)	20 Aug 1998	1:10	K. Harvey, R. Herklots

Location of surveys shown on attached maps.

Number of Data Sheets Attached:

19

Region	Northern Rivers	Management Area	Casino
State Forest	Bungawalbin	Compartment	48

PART D. SURVEY RESULTS

Prepared By:

N.W. Longmore

Date:

11 Sep 1998

New Threatened Fauna Detections

Species Name	AMG E	AMG N	Accur	Date	Cmpt	Observation Type	Observers Name	Survey/ Incidental
Yellow-bellied Glider	509250	6778980	100	18 Aug 98	48	Heard call	K. Harvey, R. Herklots	Survey
Yellow-bellied Glider	509290	6778980	iQm	18 Aug 98	48	Heard call	K. Harvey, R. Herklots	Survey
-Squirrel-Glider	509140	6779670	200	Aug 98	48	Heard call	N. Douglas, N. Harvey	Survey
Squirrel-Glider	-509350- MG 0 9900	6778840- 77800	50,50	#6 Aug 98 9	48	Heard call	K. Harvey, R. Herklots	Survey
Masked Owl	509120	6779670	50	19 Aug 98	48	Heard call	K. Harvey, R. Herklots	Survey
Miniopterus australis	509650	6779620		19 Aug 98	48	Trapped	K. Harvey, R. Herklots	Survey
Squiffel Glider)	509050	6779520	100	15 Sep 98	48	Heard call	R. Herklots	Survey
Miniopterus australis	509650	6779620		19 Aug 98	48	Trapped	K. Harvey, R. Herklots	Survey
Glossy Black Cockatoo feed site	509650	6779620		18 Aug 98	48	Observed	K. Harvey, R. Herklots	Incidental
Glossy Black Cockatoo feed site	509370	6778150		19 Aug 98	48	Observed	K. Harvey, R. Herklots	Survey

SUMMARY

GENERAL

The topography of compartment 48 is flat to gently undulating. Altitude varies from 20 to 40 metres ASL. Most of the compartment is mapped as mixed forest type 70/74 (Spotted Gum / Spotted Gum-Ironbark) dominated by *Eucalyptus henryi* with occasional *E. moluccana* and *E. siderophloia*. Much of this type has an open mid-stratum of *Acacia concurrens* and *Alphitonia excelsa* over a grassy ground layer.

Other forest types include mixed type 84/126 (ironbark/stringybark-bloodwood) which is dominated by White Stringybark (*E. eugenoides* – *E. nigra*), Pink Bloodwood (*E. intermedia*) and Broad-leaved Ironbark (*E. siderophloia*). This type occurs in slightly lower areas which appear to intersect more siliceous parent rock giving rise to a more loamy topsoil rather than the heavy clay dominated by Spotted Gum. Mixed type 40/41 (Blackbutt-Scribbly Gum/Blackbutt-bloodwood/apple) in the south of the compartment also appears to occur on a more siliceous soil but with slightly more slope. Type 40/41 is dominated by *E. pilularis*, *E.*

intermedia and E. eugenoides and is mapped as candidate old growth which the on-ground survey agreed with although this stand is degraded by grazing and heavy lantana infestation. Mid-stratum in these mixed types is generally denser than in the Spotted Gum and dominated by the same species.

The final forest type is mixed type 31/92 (paperbark/Forest Red Gum) which is excluded from harvesting on the harvesting plan. This is dominated by Forest Red Gum (E. tereticornis), Narrow-leaved Red Gum (E. seeana) and Swamp Turpentine (Lophostemon suaveolens) with a mid-stratum of Melaleuca alternifolia, Casuarina glauca and regrowth L. suaveolens over a grass and herb understorey. This type is more heavily grazed.

Flora transects and fauna surveys and transects were carried out between 18 August and 2 September 1998 lead by A. Benwell, K. Harvey, N. Douglas and W. Longmore.

FLORA

Flora transects were carried out by A. Benwell on 18 August 1998 and an additional traverse on 2 October 1998. He located small populations of the threatened *E. glaucina* and one locally significant species a *Phyllanthus* sp.. An apparently isolated population of the Coastal Cypress Pine Callitris columellaris was located in the southern reserved sector.

Benwell's threatened or significant species detections were:

Threatened species –

Slaty Red Gum E. glaucina (Prescription A) 'A few' recorded in southwest corner, see map.

Significant species (regionally rare) -

A dwarf herb or shrub, Phyllanthus sp., a single plant identified but not marked in the field; to protect this unknown species until its identification is determined an area mapped erroneously for Sauropus hirtellus (see Benwell's report) will suffice.

FAUNA

TRAVERSE SURVEYS

The fauna surveyors on 19 and 20 August and again on 2 September 1998 performed integrated fauna and threatened species feature surveys through the compartment. No threatened fauna records were obtained. Koala transects were conducted within potential koala habitat within the net logging area again with no detections.

SPOTLIGHT SURVEYS

Walking spotlighting was carried out between 18 August and 2 September 1998 and a further transect on 15 September and 17 September 1998 for distances totalling 4.4km. One Powerful Owl recorded by call was obtained. The following detections were made throughout spotlight surveys:

~ .			
Detect	none	incl	nded.

			_
Charies	Missanhan	Consider	NT
Species	Number	Species	Number
1 4	- ·	- F	

Powerful Owl	1	Common Brushtail Possum	1	٦
Olive-backed Oriole	1	Greater Glider	1	-
Noisy Friarbird	1	Sugar Glider	2	
Tawny Frogmouth	3	Feathertail Glider	1	
Australian Owlet Nightjar	2	Limnodynastes tasmaniensis	10	
Noisy Miner	1	Limnodynastes terraereginae	2	
Laughing Kookaburra	8	Litoria dentata	4	
Southern Boobook	1	Litoria gracilenta	1	
Fruit bat sp.	1	Uperoleia rugosa	1	

CALL PLAYBACK SURVEYS

Owls and arboreal mammals

At two points calls of owls (including Powerful, Masked, Barking, and Sooty) were played, as were calls of Yellow-bellied and Squirrel Gliders, and Koala. The only threatened species detected were two Yellow-bellied Gliders, two Squirrel Gliders, and a single Masked Owl calling during the pre call playback listening period. Results of call playback showed the following species present:

Species	Site	Species	Site
Southern Boobook	1	Yellow-bellied Glider	1
Australian Owlet Nightjar	1, 2	Squirrel Glider	1, 2
Masked Owl	2	Sugar Glider	2

FROG SURVEYS

Due to seasonal constraints no threatened frog surveys were conducted during the current surveys. Nor was suitable habitat identified, for the duration of the current surveys. There are no pre-existing records indicating the presence of threatened frogs. NPWS modelling predicted suitable habitat for the Green-thighed Frog in the southern sector of the compartment field investigation on 2 October 1998 failed to detect suitable habitat.

BAT SURVEYS

Although subject to seasonal constraints one anabat survey was carried out at Call Playback site 4 in compartment 47, this site borders 48 in the north central area. Two exercises in harp trapping were made resulting in identification of Miniopterus australis. No suitable habitat for either the Golden-tipped Bat Kerivoula papuensis or the Large-footed Myotis Myotis adversus was detected within the surveyed area. Detections during harp trapping and anabating (indicated by *[plus number of passes]) included:

Species	Number	Species	Number
Vespadelus regulus/darlingtoni	3	Scotorepens greyii *[57]	1
Chalinolobus gouldi	1	S. orion * [2]	5
Miniopterus australis	2	Nyctophilus gouldi *[1]	1

DIURNAL BIRDS

A diurnal bird survey was initiated on 25 August 1998 and followed by a second survey on 14 September 1998, these surveys targeted the possible presence of the Regent Honeyeater and Red Goshawk. No extensive areas of flowering eucalypts were noted that would be suitable for the honeyeater, nor was the presence of either targeted species detected. These surveys failed to detect the presence of threatened avian species.

OTHER

A total of 2.09km of scat and track survey was carried out. Seven scats were collected, these were either dog or fox. Results of their analysis by Dr Barbara Triggs have shown them to include hairs of two rats (*Rattus fuscipes* and *lutreolus*), Swamp Wallaby, Common Ringtail, Fox, and Northern Brown Bandicoot.

Although not detected during these surveys previous local records for several threatened fauna exist. Care should be exercised for possible detection of Rufous Bettong, Koala, Brushtailed Phascogale, Glossy Black Cockatoo, Powerful Owl and Black-necked Stork during mark-up and logging activities. The latter species would be restricted to wetland situations. Likewise no existing records are known for the Bush Stone-Curlew. Surveys were carried out during a time when the birds should be most vocal. No detections were made. Habitat was considered only suitable along the narrow Blackbutt Lagoon Rd edge.

		la Och C	١V
Prepared by:	Date:	6 0 0	10

Senior Ecologist

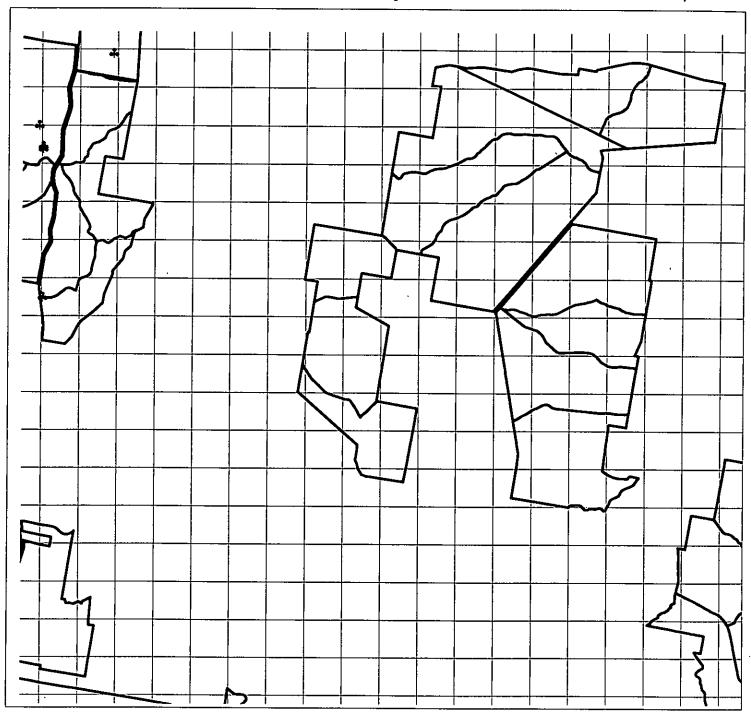
Attachments:

- 1. Maps indicating location of threatened species detections, survey points and transects
- 2. Raw survey data sheets
- 3. Flora species lists

Northern Rivers Region

Fauna Sites Map

Bungawalbin SF compartment 48



RegionCompts.shp
♣ FloraDeriv

0.6 0 0.61.21.82.43.0 Kilometers
Scale
1:100000

Prepared by: Ken McCray 17/8/98

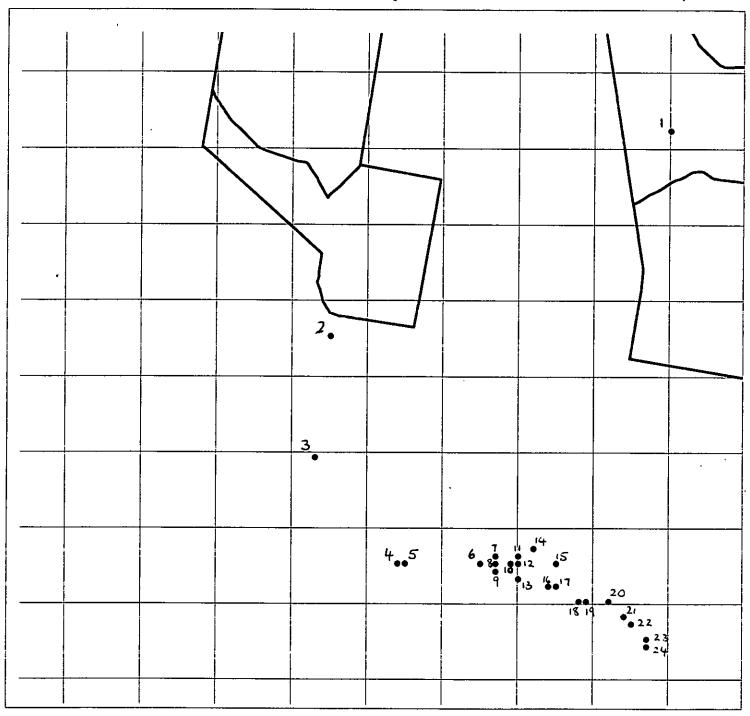
Sheet1

Restricted S1&2 Flora (4/96) | Bungawalbin 48 + 5km

Northern Rivers Region

Fauna Sites Map

Bungawalbin SF compartment 48



•	RegionCompts.shp FaunaDeriv 1klmGridNR.shp

0.3 0 0.30.60.91.21.5 Kilometers

Scale

1:50000

Prepared by: Ken McCray 14/8/98

NORTHERN RIVERS REGION

Threatened Flora/Fauna Record Sheet

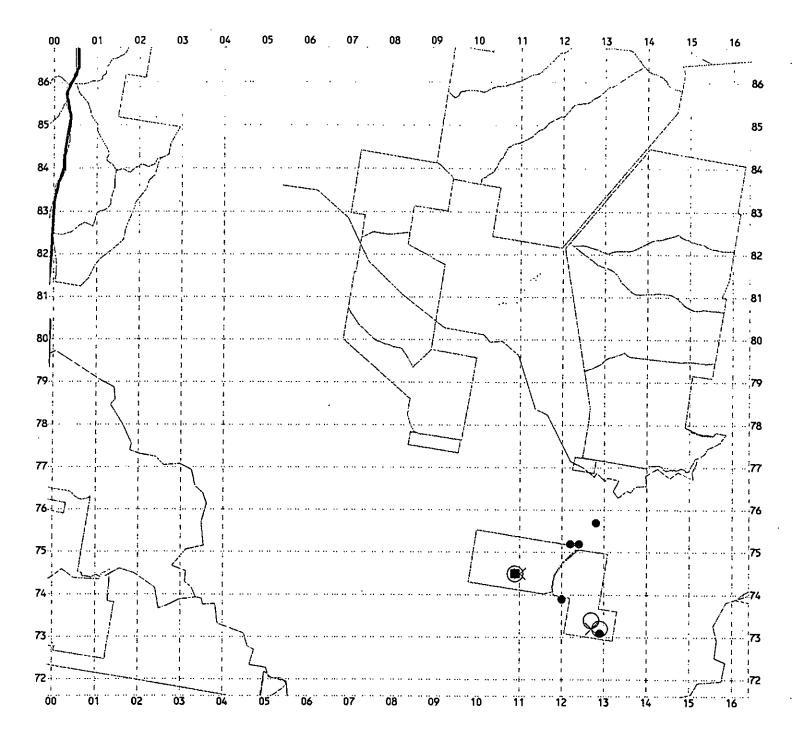


Loc.	Species Name	AMG East	AMGNorth	Date	Obs.	Ohaamiana	
No.	- Pagina Limito	1 MILO Last	AUVIONOIM	Date	Type	Observers Name	Source
	abc	5 13 000	6780200	1/7/93	Type		66 11-
2	BLACK - NECKED STORK					J. RANKIN	SF INCO
3	<u> </u>	508500	6777500	146/80	0	U .	ATLAS
4		508300	6775900	17/10/91	٥	Ų	ATLAS
5	0.50 10 00	509 400	6774500	23/10/91	o	U	ATLAS
6	RUFOUS BETTONG	501500	6774500	12/9/80		U	ATLAS
	KOALA	510500	6174500	8/2/74	0	U	ATLAS
1	GBC	5/0700	6774600	1/7/97	O	U	ATLAS
8	SOURCEL GLIDER	510700	6774500	117/47	<u> </u>	U	AMAS
9	BRUSH-TAILED PHASCOCALE	50700	6774400	1/7/97	Τ	Ú	ATLAS
<u>i0</u>	RUFOUS BETTONG	510900	6774500	17/97	0	2	ArLAS
_11	MASKED ONL	511000	6774600	17197	0	د	ATUAS
:2	GBC	511000	6774500	1/7/97	0	7	ATLAS
13	YELLOW. BELLIED GLIDER	51,000	6774300	117/97	0	C	ATLAS
14	BRUSH-TAILED AIRSCOGALE	511200	6774700	117/97	T	C	MILAS
	YELLOW-BELLYED GLIDEL	10	6.	1/7/97	W	Ü	ATLIS
15	BRUSH-TAILED PHASCOCALE	511500	6774500	5/11/90	0	ن	AMAS
	RUFOUS BETTON	⊊:;≥	Lr	5/11/80	0	C	ATLAS
	KOALA		3	31/12/90	0	U	ATHIS
	RUKOUS BETTONG	u,	\$	31/12/90	0	υ	ATLAS
16	RUFOUS BETTONG	511400	6774200	5/11/90	0	Ü	ATLAS
17	# (t	511500	6774200	4/3/80	0	U	ATAS
18	YELLOW-BELLIED GLIDER	511800	6774000	1/7/97	Q	ں	ATLAS
19	SOURREL CLIDER	511900	6174000	117197	T	υ	_ ACLAS
	POWERFUL CHL	SHU	C1	177197	w	ن	ATZAS
	BRUSH - TAILED PHASCOGALE	512200	6774000	5/11/90	7	Ü	Aitas
	LITTLE BENT-WING BAT	ч	te .	5/11/10	T	J	ATLAS
21	MASKED OWL	512400	6773800	17197	0	ں	ATZAS
22	RUFOUS BETTONG	5,2500	6773700	1/7/97	0	Ū	ATLIS
23	BRUSH-MILED PLASCOGALE	512700		5/11/90	0	U	717-11 S
24	Sawirger GLIDER	512700	6773400	1/7/97	0	J	Artas

~

Sheet1

Restricted S1&2 Fauna (4/96)	Bungawalb	in 48 + 5kr	n
Squirrel Glider	4	-	
Brush-tailed Phascogale	1		
Rufous Bettong	1		
Yellow-bellied Glider	1		



BUNBAWALBIN SF No.152 - Cpt. 48 Restricted S1 & 2 Fauna

- Brush-tailed Phascogale
- Rufous Bettong
- Squirrel Glider
- X Yellow-bellied Glider

Sheet1

Restricted S1&2 Flora (4/96) | Bungawalbin 48 + 5km

Preliminary Flora Survey

Compartment 48 Bungawalbin State Forest

for

State Forests of NSW

Casino Regional Office

Walker St Casino

20th August 1998

Andrew Benwell
Environmental and Botanical Consultant
P.O. Box 641, Mullumbimby, 2482

Method

A botanical survey of Compartment 48 Bungawalbin State Forest was carried out on 18/8/98. The compartment was surveyed by roadside survey and random foot traverses stratified to sample the range of forest types and topography within the net loggable area. The location of foot traverses is shown on the attached map and total traverse distance and duration is indicated below:

Net loggable area	[181 ha]
Total traverse length	4 km
Traverse length per 200ha	4.5 km
Total traverse duration	6 hrs
Total traverse duration per 200ha	4.5 hrs

General Description

The topography of compartment 48 is flat to gently undulating. Altitude ranges from 20 to 40 metres asl. Most of the compartment is mapped as mixed forest type 70/74 (Spotted Gum/Spotted Gum-Ironbark) dominated by E. henryi with occasional E. moluccana and E. siderophloja. Much of this type has an open mid-stratum of Acacia concurrens and Alphitonia excelsa over a grassy ground layer.

Other forest types include mixed type 84/126 (Ironbark/Stringybark-Bloodwood), which is dominated by White Stringybark (E. eugenoides = E.nigra), Pink Bloodwood (E. intermedia) and Broad-leaved Ironbark (E. siderophloia). This type occurs in slightly lower areas which appear to intersect more siliceous parent rock giving rise to a more loamy topsoil rather than the heavy clay dominated by Spotted Gum. Mixed type 40/41 (Blackbutt-Scribbly Gum/Blackbutt-Bloodwood/Apple) in the south of the cpt also appears to occur on a more siliceous soil, but with slightly more slope. Type 40/41 is dominated by E. pilularis, E. intermedia and E. eugenoides and is mapped as candidate old-growth which the on-ground survey agreed with, although this stand is degraded by grazing and heavy Lantana infestation. Mid-stratum in these mixed types is generally denser than in the Spotted Gum and dominated by the same species.

The final forest type is mixed type 31/92 (Paperbark/Forest Red Gum) which is excluded from harvesting on the harvesting plan. This is dominated by Forest Red Gum (E. tereticornis), Narrow-leaved Red Gum (E. seeana) and Swamp Turpentine (Lophostemon suaveolens) with a mid-stratum of Melaleuca alternifolia, Casuarina glauca and regrowth L. suaveolens, over a grass and herb understorey. This type is more heavily grazed.

Threatened or Significant Flora Species

A list of all plant species recorded during the survey is attached.

TSC Act Schedule 2

Eucalyptus glaucina (Slaty Red Gum)

E. glaucina is readily identified by its glaucous juvenile foliage with square stems, and its glaucous buds and fruit. A few E. glaucina were recorded adjacent to a track in the south-west of the compartment on the boundary of type 70/74 and 31/92.

Some fairly large populations of *E. glaucina* have been found during recent pre-logging surveys in Myrtle, Braemar, Carwong and Gibberagee SF's where the species' is locally common on low hilly rises in mapped forest types 74, 72/74 and 65. Although locally common *E. glaucina* has a restricted range - Braemar SF to Gibberagee SF.

'Prescription A' is specified for *E. glaucina*, which requires logging exclusion buffers of 10 metres radius around 50% of individuals and an additional 10 metre modified harvesting zone with at least 50% canopy retention.

Regionally Rare Species

Sauropus hirtellus (sp. A)

This species was found very widely scattered in type 70/74. Five plants were marked with three bars on transect 1 through the centre of the net logging area. Another eight plants were seen on transect 2 on the western boundary of the net logging area, where density appears to be higher (although still very low) and consistent with previous observations that the species's prefers moister and more fertile sites in Spotted Gum forest such as on lower slopes. These plants were also marked with three bars.

Sauropus hirtellus is a herb or dwarf shrub and occurs between Casino and Grafton in grassy open Spotted Gum forest. The species has also been recorded recently in Carwong, Southgate and Braemar State Forests during prelogging surveys. Between 1 and 20 individuals were recorded in the latter surveys. The species appears to be rare to very rare and a potential candidate for TSC Act listing.

Recommendations

- 1. Protect plants from logging disturbance by implementing logging exclusion buffers (10-20 metres). These would coalesce in the area on transect 2 where density is higher, to form a more or less continuous area of protected habitat for the species, as shown on attached map.
- 2. If not excluded from the logging area this species should at least be monitored. Rare species are likely to be at greater risk from forestry practices simply by their very low numbers and this species would be an interesting one to monitor to determine if there is any adverse impact from logging.

