Report for the United Nations Educational Scientific and Cultural Organization

(UNESCO)

And

International Union for the Conservation of Nature

(IUCN)

Report detailing the exodus of species from the Mt. Nardi area of the Nightcap National Park World Heritage Area during a 15-year period (2000-2015.)

Subject:

The correspondence of species disappearance from the Mt. Nardi-Mt. Matheson area of the World Heritage Site with the application of an increasing amount of electromagnetic technology designated as electromagnetic radiation (EMR) and electromagnetic frequencies (EMF.)

ID 368-006 Nightcap National Park 1986

New South Wales, Australia Co-ordinates: S28 32 24.60 E153 16 56.90
4,945 ha.
http://whc.unesco.org/en/list/368

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Signed:

Mark Broomhall

Contents

Introduction

The following report is designed as a simple register of the effects on wildlife in the Nightcap National Park World Heritage area of Mt. Nardi – Mt. Matheson as a result of a significant increase in both output and variety of electromagnetic radiation (EMR) and electromagnetic frequencies (EMF) from the Mt. Nardi industrial tower complex.

I acknowledge there is a greater body of knowledge within the community surrounding Australia's first rainforest National Park than just my own. Informed community understanding has corroborated my own observations at every turn. I have lived on Mt. Nardi for forty years and my evidence in the Land & Environment Court of New South Wales in 1982 was decisive in stopping the logging operations, opening the path for the subsequent declaration of the National Park and World Heritage. This evidence was given as a result of public action. I have been a forest coordinator of Tuntable Falls community for 10 years; coordinator, director and fund-raiser for the Rainforest Information Centre for more than a decade, as well as being co-founder, director of the Pacific-Eco-forestry projects in Papua New Guinea and the Solomon Islands, funded by the Australia Government and the Australian Council of Churches. I was also the Australian representative for the international 'Save the Siberian Tiger Project,' charged with locating and establishing their presence.

The Mt Nardi-Mt Matheson plateau is of unique importance. I believe it to be of major international concern that the genetic heart of our ancient 'Gondwanaland' forest is exposed to such a compound of electromagnetic frequencies without any forethought in their reckless application. This is in spite of clear international regulations that prohibit it and a growing body of internationally recognised peer-reviewed studies and literature that accuse the industry of being carcinogenic, neurotoxic, mutagenic and geno toxic.

This cool mountainous terrain, with its extensive cliff-lines, narrow ridges, steep gorges and deep valleys, provides the fire-proof niches able to support the ancient rainforest remnants and the majority of endangered plants and animals that depend on this habitat. They are all to be found in this area of the Nightcap range, centrally located on the southern rim of the great volcanic caldera of Mt Warning. My studies lead me to believe that the Mt Nardi-Mt Matheson complex is the most pristine, the most botanically complex and bio-diverse area of the Nightcap National Park. The entire caldera has been identified as Neo-Pleistocene *Refugia.* (Kooyman, et al 2011.)

The Mt Nardi-Mt Matheson sector could be considered the 'jewel in the crown' and holds an exalted status within the global context of prehistoric Gondwanaland forest.

In 2014, when the IUCN and UNECSO held the decennial reunion in Sydney, the central theme of the reunion was the necessity of the public to participate in the protection of World Heritage Sites.

In this spirit of co-operation I compiled this report.

Background:

From the 1960's until just after the millennium, the Mt. Nardi telecommunications tower complex used analogue technology. Since late in the 1970's Mt. Nardi residents have witnessed a steady increase in species diversity. It wasn't until the Analogue Era was drawing to a close, along with the advent of digital wireless technology in the years 2002 to 2004, that I began to notice a decline in insect diversity and population. This period was at the back-end of a prolonged nationwide drought and there was much talk of global warming.

Initially, I attributed the insect decline to these events. I later learnt of *"mobile phone pulsed microwave technology"* and understood from press reports that this was being installed on Mt. Nardi. This technology is named universally by the industry, the press, and the public at large, as "3G." With this knowledge, I began to suspect that perhaps something else was happening on Mt. Nardi. At the same time, further additions included Wideband Code Division Multiple Access (WCDMA) technology.

In the year 2009, enhanced 3G technology was installed and a further 150 pay television channels were added to the tower. Following these additions, I witnessed the exodus of 27 bird species from Mt. Nardi while simultaneously, insect volumes and species variety dropped dramatically.

In late 2012 and early 2013, with the construction of a new tower in the complex and the introduction of a 600,000-watt generator, the system was upgraded to what became universally known as "4G." Immediately after, I witnessed the rapid exodus of a further 49 bird species. From this time, all locally known bat species became scarce, 4 common species of cicada almost disappeared, as well as the once enormous, varied population of moths & butterfly species. Frogs and tadpole populations were drastically reduced; the massive volumes and diverse species of ant populations became uncommon to rare.

Without further refined studies, it is difficult to estimate the percentage of wildlife once common on Mt. Nardi that has become rare or disappeared from the World Heritage Area. I estimate, in both volume and species that from 70 to 90 % of the wildlife has become rare or has disappeared from the Nightcap National Park within a 2-3 km radius of the Mt. Nardi tower complex.

This statement can be summarised with concrete data:

3 bat species once common have become rare or gone
11 threatened and endangered bird species are gone
11 migratory bird species are gone
86 bird species are demonstrating unnatural behaviours
66 once common bird species are now rare or gone

A frequency refinement enabled a cutback of power output in 2015. Since then, a handful of bird species returned to the area on an irregular basis. Preceding this limited return, there was

another unexpected peak in the species count when repairs caused the power on the installation to be cut for three days. This biological explosion was also occasioned by the last seen demonstration of termites (*Isoptera*) leaving their nests, which resulted in a veritable 'festival of birds.' The precision of the biological response to the 3-day power cut was both extraordinary and telling; I have not seen the termites *en masse* since that time.

Due to the undulating topography of the region and the tower complex placed on top of the mountain where the World Heritage Site is located, many of the missing species now appear below the 450 m level, out of immediate range of the tower. They have chosen a less diverse habitat and in effect, have been driven from previously safe World Heritage Park.

As indicated, it took me time to understand what was happening. **I penned this background in August 2016.** Since then, I have been able to locate the industrial connection to these events and can demonstrate this with precision. I refer you to the Timeline as part of this report. With the inclusion of the Register of Radio-communication Licenses, I have a license-by-licence, date-by-date application of the technology, along with the frequency emissions, designator and ID of the transaction.

It is evident that pulsed microwaves are particularly toxic.

It should be considered a National Emergency that this Matter of National Significance is protected immediately. The Mt Nardi transmission towers are non-compliant with the EPBS Act.

Methodology

The format is simple: comparative species lists of the documented population and missing species.

As background to these populations, I supply a list of the *Threatened Plant and Animal Species* in the area, as listed by the Commonwealth Scientific and Industrial Research Organization (CSIRO) in 1995, in concurrence with the declaration of the Environmental Protection Act of NSW in the same year. The accredited lists from which the Plant and Animal species have been compiled have been assembled from a larger body of environmental data. Without further botanical studies on Mt Nardi, some of the species are therefore listed as 'likely to occur.' Otherwise, I indicate those I have sighted.

The second list of 30 *Threatened Fauna* is compiled again from CSIRO listed species that are believed to inhabit Mt. Nardi. I again indicate those I have sighted.

Having set the scene, subsequent lists show the corresponding disappearance of wildlife as the technology and the power to drive it are added to the Mt. Nardi industrial complex.

There are also some additional notes that provide a more detailed picture of what is happening to individual species in real terms. I also include a short list of scientific studies and research papers that effectively corroborate what I am witness to on the ground, cross referencing bird studies, insect studies and so forth. (List of Study References P.37)

Estimation of high intensity microwave footprint bisecting species flow around Mt Nardi

towers

List A

LIST OF RARE OR THREATENED AUSTRALIAN PLANTS

that are "very likely to occur" in the many complex old growth rainforest and sclerophyll plant communities of the area, exemplifying evolutionary links to Gondwanaland on Mt. Nardi and Mt Matheson.