Phyllanthus sp.

A single plant of an unidentified *Phyllanthus* was recorded on transect 2 in the same area as *S. hirtellus*. This plant is a herb or dwarf shrub which looks something like *P. gunnii* (recently merged with *P. gastroemii*). It has been collected flowering once after a fire in Glenugie SF, but was not finally determined by the NSW Herbarium, who requested more material. It has been recorded by the writer in several other compartments between Glenugie and Whiporie in very low numbers - even less common than the *Sauropus*.

ix. These plants have been le-identified by Andrew as



TRAVERSE SURVEY- NORTH. RIVERS REGION

*1 SHEET = 1 TRANSECT COMPT. 48 Car14'0 M.A. STATE FOREST نسطاهسه REGION DATE FROM 1 3 2 98 OBSERVER(S) CODE (A) DATE TO 3.00 Pu **Total Travel Time** Finish Time & har. Start Time to . as A.M. TIME SURVEY NAME & LOCATION DETAILS TOMERCH 509300 Easting **Finish** Easting 509 400 Start AMG 2:00 Northing 6779700 COORDINATES 10 00 6779700 Northing Species Possible THREATENED FLORA **CBSERVATIONS** MAP SITE DESCRIPTION NUMBER AREA TRANSECT FLORA NOR EVIDENCE OF DISTURBANCE NOTED? SIZE SPECIES DISTANCE 509400 G779500 ه، ١ ١٠ ان Sauropus hittellus ١ 250 6778800 509 4 00 oil ha Ü ţŧ ١ 800 6779300 509200 0.1 ha 2.5ku G 6779400 1 0.1 ha 509200 2.66 . THREATENED FAUNA - SIGHTING OR FEATURE# MAP SITE DESCRIPTION SPECIES OR FEATURE NUMBER TRANSECT NOTED? (MICROHABITAT) DISTANCE TYPE #THREATENED SPECIES FEATURES DIURNAL BIRD spp DIURNAL BIRD spp. TIGER QUOLL LATRINE AND DEN SITES CAVES, TUNNELS & DISUSED MINES DISTINCTIVE SCATS (TIQU, KOAL, & NESTS, DENS & ROOSTS OF LARGE BIRDS, [RAPTORS & OWLS) BATS, & HOLLOW DEPENDENT SPECIES BRUSH-TAILED ROCK WALLABY) PERMANENT SOAKS AND SEEPAGES GLOSSY BLACK COCKATOO, ALBERTS LYREBIRD & YEBG 'V-NOTCH' TREES BUSH THICK-KNEE NESTS OWL PELLETS (& WHITE WASH) RECORD FEATURES: EG. UNMAPPED CHANGE IN STRATA OR FOREST TYPE, ROCKY GENERAL COMMENTS* OUTCROPS ETC. & ARCHAEOLOGICAL ARTEFACTS MAP TRANSECT OBSERVATION OF NOTED? DISTANCE



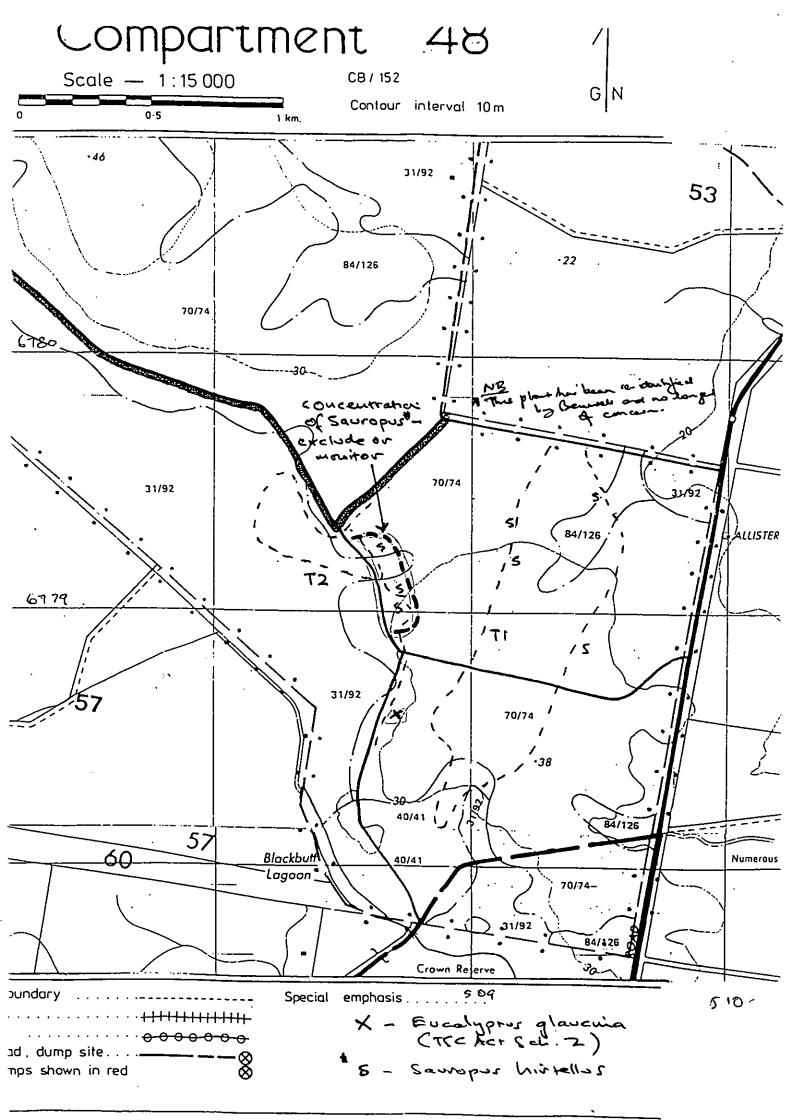
TRAVERSE SURVEY- NORTH. RIVERS REGION

STATE FORE	EFOREST Bungawalbi					(ar	u ò	COMPT. 48				
00021172141	<u>" ०.उ</u>	سس	معه		DATE FROM DATE TO		18/98	REGION CODE				
TIME 3	- لس	Start Time	5.006	<u>~</u>	Finish Time	۲,	·00 8m	Total Trave	1 Time			
SURVEY NAM	ME & LOCATION	DETAILS	70	usec	+ 2							
· · ·	· • • • • • • • • • • • • • • • • • • •			•	·- <u> </u>		·-	 -				
AMG	Start	Easting	50840	350			Finish	Easting	5086	80		
COORDINATI	ES 2.00pu	Northing	6779	८००			4.00 84	Northing	6778	300		
THREATENE	D FLORA	Species F	ossible	•			<u></u>	^ ·				
OBSERVAT									<u> </u>			
TRANSECT DISTANCE	S	FLORA PECIES		NUMBER	SIZE		SITE DES VOR EVIDENCE	CRIPTION OF DISTURBA	NCE	MAP NOTED?		
_ 1 ka_	Source	ا عدم	hriteer	: පි	0.54		50870	50 67	79100			
1.50~	Bucal	~ pr	, glav	دسم	10 01	5ha	5087	ന ₆₇	78600			
		<u> </u>	- J						<u> </u>	-		
	<u> </u>											
										Ì		
				_								
TUDEATEM	ED EAUNA A						·····	**************************************	* ************			
TRANSECT	ED FAUNA - SIC SPECIES OR FE			UMBER			SITE DESCRIP	TION		MAP		
DISTANCE	TYPE						(MICROHABIT			NOTED?		
									·			
												
										· -		
							· · · · · · · · · · · · · · · · · · ·					
#THREATENE	D SPECIES FEAT	URES					·					
 DIURNAL 	BIRD spp JOLL LATRINE AN		:e				IRD spp					
. NESTS, C	ENS & ROOSTS	OF LARGE B	IRDS, (RAPTOR	IS &	• CA	VES, TU TINCTIV	NNELS & DISUSE /E SCATS (TIQU,	D MINES KOAL, &				
	ATS, & HOLLOW I BLACK COCKATO				• BR	JSH-TAI	ILED ROCK WALL NT SOAKS AND S	ABY)				
BUSH TH	IICK-KNEE NESTS LETS (& WHITE W	3	- -				OTCH' TREES					
GENERAL C	OMMENTS*					G. UNM	APPED CHANGE	IN-STRATA O	R FOREST TY	E. ROCKY		
& ARCHAEC	LOGICAL ARTE			OUTCRO								
DISTANCE	OBSERVATIO	N UC								MAP NOTED?		
								 				
<u> </u>												
{	1											
										`		
l	J											

	~	1/3
	Paus Specil Lin. CPt 48 Bungo	18/8/98.
!		FT 70/74 , 84/126
:	E. henryi	76
,	E. engencides (= E. migra)) < (FT 126) - OCC
: :	Allercasiona terrilosa	
·	Alphiteanie excelor	C -VC
	Eurolasia Stricie	<u> </u>
	Sporder diamely	C
	distoglous sp.	<
	Actourkus sp. (whee).	د - مدد
: 	Desmodini vtyridophyllum	<u> </u>
:	Prend purpurascens	<
: ·	Chèllantes sielen	<
	Cymbopogan refraerus	<u>د</u>
	Imperere cyludrica	c ′
	Ansade vegans	C
	haganifora stipitate	0cc
	Brundella australis	7
į	E. intermedia	6 < c
	Louante multiflace	C-0CC
	Didelacher rora (?)	•
11	E. woluccana	occ-r
	* Samplus hirtellus	r
•	Dicharda repour	
	Opercularà dyphylla.	<u> </u>
	Hakea florelante	•
	Ostochlow greetliming	c (40/41, 31/92)-
	Diamella sp (like revelue)	2 (10 11, 11 12)2
	Pserostyli sp. (w Sud)	٥٥٥
	- Acacia concernes, no sign of defe	Moral Ju. union compared to
. 1	who ordered (fromy) leaf linear	
:	Diametr coorder	+ Par
 	Paniam simla	oec .

Coodanio rotandifolia	·0 CC
Privalea luitfolia	<u>۷</u>
Yernoni cinera	•
Hilbertia aspera	~
Laxuama gracili	•cc
Chycni telacua	
Lomandra longe folia	oce
lepidosperme labrale	occ
Hobera obrusifica	oec .
Xaullonhoen johrani molacopylla	·
· Cavex breviglous	∞ c
: Hardenberger violacea	०९८
B. seeang.	
Augana pudda	4-000
Pulsenaea epinara	- ಅ೯¢
Persone Strall roberris	
B. Siderophlora	
Centrantene motica.	<u> </u>
Allocariona' littorali	
Davena ulicifolia	<u> </u>
Thousa ourtrate	
•	6 CC.
Acada falcara	
Francophila debilin	
Paniem effision.	0CC
BIRJULE SOLD JIFOIN BELL	E. whomas - B. polich.
	E. engenod - E. serene
	- B. sacon - hoph-soon.
Lomanda fêlifani occ	
.	Paspalidum dissour C
	Loutona - only convan
	= +4/pa 40/41 , more or
Plevosti notous occ	ass absent from 70/74

7	·
hophesiana suarodour	<
E. ferencorm	<
Colodidin ferduiandi	· occ
1	the codd
Acami antosocopa.	:
Hyperican gramfyap.	<u> </u>
· Pjeridini esculenti	· · · · · · · · · · · · · · · · · · ·
HJpolepi uwellen	<u> </u>
Cwsum vulgano	
Conyza Sonnariens	
Adiante aethópica	©CC
wilksnown which	ودر ک
	<u>`</u>
Echiopogan compiloses	
Pomular misosolula.	-
Porantere microphylla.	
Colyené clanderni	ach who Spacked Aun
THEOLOGIC	*
Covapadu sphooien	Suk - Same
Eradnost pionni,	Phylland. sp. Chloris ventricosa
Chrysocophalm apicolom.	r Electrica verticosa
Chelforoplesa cyuon	
Jacksonia segpona	
Gomplosom frotica	
Paulovec paudovana	
Billarderi scardura	
Car, glosca occ-c	Sryliduri r 21/9.
Parson, 4 Strones	Oplinen senter occ
Melder alknifor e	. Cartella asianon C
Veriver filipe r	- Vallies r
Axom ali	Cypen sp. (mineros?
Viula baragi fola occ	Engdia fluctions c
Cenipeda minis	7 4.0010000



Flora Survey Bungawalbin Cpt 48 - Addendum 2/10/98

An additional strip of harvestable forest was surveyed for rare flora on 29/9/98. This area is located south of the road on the long western arm adjoining cpt 47. A foot traverse of approximately 1 hour duration was conducted in this area and a vehicular traverse was continued south-east along the compartment boundary to Blackbutt Lagoon.

The strip of forest is mapped as 70/74 (spotted gum/spotted gum-ironbark). Composition is mainly ecotonal between 31/92 and 70/74 with red gums and swamp turpentine mixing with spotted gum.

Threatened or Significant Flora Species

TSC Act Schedulo 2

Eucalyptus glaucina (Slaty Red Gum)

This species was found in small numbers in type 70/74 adjoining type 31/92 as shown on the attached map. E. glaucina was previously recorded further south-east in the same lower slope situation.

The Protocols specify 'Prescription A' for E. glaucina, which applies to species listed under the act considered adequately reserved in NSW by Briggs and Leigh 1995. Prescription A requires logging exclusion buffers of 10 metres radius around 50% of individuals and an additional 10 metre modified harvesting zone with at least 50% canopy retention.

Other Significant Plant Species

Coastal Cypress Pine (Calliris columcilaris)

A stand of Coastal Cypress Pine (Callitris columellaris) covering 1-2ha was found near Blackbutt Lagoon, which had previously been overlooked. This occurs under Blackbutt (E. pilularis) in type 40/41 as shown on the attached map.

Coastal Cypress Pine occurs on coastal sands north from Angourie. Its occurrence further inland in the area south of Casino in significant for several reasons. Firstly, stands of Coast Cypress Pine are uncommon to rare especially away from the coast. Secondly, this species is often associated with old semi-permanent aboriginal encampments and the area is likely to be of archaeological significance. Thirdly, occurrences south of Casino appear to occur on Pleistocene dune remnants which date from the last interglacial when a marine transgression extended inland to Casino. These eroded dune remnants are rare and of geomorphological significance.

The area of Coastal Cypress Pine marked on the attached map should be protected. Logging of emergent Blackbutt should be excluded from this area and a 40 metre buffer imposed to maintain the integrity of the site. Steps should be taken to control Lantana infestation which is becoming quite severe.

Note - Sauropus hirtellus (sp. A)

The record of Sauropus hirtellus (sp. A) in the initial flora survey report was identified from vegetative material on other advice. Flowering material has since been collected and shown not to be this species.

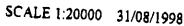
The small exclusion area proposed for Sauropus hirtellus also contains E, glaucina and the unidentified Phyllanthus sp. and it is recommended this area still be excluded from logging.



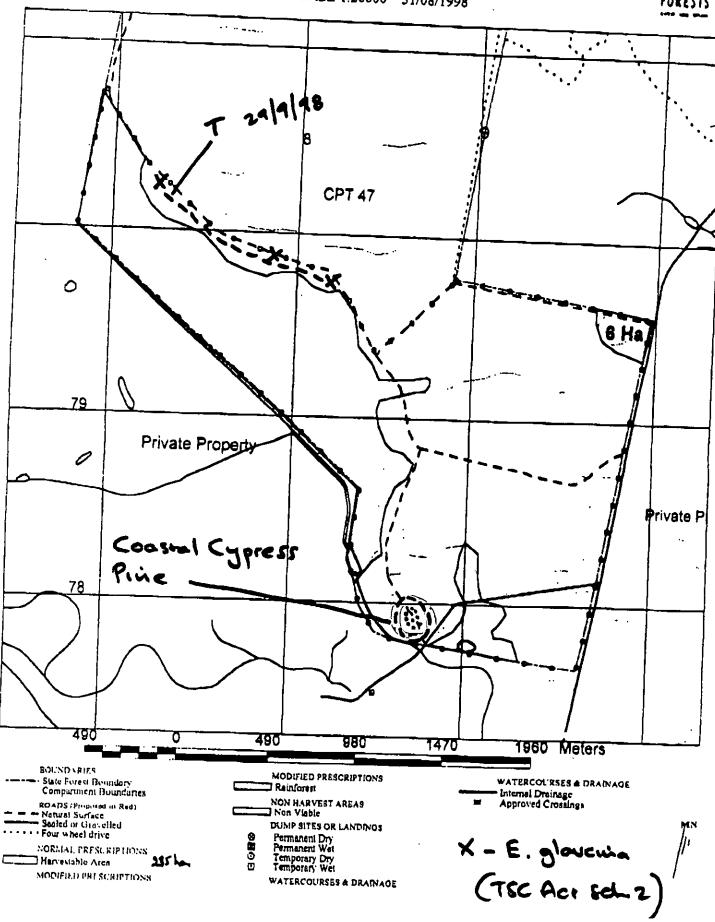
MARTINGE THE STORY THE COCK TO COME OF THE PROPERTY OF THE PRO

OPERATIONAL MAP

COMPARTMENT 48
BUNGAWALBIN STATE FOREST
UNKNOWN MAP SHEET









FAUNA TRAVERSE- Northern Rivers Region

STATE FOREST	BUNGALAL	BIN SF	MA CASINO)	CMPT I	±0
OBSERVER(S)	Hanners		DATE FROM	19.8		REGION CODE
R.	. Harvey . Hertlots		DATE TO			1 461
START TIME	10-30 ₄₀	LOCATION DE	SCRIPTION - el- el-	J - + 0)		
TRAVELTIME		المحل المست الم	#A ak 31200	n dille	COCK GIR	4 in NW end
	15hrs	and com	SCRIPTION - starte	ich ont	o Ra	Danwa-
DISTANCE TRAVE	LLED 1.6K	they to m	idale of the	م ـ مال		<u> </u>
АMG		EASTINGS		NORTH	INGS	
	START		 _			
200°		509120		6779	700	
	FINISH	509450	<u>.</u>		3750	
THREATENED FA	UNA: SIGHTING O	R FEATURE				-
SPECIES	NOTES			E	ASTING	NORTHING
						HORTHING
				<u> </u>		
			·			
						
			· · · · · · · · · · · · · · · · · · ·		·	
		-				
11 - DITT - T - COPGO	A COMP					
HABITAT ASSESSI						
Open 6	ocest (dry	6.18 aL . 1	11	. 1) 6	. 11 4	
5000 700	on etc listing	- I	1) - predomina Red gum + Gn different Gre	1V41 2	botted	Gum, with
(Pa and A	Al an al	യ മൽയ്ക്ക്	Ked gun + On	sapor (FT 70	1/74)
Called	mrough a	v area at a	litterent tone	ط اي و د	(FT 3	1/92), with
101 - w	<u> </u>	<u> </u>	<u>a</u> 150 very c	loy (of Swa	mpy) and_
very Pero pa	berparks me	FLE bLESSYF	.)			
No	arga trees	(> 80cm)	nere obser	ved on	His 1	raverse)
and very t	ers trees of	any siz	e had hollow	.s/.		
Sport	se underst	oreu-Csom	e should a	~00F -	പ് വരു	C-trees)
and many	fallen brai	محاجة راسع	+ trees lyin	ملاء	4 50.70	4 1
001	wattle + 7	moback	sp. flowers	<u> </u>	Con	
sens dru	with an a	reeks or i	on la su la com	<u> </u>	401.62	t was
5 3 -			Merways p	resent		
		·				
INCIDENTAL SIGN	ITINGS					
SPECIES		1 001 11 101 100				
SPECIES		COMMENTS				
Noisy Frear	- berd					
Fuscous Hono	_					
0	Q .	 		·		
	Root					
king parrol		 — — —			*****	
willy wagt	ail.					 _
uellow-bree	ested robin					
Eastern T	osella	1				
honkolne	412		·	_		
		 	· · · · · · · · · · · · · · · · · · ·	_	 -	
· · · · · · · · · · · · · · · · · · ·	 	 				
<u></u>		I				

FAUNA TRAVERSE - NORTHERN RIVERS REGION STATE FOREST BUNGAWALBIN SF MA CASINO COMPT 49 DATE 20.8.198 OBSERVER(S) K Harvey REGION R Hertots CODE Models of the empt, and housed at 1200 to some Mis Camp Rd START TIME 9.40 AM TRAVEL TIME 2 hr 20 mins DISTANCE TRAVELLED 1.7K RED WALL ON STM GIDE OF THIS ROLL HAN' 2 diff. Forest- type 850 NORTHING 67 78 900 AMG START EASTING 508 850 AMG FINISH EASTING 509 250 NORTHING 6778 050 THREATENED FAUNA - SIGHTING OR FEATURE# SPECIES NOTES **EASTING** NORTHING HABITAT ASSESSMENT Open Forest (dry sclerophyll), predominantly Spotted gum, with some XBK, wm, RG+GBX (FT 70/74). No large trees (>800-) were? observed on this traverse, and v. Pew trees of any size had hollows. Sparse understorey, with many falle trees, logs on the ground! watter XBL Sp. Howeving + no croseter/waterways present. Passed through an area of different forest-type (FT 84/126) with more ZBL and Bloodwood present, and a denser inderstoney for insual ton) after a INCIDENTAL SIGHTINGS SPECIES COMMENTS Torresian COW Dustry woodswirtlow Black- headed cucinoorestless flycatcher Little eagle feral pia V. old pig-scat found. No other evidence of pras



ionesses	SPO	TLIGH	Ţ	TRANS	SECT –	No	rthern F	Rive	ers	Regi	ion			
	FOREST	BUNG	A	WALBI	N SF		M.A. CAS	NV.				COMPT. 4	/ 8	
OBSER	, , ,	(1). K. 4 R. F	ler	4		_	DATE FROM			. '98	-	REGION COL		
(C2).	<i>N</i> .	Pous	٠.	<u></u>			DATE TO		<u>, e</u>			AMG Zone Transect Num	56	
CENSU		C Q		art Time: 7	.20.		Finish Time: 8pm						<u> </u>	
CENSU	JS 2	<u> </u>	St	art Time: 9	· Sopm		<u> </u>						mins)_	
	ION DESC	<u> </u>		500n 	n from	Eas	Finish Time: 10.30 (40, East Coundary along MAIN CAMP ROA)						Omins) Ab	
AMG	NN 750	Start		asting 5.	09.25	50			Northi	ng 6	7· 78	050		
<u></u>	DINATES	Finish	Ea	asting 5.	09 720	<u> </u>			Northi	ng 67	778	8 50		
Total Di				00m		ļ.	ecies Targeted	All						
BROAD	BROAD HABITAT TYPE Rainforest						erophyli	: :			Woodlan	ıd .		
		i		Temperate			Dry Swamp				□ Heath			
ļ	□ Subtropical Forest type numbers						Wet				□ Shrub Tall			
			7 K	0/74										
		s = 1 night) V) Transect		Census 1	Census 2. 🌮		Census 1 Census							
Tempera	<u>-</u>	V) Hansect		F	IS.C Dry.	Wind [(1) calm (2) light (3) moderate (4) strong]							ı	
				17°C	14. C West	Rain [(1) evidence of in last 24 hrs (2) no evidence of in last 24 hrs (3) during survey]							ą	
Relative	Humidity			86%	90%	Night light (1) very dark (2) dark (3) detail seen							٥ ـ	
Time Me	easuremen	ts Taken	_	6.20h		(4) bright] (2) a							<u> </u>	
	RVATION					ïŧ		. ,			. •			
DATE	DIST.	SPECIES				¥ (OBS.		T. from	Count	NOTES	(AMGs for S1	&S2 spp)	
18.8		7	<u> </u>	Nia	<i>Stiar</i>		-			1	Heard	alend of	ρ	
19.8	200-	COMMC)n	Brush to	all. Doccion	-	H Sighted	20		1	711070			
					703501	<u>-</u>	2124451	20	-	J				
		<u> </u>			 _		 	ļ			<u> </u>	<u></u> _	<u> </u>	
														
							 -	 -						
						_	ļ							
										<u>-</u>		 -		
					<u>.</u>	 	<u> </u>				 .			
	<u> </u>													
Notes:							<u></u>	1		·				



SPOTLIGHT TRANSECT - Northern Rivers Region

STATE	FOREST	BUNG	AL	SALBIK	ST		M.A. CASI	A1/	<u> </u>		<u></u> -	COMPT. C	+8	
OBSER	VER(S) (C	1). K Hc	ارا المار	res/R	- <u> </u>	$\neg \dagger$	DATE FROM					REGION CODE 461		
(C2).	1 Days	las R	صلا	cklate	N. Harve	-	DATE TO		'98	_		AMG Zone Transect Num	56	
CENSU	S 1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Si	art Time: C	10 Harve 3.35pm	4	The state of the s						T2	
CENSU			Si	art Time: \	5.35Pm	_	Finish Time: 9.55pm (1hr Finish Time: 7.15 pm. st off mysle chard running thru to Black Rutt Lamm Rd.							
	ON DESC	RIPTION	0	COMP	med)		00 00		Finish	Time:	7·15	pm.		
			u"	a ren	meng w	ess	· off in	لىرد	u c	hand	. ru	ning to	ru'	
			200	midal	8 of compt	. <i>h</i>	Block Be	rtt.	Log	∖.00	R.L.		}	
AMG		·Start	Ea	isting 50	8840									
COORDINATES Finish Easting 508 840									Northi		7788 7881			
Total Di	Total Distance						cies Targeted	Al			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
BROAD HABITAT TYPE Rainforest						Scle	erophyli			- -	Woodlar	nd	2 47 7 2	
□ Dry					0 D	•				□ Heath	<u>. </u>			
☐ Temperate					_ S	wamp				□ Shrub				
Forest ty	Forest type numbers						/14-				Tall			
WEATH	WEATHER (census = 1 night) Census 1 Census 2									· .		Census 1	Census 2	
Foot/Vehicular (F/V) Transect						Win	d [(1) calm (2) lig	nht (3) mode	rate (4)	strongi	(1)	Cerisus 2	
Tempera	Temperature 16.5°C 0						(1) evidence of of in last 24 hrs	in las	t 24 hrs	(2) no e		(1)		
Relative	Humidity	· .		90%	74%	Night light ((1) very dark (2) dark (3) detail see (4) bright)					iil seen	(2)	3	
Time Me	asuremen	ts Taken		10 pm	6:30pm	_							+—-	
	VATION				e et a service			-		 -	 			
DATE	DIST.	SPECIES					OBS.		T. from NS	Count	NOTES	S (AMGs for S1	&S2 spp)	
	40m	Nov		Friar	and		SR	5	- m	ι				
	50°%	ords alo		Makien	<u> </u>		SL	on tra	nsect	- 111	first C+		Her Joseph	
	350m	Taw	٥	2 moi	mouth		ڃد		<u> </u>	1			133.00	
	500m	<u>Owl</u>	ex	nyti	ar		Hr) <u>~</u>	ι .				
,	6200				,		SR			1	509			
	680,			f'no	uth_		SR		<u>-</u>	1	6778	750		
			-	•		 			<u></u>	1		Δ.		
				- 5)'''' (- reoru	Ͻ	1 near 5	24	<u>_</u>	1701	sect	ofter we	2 had	
			γb	btol_ta	ansect	,			_		<u> </u>			
			'											
											\vdash	-,,-		
										L				
Notes:														



SPOTLIGHT TRANSECT - Northern Rivers Region

	STATE FOREST BUNGALALBIN							M.A. CASINO						COMPT. 48			
OBSERVE	R(S) (C1) K Ha R He	rve	4 3	 ,	\dashv	DATE FROM					REGION CODE 461					
(C2).	·H	N He	HV.	<u>στ.</u> Σ		-	DATETA		8·19			AMG Zor Transect	<u>ne</u>	56			
CENSUS 1	Н		C)-	art Time:				8.1			Number	T3					
CENSUS 2			<u> </u>	art Time:	9.40pm		-	_	Finish		<u> 10 · 1</u>	5 Am	(35	mins)			
LOCATION		RIPTION	1	•	7.25 pm		246-2-4		Finish	Time:	8-15	em	126	5 . '\			
			h	yell Ch	r Ad ->	BL	other End ack butt	de	one Conf	ot. no Rd	inne L.	ng we	st d)			
AMG		Start			29120	_	Northing 6779 700										
COORDINA	ATES	Finish	Eas	sting 5	09650				Northir		179						
Total Distan	nce		5	00m		Spe	cies Targeted	1	74								
							erophyll	<u> </u>			Woodla	nd -	.				
l _						B 0	•	•			□ Heath						
						ט א ט	wamp Nai				☐ Shrub						
							74				Tall	<u></u> :					
WEATHER (census = 1 night) Census 1 Census 2							<u> </u>		-:	<u> </u>		Census	1	Census 2			
Foot/Vehicu	ılar (F/V) Transect		F	F	Win	nd [(1) calm (2) li		3) moder	ale (4) s	`	(1)		(1)			
Temperatur	е			13°C	16°C		n [(1) evidence of of in last 24 hrs	in las	t 24 hrs	(2) no e		(1)		(2)			
Relative Hu	midity			/	80%	Nigi	ght light ((1) very dark (2) dark (3) detail seen (4) bright]										
Time Measu	urements	Taken		10.30	m 6.40en	^	. (1) 4119111	· .				(4)	11	(2)			
OBSERV/						,						<u> </u>		<u> </u>			
DATE D	OIST.	SPECIES	<u>.</u>				OBS. TYPE		T. from NS	Count	NOTE	S (AMGs	for S1&S	2 spp)			
18.8 3	ω <u>,</u>	Nois	-	miner			5	5	<u>m</u>	1			·				
18.8					teracgine	<u>e</u>	S	on tra	nsect	3	ļ						
19.8		2× li	ድልያ	ody naste:	tosmanie	<u> 120</u>	5_5	•	.,	2							
				_													
	·						 	<u> </u>									
				<u></u>													
						•				. •							
							 										
											-		,				
		-									<u> </u>	_					
Notes:		· 					<u> </u>				<u> </u>	······					
NOIGS.																	
pald	9 1				 _												



SPOTLIGHT TRANSECT – Northern Rivers Region

SINIETONES! BUNGAL	DALBIN SF		M.A. CAS	100		COMPT. 478			
OBSERVER(S) (C1). W. Long	mass.		DATE FROM		 +	REGION CODE 461			
(C2). W. Longmore R. Hethots		_	DATE TO	15.9.			AMG Zone Transect Number	56	
	art Time: 1840h		<u>'</u>	7-9-10	_ 			1	
CENSUS 2 Sta	art Time: /8-30					20:30			
LOCATION DESCRIPTION	Hong rd. Aom		26 → 8	rinisi	ı ilme:	30.1	<u> </u>		
	flong rd. Arom (from 0816 k	P :	ے øsil	. D	mer	ek o	mpr.	*******	
AMG Finish Start Eas	sting 507050			North	ing 6	7 80	350		
COORDINATES THIISH East	sting 508 800			North	ing 6	7 79	800		
Total distance	L. 4 K	Spe	cies Targeted	All					
BROAD HABITAT TYPE Rai	inforest		erophyli · . ·			Woodlan	d 经总统管理会	adri en en	
	Temperate	8 .0	ry wamp			O Heath			
	Subtropical	_ V	·			□ Shrub Tall			
Forest type numbers WEATHER (census = 1 night)				31/92					
Foot/Vehicular (F/V) Transect	Census 1 Census 2	. 1				er Er e Garago	Census 1	Census 2	
Temperature	FF	Wind	d ((1) calm (2) li	ght. (3) mode	erate (4)	strong) ·	3	-	
Relative Humidity	18.5°C 15°C	, u,	(1) evidence of of in last 24 hrs	2					
	47% 86%	Nigh	it light ((1) very o	lark (2) dark	-(3) deta	il seen	2	2	
Time Measurements Taken	6.20 cm 7.50 pm				• -				
OBSERVATIONS DATE DIST. SPECIES	The second second second	- 4	a majad daga Logo daga	grande (* j.c.)	सङ्ग्रह	to the			
		2	TYPE	TRANS	Count	NOTES	(AMGs for S1&S	2 spp)	
15.9 2.2km Limnody	nastes tasman	iens	is O	٥	1				
22km Litoria	dentala		٥	0					
" 2.1 km Litoria	dentata.		0	0	1				
" 1.7 Limnody	nastes tasmanie	4.Sì <u>S</u>	0	0	l				
1 1.5 Uperoleia	rugosa		0	Ö					
	asks tasmanien	nsi s	0	0	19				
	rogmouth		0	0					
" 600 Olive-bac	ked Oriole.		0	10]]				
" 600 Fruit	Bat sp. gracilenta		0	20	1				
" 100 Litoria	gracilenta		0 .	ט					
Notes:						1			
								ļ	
<u> </u>									

OBSER	RVATION	IS the transfer of the state of	ALL THE STREET	Carried March Toronto	ar an da arti	
DATE	DIST.	SPECIES	OBS.	DIST. from	Count	NOTES (AMGs for S18S2 spp)
77.9	2.4	Sugar glider	Н	50-100		
1 .	2.4	1607	4	3000		507250 E 6180780N
17.9	12.9	La tasmanieros	OR	200	2	,
17-9	1.6	Featherful gliler	0	5m) —	
17-9	•8	L. tasminiers	٥	Con	J	
17.9	દ્ધ	Boobusk	Н	/		
17-9	•3	hoderbrows	٥	15m	6	
						·
			·			
		·			<u>. </u>	
				_		
				·	 	<u> </u>
					·	
Notes:						
<u> </u>						



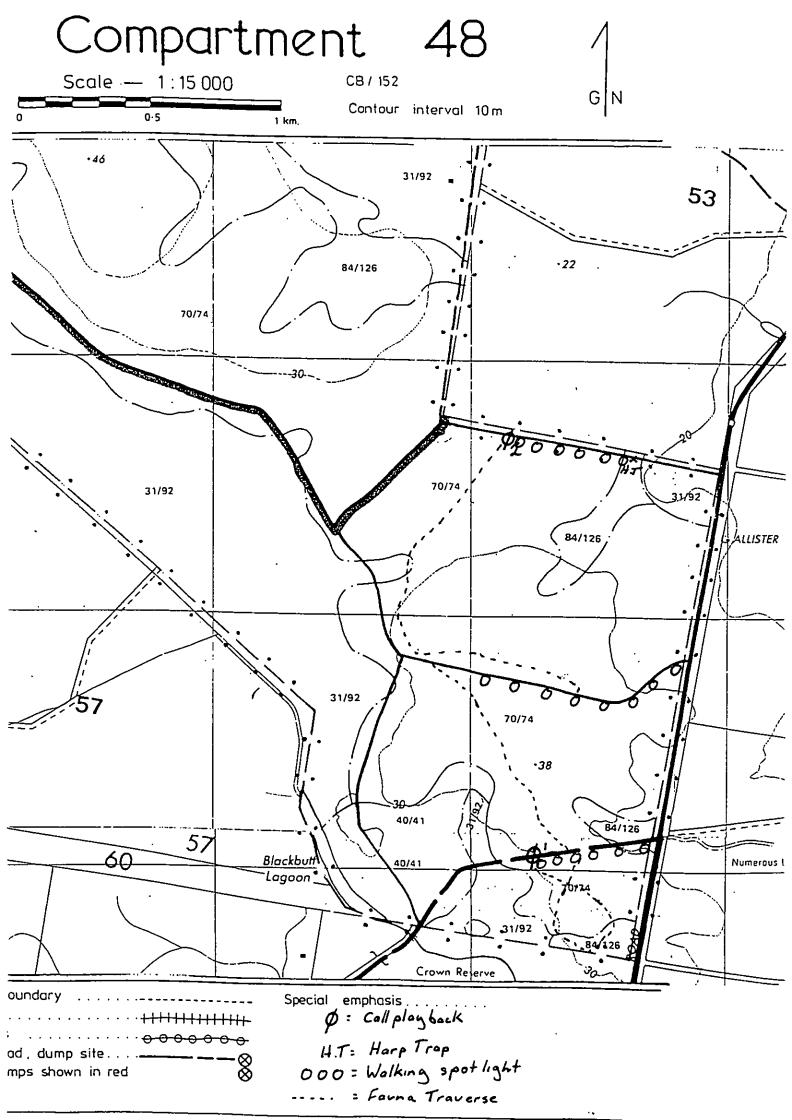
CALL PLAYBACK- Northern Rivers Region

STATE	FOREST B	UNGA	WALE	LAL S	F'	M.A.	ASINO		СОМРТ.	11.0					
OBSER		<h+ td="" <=""><td></td><td>110 3</td><td></td><td>DATE FR</td><td>ROM</td><td></td><td colspan="6"></td></h+>		110 3		DATE FR	ROM								
(C2).	ND +	NH	KM			DATE TO	DAYE TO AMG Zone 56								
CENSU		 -	tart Time:			ļ	19-	8-48		1					
CENSU			lart Time:	5.5	5 Pr	ກ		Finish Time	ア・1:	5pm	CIL	r 20mins			
<u> </u>	TON DESCRIPT			8:30	<u> Pn</u>	<u>~</u>		Cipioh Timo				15 mins)			
			300m	along	M	AIN CA	mp Rd	••							
SITE		ε	ASTING S	.09	2:	50		NORTHING	67-7	20.0					
DETEC	TION METHOD		arboreal ma			🗆 diurnal bi	irds	L	☐ other		<u> </u>				
		8	noctumal b	irds					(<u></u>						
Species	Targeted	A	ıl.					Celle Die							
BROAD	HABITAT TYPE		ainforest		Sclerophyli		Calls Playe	Woodlar	0,50,6	30,480	K, SQG				
			Dry	.		D ¥ Dry	 -		□ Heath	10 -	`				
			☐ Temperate ☐						□ Shrub						
Forest to	ype numbers		Subtropical			□ Wel			□ Tall)			
	IER (census = 1	night)	Census 1	Lo		70/7	4								
Temper		11191117	 	160						Census	1	Census 2			
	Humidity		17/15.5	14 . 0	Jet			light (3) moderate (4) strong]							
86% 90%						Rain ((1) evid	Rain ((1) evidence of in last 24 hrs (2) no evidence of in last 24 hrs (3) during survey) (1) 2								
6:5/ 8::					-	Night light [(1) very dark (2 1) bright]	?) dark (3) detai	seen	(2)		2.			
OBSE	RVATION DE	TAILS									L				
DATE	SPECIES		OBS TYPE	COUNT	• ; ;	PONSE (ESTI	MATE)	NOTE	S (appeara	ince, sex,	note if co				
				· • .: :,	DIST	ANCE	BEARING			•	<u>.</u>				
18.8	YBG	 ,,	<u> </u>	42	100	(+/-) 20m	130*	Apple (Septe	icht cou	n listen Housel H	hru' 100	re before			
٠,	Bookack		н	_1_		(+/-)									
• 4	Owlet mg	Stier_	K	١		(+/-)									
8.91	Squirrel (н	1	200	m ^(+/-) 50m	120.	Beg	an cal	ving	durin	g listenin			
			<u> </u>			(+/-)			•						
						(+/-)	 		.						
						(+-)					<u>—</u>				
						(+1-)						——			
						(+/-)	 		 -						
							 		<u> </u>						
						(+/-)			<u> </u>		<u> </u>				
Key for tree marking: MO/PO/SO/BO/						(+-)			<u> </u>						
Key f	or tree ma	rking:	MO / PO	0/SO/	BO	YBG / S	G (n	lus roost/	V-notch	etc)		——[



CALL PLAYBACK- Northern Rivers Region

STATE	STATE FOREST BUNGAWALBIN						M.A. CASINO COMPT. 48								
OBSER	RVER(S) (C1). K Ha	HWHLE	211	<u>v</u>		DATE 50		_	<u> </u>						
	K Harvey	ricids_	_		_	DATE FRO	<u> 18∙</u>	8.1	98	REGION (461 56			
	R Herkdots	<u>,</u>				DATE TO	19.8	. 19	8	Site Numb					
CENSU		Start Time	: 9	3.25 8	m				sh Time	9.4		1	1 1-		
CENSU		Start Time	: 7	5.100	1 11			Fini	ch Tima	- -	` م		hr 15mas)		
LOCATI	ION DESCRIPTION	Un-na	med	Rda	١٠	oth end goon Rd	of cmo	 	44-0-00		A M	$\frac{\Delta L}{\Delta L}$	hr 15mins		
		ha b	BA	ackbull	la	goon Rd	C500n	مملأ	~ H.	T-site	off of	nya	u cir		
SITE - A		EASTING	50	9120		•		NOF	RTHING	6779	700				
DETEC	TION METHOD(S)	🛚 arboreal	ma	mmals		O diurnal bir	ds	<u> </u>	-	☐ other					
		🙀 noctum:	al bir	rds											
Species	Targeted	A4						Cal	le Clavo	4 PM SC	100 RC	- VO.	5.4,5a6		
BROAD	HABITAT TYPE	Rainforest			.: :	Scierophyll		Cal	is riaye	Woodlan		1, 100	**,336		
ľ		□ Dry				8 Dry				☐ Heath					
		D Tempera				□ Swamp				☐ Shrub					
Forest h	/pe numbers	☐ Subtropi	cai ———			☐ Wet			□ Tali			ł			
						70/74									
	T							_			Census 1		Census 2		
Tempera		၂ <u>୯</u> ୯	<u> </u>	160	<u> </u>	Wind [(1) caln	n (2) light	(3) mo	oderate	(4) strong)	(1)	\neg	(1)		
	Humidity	90°	7	80°	Jo	Rain ((1) evid of in las	ence of in las	st 24 hi during	rs (2) no survey)	evidence	(2)		(2)		
Time Me	easurements Taken	9e	·M	6.40).	Night light [(1) very dark (2	2) dark	(3) detail	seen	7				
OBSER	RVATION DETAILS	s i	<u>'''</u> _	10 10	<u> </u>	. (4)) bright]				(2)		(<u>Z)</u>		
DATE	SPECIES	OB		COUNT .	RE	SPONSE (ESTIN	AATE)		NOTE	S (appeara	nce, sex, no	ote if α	ount an		
		TYF	۱۳		018	TANCE	ANCE DEADING			estimate)					
			十	_ <u></u>											
18.8	<u>sag</u>	<i>H</i>	\downarrow		50	m (+/-) 10m	1400		486	byfack	, and c	-3ar	ן פכיייטים		
18.8	Some alider	$H \mid \underline{}$,		(+/-)									
·	2 vgs g.w.		+		-				<u> </u>	 .					
						(+/-)							i		
14·8	Nightian	H		1		(+/-)		-	Calle	d during	10 pl	ouj	مرکع		
	Nightjar Mashed ow		7			(+/.) 10m			Calle	d durin	y lester		time		
14.8	MASKEL OW	LH	4		50)m (+/·) lom	0.		3/F	abulas	lone	للمت	whilst		
				<u> </u>		(+/-)			hind	به میس	guige	5)	time whilst		
	·					(+1-)									
				<u></u> !		(+1-)									
						(+1-)				, _					
						(+1-)					-				
					(+/-)				-	<u>_</u>					
						(+/-)				.	<u> </u>				
Key fo	or tree markin	g: MO /	PC) / SO /	ВО	/ YBG / S	G (n	hie	roost/	V notab	ata)				





SCATS – NORTHERN RIVERS REGION

STATE FOR	EST B) M(SAWAL	BIN		M.A.	CAS	INO		COMPT.	48	
OBSERVER	(S)					DATE		8-98		REGION CO		
B. THO	SENHIL	L	N.HAR	VEY						AMG Zone	56	
SURVEY NA	ME					_				TRANSECT		I Iloom
DETECTION	METHOD	(S)	1 Km road to	ansect per 20	0 ha net logo	ing area		g gard Gall ga Big Sanggara		<u></u>		SENSE :
BROAD HAE	BITAT TYPE		Rainforest	12 ¹¹⁷ "			ıyil		<u></u>	Woodland		
-			Subtropi	cal		☐ Wet I				☐ Shrub		, ,,,
			☐ Dry ☐ Tempera	alo.		⊠'Dry □ Swam	_			□ Heath		
Forest type i	numbers			11.6)))	84 12	τ.	□ Tall_		
AMG	Start		Easting	50982	်စ	Finish	Eastin			508750		
COORDINA	TES		Northing	67788			Northi	-	_	778850		 ·
Location Des	scription F	14 h	aid carrier			had of				71003		
Time Start	11:00	m.	Time Finisl	the comme	1:05pm	Total Tra	vel Time	3 1- 0	5 min	Species Targ	eted D	
		SAM	PLE DET	AILS T	rus.			25,0	J 11.0	ANALYSIS	ATTACHE	10?
DISTANCE	SAMPLE	SPE		Sac Car	OBS	PROBA	DILITY	- (4)[4()/	OT "	HOTTO		YES / NO
DiotranoL	ID ID	Ų, <u>L</u> ,		· · · · · · · · · · · · · · · · · · ·	TYPE	STAT		ANALY	81 E.,	NOTES		
					scat or	1 = definit	te '			, .	· 1	
			· ·	ال 🚣 ۽	in scat	2 = proba 3 = possit			HT- Hard Harri			
0 m	コードは											
100 n	6 62	1,,,,,,,		<u> </u>		_	<u></u> .				<u> </u>	-
	G							·				_
270~				-	_			-				
790 m	Α.											
860m	В		. <u>.</u>	<u> </u>								
1.05km	GO,E											
1.18km	F						•					· · · · · · · · · · · · · · · · · · ·
		•		_				 -			<u> </u>	
					<u> </u>							
		_	.	<u> </u>		.						_
												
				_								
SKETCH MAR	(INCLUDE	DRAIN	AGE, ROADS	AND TRACKS	S. DISTANCE	S. BEARIN	IGS)		<u>.</u>		 .	
NORTH	19				,	-0, 0 <u>-</u> 27	.00,					F q
[TOP]	1									C	DÉ.	
Seats											<i>"</i>	
13	<i>(</i>)		6			<u></u> .			A	B		
🔊 —	K		X				_		<u>^</u>			
/												
<u> </u>												
Page	of .											