Habitat and known potential distributions from TSC Act-NSW Threatened Species Conservation Act 1995, listed species; rare or threatened Australian Plants (ROTAP); ROTAP codes are provided in Briggs and Leigh (1995 revised addition.) Schedule 1 'endangered,' Schedule 2 'vulnerable.'

Species very likely to occur = # Species sited by Mark Broomhall = *

Species	Family	TSC Act	ROTAP
#*Corokia whiteana	Argophyllaceae	Sch 2	
*Eidothea hardeniana	Proteaceae	Sch 1	
*Eleocarpus sedentarius (syn. 'minyon')	Elaecarpaceae	Sch 1	
*Endiandra hayesii	Lauraceae	Sch 2	
*Ediandra muelleri ssp. Bracteata	Lauraceae	Sch 1	
Fontainea australis	Euphorbiaceae	Sch 2	
*Hibbertia hexandra	Dilleniaceae	Sch 1	
*Hicksbeachia pinnatifolia	Proteaceae	Sch 2	
#Marsdenia longiloba	Apocynaceae	Sch 1	
*Niemeyera whitei	Sapotaceae	Sch 2	
*Ochrosia moorei	Apocynaceae	Sch 1	
Plectranthus nitidus	Lamiaceae	Sch 1	
Sarcochilus fitzgeraldii	Orchidaceae	Sch 2	
Sarcochilus hartmanii	Orchidaceae	Sch 2	
*Symplocos baeuerlenii	Symplocaceae	Sch 2	
*Syzygium hodgkinsomiae	Myrtaceae	Sch 2	
#*Uromyrtus australis	Myrtaceae	Sch 1	
*Acronychia baeuerlenii	Rutaceae		3 RC
#*Archidendron muellerianum	Fabaceae		3 RCa

**Austrobuxus swainii*	*Picrodendraceae*	3 RCa
Callerya australis	*Fabaceae*	3 RC -+
*#*Cupaniopsis australis*	*Sapindaceae*	2 RC-
**Helmholtzia glaberrima*	*Phylidraceae*	2 RCa
**Marsdenia liisae*	*Apocynaceae*	3 RC-
**Olearia heterocarpa*	*Asteraceae*	2 RCa
**Ozothamnus whitei*	*Asteraceae*	3 RC
**Quasia (Unnamed)*	*Simaroubaceae*	
**Tricosanthes subvelutina*	*Cucurbitaceae*	

NB I sighted two other species of flora that are now included in the list. *Quasia* unnamed, which I have dubbed *Quasia Mount Nardii* and *Tricosanthes Subvelutina.*

List B

LIST OF 30 VULNERABLE & ENDANGERED SPECIES

as listed in the TSC Act-NSW Threatened Species Conservation Act 1995. Commonwealth Environment and Biodiversity Conservation Act 1995.

Species sighted by Mark Broomhall = *

Common Name	Scientific Name	TSC Act	EPBC Act
*Pouched Frog	*Assa darlingtoni*	V	
*Fleay's Frog	*Mixophyes fleayi*	E	E
*Giant Barred Frog	*Mixophyes iteratus*	E	E
Loveridge's Frog	*Philoria loveridgei*	E	
Three-toed Skink	*Coeranoscincus reticulatus*	V	V
*Stephen's Banded Snake	*Hoplocephalus stephensii*	V	
*White-eared Monarch	*Carterornis leucotis*	V	
*Wompoo Fruit Dove	*Ptilinopus magnificus*	V	
*Rose-crowned Fruit-Dove	*Ptilinopus regina*	V	
Superb Fruit-Dove	*Ptilinopus superbus*	V	
Double-eyed Fig Parrot	*Cyclopsitta diophthalma*	CE	E
*Albert's Lyre-bird	*Menura alberti*	V	
*Olive Whistler	*Pachycephala olivacea*	V	
*Powerful Owl	*Ninox strenua*	V	
*Sooty Owl	*Tyto tenebricosa*	V	
*Marbled Frogmouth	*Podargus ocellatus*	V	
*Little Bent-winged Bat	*Miniopterus australis*	V	
*Eastern Bent-winged Bat	*Miniopterus schreibersii oceanensis*	V	
Greater Broad-nosed Bat	*Scoteanax rueppellii*	V	
Eastern Long-eared Bat	*Nyctophilus bifax*	V	
Golden-tipped Bat	*Kerivoula papuensis*	V	
Eastern Blossom-Bat	*Syconycteris australis*	V	
Eastern Tube-nosed Bat	*Nyctimene robinsoni*	V	
*Grey-headed Fying Fox	*Pteropus poliocephalus*	V	V

*Spotted Quoll	*Dasyurus maculatus*	V	
*Common Planigale	*Planigale maculata*	V	
*Koala	*Phascolarctos cinereus*	V	V
Long-nosed Potoroo	*Potorous tridactylus*	V	V
Parma Wallaby	*Macropus parma*	V	
*Red-legged Pademelon	*Thylogale stigmatica*	V	

V = vulnerable E = endangered CE = critically endangered

List C

LIST OF 27 BIRD SPECIES THAT HAVE BECOME RARE

List C corresponds to the application of enhanced 3G microwave technology during the years 2009-2012.List of 27 bird species once common to very common on Mt. Nardi that now have become uncommon to rare and or disappeared above 450 m in approximately 2-3 km diameter around the Mt. Nardi tower complex.

T=Threatened M=Migratory U=Uncommon R=Rare G=Gone F=Found below 450 m and or outside 3 km diameter

Species	Latin Name	M	T	G	F
Silver Eye	*Zosterops lateralis*	M		G	
Jacky Winter	*Microeca leucophaea*			G	
Superb Blue Wren	*Malurus cyaneus*			G	F
Variegated Wren	*Malurus lamberti*			G	F
Red Backed Wrens	*Malurus melanocephalus*			G	F
Crested Hawk	*Aviceda subcrisata*			G	
Rose Crowned Fruit Pigeon	*Ptilinopus regina*		T	G	
Bush Hen	*Gallinula olivacea*			G	
Crested Pigeon	*Ocyphaps lophotes*			G	
Rainbow Lorikeet	*Trichoglossus haematodus*			G	F
Scaly Breasted Lorikeet	*Trichoglossus chlorolepidotus*			R	F
Rose Robin	*Petroica rosea*			G	
Restless Flycatcher	*Myiagra inquiela*			G	F
Willy Wagtail	*Rhipidura leucophrys*			G	F
Rainbow Bee Eater	*Merops ornatus*			G	F
Dollar Bird	*Eurystomus orientalis*	M		G	F
Fig Bird	*Sphecotheres viridis*			G	F
Eastern Spine Bill	*Acanthorhynchus tenuirostris*			R	F
Black Faced Cuckoo Shrike	*Coracina novaehollandiae*			R	F
Cicada Bird	*Coracina tenuirostris*			R	F
White Winged Triller	*Lalage tricolor*			U	F
Rufous Whistler	*Pachycephala rufiventris*			G	F
Leaden Flycatcher	*Myiagra rubecula*			G	F

Diamond Firetail Finch	*Steganopleura guttatum*		R	F
Olive Backed Oriole	*Oriolus sagittatus*	M	G	
Double Barred Finch	*Poepholia Vichenovii*		G	
Red-Browed Firetail Finch	*Emblema Temporalis*		G	F

List D

LIST OF 49 BIRDS & 3 BAT SPECIES THAT HAVE BECOME RARE

List D corresponds with the application of 4G in 2012-2013 up until 1-10-2015.

List of 49 birds and 3 bat species once common to very common on Mt. Nardi that now have become uncommon to rare and or have completely disappeared above 450 m in approximately a 2-3 km diameter around Mt. Nardi tower complex.

T=Threatened M=Migratory U=Uncommon R=Rare G=Gone F=Found below 450 m and or outside 3km diameter

Species	**Latin Name**	**T**	**G**	**U**	**R**	**F**
Wedge Tailed Eagle's	*Aquila audax*	T	G			F
Regent Bower Bird	*Sericulus chrysocephalus*	T	G			F
Satin Bower Bird	*Ptilinorhynchus violaceus*		G			F
King Parrot	*Alisterus scapalaris*	T			R	F
Grey Headed Flying Fox	*Pteropus poliocephalus*	T			R	F
Little Bent Winged Bat	*Miniopterus australis*	T			R	F
Eastern Tubed Nosed Bat	*Nyetimene robinsoni*	T			R	F
Grey Goshawk	*Accipeter novaehollandiae*	T	G			
Red Goshawk	*Erythrotriorchis radiatus*	T	G			
Spine Tailed Chowchilla	*Orthonyx temminckii*	T			R	F
Noisy Pitta	*Pitta versicolor*		G			F
Paradise Rifle Bird	*Ptiloris paradiseus*	T			R	F
Rufous Fantail	*Rhipidura rufifrons*			U		F
Grey Shrike Thrush	*Colluricincla harmonica*				R	F
Topknot Pidgeon	*Lopholaimus antarcticus*		G			F
Eastern Whip Bird	*Psophodes olivaceus*			U		F
Crimson Rosella	*Platycercus elegans (nigrescens)*		G	U		F
Eastern Rosella	*Platycercus eximius*					F
Rose Robin	*Petroica rosea*		G		R	
Scaly Thrush	*Zoothera lunulata*		G			
Rufous Shrike Thrush	*Colluricincla megarhyncha*					
Little Yellow Robin	*Tregallasia capito*		G		R	F
Brush Cuckoo	*Cuculus variolosus*		G	M		

Pallid Cuckoo	*Cuculus pallidus*		G	M		
Fantailed Cuckoo	*Cuculus flabelliformus*		G	M		
Little Bronze Cuckoo	*Chrysococcyx minutillus*		G			
Indian Koel	*Eudynamis scolopacea*		G	M		F
Channel Billed Cuckoo	*Scythrops novaehollandiae*		G	M		F
Pheasant Coucal	*Centropus phasianinus*			U		F
Azure King Fisher	*Ceyx azurea*		G			
Spangled Drongo	*Dicrurus bracteatus*		G	M		F
Green Cat Bird	*Ailuroedus crassirostris*	T	G			F
Red Browed Tree Creeper	*Climacteris erythrops*		G			F
Brown Throated Tree Creeper	*Climaacteris picumnus*		G			F
White Throated Tree Creeper	*Cormobates leucophaea*		G			F
Yellow Throated Scrub Wren	*Sericorms citreogularis*		G			
Brown Thorn Bill	*Acanthiza pusilla*				R	F
Yellow Tailed Black Cockatoo	*Calyptorhynchus funereus*			U		F
Sulphur Crested White Cockatoo	*Cacatua galerita*			U		F
Grey Fantail	*Rhypidura fuliginosa*		G			F
Pied Currawong	*Strepera graculina*			U		F
Golden Whistler	*Pachycephala pectoralis*		G			F
White Browed Scrub Wren	*Sericornis frontalis*				R	F
Black Faced Monarch	*Monarcha melanopsis*		G			F
Spectacled Monarch	*Monarcha trivirgatus*		G			F
Mistletoe Bird	*Dicaeum hirundinaceum*		G			F
Varied Triller	*Lalage leucomela*				R	
Olive Whistler	*Pachycephala olivacea*		G			
Red Necked Rail	*Rallina tricolor*		G			

List E

LIST OF BIRD SPECIES STILL EXTANT IN THE REGION

A list of a few bird species during the years 2009-2015 were the only species that still continued to be seen or heard on a daily and nightly basis. Fluctuations in populations have a direct correlation with the number of people in the nearby town of Nimbin. When there is more people and mobile phone Wi-Fi traffic, we see less wildlife. For example, on Sundays and Monday mornings, bird populations on this list can sometimes double.

P=Increase Population D=Decrease T=Threatened

F=Found below 450 m and or outside a 2-3 km radius of the transmission towers.

Species	**Latin Names**	**P**	**D**	**T**	**F**
Wompoo Pigeon	*Ptilinopus magnificus*	P		T	F
Lewin's Honey Eater	*Meliphaga lewinii*				F
Bar Shouldered Dove	*Geopelia humeralis*				F
Pale Yellow Robin	*Eopsaltria Australis*				F
White Headed Pigeon	*Colomba leucomela*				F
Brown Pigeon	*Macropygia amboinensis*	P			F
Emerald Dove	*Chalcophapis indica*		D		F
Common Bronze Wing	*Phaps Chalcoptera*				F
Kookaburra	*Dacelo novaeguineae*	P			F
Albert's Lyerbird	*Menura alberti*		D	T	F
Tawny Frogmouth	*Podargus strigoides*				F
Marbled Frogmouth	*Podargus ocellatus*	P		T	
Boobook Owl	*Ninox novaeseolandiae*				F
Brush Turkey	*Alectura lathami*		D		F
Wonga Pigeon	*Leucosarcia melanoleuca*	P			

List F

LIST OF RETURNING BIRD SPECIES OCTOBER 2015

A list of bird species not seen since 2012-2013 that arrived back to Mt. Nardi on the 1st October 2015. This corresponds with the lessening of intensity of the "4G" microwave technology. On the first weekend in October 2015 Mt. Nardi experienced a dramatic explosion of insects and birds not seen since 2012-2013. This corresponded to the new technical applications that were cut for three days that allowed for the last explosion of termites (*Isoptera*) we have seen on Mt. Nardi.

T=Threatened M=Migratory C=Common O=Occasional U=Uncommon R=Rare

Species	**Latin Name**	**T**	**O**	**C**	**U**	**R**
Noisy Pitta	*Pitta versicolor*	T	O			
Golden Whistler	*Pachycephala pectoralis*			C		
Green Cat Bird	*Ailuroedus crassirostris*	T			U	
Grey Shrike Thrush	*Colluricincla harmonica*				U	
Eastern Whip Bird	*Psophodes nigrogularis*		O			
Grey Headed Flying Fox	*Pteropus poliocephalus*	T				R
Scaly Thrush	*Zoothera lunulata*					R
Scarlet Honey Eater	*Myzomela sanguinolenta*		O			
White Throated Tree Creeper	*Cormobates leucophaea*		O			
Black Faced Monarch	*Monarcha melanopsis*		O			
Yellow Throated Scrub Wren	*Sericornis citreogularis*		O			
White Browed Scrub Wren	*Sericornis frontalis*			C		
Spectacled Monarch	*Monarcha trivirgatus*		O			
Pied Currawong	*Strepera graculina*		O			
King Parrot	*Alisterus scapularis*		O			
Grey Fantail	*Rhipidura fuliginosa*		O			
Spined Tailed Chowchilla	*Orthonyx temminkii*		O			
Red Necked Rail	*Rallina tricolor*		O			
Pheasant Coucal	*Centropus phasianinus*				U	

Additional Notes

The following notes give an individual breakdown of bird species observations. I see the birds as a key identifier to the larger event, the veritable ‘canary in the cage’ if you will. I also wish to demonstrate other extraordinary processes that have occurred within the same timeframe.

BIRDS:

Wedge Tailed Eagle

The only local pair moved away from Mt. Nardi-Neville, outside the National Park, when 4G was switched on.

Regent Bower Bird

Secretive and rare and a bird sighted only occasionally; it has now gone.

Satin Bower Bird

Once very common, these large populations have gone from the mountains, retreating to the valleys below.

King Parrot

Once common, their chattering was a remarked-upon feature of the forest but is now rarely heard; the only audible sound is their call of alarm.

Grey Headed Flying Fox

Once common both day and night, they are now heard rarely, only very late at night and very early in the morning when power use drops to a minimum.

Grey Goshawks

These birds, seen patrolling the roadway to the National Park (Newton Drive) for thirty years, have now vanished completely.

Spangled Drongo

Once a conspicuous visitor and breeder, has now gone from the mountain but still common in the valleys below.

Grey Shrike Thrush

Once one of the prominent early birds of the Dawn Chorus, they are now uncommon to rare.