SCATS



SCATS - NORTHERN RIVERS REGION

STATE FOR	EST isk	ngah	<u> </u>	Harver		M.A.	CAS	,100	COMPT. L	8
OBSERVER	(S) ∕\'	- 0 -	. €	Harver)	DATE		8-98	REGION CODE 46	1
	Bry	u T	horal				19-	8-48		6
SURVEY NA		-	_			! _		<u> </u>	TRANSECT LENG	
DETECTION	METHOD	(S)	1 Km ma	d transect per 200	\ ha antino				TIVANSEOT CENG	
BROAD HAE		' '	Rainfore		/ na net logg			<u>.</u>		- T-1
BNOADTIAL	MIAL LIFE	Ī	☐ Subtro			Scleroph	yli		Woodland	
			□ Dry	, pioc.		©2/Ory			☐ Heath	
		-7		erate		□ Swam	р		☐ Tall	
Forest type n							<u>- つ</u>	4.		
AMG	Start	L		50980		Finish	Eastin	9 50865)	
COORDINAT	res		Northing	67788	50 <u> </u>		Northi			
Location Des	cription									
Time Start ,	11.300	AIM	Time Fir	ish 1.00 F	m	Total Tra	vel Time	1/2 lu	Species Targeted	Д١١.
				TAILS			-		ANALYSIS ATTAC	•
DIOTINOS	0441015				(Seconds)					YES / NO
DISTANCE	SAMPLE ID	SPEC	IES		OBS	PROBAT STAT		ANALYST .	NOTES	
	,,,	·		4	scat or	1 = definit				
l					in scat	2 ≈ proba	ble '			# 1
From West to East						3 = possit	e			*
600~	A	⁻	Dogl	Fox	Sca	2_				
700m	ß		41	<u></u>	7)	7			-	
850	C, D,E,))		25	2			-	<u> </u>
				_	_					
1.12 kg	F				**	2				
110~	62			···	••	7				
90-	G		"		*,	2				
0.0,n	$H_{,}\mathcal{I}$		5		1	Ŋ				
			_				·			
				_					<u> </u>	·
				· - -						
<u> </u>									· 	
SKETCH MAP	(INCLUDE	ORAINA	GE, ROA	OS AND TRACKS	, DISTANCE	S, BEARIN	GS)			
NORTH 4										
ITOPI +										∤ I
'/			r. +							
: /	ر ال	<u>.</u> .+ -	/6~1 /4-2.			<	; , t		,	sset 1
1 /500	··· ×	6				_	· ·	Seat	+ Scots	
1 1 187							z.t X	\$	+ seats	- '
								IS	COE	<i> </i>
				•						//
//				-	<u>-1.1</u>	<i>N</i> :	Į.	1.19 Kn.		
ــــــــــــــــــــــــــــــــــــــ					CTAI	<u> </u>	<u> </u>	1.1 /KN -		
Page /	of /.									



SCATS – NORTHERN RIVERS REGION

STATE FOR	EST B	יייט	SAWALBIN		MA				COURT
OBSERVER	(S) R H		MACRIC		M.A. C	ASIA	<u>00</u>		COMPT. 4 8
}	NH				DATE	16.	9	· '98	REGION CODE 461
SURVEY NA	WE PH	ما	ماد در س		L			10	AMG Zone 56
DETECTION	METHOD	(S)	1 Km road transect per 200	ha nat law			_	7,	TRANSECT LENGTH 900m
BROAD HAE	SITAT TYP	E.	Rainforest	na nat logg	Scleroph	ull		•	
			☐ Subtropical		□ Wet I	yn			Woodland ☐ Shrub
<u> </u>			□ Ory		St Dry				☐ Heath
Forest type r	numbers		☐ Temperate		□ Swam				□ Tall
AMG	Stan		Easting Coo am		70/7	_			
COORDINAT	TES :		Easting 508 35 0 Northing 67797	<u>~</u>	ranisn	Eastin		508 800	0
Location Des	cription	Δlos	1 h h A	<u> 50 </u>	<u></u> _	North	ng (67 79 8	00
Time Start	2 en	<u> </u>	Time Finish 7 3 Co	<u>rd al</u>	0-9	<u> </u>	<u> </u>	se of co	of. to Øsik 4. Species Targeted all
	<u>~ 101</u>	SAN	MPLE DETAILS	<u>````````````````````````````````````</u>	Total Tra	vel lime	<u> 3</u>	Smins	Species Targeted all
DISTANCE	CAMPLE		<u>ः । </u>	3345					ANALYSIS ATTACHED?
DISTANCE	SAMPLE) SPE	CIES	OBS :	PROBA	SILITY		ANALYST:	NOTES
				scat or	STAT	US : :	<i>)</i> • 3		
				in scat	2 = probai	ole .			
			PREDATOR	<u> </u>	3 = possib	le :	, ; <u>;</u>	4.7	
	ļ	NO	SCATS						
		ļ <u>, ,</u>					 		
		1 10	UND						
200m		E	chidna scat				_		
250m		Dez	thickna scat marking-tree						· · · · · · · · · · · · · · · · · · ·
A3UM									
	<u> </u>							ļ	
	_				<u> </u>				
							├		
		 					<u> </u>	<u></u>	<u>-</u>
						•		Ī	
SKETCH MAP	(INCLUDE	DRAIN	AGE, ROADS AND TRACKS	DISTANCE			L	l	
NORTH	•		The second of the second	, DISTANCE	eo, dearin	GS)			
[TOP]									
•									
<u> </u>									

Sent to: Dr. Barbara Triggs 'DEAD FINISH' GENOA, VIC 3891

From: State Forests

Regional Office, Casino

PO BOX 688 NSW 2470

Date Sent: 16.9.198

Invoice No: 461187670

State Forest: MANAGEREN Bungawalbin SF

REF. No.	CPT	TRAN. No DIST. (m)	DEFINITE	PROBABLE	COMMENTS (eg fox scat? hair? possibles?)
B	48		R fuscifes		DOG sest
C.D.E	48		Pperegranus; Rlutreolus		Fox scat
F	48		W. bicola		Dog seat
G	48		V. velles (growing) / + eneed 1	neterual)	Fox seat
G2	48		N. sicola		Dag seat
HI	48		d. macrourus		?Dog acat
Α	48		- (need meteral)		? For scat
<u>L</u>	l				

Notes.....7 \$ x Predator scats



BAT SURVEY- Northern Rivers Region

STATE FO	REST /	BUNGA	WALBIA				M.A.						СОМ	PT. 48	
OBSERVE	R(S)	C.H ~ A	2 , ,				DATE	FROM	18.	8.9	8			ION CODE	461
Survey idea			<i>(H</i>				DATE	10	<u> 20</u>	8.9	8			Zone	56
POTENTIA			100				NO. C	F CENSI	US N	IGHTS	2				
BROAD HA			Caves Rainforest				O Tun							sed minesha	fts
Bright			□ Dry				Sclero		<u>:</u>	<u>·</u>	•		Voodla		<u></u>
			☐ Temperal	le			©∕Dry □ Wei] Heat		
			☐ Subtropio				□ Swa						3 Shrui 3 Tall	0	
Forest type			Chrome	ده			701	74 9	34	1126		-			_
LOCATION	للمل	2 butt	hoad a	*	N44, 6 d. (4	ا من	م م	mpt	in	un s R	nen d)	س و	est	off m	yell ch
DETECTIO	N METI	HOD(S)	12 harp trap				□ trip							served	
			☐ bat sonar				□mis	t net					□ oth	ner	***************************************
AMG		Site No	Easting 5				SPEC	IES TAR	GETE	D (NB	M. advi	ersus =		t K. papuensis	
COORDINA		/	Northing 6	77	9620		_			·				. ,	walp dop)
WEATHER	(census	s = 1 night)	4		Census	ı C	ensus 2	Census	s 3 .	Cens	us 4	Çensi	us 5	Census 6	Census 7
Date					18-8.	14	1-8					<u> </u>			
Temperatur			<u>. </u>		15/14	16	50								
Relative Hu					90%	8	0%				i				
Time Meas				-	9.00A	m 6	·40em				$\neg \uparrow$			 -	
			derate (4) stroi		1		1			_				·	
of in I	ast 24 hr	s (3) during		•	1		2								
Night light ((1) very ((4) brigh	dark (2) da it]	rk (3) detail se	en .	2		2,							 ,	
CAPTUR	E/SA	MPLE DE	TAILS		N.C.A.V	•	_ 	<u> </u>	<u>.</u>		1 1 1 1	٠٠.			<u> </u>
DATE	SPEC	CIES				Sex		ght (gms)	F-a	m :	Field .	Com	pulsor	y notes (age,	breeding,
1	.,			<u> </u>			_	<u>·</u>	 -	. 126	7,0.	appe		 -	
18-8-99	V.	<u>regu</u>	us/da	<u> </u>	gloni.	M	_ 5	<u>-</u> ஹே_	32	.5	1				
	"		,		"	m		ง 5q-1		- 1	2				
								J	1		<u> </u>				
						m	<u> </u>	5gn	3	3	3				
19-8-98	M	Aus	<u>+</u>			<i>p</i> 2	6.	<u>5_</u>	40	<u>د</u>	4				
	M	. Aus	<u> </u>			F	6	· ·	3	9	5				
- decled	tra	pat	8pm -	<u>. </u>											-
														-	
20-8	- tr	ao cho	uted 7	· <		o: \	50								 -
		7			/ <u> </u>	, 13	118	<u> </u>	-	\dashv				<u> </u>	
									 	\dashv					
	<u> </u>														
						_				\neg			•	 _	<u> </u>
	l								L	}					

BATS



BAT SURVEY- Northern Rivers Region

STATE FORES	<u></u>	gawalbin	_		M.A.	Cas	<u></u>			СОМ	OT 4 9	
OBSERVER(S	N.Dou R.Herk	glas			DATE	FROM :	12-6	1- 98		REG	ION CODE	461
Survey identifie	er:				NO OF	F CENSU	IS NICE	7 - 98		AMG	Zone	56
POTENTIAL H		☐ Caves			□ Tunr		19 MIGI	113	<u> </u>	D'ann	4 1 1 4	
BROAD HABIT	'AT TYPE	Rainforest	WAR WILLIAM	ika inggr	Scleror	ohvli 😳	3	to the contract	 91 - 1144	loodla	sed mineshaft	s ১৯৮৮ টুকার স্থান্ত
ĺ		•		1	©¹Ory		<u> </u>			Heall	<u>na 1931,135</u> h	A CONTRACT OF MANAGEMENT
		☐ Temperate			□ Wet					Shrul	-	
Forest type nur	mbers	O Subtropical			O Swa	mp			1	Tall		
LOCATION DE			C 1110 S		<u>-</u>				\perp			
		in the s	r was SE coi	rner	of	م مد	n en	Laul Latma	v t	yba 47.		ite 4
DETECTION M	(ETHOD(S)	☐ harp trap		- 1	☐ trip li		70 -0	-			served	
1		Le bat sonar			☐ mist							
AMG	Site No	Easting 508	3800	$\neg +$	SPECI	ES TAR	SETEN	(NID M. adv			ier	***************************************
COORDINATE	s B	Northing 6779			M. c	zdvers	א2. פרובט	(ND M. 80)	vet2n2 =	anabai	t K. papuensis :	= harp-trap)
WEATHER (ce	nsus = 1 night)		Census 1	(Cens	sus 2	Census	3 1 C	ensus 4	Censu	9.5	Cancillo 6 3	Census 7
Date	The street of		22-9-9	<u> </u>		STATE OF THE PARTY		And a language	3. Oction	3,7	Cellaus 0 /	Lensus /
Temperature	1.13		18 °C	1								
Relative Humid		The second second		┼								
Time Measuren				┼								
Wind [(1) calm.	(2) light (3) mod	lerate (4) strong	6:20pm	'			-					
Rain (1) eviden	ice of in last 24 ho	s (2) no evidence survey)		 			-					
Night light ((1) v	very dark (2) dar	k . (3) detail seen	2	-			-			-		
CAPTURE /	SAMPLE DE	TAILS	St English Hos									<u></u>
DATE S	PECIES	TATES TO ESTADO		24 - 15 1 IAA		. 14.3	(a) (b)					
		44.00	\$ 10 mg	Sex	Weig	hi (gms)	F-arm Length	Field No.	Comp	oulson arance	y notes (age, i	breeding.
22-9-98 8	Scotorep	ens grey	ü	N/A					¥ 5	7 _F	asses.	のは のは 神をからない はないかん
1		ens orion		N/A					×2			
22-9-98 C	natinolo	bus gou	[N/A.	_				×1	<u> </u>		
				-/	\vdash			+	~			 -
					┼		<u> </u>	 	-			 .
	 				<u> </u>							
												
		_						 		_		 -
		 -			┼─							
	<u> </u>				 			<u> </u>				
	· · · · · · · · · · · · · · · · · · ·		<u> </u>					1				
					_							
	_							 -	┼─			
					<u> </u>		L		<u> </u>			



BAT SURVEY- Northern Rivers Region

STATE FO	REST Bung	awalbin			M.A.	Cas	sino	 -	1 00	OMPT.	49	
OBSERVE	R(S) R. Her	klcts						9.93		GION COD	48	
	N Do	uglas.			DATE	TO 24	- q	- 198		IG Zone		56 ·
Survey ider						F CENS					`	<u></u>
	L HABITAT?	☐ Caves			O Tun	nels			Oi	sused mines	hafts	
BROAD HA	BITAT TYPE	Rainforest	Q0743	<u> 22. j</u>	Sclero	phyll	۲.:	4 *********	Woo	dland		
		☐ Dry ☐ Temperate			⊠ Dry				Пн	eath		
		☐ Subtropical			□ Wet				O SI			
Forest type	numbers				O Swa	imp			O Ta	ill		
LOCATION	DESCRIPTION	This site	is	locate	<u>દ</u> તે	in t	he	SE C	orner	of c	pt.	47.
DETECTIO	N METHOD(S)			 -								
	14 (4)(3)	harp trap			☐ trip	lines] a	observed		<u> </u>
		☐ bat sonar			☐ mist	net				olher		
AMG	Site No	Easting 509	600		SPECI	ES TAR	GETE) (NB M. ad		bat K. papuer		
COORDINA	ITES 1a	Northing 6770	1450		Αll.			(10 111 20		out ie bobaei	1313 - 1181	h-gab)
WEATHER	(census = 1 night)	4 1 W 12 W	Census	î Cen	sus 2	Censu	3:1:0	Census 4	Census 5	Census	S 7 50	
Date			22-9-			1 2 2 3 1 0 0 1	1 7 7	**************************************	ioenana a	Census	9,1 70,5	ensus 7
Temperatur	e .			18		 	-			<u> </u>	$+\!\!\!-$	
Relative Hu	midity		18%	78		 	\dashv			 		
Time Measu	rements Taken		6:30pi				-			 		
Wind ((1) ca	im (2) light (3) mod	derate (4) strong)	ι	<u>vr. 0 9</u>								
Rain ((1) evi	idence of in last 24 h	rs (2) no evidence	2	1	_		_				-	
Night light [(1) very dark (2) da (4) bright)	rk (3) detail seen	2	12	- ;				···········			
CAPTURE	/ SAMPLE DE	PAILS	19622 50	<u></u> L							<u> </u>	
DATE	SPECIES	TAICS TO A SE							ا او آ 			STATE OF THE STATE
	<u> </u>	i New		Sex	Weig	tht (gms)	F-am Leng		Comput	ory notes (ance)	ge, bree	ding,
22-9-48	Myctoph			C	í				<u> </u>		- "	- 13 30 Age
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Goile		معراعم	48		40~	- /	Acl	ult.		
22.9.9 ₉	Nyc 10 pl	ilus gon	۱۵۸,	لعسان	۱۹		41	اع	 ,,			
					Ť							
Oii O	Nycto	philus			†				-			
24.9		philus anulli	×2	fm	18	}	42		Adu	It (p	regn	ant)
24.9		"		Fm		<u>-59</u>	42		Adu	Lt (p Lt_ :		
24.9		'1		fm	11.		4/2	- 1	1	ll -		
)			1,7900			
			_		┼		-					
					├						. <u></u>	
]
								1				
					† –			 	 			
	L			L	<u></u>							



DIURNAL BIRD- Northern Rivers Region #1 Sheet per 500m transect or plot point

STATE	FOREST Bung	-`-انصمد		<u> </u>	M.A. Casia		COURT	 _			
OBSE						<i>•</i>	СОМРТ.	<u> </u>	<u>. </u>		
	· N.W.	سهدرما	- LuE		DATE FROM/TO	۹٤	REGION CO	DDE 46	1		
SURVE	EY NAME				Transect name		Point Surve	y			
CENSU		Start Time:	Ö	8+5		Finish Time	: 0	945			
CENSU		Start Time:		_		Finish Time					
LOCAT	ION DESCRIPTION	Fire to	eth a	-4 50	cooten and	4 com	pasan	* 	AL ava		
SITE -	AMG	EASTING	50	9850		NORTHING	(n)	18850			
DETEC	TION METHOD(S)	☐ arboreal r	nammals			1	☐ other	. 0 000	-		
		☐ nocturnal	birds				C Other				
Species	s targeted	Resent	Honene	ate.	Red Joshank	Calls Playe					
Potentia	al habitat?	No -	اعديس	Tuous	ming emechaly	المالا	L U	•	 -		
BROAD	HABITAT TYPE	Rainforest	• • • • • • • • • • • • • • • • • • • •	1	Sclerophyll	3 //4	Woodland	- 			
		□ Dry			& Dry Sclerophyll		☐ Heath W	oodland			
		☐ Temperate			☐ Swamp Sclerophy	·II	☐ Shrub W				
		☐ Subtropica	al		☐ Wet Sclerophyll		Tali Wood				
	ype numbers		-		70/74,	94 126					
	IER (census = 1 night)	Censu		nsus 2			·	Census 1	Census 2		
Temper	ature	Since Williams			Wind (1) calm (2) 6	ght (3) moder	rate (4)				
Relative	Humidity		ر حد		strong]			2			
					Rain [(1) evidence in in last 24 hrs (last 24 hrs (2) 3) during surve	no evidence yl	2			
Time M	easurements Taken	08	45		Night light [(1) very d (4) bright]				 -		
OBSE	RVATION DETAILS	3	<u>-</u>					<u> </u>	J		
DATE	SPECIES	OBS		RESPO	ONSE (ESTIMATE)	NOTE	ES (appearance	ce, sex, note if	COURT an		
5,,,_		TYPE		DIOTAL		<u> </u>	estimate)		oodin an		
	Bour chinned	Heard		DISTAN	NCE. BEARING						
	Harakare	,	4	1	(+/-)		-				
	Shortes - thru	dos.	3	((+/-)			 .			
	King land	Decod	<u> </u>		(+/-)						
	Fuscous Honory	1	\propto		(++-)		····				
	Gove Traces	س م	ی	((+I-)		· · · · · · · · · · · · · · · · · · ·	<u>-</u> -			
	Silverege	اعده عذا	?	(+		. <u>-</u>				
	Noin Front:	d Heard	3	(+-)						
	Little Lories	gor.	7	(+-)			<u>.</u>			
	Jellou Robin	Öns	١	(+-)		<u>-</u>				
	Dusky Woodmak	م ه	2	(+1-)						
	Horanicates	Head	1	(-	+-)						
	Brush Lomati	Uns	2		+1-)						
Key f	or tree markin	g: MO / F	O/SO/	/ BO/ Y	/BG / SG (p	lus roost/	V-notch e	etc.)			