Alberts Lyre Bird

This bird is endemic to the Mount Warning caldera, a relic species exclusive to Gondwanaland habitat.

For example, since 2014 the *Alberts Lyrebird* has been heard calling in an area 5 to 10 km from the towers, below 300 m. In May of 2017, an *Alberts Lyrebird* nest with 2 chicks was discovered beneath wild Lantana brush, about 20 m from the base of the mountain. This site is a small strip of 35 year-old natural regrowth, 6 km from the towers, below 100 m altitude, that is sheltered from the mountain and towers.

Rare photo Alberts Lyre Bird Nest with Chicks

Greatly reduced singing and mimicking frequency. Once common, Lyre Bird numbers have dwindled, retreating in all directions away from the towers. Their singing is now heard down in the Tuntable Falls and Gungas Valleys beyond the National Park. Notably, they are being heard in these ex-farming valleys for the first time in 30 years as they are forced from the National Park.

Marbled Frogmouth

Once very rare, they have now become common at the periphery of the affected area. This bird's beautiful call is most commonly heard when the Tawny Frogmouths and Boobook Owls are calling.

Sooty Owl

Still here, still rare.

Channel Billed Cuckoo
Pallad Cuckoo
Brush Cuckoo
Little Bronze Cuckoo

All of these Cuckoos were common in season and are now rare or have vanished.

Indian Koel

Once a common breeding visitor, it no longer visits.

Mistletoe bird (*Dicaeum hirundinaceum*)

A bird that lives across the entire continent of mainland Australia but has now disappeared from Mt. Nardi. It has not been seen or heard for years. It is the only specie that proliferates the mistletoe and is a prime example of how genetic diversity unravels when the key dispersers are affected.

Superb Blue Wren
Red-backed Wren (*Malurus melanocephalus*)
Variegated Wren

All once very common, have disappeared since 2009. They are still to be found down the mountain, below 450 m.

INSECTS/Cicadas/Moths/Butterflies/Ants/Bees/Flies
Cicadas (*Cicadoidea)*

There exist four commonly known species: the Black Prince, Big Green Cicada, Little Green Cicada and Large Brown Cicadas. Once abundant every other year, singing all day throughout the summer months, they all disappeared by 2012. I have seen a momentary reappearance since the power output change in spring of 2015. I believe that only two of the original four species have reappeared and now, in summer, can be heard about an hour before dusk for only about fifteen minutes and sporadic attempts at trilling around dawn for ten to fifteen minutes.

Moths/Butterflies/Ants/Bees/Flies

Most have become uncommon to occasional. From the year 2000 flying insects have been noticeably diminishing. From 2012-2017 populations have crashed, estimating as high as 80-90% less insects than before 2000.

Ants

Once abundant populations of all species represented in the World Heritage are now hard to find, mostly emerging just before the rain. Biting Ants have become more aggressive than before 2000, now always biting on contact.

Richmond Bird-Wing Butterfly (*Orinthoptera richmandia*)

Once an iconic species abundant around the tower complex, is now a rare sight.

The Giant Yellow Wasp/Giant Sticky Wasp

Once abundant, have now disappeared.

White Ants/Termites (*Isoptera)*

Previously there was an annual explosion of White Ants as storms approached. Now Flying White Ant eruptions are nearly non-existent, rarely emerging to release a few ants. These ‘insect emergences’ are no longer calibrated with the weather patterns.

NATIVE BEES

Once abundant, this little bee's large populations have crashed; its historical contribution as a dominant pollinator has been greatly impaired.

FROGS

Populations and diversity have decreased significantly. They are singing less and their chants have become shorter in time span. Before 2012 frogs would sing almost all day. Now it is uncommon. Mt Nardi area is known as the recognised home of the Giant Barred Frog.

ORNITHOLOGICAL STUDY

I bring to your attention to a study titled, *'A Baseline Assessment Of Mt Nardi Bird Community Indicators & Spatial Variation Among Sites-July 1997.'* The study is produced by Sandy Gilmore, renowned bird species expert of the region, in fact the world expert on the ornithology of the local region and beyond. (See Annex #3)

The data was collected in 1997 from a study of the ground birds of the region that had, as its point of departure the tower complex on M Nardi. It reveals increasing numbers of birds and bird species the further one moves away from the complex. Mr Gilmore reached the conclusion that the tower is the most likely cause of the decrease in number and speciation. As already mentioned, the data was previously collected in 1997. I extended my research and discovered that the first Wi-Fi apparatus was attached to the tower in 1995.

SIGNIFICANCE OF THE DAWN CHORUS

Once there were hundreds of birds joining the dawn chorus, now only a handful can be heard. The dawn chorus may be considered the most extravagant indicator of species and populations.

In conclusion to the additional notes, I would like to remark that this study is based on a complex genetic seed bank. None of my research has so far revealed a study of this scope or nature. I stress that with the backdrop of such a diverse environment, the effects of this technology are more dramatically revealed.

Mt. Nardi Tower Activation Timeline

MARCH-APRIL 2003 – 3G STARTS UP -850 MHz

MARCH-NOVEMBER 2004 – WI-FI BROADBAND LAUNCHES

PERIOD 2002-2004 INSECTS DECLINE DRAMATICALLY

2005 OTHER 3G SERVICES LAUNCHED

2006-2009 TELSTRA “NEXTG”MORE POWERFUL 3G LAUNCHES – 2100 MHz

AUGUST 2009 VODAPHONE NATIONAL 3G LAUNCH

PERIOD 2009

27 BIRD SPECIES VANISH (SEE LIST C)

INSECTS DECLINE

2010-2011 TELSTRA 4G LAUNCHED – 1800 MHz

PLUS 3G UPGRADE

JULY 2012 OPTUS LAUNCHES 4G – 2300 MHz & 2600 MHz

PERIOD 2012-2013

49 BIRD SPECIES VANISH (SEE LIST D)

BATS, CICADAS, BUTTERFLYS, FROGS AND ANTS DECLINE

AUGUST 2012 3G TURNED OFF

2014 4G EXPANDS, ADDS NEW SPECTRUM & SPEED

OCTOBER 2015 OPTUS &TELSTRA SWITCH TO “4GX”

ASSUMES BROADER SPECTRUM (OLD ANALOGUE SPECTRUM)

DROP TO 700 MHz frequency range

(via Australian Mobile Timeline 1981 to 2013 http://3gwiz.com.au/ozmobilenet/?page_id=4)

The Register of Radio-communication Licenses-Site Details

Register of Radiocommunications Licences and Broadcast Service Licences

Site Details

Site ID	8533
Name	Broadcast Australia Tower 30 km N of Lismore
Location	MT NARDI NSW 2480
Precision	Within 10 meters
Elevation	783 m
Lat,Long (GDA94)	-28.545563°,153.287606° [KML]
Licence Fee Density	Low Density Area

[Show Nearby Sites in Map] [Site Location Map for this Site Only]
[Sites 1km, 10km, 20km, 100km] [Site Location Map] [Nearby Assignments]
[New Site Search]

Assignments at this Site

Results **1 - 88** of **88** assignments.