DATE	SPECIES 1	OBS TYPE	COUNT	RESPONSE (ESTI	MATE)	NOTES (appearance, sex, note if count an estimate)
				DISTANCE	BEARING	estimate)
	Lillie Haztail	Oos	4	(+1-)		-
	Catherine - 2111-201	Hend	1	(+/-)		
	انسد صدیمه کاشاله	Hearl	2	(+/-)		
	Crow	لمدمنا	2_	(+/-)		
	Buenhoam	المدملا	2	(+/-)		- · · · · · · · · · · · · · · · · · · ·
	Mhithetoehid Varigated Wan	beard	3	(+/-)		
<u> </u>	Veringation	or c	۲_	(+/-)		
	Shoiled hit	HerrA	2	(+/-)		
	takinal wahish	Weerd	3	(+1-)		
	<u></u>			(+/-)		
				(+/-)		
				(+1-)		
				(+/-)		
			_	(+/-)		
				(+/-)		
				(+/-)		
				(+/-)		
				(+/-)		
				(+/-)		
		<u></u>		(+/-)		
				(+/-)		
				(+/-)		
			-	(+/-)		
				(+1-)		
			 	(+/-)		
			·	(+/-)		
				(+/-)		
				(+/-)		
	- of 3			(+1-)		

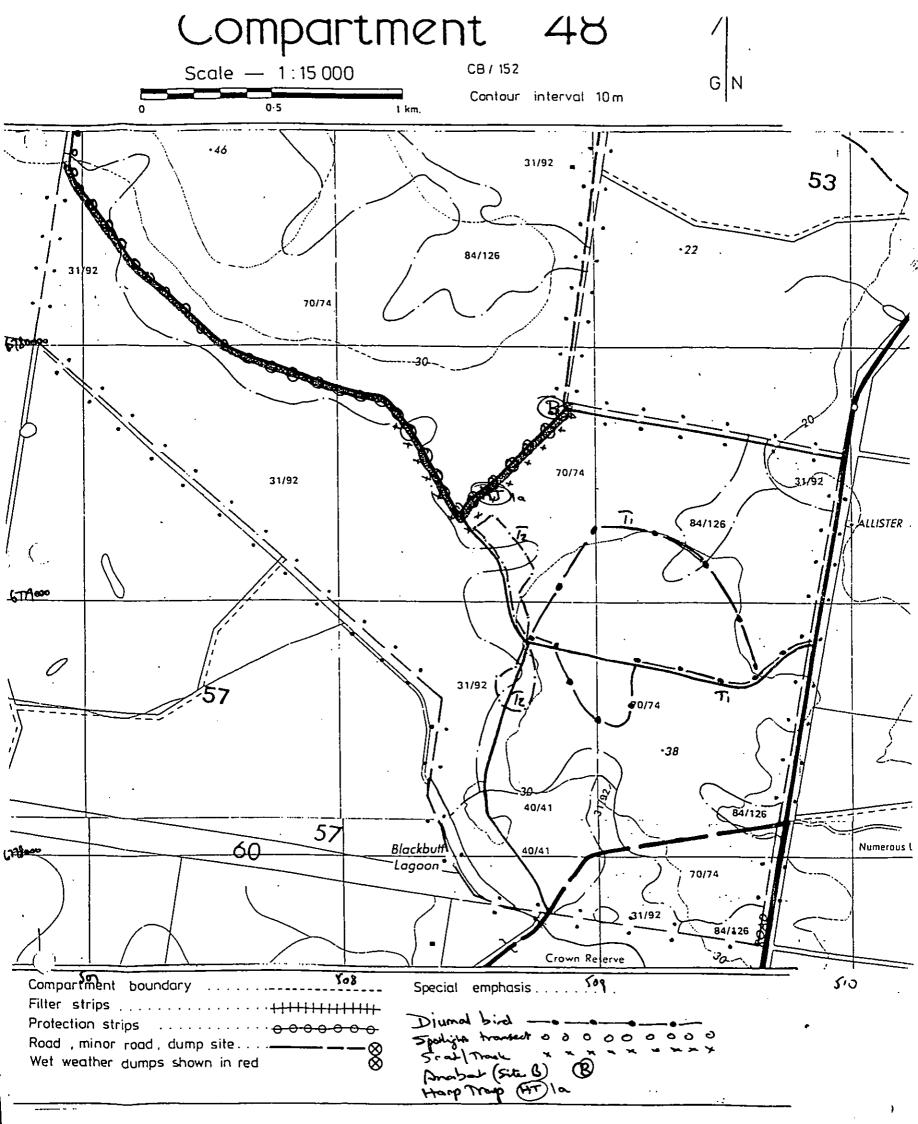


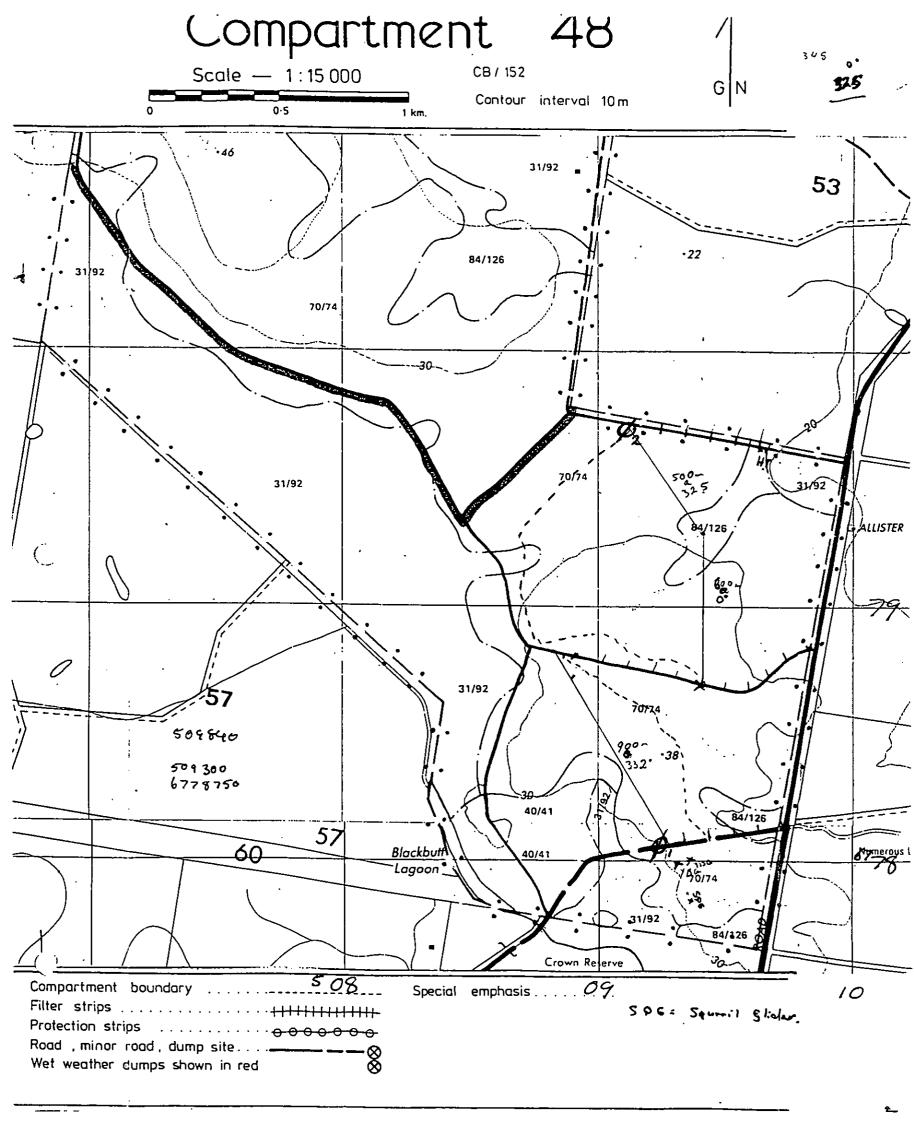
DIURNAL BIRD- Northern Rivers Region

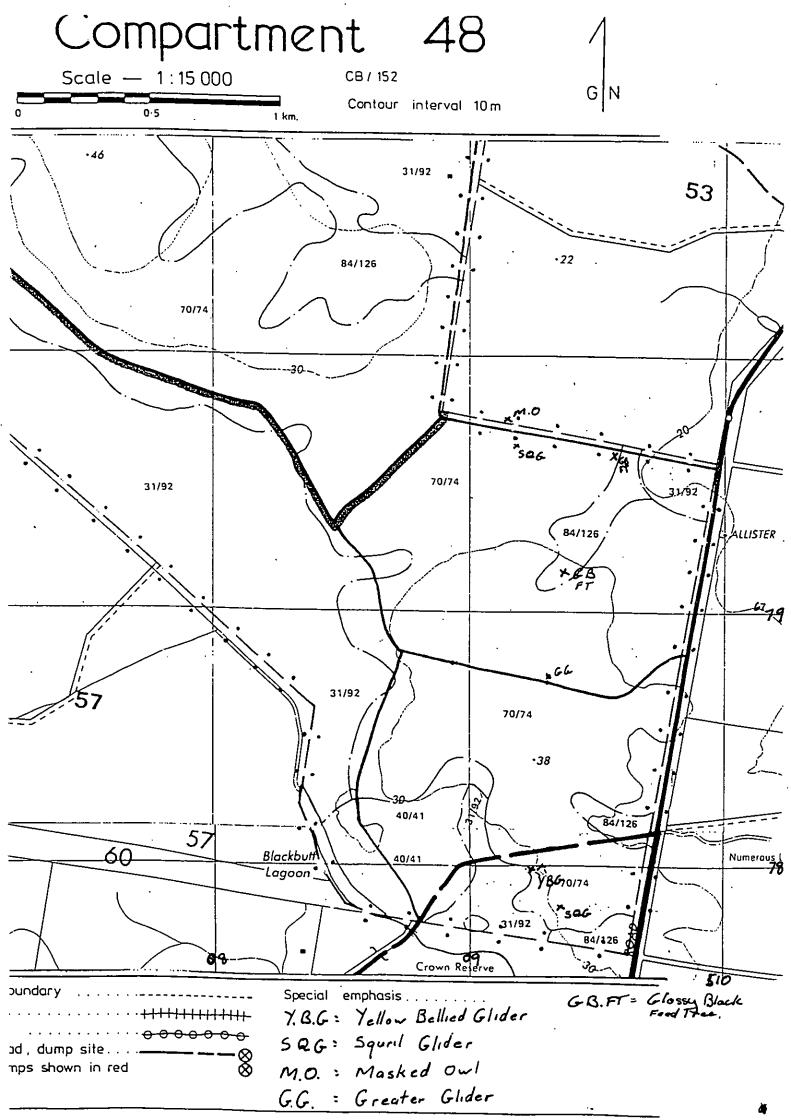
#1 Sheet per 500m transect or plot point

STATE	FOREST Q					M.A. C				1 WENT	Mr !-		
OBSER	FOREST Sun	<u>5°</u>		<u>-</u>			هماند	0	(COMPT.	4		
	Y NAME	· L	ــــــــــــــــــــــــــــــــــــــ	<u>~~0</u>	ત્ર		4 Seg	1998	8 1	REGION CO	DE	461	
		-				Transect n	ame T2		F	oint Survey			,
CENSU			t Time:	10	للرص			Finish 1	Time:	120	2		
CENSU			t Time:					Finish 1		130			
LOCATI	ON DESCRIPTION	2	- Blow	7 mg	مهر و	u a	م محرد	المساو	امدا		مان ملح حصمہ		
SITE -/	AMG	EAS	TING		50872	2		NORTH	IING	(-22	8850	·	
DETEC.	TION METHOD(S)	Ü ar	rboreal ma			St diurna	l birds			☐ other	9 970		
		C) no	oclumal bi	irds			•			C Onlei	•		
Species	targeted	_		paci				T a		***************************************			
Potentia	l habitat?	1	to	1-00				Calls F	Played	72-	3.		
BROAD	HABITAT TYPE		forest	v. • '.,		Scieroph	ýll .	·		Woodland	· - 		19. 19. 19. 19.
		00	•			SE Dry Sc	derophyll			☐ Heath We			
			emperate				p Sclerophy	11		☐ Shrub We			1
Forest ty	pe numbers	U St	ubtropical			□ Wet S	clerophyll			Tall Wood	land		
	ER (census = 1 night)		Census	1 6	Cénsus 2	 							
Tempera	ature	_				Mind (1)	lasi- in r	1			Census 1		Census 2
			Mar	~		strong) caim (2) li	ght (3) m	noderat	e (4)			
Relative	Humidity					Rain [(1) evidence in last 24 hrs (2) no evidence in last 24 hrs (3) during survey]						_	
Time Me	easurements Taken					Night light [(1) very dark (2) dark (3) detail seen							
OBSER	RVATION DETAIL	<u> </u>			eart Maring and the first	<u> </u>	(4) bright]	<u> </u>					
DATE	SPECIES	. :	· OBS.	-COUN		ONSE (ESTI	MATE)	· · · · · · · · · · · · · · · · · · ·	NOTES	Clannagen			
•			TYPE				<u> </u>			(appearance)	e, sex, not	e 11 COL	int an
1	لمكلاح			7. 77	DISTA	NCE	8EARING						
14	tessiven		0	م ا		(+/-)							
	holan		H	1		(+/-)							
	Noing hid		" 0	30	+	(++-)							
	Curros Shite		H	2		(+1-)							
	Frozon Howyest	س_	0	30-	۲	(+/-)				.	 -		
•	naspie		4	1		(+/-)				_			
	Leothers Hygatch Varigation Wien	ير_	0	١		(++-)							
	Valegation Wien		0	4		(+/-)				-			
	Mistabebia)	H	١		(+-)	 		_	<u> </u>			
	Willie Waylar	٨_	0	4		(+-)		-					
	Mistabebie Willie Waylar Grander Shilatia		0	2		(+/-)							
1/ 0	Shalita		H	_\		(+/-)							
Rey I	or tree markin	ıg: N	VIO / P	<u>0/s</u> () / BO/	YBG/S	SG (p	olus ro	ost/\	V-notch	etc.)		

DATE	SPECIES	OBS	COUNT	RESPONSE (EST	IMATE)	NOTES (appearance, sex, note if count an estimate)
	Whiteshoots			DISTANCE	BEARING	estima(e)
14	Tremesque	4	1	(+1-)		
	Melas Rasin	#	١	(+1-)		
	Lyesesser Lyesesser Lyly Dury	0	2	(+/-)		
	Freezen	14	\	(+/-)		·
	Kankel	#	١	(+/-)		
	Black. Janes Crukes Shite	#	١	(+1-)		
	Back. Jane of Creation Strike Pearaful Pose	0	2	(+1-)		
	Olive.backed Oriole	0	1	(+/-)		
				(+/-)		
	·			(+/-)		
				(+/-)		
				(+/-)	<u> </u>	·
				(+/-)		
				(+/-)		
				(+/-)		
				(+/-)		
			·	(4-)		
·			_	.(4-)		
				(+/-)		
•	,			(+/-)		
				(+/-)		
				(++-)		·
				(+/-)		·
				(+/-)		
				(+/-)		
				(+1-)		
				(+1-)		
				(+/-)		
	2 lo / 2			(+/-)		







	ERSE SURVEY	-BiN	1 444	ASINO	COMPT	48			ALA'SURVE	NO of
DBSERVER	(S) K Hervey		DATE FR	OMO .	REGION	10	-	MANUAL X	e teleproper	
	a Harlake		0.472.70	i9·8·98	CODE	61		CEO PER	DO M SECURIM	PER 100HA
START TIME	9am TRAVELTI	ME 154	START	EASTING	-		START	EACT	Water Transfer	And Land 3
SURVEY NAM	ME Pre-harvest		3	NORTHING	71		SIARI			€€ 509450
THREATE	NED FLORA OBSER	NATION:	C A T To A			1.1km	O	NORT	HING 67-7	1700 67
SPECIES SE	ARCHED FOR	(ANTION	S	- 1. mm	n		1	TREE	DBH 7	SCATS or
							- A	SPECIE	S approx	OTHER • 2
							1	<u> </u>	120 40	
							2	IRK	20-40	
TRANSECT	FLORA	NUMBER	AREA	SITE DESC	PIPTION	MAP/AMG	3	RG	20-40	
DISTANCE	- SPECIES		SIZE	& SITE DISTU	a California		I	TAK	20-40	
	* <u>* * * * * * * * * * * * * * * * * * </u>		Frank 1th		TOAROL (1)	- MOLEDA	 	Tile	20-40	
		<u> </u>	 			 	6	GĠ	20-40	
				<u> </u>		<u> </u>	7	RG	20-40 }	Bretteri
		<u> </u>	 			<u> </u>	8	RG	20-40	neato
			 			 	9	スぴく	140-60	1
	 	- 	-		<u> </u>		10		20-40	100 M
							11	RG	120-90	!
 -					-		12	TBL	140-ED	1
HREAT	ENED FALINATION	1 1	<u> </u>	Springerparies of	pers. 2011 7	<u> </u>	13		120-40	
UNICCE.	NED FAUNA SIGHT	ING OR FE	ATURE#	TO PALLS	12.12		14	Ris	2c-40	
KANSECI	SPECIES OR FEATURE	表 NUMBER はごうかっかで	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SITE DESCRIPȚI (MICROHABITĂ	ONIXE	MAP/AMG	15		120-40	<u>. </u>
DISTANCE .	T. TYPE		450 1	(MICROHABITA	ئۇرىكى ئىي (T	NOTED?	16		20-40	1
							17		HO-60	<u> </u>
2.77				<u>.</u>			18		120 -40	<u> </u>
						 	19		120-40	<u>!</u>
						†—— <u>—</u>	20		<u>'40-60</u>	
						 	21 :			B/T Scrippon
			<u> </u>	<u> </u>	-	 	22		2= +0_	1
						 	23		<u> 120-40</u>	-
						 	24		4C-60	!
				·		 	25		140-60	<u> </u>
		╅			 -	<u> </u>	26		120-40	
		+				 	27	TBK	120-40	<u> </u>
		 							20-40	
		╅╼╌┤			_	 -	28		20-40	
						 	29	TBY	10-60	<u> </u>
	· <u> </u>	+		<u> </u>		-	30		<u>120-40</u>	300 M
	-	 					31,	56-	10 .4c	
THREATEN	ED SPECIES FEATURES TO	- narrison - 7	· aur y . apr . garage.	7 0 1 50 0		<u></u>	32	wm	120-40	
BIRDS	ED SPECIES FEATURES		1.0000			F 17:	33 -	メロイ	20-40	
	OLL LATRINE AND DEN SIT	E0	- CAVES T	TAME O DIO			34	TOH	60-30	
-:: .50 TIGER QUO	V2 4 2000 70 22 1 7		TURVED. I	UNIVEL N KINN		S , .	35	WM	60-90	
TIGER QUO	NS & HOOSIN OF LARCE :	PIPAC .								
TIGER QUO NESTS, DEI	NS & ROOSTS OF LARGE & OWLSI BATS & HOLLOW	JII 103.	י עטוווטען	TIVE SCAIS (II	UU. KOAL	6	36	<u>w</u> m	<u> </u>	
TIGER QUO NESTS, DEI	NS & ROOS IS OF LARGE & OWLS) BATS, & HOLLOW T SPECIES	/	⊒BRUSH-1	TAILED ROCK V	QU, KOAL,	`	37	P.G	40-60	
TIGER QUO NESTS, DEI (RAPTORS (DEPENDEN	& OWLS) BATS, & HOLLOW T SPECIES	/ /	BRUSH-1 PERMANI	FAILED ROCK V	QU, KOAL VALLABY) ID SEERAC		37 38	P.G		
TIGER QUO NESTS, DEI (RAPTORS (DEPENDEN' GLOSSY BL	& OWLS) BATS, & HOLLOW T SPECIES ACK COCKATOO, ALBERT	rs ***	PERMANI YEBG 'V-I	TAILED ROCK V ENT SOAKS ÂN NOTCH' TREES	QU, KOAL, VALLABY) D SEEPAG	ES T	37 38 39	r.G	40-60	
TIGER QUO NESTS, DEI (RAPTORS I DEPENDEN' GLOSSY BL LYREBIRD 8	& OWLS) BATS, & HOLLOW T SPECIES	S *** 3	PERMANI YEBG 'V-I OWL PEL	TAILED ROCK V ENT SOAKS AN NOTCH' TREES LETS (& WHITE	QU, KOAL VALLABY) ID SEEPAG WASH)	ES .	37 38 39 40	RG Lam Wan	40-60 20-40	400 M
TIGER QUO NESTS, DEI RAPTORS (DEPENDEN GLOSSY BL YREBIRD (ENERAL (T SPECIES ACK COCKATOO, ALBERT BUSH THICK-KNEE NEST	RECORD	PERMANI PERMANI YEBG 'V-I OWL PEL FEATURES	TAILED ROCK V ENT SOAKS AN NOTCH' TREES LETS (& WHITE EG. UNMAPPEI	VALLABY) O SEEPAG WASH)	ES .	37 38 39 40 41.	RG Lam Lum Wm	40-60 20-40 40-60	400 M
TIGER QUO NESTS, DEI RAPTORS & DEPENDEN GLOSSY BL LYREBIRD & ENERAL (RCHAEOL RTEFACT	COMES) BATS, & HOLLOW T SPECIES ACK COCKATOO, ALBERT BUSH THICK-KNEE NEST COMMENTS & LOGICAL S	RECORD	PERMANI PERMANI YEBG 'V-I OWL PEL FEATURES	TAILED ROCK V ENT SOAKS AN NOTCH' TREES LETS (& WHITE EG. UNMAPPEI	VALLABY) ID SEEPAG WASH) CHANGE II	ES .	37 38 39 40	EUK EM EM EM EM EM EM EM EM EM EM EM EM EM	70-40 40-60 40-60	400 M
TIGER QUO NESTS, DEI RAPTORS & DEPENDEN GLOSSY BL LYREBIRD & ENERAL & RCHAEOL RTEFACT RANSECT [COMMENTS & HOLLOW T SPECIES ACK COCKATOO, ALBERT BUSH THICK-KNEE NEST COMMENTS & LOGICAL S OBSERVATION OF:	RECORD	PERMANI PERMANI YEBG V-I OWL PEL FEATURES	FAILED ROCK V ENT SOAKS AN NOTCH' TREES LETS (& WHITE EG. UNMAPPEI OCKY OUTCROPS	VALLABY) ID SEEPAG WASH) CHANGE II	ISTRATA	37 38 39 40 41.	EUK FAU FAU FAU FAU FAU FAU FAU FAU FAU FAU	40-60 40-60 40-60 40-60 40-60	400 M
TIGER QUO NESTS, DEI RAPTORS & DEPENDEN GLOSSY BL YREBIRD & ENERAL © RCHAEOL RTEFACT	COMES) BATS, & HOLLOW T SPECIES ACK COCKATOO, ALBERT BUSH THICK-KNEE NEST COMMENTS & LOGICAL S	RECORD	PERMANI PERMANI YEBG V-I OWL PEL FEATURES TTYPE RO	TAILED ROCK V ENT SOAKS AN NOTCH' TREES LETS (& WHITE EG. UNMAPPEI OCKY OUTCROP	QU, KOAL, VALLABY) D SEEPAG WASH) D CHANGE II S ETC ?	ISTRATA	37 38 39 40 41. 42 ;	SW SW SW SW SW SW SW SW SW SW SW SW SW S	40-60 40-60 40-60 40-60 40-80	
TIGER QUO NESTS, DEI RAPTORS (DEPENDEN GLOSSY BL YREBIRD 8 ENERAL (RCHAEOL RTEFACT VANSECT [COMMENTS & HOLLOW T SPECIES ACK COCKATOO, ALBERT BUSH THICK-KNEE NEST COMMENTS & LOGICAL S OBSERVATION OF:	RECORD	PERMANI PERMANI YEBG V-I OWL PEL FEATURES	TAILED ROCK V ENT SOAKS AN NOTCH' TREES LETS (& WHITE EG. UNMAPPEI OCKY OUTCROP	VALLABY) ID SEEPAG WASH) CHANGE II	ISTRATA	37 38 39 40 41. 42 ; 43 44]	SUN SUN SUN SUN SUN SUN SUN SUN SUN SUN	40-60 20-40 40-60 40-60 40-60 40-60	400 M
TIGER QUO NESTS, DEI RAPTORS (DEPENDEN GLOSSY BL YREBIRD 8 ENERAL (RCHAEOL RTEFACT VANSECT [COMMENTS & HOLLOW T SPECIES ACK COCKATOO, ALBERT BUSH THICK-KNEE NEST COMMENTS & LOGICAL S OBSERVATION OF:	RECORD	PERMANI PERMANI YEBG V-I OWL PEL FEATURES TTYPE RO	TAILED ROCK V ENT SOAKS AN NOTCH' TREES LETS (& WHITE EG. UNMAPPEI OCKY OUTCROP	QU, KOAL, VALLABY) D SEEPAG WASH) D CHANGE II S ETC ?	ISTRATA	37 38 39 40 41. 42 ; 43 44! 45	SUM SUM SUM SUM SUM SUM SUM SUM SUM SUM	40-60 40-60 40-60 40-80 40-80 80-80 80-80	
TIGER QUO NESTS, DEI RAPTORS (DEPENDEN GLOSSY BL YREBIRD 8 ENERAL (RCHAEOL RTEFACT VANSECT [COMMENTS & HOLLOW T SPECIES ACK COCKATOO, ALBERT BUSH THICK-KNEE NEST COMMENTS & LOGICAL S OBSERVATION OF:	RECORD	PERMANI PERMANI YEBG V-I OWL PEL FEATURES TTYPE RO	TAILED ROCK V ENT SOAKS AN NOTCH' TREES LETS (& WHITE EG. UNMAPPEI OCKY OUTCROP	QU, KOAL, VALLABY) D SEEPAG WASH) D CHANGE II S ETC ?	ISTRATA	37 38 39 40 41. 42 43 441 45:	Sym Sym Sym CUPY Sym Sym Sym Sym	\$0-\$0 \$0-\$0 \$0-\$0 \$0-\$0 \$0-\$0	
TIGER QUO NESTS, DEI RAPTORS (DEPENDEN GLOSSY BL YREBIRD 8 ENERAL (RCHAEOL RTEFACT VANSECT [COMMENTS & HOLLOW T SPECIES ACK COCKATOO, ALBERT BUSH THICK-KNEE NEST COMMENTS & LOGICAL S OBSERVATION OF:	RECORD	PERMANI PERMANI YEBG V-I OWL PEL FEATURES TTYPE RO	TAILED ROCK V ENT SOAKS AN NOTCH' TREES LETS (& WHITE EG. UNMAPPEI OCKY OUTCROP	QU, KOAL, VALLABY) D SEEPAG WASH) D CHANGE II S ETC ?	ISTRATA	37 38 39 40 41. 42 ; 43 44! 45 46: 47!	SAW SAW SAW SAW SAW SAW SAW SAW SAW SAW	40-60 40-60 40-60 40-60 60-30 20-40 40-60 60-30 10-40	
TIGER QUO NESTS, DEI RAPTORS (DEPENDEN GLOSSY BL YREBIRD (REBRAL (RCHAEOL RTEFACT ANSECT [COMMENTS & HOLLOW T SPECIES ACK COCKATOO, ALBERT BUSH THICK-KNEE NEST COMMENTS & LOGICAL S OBSERVATION OF:	RECORD	PERMANI PERMANI YEBG V-I OWL PEL FEATURES TTYPE RO	TAILED ROCK V ENT SOAKS AN NOTCH' TREES LETS (& WHITE EG. UNMAPPEI OCKY OUTCROP	QU, KOAL, VALLABY) D SEEPAG WASH) D CHANGE II S ETC ?	ISTRATA	37 38 39 40 41. 42 43 441 45:	Figure 1970 Ping	\$0-\$0 \$0-\$0 \$0-\$0 \$0-\$0 \$0-\$0	