ID	Frequency	Emission Designator	T/R	Client	BSL/Licence No	
893887	932.75 MHz	75K0D7W	R	OFFICE OF ENVIRONMENT AND HERITAGE (115634)	1923881/1	6-4-10
893888	856.75 MHz	75K0D7W	T	OFFICE OF ENVIRONMENT AND HERITAGE (115634)	1923881/1	6-4-10
910513	8.251745 GHz	28M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936288/1	6-4-10
910249	6.1231 GHz	28M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936069/1	21-10-11
910309	6.74 GHz	40M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936077/1	21-10-11
996704	7.04 GHz	38M5D7WET	R	Telstra Corporation Limited (39310)	1983830/1	7-7-15
996705	6.7 GHz	38M5D7WET	T	Telstra Corporation Limited (39310)	1983830/1	7-7-15
1005407	7.6625 GHz	13M7D7W	R	Vertical Telecoms Pty Limited (1209404)	1987512/1	17-4-15
1005408	7.5015 GHz	13M7D7W	T	Vertical Telecoms Pty Limited (1209404)	1987512/1	17-4-15
929430	6.22689 GHz	28M0D7W	R	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1948632/1	23-3-12
929431	5.97485 GHz	28M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1948632/1	23-3-12
1011296	7.5925 GHz	13M7D7W	R	Vertical Telecoms Pty Limited (1209404)	1990332/1	14-5-14
1011297	7.4315 GHz	13M7D7W	T	Vertical Telecoms Pty Limited (1209404)	1990332/1	14-5-14
759871	7.666 GHz	7M00D7W	R	Australian Broadcasting Corporation (336877)	1189929/1	19-4-07
759872	7.505 GHz	7M00D7W	T	Australian Broadcasting Corporation (336877)	1189929/1	19-4-07
773981	13.031 GHz	28M0F7W	R	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1222611/1	13-3-02
773982	12.765 GHz	28M0F7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1222611/1	13-3-02
910516	7.940425 GHz	28M0D7W	R	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936288/1	4-5-11
910300	6.92 GHz	40M0D7W	R	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936075/1	21-10-11

910301	6.58 GHz	40M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936075/1	21-10-11
981170	460.16875 MHz	10K1F3E	T	OFFICE OF ENVIRONMENT AND HERITAGE (115634)	1976010/1	16-9-16
981175	450.66875 MHz	10K1F3E	R	OFFICE OF ENVIRONMENT AND HERITAGE (115634)	1976010/1	16-9-16
1005846	8.162795 GHz	29M6D7W	T	Vertical Telecoms Pty Limited (1209404)	1987727/1	23-04-15
1005849	7.851475 GHz	29M6D7W	R	Vertical Telecoms Pty Limited (1209404)	1987727/1	23-04-15
929447	6.03415 GHz	28M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1948634/1	23-3-12
1005834	8.222095 GHz	27M5D7W	T	Vertical Telecoms Pty Limited (1209404)	1987726/1	23-4-15
1005837	7.910775 GHz	27M5D7W	R	Vertical Telecoms Pty Limited (1209404)	1987726/1	23-4-15
929439	6.0045 GHz	28M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1948633/1	23-03-12
929446	6.28619 GHz	28M0D7W	R	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1948634/1	23-3-12
1056733	163.1 MHz	10K1F3E	T	OFFICE OF ENVIRONMENT AND HERITAGE (115634)	1917372/1	10-5-10
1056736	158.5 MHz	10K1F3E	R	OFFICE OF ENVIRONMENT AND HERITAGE (115634)	1917372/1	10-5-10
1597917	564.5 MHz	6M70V7W	T	SPECIAL BROADCASTING SERVICE CORPORATION (1133847)	1159683/1	21-3-14
9613481	723 MHz	20M0W7D	R	Telstra Corporation Limited (1103275)	9469862	13-5-15
9613482	778 MHz	20M0W7D	T	Telstra Corporation Limited (1103275)	9469862	13-5-15
9613483	723 MHz	20M0W7D	R	Telstra Corporation Limited (1103275)	9469862	13-5-15
9613484	778 MHz	20M0W7D	T	Telstra Corporation Limited (1103275)	9469862	13-5-15
9613485	723 MHz	20M0W7D	R	Telstra Corporation Limited (1103275)	9469862	13-5-15
9613486	778 MHz	20M0W7D	T	Telstra Corporation Limited (1103275)	9469862	13-5-15
896028	413.875 MHz	16K0F3E	T	OFFICE OF ENVIRONMENT AND HERITAGE (115634)	1924878/1	10-5-10
896031	404.425 MHz	16K0F3E	R	OFFICE OF ENVIRONMENT AND HERITAGE (115634)	1924878/1	10-5-10
1003547	7.673 GHz	7M00D7W	R	Vertical Telecoms Pty Limited (1209404)	1986540/1	7-5-15
1003548	7.512 GHz	7M00D7W	T	Vertical Telecoms Pty Limited (1209404)	1986540/1	7-5-15
1003554	11.585 GHz	40M0D7W	T	Vertical Telecoms Pty Limited (1209404)	1986541/1	7-5-15
1003557	11.095 GHz	40M0D7W	R	Vertical Telecoms Pty Limited (1209404)	1986541/1	7-5-15
929438	6.25654 GHz	28M0D7W	R	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1948633/1	23-3-12
1011278	7.603 GHz	7M00D7W	R	Vertical Telecoms Pty Limited (1209404)	1990329/1	7-7-15
1011281	7.442 GHz	7M00D7W	T	Vertical Telecoms Pty Limited (1209404)	1990329/1	7-7-15
1011292	15.1485 GHz	7M00D7W	R	Vertical Telecoms Pty Limited (1209404)	1990331/1	7-7-15
1599678	98.5 MHz	200KF8EHF	T	Australian Broadcasting Corporation (1103909)	1189262/1	12-3-07
1598024	543.5 MHz	6M70V7W	T	Prime Television (Northern) Pty Limited (1155718)	1159792/1	21-03-14
10102814	840 MHz	9M90G7W	R	Telstra Corporation Limited (1103275)	9263433	16-9-16
10102815	885 MHz	9M90G7W	T	Telstra Corporation Limited (1103275)	9263433	16-9-16

10102816	840 MHz	9M90G7W	R	Telstra Corporation Limited (1103275)	9263433	16-9-16
910225	5.97485 GHz	28M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936066/1	21-10-11
910232	6.25654 GHz	28M0D7W	R	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936067/1	21-10-11
910304	7 GHz	40M0D7W	R	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936076/1	21-10-11
910305	6.66 GHz	40M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936076/1	21-10-11
910296	6.84 GHz	40M0D7W	R	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936074/1	21-10-11
910297	6.5 GHz	40M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936074/1	21-10-11
929422	6.19724 GHz	28M0D7W	R	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1948631/1	23-3-12
929423	5.9452 GHz	28M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1948631/1	23-3-12
1011293	14.5045 GHz	7M00D7W	T	Vertical Telecoms Pty Limited (1209404)	1990331/1	13-5-15
1450370	6.03415 GHz	29M6D7W	T	Vertical Telecoms Pty Limited (1209404)	9939776/1	8-3-16
1598045	550.5 MHz	6M70V7W	T	NBN Pty Ltd (28768)	1159813/1	21-3-14
1596760	94.5 MHz	200KF8EHF	T	Australian Broadcasting Corporation (1103909)	1150259/1	31-1-93
1596761	95.3 MHz	200KF8EHF	T	Australian Broadcasting Corporation (1103909)	1150260/1	3-12-91
1596764	96.1 MHz	200KF8EHF	T	Australian Broadcasting Corporation (1103909)	1150263/1	1-10-94
10102817	885 MHz	9M90G7W	T	Telstra Corporation Limited (1103275)	9263433	16-9-16
10102818	840 MHz	9M90G7W	R	Telstra Corporation Limited (1103275)	9263433	16-9-16
10102819	885 MHz	9M90G7W	T	Telstra Corporation Limited (1103275)	9263433	16-9-16
10102820	840 MHz	9M90G7W	R	Telstra Corporation Limited (1103275)	9263433	16-9-16
10102821	885 MHz	9M90G7W	T	Telstra Corporation Limited (1103275)	9263433	16-9-16
892601	460.8 MHz	16K0F3E	T	OFFICE OF ENVIRONMENT AND HERITAGE (115634)	1922974/1	11-3-10
892604	451.3 MHz	16K0F3E	R	OFFICE OF ENVIRONMENT AND HERITAGE (115634)	1922974/1	11-3-10
910216	6.19724 GHz	28M0D7W	R	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936065/1	21-10-11
910217	5.9452 GHz	28M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936065/1	21-10-11
910224	6.22689 GHz	28M0D7W	R	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936066/1	21-10-11
910233	6.0045 GHz	28M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936067/1	21-10-11
910240	6.31584 GHz	28M0D7W	R	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936068/1	21-10-11
910241	6.0638 GHz	28M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936068/1	21-10-11
910248	6.37514 GHz	28M0D7W	R	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936069/1	21-10-11
910308	7.08 GHz	40M0D7W	R	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936077/1	30-3-15
1002995	7.694 GHz	7M00D7W	R	Vertical Telecoms Pty Limited (1209404)	1986364/1	22-4-15

1002996	7.533 GHz	7M00D7W	T	Vertical Telecoms Pty Limited (1209404)	1986364/1	22-4-15
1450369	6.28619 GHz	29M6D7W	R	Vertical Telecoms Pty Limited (1209404)	9939776/1	8-3-16
1597655	536.5 MHz	6M70V7W	T	Australian Broadcasting Corporation (1137920)	1158507/1	22-8-03
1596767	96.9 MHz	200KF8EHF	T	Australian Broadcasting Corporation (1103909)	1150266/1	13-01-93
1597771	557.5 MHz	6M70V7W	T	Northern Rivers Television Pty Ltd (29420)	1159167/1	2-8-05

Mt Nardi Towers.

Sites where within 1km of Latitude: -28.542669, Longitude: 153.290154

Results 1 - 5 of 5 possible matches. Sorted by Distance.

Site ID	Name	City	https://web.acma.gov.au/rrl/site_search.results_page?pQRY=-28.542669,153.290154&pSUB_TYPE=%3c1km from&pEXACT_IND=matches&pSORT_BY=district	State & Postcode	Asgn	KM
8535	NRN8 TV Tower 30 km N of Lismore MT NARDI	MT NARDI		NSW 2480	152	[K
8542	Telstra Tower 2 30 km N of Lismore MT NARDI	MT NARDI		NSW 2480	4	[K
8541	Telstra Tower 1 30 km N of Lismore MT NARDI	MT NARDI		NSW 2480		[K
9011268	Nimbin Optus Site Newton Drive TUNTABLE FALLS NSW 2480	MT NARDI		NSW 2480	18	[K
8533	Broadcast Australia Tower 30 km N of Lismore MT NARDI	MT NARDI		NSW 2480	80	[K

Site ID	8535
Name	NRN8 TV Tower 30 km N of Lismore
Location	MT NARDI NSW 2480
Precision	Within 10 meters
HCIS Level 2	NU3J
Elevation	776 m
Lat,Long (GDA94)	-28.542669°,153.290154° [KML]
Licence Fee Density	Low Density Area

Assignments at this Site

Results 1 - 100 of 152 assignments.

ID	Frequency	Emission Designator	T / R	Client	BSL/Licence No
708524	460.55 MHE	16K0F3	T	Essential Energy (1214220)	101421/1

708418	460.125 MHz	16K0F2DMD	Essential Energy (1214220)	101378/1
708480	461.08125 MHz	10K1F2DMD	Essential Energy (1214220)	101397/1
767707	460.35 MHz	16K0F3E	NSW Rural Fire Service (5832)	1209102/1
783901	414.05 MHz	16K0F3E	Forestry Corporation of New South Wales (13634)	1280435/1
817769	413.3125 MHz	10K1F3E	NSW Rural Fire Service (5832)	1209571/1
870450	853.20625 MHz	10K1F2DMD	NSW Rural Fire Service (5832)	1907892/1
870474	853.20625 MHz	10K1F2DMD	NSW Rural Fire Service (5832)	1907895/1
870482	853.20625 MHz	10K1F2DMD	NSW Rural Fire Service (5832)	1907896/1
939038	414.14375 MHz	10K1F3E	State Emergency Service (Nsw) (516364)	1953883/1
981950	414.175 MHz	20K4D7W	NSW Rural Fire Service (5832)	1976408/1
1186438	7.5435 GHz	14M0D7W	Soul Pattinson Telecommunications Pty Limited (1131556)	1224975/1
1098042	420.1625 MHz	10K1F9W	NEW SOUTH WALES GOVERNMENT TELECOMMUNICATIONS AUTHORITY (20005985)	1952079/1
1141307	468.9125 MHz	10K1F1E	NSW Police Force (31823)	1984777/1
2692400	8.192445 GHz	29M6G7W	NETWORK INVESTMENTS PTY LTD (20032976)	42993/2

2692418	8.133145 GHz	29M6G7W	T	NETWORK INVESTMENTS PTY LTD (20032976)	1429172/2
656040	145.05 MHz	16K0F2D	T	Summerland Amateur Radio Club Inc (94279)	164676/1
656056	1.2733 GHz	16K0F3E	T	Summerland Amateur Radio Club Inc (94279)	164676/1
656042	438.875 MHz	16K0F2D	T	Summerland Amateur Radio Club Inc (94279)	164676/1
656044	440.05 MHz	16K0F2D	T	Summerland Amateur Radio Club Inc (94279)	164676/1
656046	440.4 MHz	16K0F2D	T	Summerland Amateur Radio Club Inc (94279)	164676/1
656048	440.85 MHz	16K0F2D	T	Summerland Amateur Radio Club Inc (94279)	164676/1
656050	438.675 MHz	16K0F2D	T	Summerland Amateur Radio Club Inc (94279)	164676/1
656052	147.325 MHz	16K0F3E	T	Summerland Amateur Radio Club Inc (94279)	164676/1
656054	145.175 MHz	16K0F2D	T	Summerland Amateur Radio Club Inc (94279)	164676/1
708430	460.125 MHz	16K0F2D	T	Essential Energy (1214220)	101386/1
784235	450.825 MHz	16K0F3E	T	Essential Energy (1214220)	1281290/1
784245	460.45 MHz	16K0F3E	T	Essential Energy (1214220)	1281302/1
909083	8.1924 GHz	29M6D7W	T	NBN Pty Ltd (28768)	1935084/1
950143	404.07	16K0F9	T	ST. JOHN AMBULANCE AUSTRALIA INCORPORATED	1960565/1

	5 MHz	W	T	(1144303)		
981942	414.175 MHz	20K4D7W	T	NSW Rural Fire Service (5832)	1976407/1	
981960	7.4595 GHz	14M0G7W	T	NSW Rural Fire Service (5832)	1976409/1	
780213	847.2 MHz	380KF1EHX	T	Richmond River Broadcasters Pty Ltd (33520)	1233496/1	
683862	461.19375 MHz	10K1F2D	T	NBN Pty Ltd (28768)	42070/1	
757637	414.1 MHz	16K0F3E	T	Ambulance Service of NSW (17661)	1187688/1	
870402	853.20625 MHz	10K1F2D	T	NSW Rural Fire Service (5832)	1907886/1	
870410	853.20625 MHz	10K1F2D	T	NSW Rural Fire Service (5832)	1907887/1	
870418	853.20625 MHz	10K1F2D	T	NSW Rural Fire Service (5832)	1907888/1	
870426	853.20625 MHz	10K1F2D	T	NSW Rural Fire Service (5832)	1907889/1	
870434	853.20625 MHz	10K1F2D	T	NSW Rural Fire Service (5832)	1907890/1	
945129	413.71875 MHz	12K5F3E	T	Ambulance Service of NSW (17661)	1957911/1	
956210	7.5015 GHz	14M0G7W	T	NSW Rural Fire Service (5832)	1963897/1	
1004077	468.325 MHz	10K1F3E	T	NEW SOUTH WALES GOVERNMENT TELECOMMUNICATIONS AUTHORITY (20017375)	1802660/1	
1004125	468.5875	10K1F3E	T	NEW SOUTH WALES GOVERNMENT TELECOMMUNICATIONS	1802666/1	

		MHz			AUTHORITY (20017375)	
1004157		468.8375 MHz	10K0F3E	T	NEW SOUTH WALES GOVERNMENT TELECOMMUNICATIONS AUTHORITY (20017375)	1802671/1
1033379		462.85 MHz	10K0F9W	T	ST. JOHN AMBULANCE AUSTRALIA INCORPORATED (1144303)	1908836/1
1042064		151.125 MHz	10K0F3E	T	ST. JOHN AMBULANCE AUSTRALIA INCORPORATED (1144303)	1912379/1
2692402		8.133145 GHz	24M0F3FNN	T	NETWORK INVESTMENTS PTY LTD (20032976)	531139/2
2692396		8.073845 GHz	18M0F9F	T	NETWORK INVESTMENTS PTY LTD (20032976)	42984/2
661007		79.2625 MHz	10K0F3E	T	Forestry Corporation of New South Wales (13634)	24427/1

https://web.acma.gov.au/rrl/assignment_search.lookup?pEFL_ID=661006 https://web.acma.gov.au/rrl/client_search.client_lookup?pCLIENT_NO=13634 https://web.acma.gov.au/rrl/licence_search.licence_lookup?pLICENCE_NO=24427/1

Site Details

Site ID	8542
Name	Telstra Tower 2 30 km N of Lismore
Location	MT NARDI NSW 2480
Precision	Within 10 meters
HCIS Level 2	NU3J
Elevation	778 m
Lat,Long (GDA94)	-28.544867°,153.288034° [KML]
Licence Fee Density	Low Density Area

Assignments at this Site

Results 1 - 4 of 4 assignments.