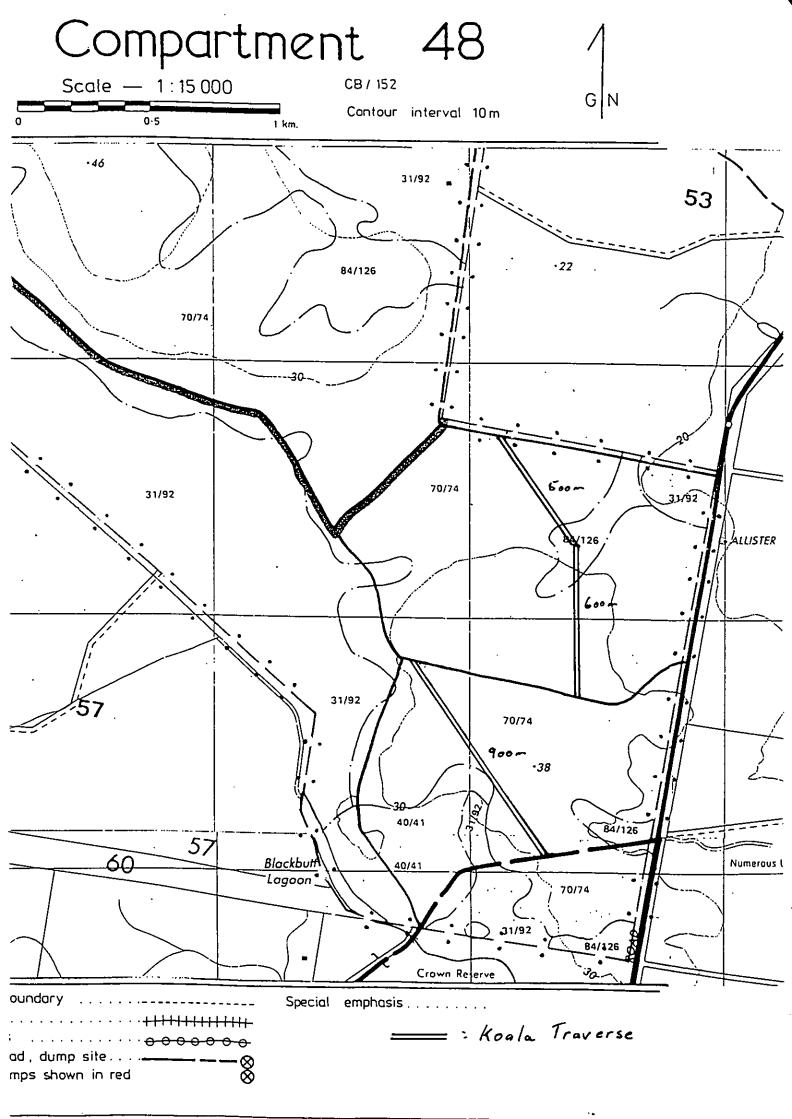
TRAVER	RSE SUR	VEY (CONT	INUED)	NO	OF_				,	KOALA SI	URVEY (C	ONTINUÉ	מו
OBSERVER	R(S)			DATE	19-8		•		II '	5 TREES PE		KM PER 100H/	* 1
		BSERVATIO)NS]			_		1	+	 	7 7 7	-
SPECIES SEA					_ <u></u>					TREE	DBH (approx)	SCATS or OTHER	
TRANSECT	FLORA		NUMBER		4	SCRIPTION		MAP/AMG	51	سنز	20-40	Office,	•
DISTANCE	SPECIES			SIZE	& SITE DIS	TURBANCE (?))	NOTED?	52		20.40	 	
	<u> </u>						\neg		53		_	 	
	<u> </u>		Τ				7		54		20-40	 	
					 		\dashv		55		40-60	 	
			†	 	 		7		56	<u>GG</u>	20-40	 	550 M
			 	 	 		+		57	୍ର	20-40	 	
			 	 					58		<u> 20 - 40 </u>	 	
			 	 	 		+		-		20-40	 _	
	 		┼──	 	 	 ,	-		59		40-60	GG Still	<u> </u>
	 		 		 		-	<u> </u>	60		20-40		600 M
	 		 	 	 		4	Δ Ι Ο	6132	15° TBK	20-40		
	 		 	 -	 		_		62	<u>56-</u>	20-40		
		<u>_</u>	——	 	<u> </u>				63		25-40		
1				<u></u> '	<u> </u>				64	ພຸກ	20-40		
	<u> </u>						\neg		65		40-60		
							7		66			Sunp w	عدالماجع
THREATEN	ED FAUNA -	SIGHTING OR FI	EATURE#		<u></u>	<u></u>			67		12c-40	Sul .	
DISTANCE	SPECIES/FEA		NUMBER	TRITE (MICI	ROHABITAT)		140	P/AMG?			20-40		
			1.0	Ort E (inio.	KURABITATI			PIAMO	68		<u> 20-40</u>	<u> </u>	
			 -	 		\longrightarrow			69		20-40	<u> </u>	
			 	 	 _	$\longrightarrow \downarrow$		<i> </i>	70	\$25	20.40	no other	700 M
	 	 -	 -	↓				/	71	56	40-60	hees are	ourne
	<u> </u>		 _	<u> </u>					72		20-40	here to	
			<u> </u>	<u> </u>			_	/	73		20-40	S. rvey	
									74		20-40	13 roay	
							_	/	75		30-40	<u> </u>	
	ſ <u></u>						_		76				
							_		77		4C - 6c	 	
							—		78		کن - ننون		
			 	 		 +	—	——			१८-५०	<u> </u>	
			 						79			GG Scat	
			 						80	TRK	20-40	L	800 M
			 						81	Tair	40-60	i -	
	<u> </u>		 !						82	INK			
	 			<u> </u>					83		40-60		
1			<u> </u>						84		20-40		
		ARCHAEOLOG							85		40-6D		
		NMAPPED CHAN	IGE IN STR	ATA OR FO	REST TYPE, R	OCKY OUTCRO	OPS	ETC.	86		20-40	_	
TRANSECT	OBSERVATIO							\P/AMG	87				
DISTANCE						- 1		OTED?	88		25-40		
								-	89		20-4c		
	<u> </u>								90		20-40		
							—		91		40-60		900 M
							—				60-30	_	
						\longrightarrow			92	f i	40-60		
								——-	93		40-60	<u>. </u>	
									94	RG-	20-40		
									95	. 1	40-60		
									96		20-40		
									97		20-40		
									98		20-40		
									99				
							—		100	- 40K	40-60		
LAST SHEET?	YES / NO	TRAVERSE FI	INISH	EASTING							40-60		1000 M
TOTAL TIME		AMG CO-ORD		NORTHIN						FINISH	EASTING		
		AING CO-OND	MATES	NORTHIN	10				CO-OR	DINATES	NORTHING		

TRAVERS	E ŞURVEY	(CONTINUED) NO	D	OF			KOALA S	URVEY.(C	ONTINUED)
OBSERVER(S)			DATE	19.8			TOPECOE	Parker in the	M PER 100HA
THREATENED	FLORA -OBSE	RVATIONS		11 6	<u> </u>				M PER 100HA
SPECIES SEARC			J			Ì			
						#	TREE SPECIES	D8H	SCATS or
TRANSECT	FLORA	NUMBER	AREA	SITE DESCRI	PTION MAP/	/AMG 10		(approx)	OTHER
DISTANCE	SPECIES		SIZE	& SITE DISTURB	ANCE (7) NOTE	ED? 10		20-40	
					<u> </u>	10:		20-40	
						10		40-60	
				·		10	701	20-40	1000
						10		20-10	1 (43.6)
						10		40-60	
		·				108		20-40	
						169	704	80+	
	 			 		1050	O TOK	20-40	₽ \$00 M
						61			
			<u>_</u> _	<u> </u>		62	2		
						6.3	3		
						64			
						65	· · · · · · · · · · · · · · · · · · ·		
7110547517	. =				·	66	i		
THREATENEL) FAUNA - SIGH	TING OR FEATURE# 🚕			美国教育	67	,		
DISTANCE	'SPECIES/FEATL	JRE TYPE . NUMBER	SITE (MICE	ROHABITAT)	MAP/AM	IG? 68	l "		
						69			
				<u> </u>		70)		700 M
						71			
					<u> </u>	72	!		
						73			
	7.0			 		74			
						75			
						76			
						77			
						78			
Ì						79			
				·		80			1A 008
						81		<u> </u>	
						82		 	
						84		 	
GENERAL COM	MENTS*& ARC	HAEOLOGICAL ARTEF	ACTS			85			
RECURD FEATU	JRES. EG. UNMAJ	PPFI) CHANGE IN STRAT	A OD EODE	CT TUDE BOOKS	HTCDODS ETC	- ⊩			
TRANSECT	OBSERVATION (OF				86 4G 87			
DISTANCE	•				NOTED	IL_			
						89			
						90			
		-		<u> </u>		91			900 M
						92			— ——
						93	7.		
						94			
	•					95		 	
	,	<u> </u>				96			
						97			
						98			
					_ 	99			
···				-		100)		1000 M
LAST SHEET? Y	ES / NO	TRAVERSE FINISH * 19	EASTING						
TOTAL TIME		TRAVERSE FINISH AMG CO-ORDINATES					ALA FINISH	EASTING	509120
	<u></u>	TO ONORANIES	NURTHIN			CC	ORDINATES	NORTHING	6779700

PAGE 1 OF 2 of insect-bits in probably Tawny frogmouth (sev. sighted during night-surveys).

TRAVERSI	E SURVE	Y (CONTINUED) N	O OF				KOALA SI	JRVEY (C	ONTINUED)
OBSERVER(S)		,	DATE		į				
THREATENED I	FLORA -ORSE	RVATIONS						R 50 M · 1K	M PER 100HA
SPECIES SEARCH		- TONS	J						
		_					TREE	DBH	SCATS or
	FLORA	NUMBER	AREA SITE	DESCRIPTION	MAP/AMG	51	SPECIES	(approx)	OTHER
DISTANCE	SPECIES			DISTURBANCE (?)		52	<u> </u>		ļ
		 _				53		20-40	
					i	54		20-40	
1			<u></u>			55	<u> </u>	40-60	
					li li	56		20.40	550 14
		<u></u>	 			57		20.40	
						58	TBix C1V	20-40	
						59		80-30	<u> </u>
						60		20-40	
			<u>-</u>		 -	61		26-40	500 M
						62		25-40	
į			·			63		12:40	
		<u> </u>			it it	64	-	20-40	
İ						65		40-60	
					ì	66		40-60	
THREATENED	FAUNA - SIGH	TING OR FEATURE#	: 在海域的	raini beceje	₹ · .	67		1 -	Edstern Grey
DISTANCE :	SPECIES/FEATU	JRE TYPE NUMBER	SITE (MICROHABITA	T) MA	P/AMG2	68		20-40	Scats -
			<u>,</u>	7	* // #//01	69		20-40	
		<u></u>			ŀ	70		40-60	
	-	 				71		20-40	700 M
]-	72	<u> </u>	20-40	
						73	<u> </u>	20-40	
		<u> </u>			ŀ	74		20-40	
					─	75		20-40	
					-	76		20-40 40-60	
					—— <u> </u>	77		20-40	
					i i	78		20-40	
				<u> </u>		79		20-40	
					ŀ	80		20-40	
						81	GRY	20-40 20-40	
	 				ľ	82		2C~40	
				<u> </u>		83		20-40	
					i i	84		20-40	
GENERAL COMM	MENTS" & ARC	HAEOLOGICAL ARTER	ACTS			85	Ī	٢٥-40	
NECORD FERTOR	RES. EG. UNMA	LLED CUMURE IN 2 [KY]	A OR FOREST TYPE	ROCKY OUTCROSS E	TC.	86		30-40	
TRANSECT	OBSERVATION	OF American	e de la companya de l	. M/	AP/AMG	87		20-40	— — ·——
DISTANCE	<u> </u>	OF		N	OTED?	88		20-40	
				<u></u>		89	*KBK	20-40	
			<u> </u>			90	ZOK	<u> </u>	900 M
						91		<u> </u>	
_			 			92			
						93			
						94			
						95			
						96			
						97			
-				. <u> </u>		98			
					1	99			
			-			100			1000 M
LAST SHEET? YE	S / NO	TRAVERSE FINISH	EASTING		- · II	.,-			
TOTAL TIME		AMG CO-ORDINATES	· ·				A FINISH	EASTING	छा ६ ६२०
		TO GROWATED!	HORTHING	. — — ——		CO-0	RDINATES	NORTHING	6778900

PAGE ____ OF ____



Schedule 7

SFNSW HARVESTING PLAN CHECKLIST

SURVEY REPORT

Region	Northern Rivers (Compa	artment(s))	48
Management Area		SF Ecol	` ,	•	K. MCCRAY
REQUIREMENT	ISSUES TO CHECK		YES/NO	COMMENT	S/ACTION
1.5 SURVEY DOC	UMENT AND REPORTING			,	
	Are all raw data sheets included?		_ Y	_	
ĺ	Is surveyor's name supplied?	$\neg \uparrow$	4	_	, ,
[Are surveyor's experience details on file?	?	ÿ	-	
1.6 RELIABILITY	OF PREVIOUS SURVEYS			·	-
				 .	
[Have surveys been conducted within 2 or km of the compartments?		7	None K	nown
Į	Has documentation of the reliability of the surveys been supplied?	iese	Nla		
4 - Protenop par					
2.1 DESKTOP REV	/IEW				
ſ	Date of desktop review?			7/6/	
}	Has Management Area, State Forest name			17/8/	48
	compartment number been supplied?	·	4		
	Has name of person(s) conducting review been supplied?	/ 	7		
Ì	Results supplied of NPWS database search	h for			-
_	threatened flora and fauna records within km?	-	4		
	Date of NPWS database search for threater flora and fauna records?	ened	7		
 	Results of a check of SFNSW records for	.——			
	threatened species within 5 km?		7		
	Has summary of threatened species record				
	(species name, location, date, type of reco		Υ		
}	observers name and source) been provided Have locations of threatened species requi		`	 .	
į	prescriptions been plotted on to HP map?	inng	<u> </u>		
A A PRICIED TO STORE A F. O.	mine . marine announce pro	-			
2.2 INCIDENTAL	THREATENED SPECIES RECO	<u>DRDS</u>			
Г	Details of AMG, State Forest and cpt num	nher	<u> </u>		
L	date recorded, recorder's name provided?		4		
2.2.COMPADIAN	The man are a second				
2.3 COMPARTME	NT TRAVERSE				,, <u>,,</u> ,,
Г	Management Area, State Forest, cpt given	-9 T			<u> </u>
F	Date of survey provided?	" +			· .
}	Is distance of traverse adequate? (200 ha/4	,_ -	<u> </u>	on data	sheet
	km)	•	4		
[Has a clear route traverse map been provide	ided?	Ψ		
	Have the full range of environments been	-			
	sampled (forest types, ridges, slope and Gully)?		7		

REQUIREMENT	ISSUES TO CHECK	YES/NO	COMMENTS/ACTION
Flora component	Is length of time spent adequate? (200 ha/6 hr)	4	Just adequate
	Has potential habitat been sampled?	4	
	Threatened flora recorded and number given?	4	
	AMG of threatened flora recorded and number given?	4	
	Locality of threatened flora records given?	4	
	Locality of threatened flora marked on a 1:25,000 map?	7	1:15000
Fauna feature	Is length of time spent adequate? (200 ha/4	1	-
component	hr)	7	
<u> </u>	Has potential habitat been sampled?	7	
	Locality of threatened fauna features clearly marked on a 1:25,000 map?	Ma	None located

2.4 TARGETED FAUNA SURVEYS

Surveys	Have prescriptions been applied in place of		
Undertaken	survey?	7	
	Is yes, which prescription has been implemented instead of doing which survey?	Na	
Spotlight survey	200 ha NLA, 1 x 2 km transect (or 2 x 1 km)?	7	
	Spotlighted on two separate nights?	7	
	Spotlighted at least once on foot?	7	
	Spotlighted for minimum 1 hr duration	7	
	Location of spotlight marked on map?	Y	
	Was the full range of habitats sampled?	4	-
Nocturnal call playback	Per 200 ha NLA, 2 call playback sites?	Ч	2@235h + CFF 419
	Playback conducted on two separate nights?	7	,
	Were Powerful Owl, Sooty Owl and Masked Owl calls played (mandatory calls)?	4	
	Were Yellow-bellied Glider, Squirrel Glider, Koala and Marbled Frogmouth calls played?	4	50, 184, K, SQC
	Playback sites > 1 km apart?	<u> </u>	
Hairtubes	Per 200 ha NLA, 20 tubes over 2 km?	2/4	Not conducted
	Transect along gully and midslope on contour?	N)a	
	Results of analysis provided?	N/a	
Scat and track	Per 200 ha NLA, 1 km road transect (on foot)?	4	
	Results of analysis provided?	<u> 70</u>	Not yet analysed

Frogs

(a) Riparian	Per 200 ha NLA, minimum 1 person hour	NIa	Not conducted
- -	No. of streams surveyed (10 minimum)?	N/a	
	Minimum 3 call playback per 1 hour search	N/a	
	Playback conducted on 2 separate nights	NIA	
(b) Non-riparian	Do soaks, seepages, bogs occur in NLA?	2	None recorded
-	If yes, per 200 ha NLA, 30 mins to 2 hours survey conducted (10 mins each separate site)?	NJA	, , , , , , , , , , , , , , , , , , , ,
	Playback conducted for Philoria sp.?	Nla	

Do permanent swamps or ponds occur in LA? Per I ha water surface area, I hour survey, both day and night (proportional time if less than I hap?) If no, was technique used documented? Night survey on two non-consecutive nights? Over I ha water surface area, I hour survey, hold nights? Over I ha water surface area, I hour survey, hold nights? Call playback conducted over soft non-consecutive (maller swamps/ponds 30 Min. survey) Call playback conducted over soft non-consecutive (maller swamps/ponds 30 Min. survey) Call playback conducted over soft non-consecutive (maller swamps/ponds 30 Min. survey) Call playback conducted are three points? Per 200 ha NLA 2 km road-based survey? Also Ostside known range Call playback conducted at three points? N/a Microbats (a) Cave, tunnel, mineshaft roost surveys If yes, was ultrasonic call recording of 30 minutes duration undernaken? Or has experienced person physically inspected any potential cave cost sites? Results of analysis provided? Results of analysis provided? Also Note: A surveys on survey and surveys on surveys on surveys of the surveys	REQUIREMENT	ISSUES TO CHECK	YES/NO	COMMENTS/ACTION
Per I ha water surface area, I hour survey, both day and night (proportional time if less than 1 ha)? If no, was technique used documented? Night survey on two non-consecutive nights? (d) Litoria brevipalmata Over I ha water surface area, I hour survey, smaller swamps/ponds occur in LA? Over I ha water surface area, I hour survey) (smaller swamps/ponds 30 Min. survey) Call playback conducted every 50-100m? Microbats Microbats Are caves, mines and disused mineshafts present in NLA? If yes, was ultrasonic call recording of 30 minutes duration undertaken? Or has experienced person physically inspected any potential cave roots sites? Results of analysis provided? Per 200 ha NLA 2 har priase, minimum consecutive nights (= 4 trap nights) Also value in the for K. peparase or n. c. description of target species? Small mammal (a) Broad-tooth Rat To Ellious set for 4 nights in potential habitat? Diurnal birds Call playback conducted Jul to Jan? Playback conducted Jul to Jan? No and the state of the conducted Jul to Jan? No and the co	🛇 Litoria aurea,			
both day and right (proportional time if less than I ha?) If no, was technique used documented? Night survey on two non-consecutive nights? Do temp. Rooded areas/ponds occur in LA? Now have non-consecutive general proportion of the previpal mata Over I ha water surface area, I hour survey (smaller swamps/ponds 30 Min. survey) Call playback conducted every 50-106m? Survey conducted on at least two nights? All outside known range Call playback conducted at three points? Other has NLA 2 km road-based survey? All outside known range Call playback conducted at three points? No outside known range Microbats Are caves, mines and disused mineshafts present in NLA? No outside known range If yes, was ultrasonic call recording of 30 minutes duration undertaken? Or has experienced preson physically inspected any potential cave roots ties? Results of analysis provided? No consecutive nights (= 4 trap nights) Potential Myorite habitat, Anabat for 30 mins Are traps placement adequate for target species? Small mammal (a) Broad-tooth Rat 175 Ellious set for 4 nights in potential habitat? No outside known range No potential habitat? No potential habitat? No potential habitat on previous excerds identified. Playback conducted Set to Jul? No potential habitat on previous excerds identified. Playback conducted Set to Jul? No habitat? No previous excerds identified. Playback conducted Set to Jul? No habitat No habitat? No previous excerds identified. Playback conducted Set to Jul? No habitat? No previous excerds identified. Playback conducted Set to Jul? No habitat? No previous excerds identified. Playback conducted Set to Jul? No habitat No habitat? No previous excerds identified. Playback conducted Set to Jul? No habitat? No previous excerds identified. Playback conducted Set to Jul? No habitat? No previous excerds identified. Playback conducted Set to Jul? No habitat? No previous excerds identified. Playback conducted Set to Jul? No habitat? No previous excerds identified. Playback on on 2 non-consecutive da	castanea	1	~	None recorded
than 1 haj? If no was technique used documented? Night survey on two non-consecutive nights? Night survey on two non-consecutive nights? Over 1 ha water surface area, 1 hour survey (smaller swamps/ponds 30 Min. survey) Call playback conducted every 50-10007 Survey conducted on at least two nights? Oly 1 playback conducted overy 50-10007 Survey conducted on at least two nights? Oly 1 playback conducted at three points? Oly 1 playback conducted at three points? Oly 2 playback conducted at three points? Oly 2 playback conducted at three points? Oly 2 playback conductated at three points? Oly 2 playback conductated at three points? Oly 3 playback conductated at three points? Oly 4 problem of the conductated at three points? Oly 4 problem of the conductated at three points? Oly 4 problem of the conductated at three points? Oly 4 problem of the conductated at three points? Oly 4 problem of the conductated at three points? Oly 4 problem of the conductated at three points? Oly 4 problem of the conductated at three points? Oly 4 problem of the conductated at three points? Oly 4 problem of the conductated at three points? Oly 5 problem of the conductated at three points? Oly 5 problem of the conductated at three points? Oly 6 problem of the conductated of three points? Oly 6 problem of the conductated of three points? Oly 6 problem of the conductated of three points? Oly 6 problem of the conductated of three points? Oly 6 problem of the conductated of three points? No pokuhal habitat or problem of the conductated of three points and the conductated of the cond				
If no, was terchnique used documented? N/a Night survey on two non-consecutive nights? N/a Do temp. Resolved a reasylonds occur in LA? N Nc habitet dekeled. No Article Resolved N/a No Article Resolved N/a No Article Resolved N/a No Article Resolved N/a N/a No Article Resolved N/a			N)a	
Night survey on two non-consecutive nights? (d) Litoria brevipalmata Over 1 ha water surface area, 1 hour survey (smaller swamps/ponds 30 Min. survey) Call playback conducted every 50-100m? Survey conducted on at least two nights? (e) Heleioporus australiacus Call playback conducted at three points? Na Otside known range Call playback conducted at three points? Na Otside known range Call playback conducted at three points? Na Otside known range Call playback conducted at three points? Na Microbats (a) Cave, tunnel, mineshaft roost surveys If yes, was ultrasonic call recording of 30 minutes duration undertaken? Or has experienced person physically inspected any optential cave roots sites? Results of analysis provided? Na Otherwoula papuensis, Myotis adversus Potential Myotis habitat, Anabat for 30 mins Was trap placement adequate for target species? Small mammal (a) Broad-tooth Rat Thick- knee Playback conducted but to Jan? Playback conducted Sep to Jul? Playback conducted Sep to Jul? Na Otside known range Na Na Na Na Na Na Na Na Na N			210	
A caves mines and disused mineshafts present in NLA? N N N N N N N N N		•		
Developmental Over 1 ha water surface area, 1 hour survey (smaller swamps/ponds 30 Min. survey) N/A		nights?	110	
Over I ha water surface area, I hour survey (smaller swamps)ponds 30 Min. survey) Call playback conducted every 50 10007 Survey conducted on at least two nights? All a Outside known range Call playback conducted at three points? N/A Outside known range Call playback conducted at three points? N/A Microbats (a) Cave, tunnel, mineshaft roost surveys If yes, was ultrasonic call recording of 30 mineshafts present in NLA? If yes, was ultrasonic call recording of 30 mineshafts present in NLA? Or has experienced person physically inspected any potential cave roost sites? Results of analysis provided? Or has experienced person physically inspected any potential cave roost sites? Results of analysis provided? Per 200 ha NLA 2 harp traps, minimum consecutive nights (= 4 trap nights) Potential Myoris habitat, Anabat for 30 mins Was trap placement adequate for target species? N/A Small mammal (a) Broad-tooth Rat To Elliots set for 4 nights in potential habitat? Diurnal birds Call playback conducted Jul to Jan? Playback conducted Sep to Jul? Playback conducted Jul to Jan? Playback conducted Jul to Jan? Playback conducted Sep to Jul? Playback cond	1 ' '	Do temp. flooded areas/ponds occur in LA?		No habitet detected.
Smaller swamps/ponds 30 Min. survey) N/A Call playback conducted every 50-100m? N/A N/A Survey conducted on at least two nights? N/A N/A Outside Known range Per 200 ha NLA 2 km road-based survey? N/A Outside Known range Call playback conducted at three points? N/A Outside Known range Call playback conducted at three points? N/A Outside Known range Call playback conducted at three points? N/A Outside Known range N/A Outside Known range Call playback conducted at three points? N/A Outside Known range Outside Known range N/A Outs	brevipalmata		7	No previous records
Call playback conducted every 50-100m? Survey conducted on at least two nights? Ala Per 200 ha NLA 2 km road-based survey? Ala Outside known range Call playback conducted at three points? Nla Outside known range Call playback conducted at three points? Nla Outside known range Call playback conducted at three points? Nla Outside known range Are caves, mines and disused mineshafts present in NLA? Surveys If yes, was ultrasonic call recording of 30 minutes duration undertaken? Or has experienced person physically inspected any potential cave roads sites? Results of analysis provided? Nla Per 200 ha NLA 2 harp traps, minimum consecutive nights (= 4 trap nights) Potential Alpotis habitat, Anabat for 30 mins Was trap placement adequate for target species? Small mammal (a) Broad-tooth Rat Thick-knee Playback conducted Jul to Jan? Playback of onducted Sep to Jul? Playback done on 2 non-consecutive days? Playback conducted Sep to Jul? Playback conducted Sep to Jul? Playback conducted Sep to Jul? Playback done on 2 non-consecutive days? Outside known range If feeding marks found, playback conducted? Per 10 ha potential habitat, I hour search? Nla Outside known range Outside known range If feeding marks found, playback conducted? Surveys conducted in potential habitat?			NIA	
Survey conducted on at least two nights? Per 200 ha NLA 2 km road-based survey? N/A Outside Known range				
Per 200 ha NLA 2 km road-based survey? N/A Outside Known range			NA	
Call playback conducted at three points? N/a Outside Known range	(a) Halaianamus		N/A	
Call playback conducted at three points? N/a		Tel 200 ha ive/4 2 km toad-based sulvey?	NIA	Outside Koon - and
Microbats (a) Cave, tunnel, mineshaft roost present in NLA? If yes, was ultrasonic call recording of 30 minutes duration undertaken? Or has experienced person physically inspected any potential cave roots sites? Results of analysis provided? Per 200 ha NLA 2 harp traps, minimum consecutive nights (= 4 trap nights) Ala Na habitat for K. papueast or Material Babitat, Anabat for 30 mins Was trap placement adequate for target species? Potential Myoris habitat, Anabat for 30 mins Was trap placement adequate for target species? Small mammal (a) Broad-tooth Rat 75 Elliots set for 4 nights in potential habitat? N/a No pokelial habitat or previous records identified, habitat? Diurnal birds Call playback every 500 m at dusk? Playback conducted ful to Jan? Playback conducted Sep to Jul? Playback done on 2 non-consecutive days? Per 10 ha potential habitat, 1 hour search? Button Quail If feeding marks found, playback conducted in potential habitat?	austranacus	Call playback conducted at these relieted	<u> </u>	osisio - tange
(a) Cave, tunnel, mineshaft roost present in NLA? Are caves, mines and disused mineshafts present in NLA? If yes, was ultrasonic call recording of 30 minutes duration undertaken? N/a		Can prayback conducted at times points?	Ma	
(a) Cave, tunnel, mineshaft roost present in NLA? Are caves, mines and disused mineshafts present in NLA? If yes, was ultrasonic call recording of 30 minutes duration undertaken? N/a	Microbate			
mineshaft roost surveys If yes, was ultrasonic call recording of 30 minutes duration undertaken? N/a	Witchonars	······································		
mineshaft roost surveys If yes, was ultrasonic call recording of 30 minutes duration undertaken? N/a	(a) Cona turnal	Are caves mines and disused minachaela		
If yes, was ultrasonic call recording of 30 minutes duration undertaken? Or has experienced person physically inspected any potential cave roost sites? Results of analysis provided? Results of analysis provided? Ala Per 200 ha NLA 2 harp traps, minimum consecutive nights (= 4 trap nights) Ala Potential Myotis habitat, Anabat for 30 mins Was trap placement adequate for target species? Small mammal (a) Broad-tooth Rat To Elliots set for 4 nights in potential habitat? N/a Diurnal birds Call playback every 500 m at dusk? Playback conducted Jul to Jan? Playback conducted Sep to Jul? Playback done on 2 non-consecutive days? O Black-breasted Button Quail If feeding marks found, playback conducted? (d) Double-eyed Surveys conducted in potential habitat?				
If yes, was ultrasonic call recording of 30 minutes duration undertaken? Or has experienced person physically inspected any potential cave roost sites? Results of analysis provided? Results of analysis provided? Per 200 ha NLA 2 harp traps, minimum consecutive nights (= 4 trap nights) Potential Myotis habitat, Anabat for 30 mins Was trap placement adequate for target species? Potential Myotis habitat, Anabat for 30 mins Was trap placement adequate for target species? N/a Small mammal (a) Broad-tooth Rat Thick-knee Call playback every 500 m at dusk? Knee Playback conducted Jul to Jan? (b) Olive Whistler Playback conducted Sep to Jul? Playback done on 2 non-consecutive days? Playback done on 2 non-consecutive days? Black-breasted Button Quail If feeding marks found, playback conducted? (d) Double-eyed Surveys conducted in potential habitat?	1		2	
minutes duration undertaken? Or has experienced person physically inspected any potential cave roost sites? Results of analysis provided? No habitat for K. papuers? Results of analysis provided? No habitat for K. papuers? Per 200 ha NLA 2 harp traps, minimum consecutive nights (= 4 trap nights) Was trap placement adequate for 30 mins Was trap placement adequate for target Small mammal (a) Broad-tooth Rat To Elliots set for 4 nights in potential habitat? No pokential habitat or previous records identified. Playback conducted Jul to Jan? Playback conducted Sep to Jul? Playback conducted Sep to Jul? Playback done on 2 non-consecutive days? No pokential habitat or previous records identified. Playback done on 2 non-consecutive days? No pokential habitat or previous records identified. Playback done on 2 non-consecutive days? No pokential habitat or previous records identified. Playback done on 2 non-consecutive days? No pokential habitat or previous records identified. Playback done on 2 non-consecutive days? No pokential habitat or previous records identified.	surveys	If you was altered as a college of the college of the		
Or has experienced person physically inspected any potential cave roots sites? Results of analysis provided? (b) Kerivoula Per 200 ha NLA 2 harp traps, minimum consecutive nights (= 4 trap nights) Potential Myois habitat, Anabat for 30 mins Was trap placement adequate for target species? Potential Myois habitat, Anabat for 30 mins Was trap placement adequate for target species? Small mammal (a) Broad-tooth Rat 75 Elliots set for 4 nights in potential habitat? N/a Diurnal birds Call playback every 500 m at dusk? N/a Playback conducted Jul to Jan? Playback conducted Sep to Jul? Playback done on 2 non-consecutive days? N/a Ostaide Known range If feeding marks found, playback conducted? (d) Double-eyed Surveys conducted in potential habitat?			N/a	
Results of analysis provided? (b) Kerivoula papuensis, Myotis adversus Potential Myotis habitat, Anabat for 30 mins Was trap placement adequate for target species? Potential Myotis habitat, Anabat for 30 mins Was trap placement adequate for target species? Na Small mammal (a) Broad-tooth Rat 75 Elliots set for 4 nights in potential habitat? Na Playback conducted Jul to Jan? Playback conducted Sep to Jul? Playback done on 2 non-consecutive days? Na Outside Known range If feeding marks found, playback conducted? (d) Double-eyed Surveys conducted in potential habitat?				
(a) Broad-tooth Rat 75 Elliots set for 4 nights in potential habitat? N/a		Na		
papuensis, Myotis adversus Potential Myotis habitat, Anabat for 30 mins Was trap placement adequate for target species? Na Potential Myotis habitat, Anabat for 30 mins Was trap placement adequate for target species? Na Small mammal (a) Broad-tooth Rat 75 Elliots set for 4 nights in potential habitat? Na Na No Pokutial Nebitat or previous records identified. Na Playback conducted Jul to Jan? Playback conducted Sep to Jul? Playback done on 2 non-consecutive days? Na Per 10 ha potential habitat, I hour search? Na Outside Known range (d) Double-eyed Surveys conducted in potential habitat?		<u> </u>	Na	
Potential Myotis habitat, Anabat for 30 mins N/a Or m. activers is located. Opportunistic Surveys and dor	, ,			No habitat for K. papuensis
Potential Myotis habitat, Anabat for 30 mins Was trap placement adequate for target species? N(a) Small mammal (a) Broad-tooth Rat habitat? T5 Elliots set for 4 nights in potential habitat? N/a Diurnal birds (a) Bush Thick-knee Playback conducted Jul to Jan? Playback conducted Sep to Jul? Playback done on 2 non-consecutive days? N a Playback done on 2 non-consecutive days? Playback done on 2 non-consecutive days? Per 10 ha potential habitat, I hour scarch? N a Prayback conducted? N a Ortside Known range (d) Double-eyed Surveys conducted in potential habitat?		consecutive nights (= 4 trap nights)	Na	or madversus located.
Potential Myotis habitat, Anabat for 30 mins Was trap placement adequate for target species? N(a) Small mammal (a) Broad-tooth Rat habitat? Thick-knee Call playback every 500 m at dusk? Playback conducted Jul to Jan? Playback conducted Jul to Jan? Playback conducted Sep to Jul? Playback done on 2 non-consecutive days? Black-breasted Button Quail If feeding marks found, playback conducted? (d) Double-eyed Surveys conducted in potential habitat?	adversus			opportunistic surveys any done
Small mammal (a) Broad-tooth Rat 75 Elliots set for 4 nights in potential habitat? N/a			2/2	
Small mammal (a) Broad-tooth Rat 75 Elliots set for 4 nights in potential N/a Diurnal birds (a) Bush Thick- Call playback every 500 m at dusk? N/a Pokential habitat or previous records identified. Playback conducted Jul to Jan? N/a Playback conducted Sep to Jul? N/a Playback done on 2 non-consecutive days? N/a Oblive Whistler Playback done on 2 non-consecutive days? N/a Oblive Whistler Playback done on 2 non-consecutive days? N/a Oblive Whistler Per 10 ha potential habitat, I hour search? N/a Oblive Whistler Oblive Whistler Oblive Whistler N/a Oblive Whistler Playback done on 2 non-consecutive days? N/a Oblive Whistler Oblive Whistler N/a Oblive Whistler Oblive Whistler N/a Oblive Whistler Oblive Whistler N/a Oblive Whistler N/a N/a Oblive Whistler N/a N/a Oblive Whistler N/a Oblive Wh				
(a) Broad-tooth Rat 75 Elliots set for 4 nights in potential N/a Diurnal birds (a) Bush Thick-knee Call playback every 500 m at dusk? N/a No pokential habitat or perious records identified. Playback conducted Jul to Jan? N/a (b) Olive Whistler Playback conducted Sep to Jul? N/a Playback done on 2 non-consecutive days? N/a Black-breasted Per 10 ha potential habitat, I hour search? N/a Outside Known range If feeding marks found, playback conducted?		species?	1012	
(a) Broad-tooth Rat 75 Elliots set for 4 nights in potential N/a Diurnal birds (a) Bush Thick-knee Call playback every 500 m at dusk? N/a No pokential habitat or perious records identified. Playback conducted Jul to Jan? N/a (b) Olive Whistler Playback conducted Sep to Jul? N/a Playback done on 2 non-consecutive days? N/a Black-breasted Per 10 ha potential habitat, I hour search? N/a Outside Known range If feeding marks found, playback conducted?	Small mammal			-
Diurnal birds (a) Bush Thick-knee Call playback every 500 m at dusk? No pokultial habitat or perious records identified. Playback conducted Jul to Jan? No pokultial habitat or perious records identified. Playback conducted Sep to Jul? Playback done on 2 non-consecutive days? Playback done on 2 non-consecutive days? Per 10 ha potential habitat, I hour search? Button Quail If feeding marks found, playback conducted? Na Outside Known range (d) Double-eyed Surveys conducted in potential habitat?	Sman manunat			
Diurnal birds (a) Bush Thick-knee Call playback every 500 m at dusk? No pokultial habitat or perious records identified. Playback conducted Jul to Jan? No pokultial habitat or perious records identified. Playback conducted Sep to Jul? Playback done on 2 non-consecutive days? Playback done on 2 non-consecutive days? Per 10 ha potential habitat, I hour search? Button Quail If feeding marks found, playback conducted? Na Outside Known range (d) Double-eyed Surveys conducted in potential habitat?	(a) Proad tooth Pat	75 Elliote set for 4 nights in potential	, , , , , , , , , , , , , , , , , , , 	
(a) Bush Thick- knee Call playback every 500 m at dusk? No pokultial habitat or perious records identified. Playback conducted Jul to Jan? No pokultial habitat or perious records identified. Playback conducted Sep to Jul? Playback done on 2 non-consecutive days? No pokultial habitat or perious records identified.	(a) broad-tooth Kat	habitat?	N/a	
(a) Bush Thick- knee Call playback every 500 m at dusk? No pokultial habitat or perious records identified. Playback conducted Jul to Jan? No pokultial habitat or perious records identified. Playback conducted Sep to Jul? Playback done on 2 non-consecutive days? No pokultial habitat or perious records identified.		<u> </u>	 .	
Playback conducted Jul to Jan? N/a Perious records identified.	Diurnal birds		-	
Playback conducted Jul to Jan? N/a Perious records identified.			- <u>-</u>	
Playback conducted Jul to Jan? N/a Perious records identified.	(a) Bush Thick-	Call playback every 500 m at dusk?		al and but he hitek as
(b) Olive Whistler Playback conducted Sep to Jul? Playback done on 2 non-consecutive days? Playback done on 2 non-consecutive days? Per 10 ha potential habitat, I hour search? Button Quail If feeding marks found, playback conducted? (d) Double-eyed Surveys conducted in potential habitat?	knee		N/a	previous permits the hibert
Playback conducted Sep to Jul? N/A Playback done on 2 non-consecutive days? N/A Per 10 ha potential habitat, I hour search? N/A Outside Known range If feeding marks found, playback conducted? N/A Outside Known range N/A Outside Known range N/A Outside Known range Outside Known range N/A Outside Known range N/A Outside		Playback conducted Jul to Jan?	NIA	p control y coopy a negotive or
Playback done on 2 non-consecutive days? © Black-breasted Button Quail If feeding marks found, playback conducted? Continuous conducted in potential habitat? Part 10 ha potential habitat, I hour search? Part 10 ha potential habitat, I hour search? Part 10 ha potential habitat, I hour search? Part 10 ha potential habitat?	(b) Olive Whistler	Playback conducted Sep to Jul?		
Button Quail If feeding marks found, playback conducted? (d) Double-eyed Per 10 ha potential habitat, I hour search? N/a Ostside Knows range N/a Ostside Knows range	·····	Playback done on 2 non-consecutive days?		
Button Quail If feeding marks found, playback conducted? (d) Double-eyed Surveys conducted in potential habitat?	© Black-breasted			o kida Kasan coan
If feeding marks found, playback conducted? (d) Double-eyed Surveys conducted in potential habitat?			N/a	Ustsice with range
conducted? (d) Double-eyed Surveys conducted in potential habitat?		If feeding marks found, playback	 -	
	4 N = 14	conducted?	Na	
rig rarrot ~ ^A "	· · ·	Surveys conducted in potential habitat?	.11.	
	r ig Parrot		~1a	

REQUIREMENT	ISSUES TO CHECK	YES/NO	COMMENTS/ACTION
(e) Eastern Bristlebird	Call playback in potential habitat?	Na	No potential habitat
	Call playback conducted more than once?	NIA	
	Minimum 30 minute surveys conducted?	Na	
(f) Other diurnal birds	Per 200 ha, I hour search for target species?	4	1:00@ 235ha
	Red Goshawk: nest detection Aug- Dec?	y	
	 Regent Honeyeater: surveys within 5 km of record? 	4	No records within 5km.
	Call playback in potential habitat?	7	No habitation titled or previous recor
	Pink Robin rainforest-sclerophyll ecotone, Oct-Jan?	Na	
	Superb Parrot: nest surveys Sep-Dec?	NIA	
	Swift Parrot: winter flowering eucalypts?	Na	Seasonal constraints
	Turquoise Parrot: nest surveys Aug- Dec?	Na	Seasonal constraints No habitat identified
	Black-throated Finch: dry season water?	212	
	Gilbert's Whistler playback conducted?	Na	

	15 11:11		
Varanus rosenbergi	Road kills examined?	Na	
Southern Brown Bandicoot	Is there habitat for the species?	Na	
	Has a survey for this species been done?	NIA	
Hastings River Mouse	Is there habitat for the species?	Na	
	Has a survey for this species been done?	Na	
Smoky Mouse	Is there habitat for the species?	N/a	
	Has a survey for this species been done?	Na	
Broad-tooth Rat	Is there habitat for the species?	Na	
	Has a survey for this species been done?	Nla	
Queensland Blossom Bat	Is there habitat for the species?	NIa	
	Has a survey for this species been done?	Nla	
Queensland Tube- nosed Bat	Is there habitat for the species?	باام	
	Has a survey for this species been done?	NIa	
Flying Fox camps	Is there habitat for the species?	4	
	Has a survey for this species been done?	Ч	No camps' identified/ located
Long-footed Potoroo	Is there habitat for the species?	Ma	
	Has a survey for this species been done?	Ma Ma	

Northern Rivers Region - Threatened Species Pre-logging and Pre-roading Survey

REQUIREMENT	ISSUES TO CHECK	YES/NO	COMMENTS/ACTION:
Square-tailed Kite	Is there habitat for the species?	4	
	Has a survey for this species been done?	4	
Red Goshawk	Is there habitat for the species?	7	
	Has a survey for this species been done?	Ч	-
Regent Honeyeater	Is there habitat for the species?	Y	None at present (seasonality
	Has a survey for this species been done?	4	
Superb Parrot	Is there habitat for the species?	NIA	
	Has a survey for this species been done?	NIa	
Bush Thick-knee	Is there habitat for the species?	2	
	Has a survey for this species been done?	N	

This information is supplied as being a full and accurate account of the survey results.