ID	Frequency	Emission Designator	T/R	Client	BSL/Licence No
983736	7.449 GHz	7M00D7WET	T	Airservices Australia (401054)	1977346/1
1029956	120.3 MHz	6K00A3E	T	Airservices Australia (391222)	420357/1

https://web.acma.gov.au/rrl/client_search.client_lookup?pCLIENT_NO=391222

https://web.acma.gov.au/rrl/licence_search.licence_lookup?pLICENCE_NO=420357/1

Site Details

Site ID	8541
Name	Telstra Tower 1 30 km N of Lismore
Location	MT NARDI NSW 2480
Precision	Within 10 meters
HCIS Level 2	NU3J
Lat,Long (GDA94)	-28.545039°,153.287901° [KML]
Licence Fee Density	Low Density Area

No assignments are listed for this site.

Site Details

Site ID 9011268

Name Nimbin Optus

Site Newton Drive

Location TUNTABLE FALLS NSW 2480 NSW 2480

Precision Within 10 meters

HCIS Level 2 NU3J

Elevation 783 m Lat,Long (GDA94) - 28.545563°,153.287914° [KML] Licence Fee Density Low Density Area

https://web.acma.gov.au/rrl/hcis2kml_proxy.kml?pHCIS=NU3J

Assignments at this Site

Results 1 - 18 of 18 assignments.

ID	Frequency	Emission Designator	T/R	Client	BSL/Licence No
10170018	1.8575 GHz	15M0W7D	T	Optus Mobile Pty Limited (1103276)	9263448
9608116	763 MHz	10M0W7D	T	Optus Mobile Pty Limited (1149289)	9469858
9608118	763 MHz	10M0W7D	T	Optus Mobile Pty Limited (1149289)	9469858
10170014	1.8575 GHz	15M0W7D	T	Optus Mobile Pty Limited (1103276)	9263448
10170021	1.8575 GHz	15M0W7D	T	Optus Mobile Pty Limited (1103276)	9263448
10033723/1	947.6 MHz	3M84G7W	T	Optus Mobile Pty Limited (512112)	1136358/1
9608120	763 MHz	10M0W7D	T	Optus Mobile Pty Limited	9469858

				(1149289)	
1291612	8.073845 GHz	28M0D7W	T	Optus Mobile Pty Limited (510769)	1922085/1
10041198/1	947.6 MHz	3M84G7W	T	Optus Mobile Pty Limited (512112)	1136358/1

Site Details

Site ID	8533
Name	Broadcast Australia Tower 30 km N of
Location	MT NARDI NSW 2480
Precision	Within 10 meters
HCIS Level 2	NU3J
Elevation	783 m
Lat,Long (GDA94)	-28.545563°,153.287606° [KML]
Licence Fee Density	Low Density Area

]

Assignments at this Site

Results 1 - 80 of 80 assignments.

ID	Frequency	Emission Designator	T / R	Client	BSL/Licence No
				https://web.acma.gov.au/rrl/client_search.client_lookup?pCLIENT_NO=1103275	https://web.acma.gov.au/rrl/licence_search.licence_lookup?pLICENCE_NO=9469862
759872	7.505 GHz	7M00D7W	T	Australian Broadcasting Corporation (336877)	1189929/1
773982	12.765 GHz	28M0F7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1222611/1
929431	5.97485 GHz	28M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1948632/1
929436	6.0045 GHz	28M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1948633/1
1002996	7.533 GHz	7M00D7W	T	Vertical Telecoms Pty Limited (1209404)	1986364/1
1599678	98.5 MHz	200KF8EHF	T	Australian Broadcasting Corporation (1103909)	1189262/1
2546596	7.554 GHz	7M00D7W	T	Vertical Telecoms Pty Limited (1209404)	10222199/1
2608970	8.23692 GHz	55M0D7W	T	Vertical Telecoms Pty Limited (1209404)	1987727/2
1598045	550.5 MHz	6M70V7W	T	NBN Pty Ltd (28768)	1159813/1
10102815	885 MHz	9M90G7W	T	Telstra Corporation Limited (1103275)	9263433
896028	413.875 MHz	16K0F3E	T	OFFICE OF ENVIRONMENT AND HERITAGE (115634)	1924878/1
981170	460.16875 MHz	10K1F3E	T	OFFICE OF ENVIRONMENT AND HERITAGE (115634)	1976010/1
1005834	8.222095 GHz	27M5D7W	T	Vertical Telecoms Pty Limited (1209404)	1987726/1
1011281	7.442 GHz	7M00D7W	T	Vertical Telecoms Pty Limited (1209404)	1990329/1
1011293	14.5045 GHz	7M00D7W	T	Vertical Telecoms Pty Limited (1209404)	1990331/1
10102817	885 MHz	9M90G7W	T	Telstra Corporation Limited (1103275)	9263433
1056733	163.1 MHz	10K1F3E	T	OFFICE OF ENVIRONMENT AND HERITAGE (115634)	1917372/1
				https://web.acma.gov.au/rrl/client_search.client_lookup?pCLIENT_NO=115634	https://web.acma.gov.au/rrl/licence_search.licence_lookup?pLICENCE_NO=1917372/1

159676060	94.5 MHz	200KF8EHF	T	Australian Broadcasting Corporation (1103909)	1150259/1
159676161	95.3 MHz	200KF8EHF	T	Australian Broadcasting Corporation (1103909)	1150260/1
159676464	96.1 MHz	200KF8EHF	T	Australian Broadcasting Corporation (1103909)	1150263/1
159676767	96.9 MHz	200KF8EHF	T	Australian Broadcasting Corporation (1103909)	1150266/1
8938888	856.75 MHz	75K0D7W	T	OFFICE OF ENVIRONMENT AND HERITAGE (115634)	1923881/1
9102157	5.9452 GHz	28M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936065/1
9102225	5.97485 GHz	28M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936066/1
892601	460.8 MHz	16K0F3E	T	OFFICE OF ENVIRONMENT AND HERITAGE (115634)	1922974/1
996705	6.7 GHz	38M5D7WET	T	Telstra Corporation Limited (39310)	1983830/1
1011297	7.4315 GHz	13M7D7W	T	Vertical Telecoms Pty Limited (1209404)	1990332/1
9613482	778 MHz	20M0W7D	T	Telstra Corporation Limited (1103275)	9469862
9613484	778 MHz	20M0W7D	T	Telstra Corporation Limited (1103275)	9469862
1597655	536.5 MHz	6M70V7W	T	Australian Broadcasting Corporation (1137920)	1158507/1
1597917	564.5 MHz	6M70V7W	T	SPECIAL BROADCASTING SERVICE CORPORATION (1133847)	1159683/1
2692255	557.5 MHz	6M70V7W	T	NETWORK INVESTMENTS PTY LTD (20032976)	1159167/2
10102819	885 MHz	9M90G7W	T	Telstra Corporation Limited (1103275)	9263433
910233	6.0045 GHz	28M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936067/1
910241	6.0638 GHz	28M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936068/1
910249	6.1231 GHz	28M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1936069/1
1003548	7.512 GHz	7M00D7W	T	Vertical Telecoms Pty Limited (1209404)	1986540/1
				https://web.acma.gov.au/rrl/client_search.client_lookup?pCLIENT_NO=1209404	https://web.acma.gov.au/rrl/licence_search.licence_lookup?pLICENCE_NO=1986540/1
1003554	11.585 GHz	40M0D7W	T	Vertical Telecoms Pty Limited (1209404)	1986541/1
1005408	7.5015 GHz	13M7D7W	T	Vertical Telecoms Pty Limited (1209404)	1987512/1
10102821	885 MHz	9M90G7W	T	Telstra Corporation Limited (1103275)	9263433
2626812	6.09345 GHz	28M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	10238733/1
929423	5.9452 GHz	28M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1948631/1
929447	6.03415 GHz	28M0D7W	T	DIGITAL DISTRIBUTION AUSTRALIA PTY LIMITED (1104256)	1948634/1
1598024	543.5 MHz	6M70V7W	T	Prime Television (Northern) Pty Limited (1155718)	1159792/1