Ken McCray Ecologist

Date: 6/10/98

·	
O DANIEL HALL	
Attention	Date 15 Oct 98
our Fax 02-93397318	Our (02) 66 625826 Fax
rom John MACGEEGOL-GKINNE	Phone (02) 66 624499
o of ages 3 (including this co	
villeged and confidential information. If you	NOTICE FOR RECIPIENTS intended for the named recipient only. It may but are not the intended recipient you must not use any details of the facsimile to any other person, please notify us immediately by reverse chains.
an	
The second secon	
Vet loging and	S
Famoritel	- Tewaton Spr. 48
2351 1	my Non were bese
the standard of	just folen was for
chilo 1 The 1	to the north-west
as the t	as linguing this description
- work com 231	the in the net crea
101	4
of Managers	response to your con
the plan for Be	Leen ported with
attachments have	been ported with
and why of the l	etter to you of Big
0 0	
Kanning Progress Re	port detal 15 Det for
	Reado
	· · · · · · · · · · · · · · · · · · ·



State Forests of New South Wales Native Forests Division Northern Rivers Region Cnr Walker & Canterbury Sts, PO Box 688, CASINO N.S.W. 2470 Phone (02) 66 624499 Fax (02) 66 625826 Your reference Our reference

413B

mc:sm

15 October 1998

Daniel Hall C/- Big Scrub Environment Centre 123 Keen Street LISMORE NSW 2480

Dear Daniel,

Harvesting Plan for Compartment 70 Beauty State Forest

Thank you for your letter dated 16 September 1998 on behalf of the Conservation Representatives expressing your concerns with the draft harvesting plans for Compartment 70, Beaury State Forest.

The graphs presented at the last HAB meeting did not indicate an overcutting of commitments. An impression of over-cutting may have been obtained because only the second half of 1997 quota sawlog yields were shown. Full calendar-year data is being compiled and will be shortly made available to all NESFHAB Members.

Recent communication between this office and NPWS in finalising this Harvesting Plan has included the resolution of matters voiced in your letter. Addressing the main topics raised by you, I have enclosed two reports from Ken McCray, Ecologist, and a copy of scat analyses.

In summary, concerning the points you raised:

- 1. Amphibian surveys. Additional surveys, particularly for Philoria species have been undertaken to ensure that survey requirements have been met.
- 2. Nocturnal call playback. Augmented surveys have occurred to ensure that survey requirements have been met.
- 3. Koala transects. Star transects did occur and copy of the datasheets are enclosed.
- 4. Fauna data sheets. The information provided by Bob Kooyman was from his diary entries that were not recorded on standard data sheets. These activities were extra survey effort that was additional to Licence requirements.
- 5. Copies of scat analyses are enclosed.

Yours faithfully

Karl Zapolik

Karel Zejbrlik Acting Planning Manager Northern Rivers Region



State Forests of **New South Wales**

Native Forests Division Northern Rivers Region Cnr Walker & Canterbury St Casino NSW 2470 P.O. Box 688 Casino NSW 2470 Phone (02) 6662 4499 Fax (02) 6662 5826

www.forest.nsw.gov.au

State Forests is the registered business name of the Forestry Commission of New South Wales

rax trom

PLANNING PROGRESS REPORT NORTHERN RIVERS REGION 15/10/98

MANAGEMENT AREA	S.F.	СРТ.	IDFA	API GIS	Мар	Soil	O.G.	Flora	Founa	F/F Report		NPWS	ЕРА	Rapic	COMMENTS
Сазіло	Myrtle	64	Y	Θ	©	·	©						©		
	Bungawalbin	47	Y	0	Θ		©	0	②		9		٥		-
· · · · · · · · · · · · · · · · · · ·	Bungawalbin	48	Y	0	9	-	9	©	9	©	0	(1)	©		
<u> </u>	Bungawalbin	51	Y	8	0		©	0	©		©		©		
	Braemar	24	Y	©	9	@	©	(3)	@				٥		NPWS has rejected because of suspected Red Goshawk nest
	Gibberagee	113	Y	⊕	3	0	8	Θ	0	. 🕲	0		9	⊜	Opposed by NCC representatives no reason given
		<u> </u>			·										
Urbenville	Bald Knob	66	N	0	©	0	0	0	9	0	©	©	⊚	©	
	Richmond Range	212,213	Y	©		0				_		1	Θ		
<u> </u>	Toonumbar	255	Y	9	©	0							9	Ì	
· ····································	Веашту	70	Y	@	9	0	©	0	Θ	Θ.	9	©	②	©	All approvals in place
D C.11	[a: .			-			—								
renterfield	Girard	34	N	0	⊜	☺	9	©	❷	9	⊕	©	9	⊜	
Glen Innes	Glen Elgin	13,14	N	<u> </u>	T									-: -	
		23,24	N	©	©	© ^	<u> </u>	0	<u>©</u>	9	<u> </u>	9	9	n/a	
				0	<u>©</u>	<u>©</u>		© •	<u> </u>		9	<u> </u>	0	n/a	<u> </u>
i	Civiata Kg.	25,26,27	И	©	Θ .	0		0	⊜		⊖	©	☺	n/a	·

	Bi	. 0	- \							
To			cu/s							_
Attention		ial k			Date	12	0	ومر	Y	
Your Fax	02	662	2 267	ل ر F	Our ex	(0	2) 66	62582	8	
From 📐) <u> </u>	برح	mo -	F	hone	(0	2) 66	62449		
No of Pages	7		ding this		page)					
The informati privileged and distribute, tak or corporation and destroy th		ntial info		you are	ed for not u	the ni 18 inte	amed Inded	recipien		2011 et
Danie	1,									
	- J-	4	Ce	11 11	م	hau	بر	de l	ler	a rol
-4	39		- 	يامنط	<u>, </u>					
							-			
					1	\$	P	5		
							_			
										
									<u></u>	
				`	·····					
										
					,		•			
· - · · · · · · · · · · · · · · · · · ·										
 										
							 -			
	·				 .					
			 _							
						<u> </u>	_			
							-			
				•						
	<u> </u>				,		·			



State Forests of New South Wales Native Forests Division Northern Rivers Region Cnr Walker & Canterbury Sts. PO Box 688, CASINO N.S.W. 2470 Phone (02) 66 624499 Fax (02) 66 625826



CALL PLAYBACK- Northern Rivers Region

STATE	FOREST BUI	 ى م	AWAL	0		M.A.			COMPT		
OBSI				'RIV		DATE FR	aserio		COMPT.		
(C2).			rloto	 _				9.198	REGION (e	461 56
CENSI	BH N. Day	ا هن ا ن	od Times			DATE TO	<u> ၁၃. º</u>	1.'98	Site Numb	4.	
CENSIL	<u> </u>	Sie	of Times	7.50	<u> </u>	- <u></u>		Finish Time	8.30	PM	
	TON DESCRIPTION	7	at time, (5.10pm	<u> </u>		-	Finish Time	.7·20	P.	
: •		l	b 2	SE	Com	er of	be co	pt. at.	He Zien	et al	
SITE	AMG			roods.							
DETECTION METHOD(S) SITE - AMG EASTING SO 8 600 Detection Method(S) Be arboreal mammals								NORTHING	677	9 800	2
			noclumal b			🛘 diumal bir	rds		🗆 other		
Species	s Targeled	⊢–		ilras							
<u> </u>	HABITAT TYPE	Pai						Calls Playe	d Poin	10,50,1	<,48G,500
	7.7			Francis (Francis			主动物(企)	建筑等 "公司	, woodlar	d 海滨海	
:			emperate			A≴Dry □Swamp			O Heath		
·		០ន	ubtropical			□Wet			□ Shrub □ Tall		
	ype numbers					70/7	4	-	10 181	·	
Temper	IER (census = 1 nįght)	- 4		Cansus	2	想	1.00 CO	Kalen ye		Census 1	Census 2
<u> </u>			15°C	189	ا ت	Wind ((1) calin; (2) light: (3) moderato (4) strong] 2					main jumper and
				of 🖟	lain (1) evidence of in last 24 hm (2) no evidence of in last 24 hm (3) during survey)					2	
i ime ka	Time Measurements Taken				Night light [(1) very dark (2) dark (3) detail			- -<	
OBSER	RVATION DETAILS		to a soil		- /17)	<u>े रे रे (4</u>) bright]		·	2	2
DATE	SPECIES.	·	∆`OBS:		RES	PONSE (ESTI	MATELY	I NOTE	C /	·	
			TYPE		DIST	ANCE	:		: estimale	nce, sex, not	e il count an
15.9	Squirrel G		H	1	300	(H-) /80 m		Qnly	avé a	vord cast	heard
	,				-		140	41000	-dip	compt 4	8
					<u> </u>	(++-)					
<u> </u>	Owlet matigas		H			(+/-)					
12.9	Powerful on	<u>e</u>	H		400,	(H) 200m	2609	Calle Irster	d during	plogbac	le +
						(+/-)					
						(+f-) .					······
	<u> </u>					(++;)					
 ,						(4.)					
						(+/-)	<u> </u>		<u> </u>		
			,			(+/-)					
				 		(41-)					
						(+1-)			- 		
Key f	or tree marking	g: N	10 / PC	0/50/	BO/	YRG/9	G /=1				<u> </u>
		_				.20/8	2 (b)	us roost/	v-notch	etc.)	

Sheet of

LANDSCAPE APPROACH TO THE LARGE FOREST OWL PRESCRIPTION.

BUNGAWALBIN STATE FOREST

CASINO MANAGEMENT AREA

NORTHERN RIVERS REGION

Designed by Pat Groenhout (Fo	rest Planner)
-------------------------------	---------------

Signature: MMM

Aim: To cater for the conservation of the Masked Owl in Bungawalbin State Forest.

Total Planning Area (A) = 7224 hectares Total IDFA, NP, Reserve Area (B) = 5977 hectares

Total Non-suitable Habitat (C)

Rainforest A & B = 0 hectares
Pine plantation = 0 hectares
Cleared areas/swamps = 34 hectares
Rock = 0 hectares
Other(Roads,power lines) = 41 hectares
Total = 75 hectares

IDFA,NP Res Non-suitable Habitat (D)

Rainforest A & B = 0 hectares
Pine plantation = 0 hectares
Cleared areas/swamps = 34 hectares
Rock = 0 hectares
Other(Roads,power lines) = 41 hectares

Total = 75 hectares

Total Suitable Habitat (E) = (A) - (C) = 7149 hectares

Suitable habitat IDFA,NP, Res (F) = (B) – (D) = 5902 hectares

Production Area (G) = (E) -(F) = 1247 hectares

Note:

RULE 1.

A minimum area of 25% of suitable habitat must be retained across the planning area. H = 25% of (E)

(H) = 1787 hectares



RULE

Of the 25% of retained habitat, a minimum of 30% (or 7.5% of the Planning Area) must be production forest area. (Eg outside IDFAs and other statutory reserves) = (I).

Of (H) 30% (ie. 0.3 x H), must be from (G)

(I) = 536 hectares

NOTE: DISREGARD DUE TO RULE 3

RULE 3.

If the area of IDFAs or statutory reserves is greater than 25% of the total area to be retained (ie. then the area to be retained in the production forest in Rule 2 will be capped at a maximum of 12.5% of the production Forest).(ie. not 30%)

If (B)/(E) x 100 > 25% then (84%)

(I) = 12.5% of (H) {disregard Rule 2}. \therefore (I) = 223 hectares

Minimum Production Forest to be retained = 223 ha
∴ Minimum IDFA Forest Area to be retained (H) – (I) = 1564 ha

RIII E 4

The area in production forest can include PMP exclusions, riparian buffers, EPA exclusions and other Conservation Protocol exclusions (such as Old Growth).

Production Forest Exclusions:

Forest type in order of prominance, yr L/M/H indicates year & logging intensity

Compartment 47 (reserves) BungawalbinSF = 143 hectares (FT 31/92, 70/74, 72) 89L

Compartment 48 (reserves) Bungawalbin SF = 175 hectares (FT 31/92, 70/74, 40/41) 91 L

Reserved Production forest = 318 hectares



RULE 53

Of the retained habitat in the production forest (G) 30% should be patches of reasonable sizes (50 - 100 hectares)

Two areas (91% of the reserved production forest) are in patches greater than 100 hectares in size.

RULE:6

A minimum of 25% of IAP modelled mapped owl habitat should be retained. This 25% can be sourced in IDFAs and statutory reserves. This IAP modelled mapped habitat has been provided to State Forests of NSW (see attached Owl Predicted Distribution maps).

4842 hectares of modelled Masked Owl habitat in the planning area therefore require 1210 hectares to be reserved.

TOTAL	=1321 ha
Cpt 42 IDFA	=328 ha
Cpt 41 IDFA	=363 ha
Cpt 50 IDFA	=126 ha
Cpt 52 IDFA	=504 ha

SUMMARY

Production Forest Area (Non-IDFA*) to be reserved

Forest type in order of prominence, yr L/M/H indicates year & logging intensity

Compartment 47 (reserves) BungawalbinSF = 143 hectares

(FT 31/92, 70/74, 72) 89L

Compartment 48 (reserves) Bungawalbin SF = 175 hectares

(FT 31/92, 70/74, 40/41) 91 L

Reserved Production forest = 318 hectares

(223 ha minimum requirement)



IDFA Forest, National Parks & Flora Reserves Area to be reserved

Forest type listed in order of prominance.

IDFA Cpt 41 = 435 hectares
(FT 72/74, 39, 40-41, 48)

IDFA Cpt 42 = 487 hectares
(FT 72/74, 92, 30-32/9)

IDFA Cpt 50 = 369 hectares
(FT 72/74, 39, 40-41, 48)

IDFA Cpt 52 = 650 hectares
(FT 72/74, 92, 30-32/9)

Bungawalbin Nature Reserve
(FT 72/74, 92, 30-32/9)

Reserved IDFA/NP/Flora Reserves = 2404 hectares

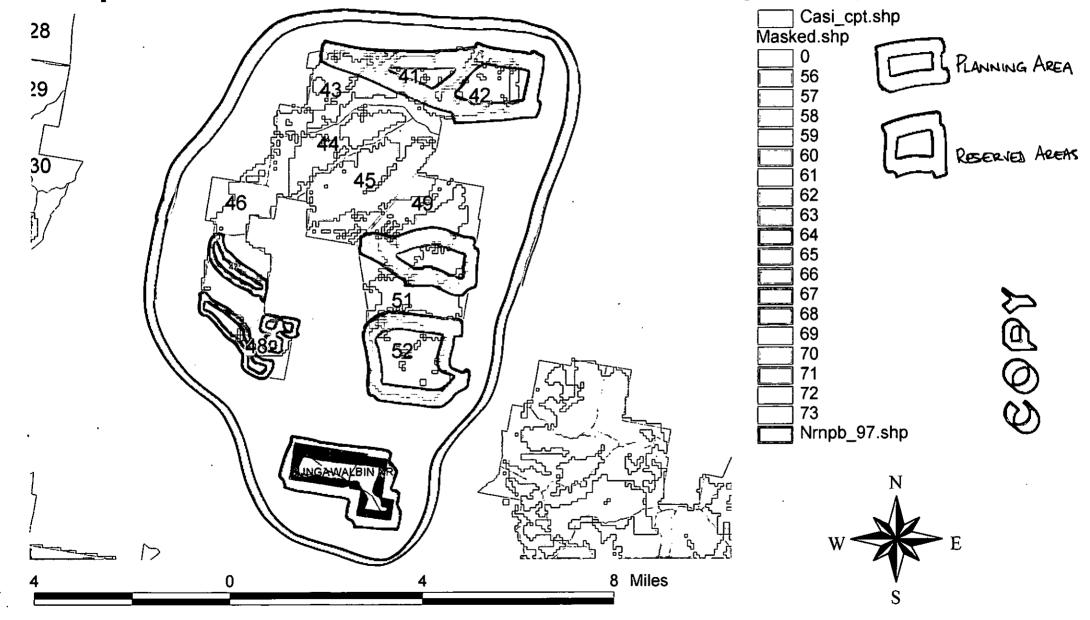
(1564 ha minimum requirement)

Grand Total (1787 ha requirement)	2722 hectares

Notes: If required to explain approach.



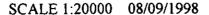
Compartment 48: Owl Landscape Approach



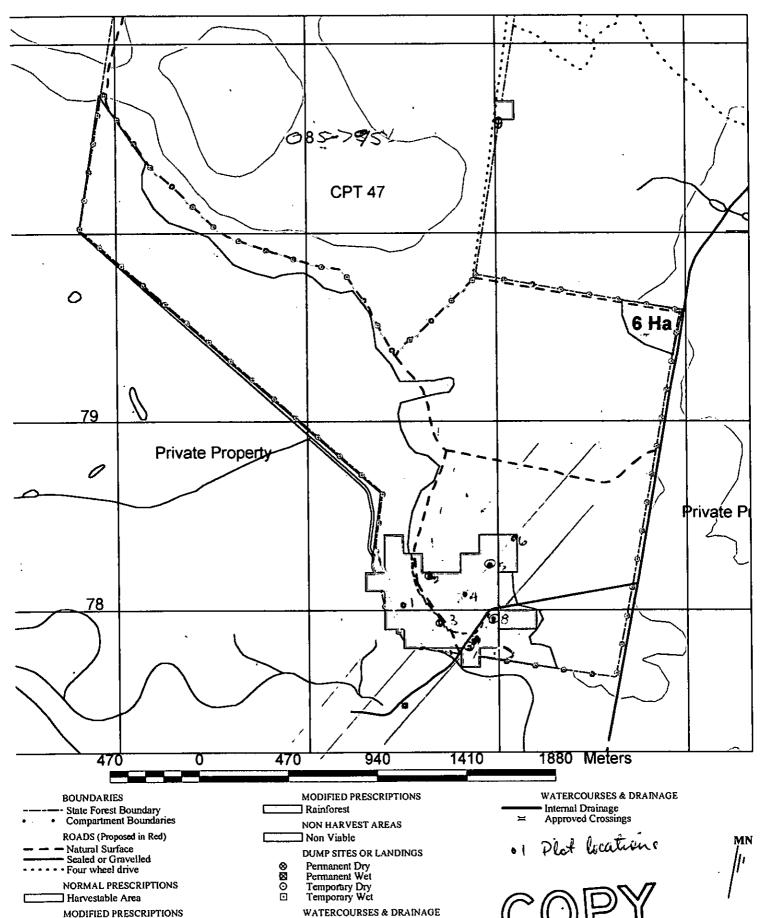
OLD GROWTH

COMPARTMENT 48

BUNGAWALBIN STATE FOREST GIBBARAGEE MAP SHEET







MODIFIED PRESCRIPTIONS

ULD GROWTH HESESSMEN	T Davales / //
S.F. BUNGAWALBIN	Douglas Harvey
C.P.T. 48	
LOT No 1 STUMPS TREUS 50 65 49 140 48 76 52 281 93	- 8
PLOT No 2. 45th 10th over 81 73 105 51 95 281 93 46.5-04	-4
PLOT No 3 38- 102 68 48- 44- 72 66 310 103 51.50 dt	-2
PLOT No. 4 50 74 88 54 40- 80 56 60 75 56 42 31243 58 45 81 126 42 40.5	_ 11
PLOTING 5. NIL PLOT NO STUMP	s. ~ O
PLOT No 6 70 - POST 65 15 THIS 24 - not over 1/2 day 5 SUPPOSED TO 45 SAY PRE or Bot 40 3 223 VIES Might are the 37. PLOT No 7 NIL PLOT NO STUME	-7 Poss OG. need to
PLOT No. 8 64 105 76 71 NOT OVEX 37 + ADOT 104 Y2 41517. 54 11 3 280 46.5 SUPPOSED TO SAY PRE	COPY

CANDIDATE OLD GROWTH FOREST ASSESSMENT

Region		N.N. F	<i>)</i>		State F	orest	Receive	
Manager	ment Area	N.N.F	vo		Compartment 48			AWALBIN.
Recorde	d Logging:	• -						
STUMP	COUNT							
Polygon	No A	ea in Cpt ≤ (ha). ∵	5% sam	ple area	Maria 1985	of 0.5 hā p	lots requi	red points required
1		39 ha .	Hha		1	8	(room g	14)
		0.4	h XI	*** 1 a	 		c would gr	
				page				
Point =	Av diam o flargest tre in stand (cm dbhol	(3) (Street P	imps/ha \$5 re 1960	Stump Postum (double r	iumber 🖁	Moist // Dry	XCOGF?.	Comments (Disturbance etc.)
1	46 5		The state of the s				电影电话	1986 - 1987 - 1986 - 1
2	46 5			8	(4)	ا المار	NO	OK
3	51.5			8	(Z)	Dru-	YES	SF URONG
4	40.5			27	(2)	Dry	NO	SF WRONG
5	NIL	12/07			UMPS		YES	less than 10 ha
6	37	10107	2_	8	<u> </u>	200	3NO?	SF WTOUS
7	NIL	Pho	T	No ST	UMPS	. 200	75.2	OK
- 8	43.5	4	5 6	X), 1	YES	SF WITONS
9)	7.00	<u> </u>
10								
11	<u> </u>							
12	·							
13								
14								
Commer								
Certificati		repared by	earried out by	Doi Pulif	alas	Hory	<u>Cu</u>	·

COPY