CONDENSED DATA FROM LIST:

50 transmitters listed for NRN8 TV tower site ID 8535. 8 of these transmit in the 7 to 8 GHz bands.

2 transmitters listed for Telstra Tower 2 site ID 8542. 1 transmits in the 7.449 GHz band.

9 transmitters for Optus site ID 8541. 4 of these transmit in the 1.8 to 8.1 GHz bands.

44 transmitters for site ID 8533. 23 of these transmit in the 5.9 to 14.5 GHz bands.

Overall there appear to be 105 transmitters operating on Mt Nardi.

Summary

The effects on this area of the World Heritage by the microwave radiation coming from the tower divides the larger Nightcap Park into two pieces by blocking the species flow through the East - West corridor of the Park. (see Mt Nardi map page: 6)

The use of a huge diesel powered generator to boost the power and the general effects of 3G and 4G and the many other frequencies that have been added, impose a frequency message of such magnitude and complexity that the interplay between the naturally occurring electromagnetic oscillatory bands, a vibrational zone of great subtlety wherein dwells most of known biology, is simply overridden. The message is too powerful and creatures both great and small simply flee or perish.

There have been unmeasured diesel spills from the generator.

Walking trails are neglected and power-line corridors transect the delicate ecology triggering a massive incursion of introduced non-native species such as cane toads and wild dogs.

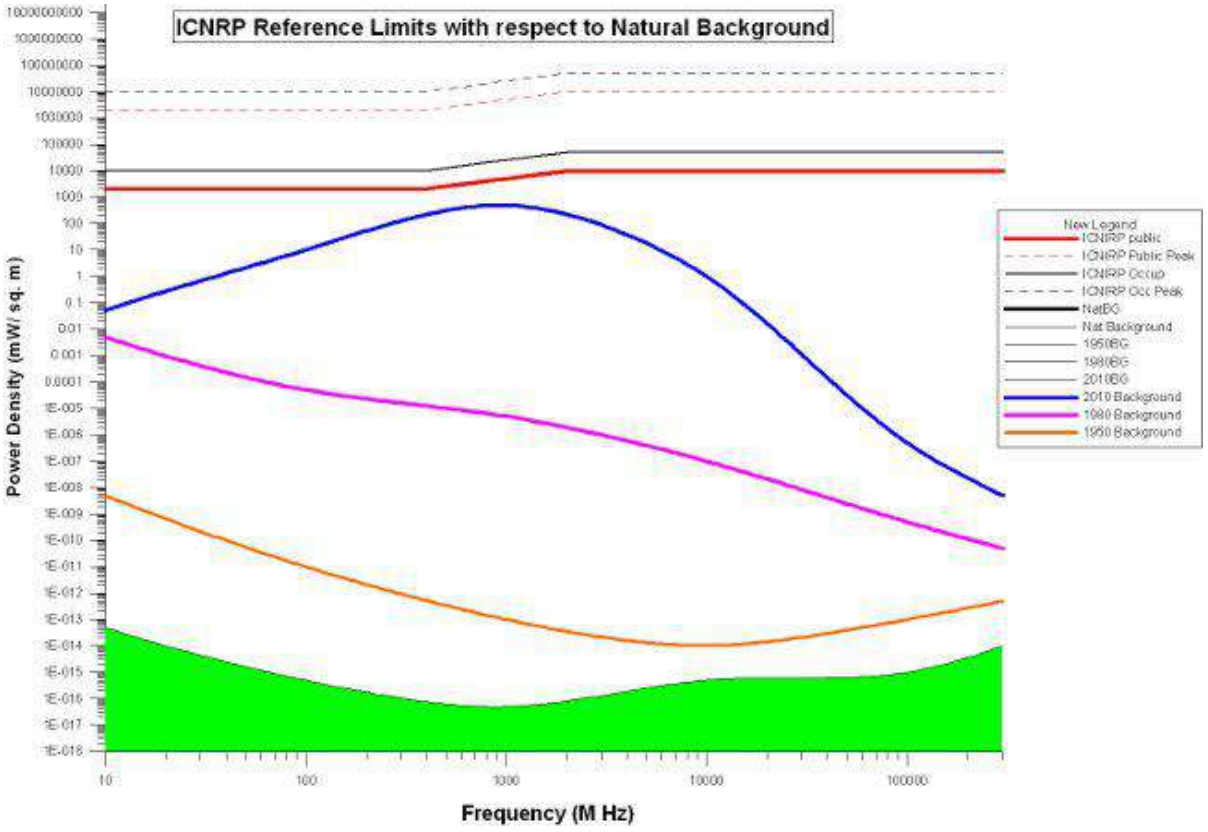
- There is no information or *liaison* with visitors who come from around the country and the world, to be confronted by these "Towers of Doom." Many people, like other sensible species, don't even leave their car; they simply leave.

My own observations correspond so well with the explanation revealed by the Register of Radio-communications Licenses and Broadcast Services, as well as the Timeline of application of the technology, that our community has little choice but to believe the overwhelming evidence of our own eyes and ears. The Mt. Nardi - Mt. Matheson area has been consistently neglected, consistently abused and with the intensifying storm of invisible frequencies emanating from the towers it is accurate to say that Mt. Nardi is under siege.

Since 2000 many more towers and new technologies that utilise a broader spectrum of frequencies have been added to the transmission facilities on top of Mt Nardi. Currently there are about 105 transmitters operating on the mountain.

I understand from my research that EMR levels near towers are millions of times greater than the natural background levels that wildlife has evolved to utilize for navigation, homing, etc. Every new network is more complex in signal structure than the previous. Given the number of transmitters on-site, it is also relevant that virtually no research has been conducted upon the biological effects of simultaneous exposure to multiple signals, much less dropping them into a World Heritage gene bank without foresight.

My 'urgency to act' is not only for the reasons already demonstrated but also because upcoming technologies likely represent an even more serious threat to biology. I would like you to note that it would be simple to verify my findings, rather than undertaking years of protracted studies. Turn off the 4G for a predetermined period and have the biologists note species reappearance. I have indicated previously what happened when the towers were turned off for two days and the resultant explosion of biology on the mountain.



Conclusion

With these short explanations of events we can appreciate that the effects of this technology and its application on Mt. Nardi over the last fifteen years, affect not only the top of the life chain species but they are devastating the fabric of the continuity of the World Heritage, causing genetic deterioration in an insidious, massive and ever escalating scale. To truly understand what these studies reveal is to stare into the abyss.

List of Appendices:

1. Site Assessment. Kooyman R. (see Pdf.1)

2. ‘Gondwanaland Rainforest of Australia.’ UNESCO World Heritage.
3. ‘A Baseline Assessment Of Mt Nardi Bird Community Indicators And Spatial Variation Among Sites – July 1997.’ Sandy Gilmore, Ecologist. (See Pdf.2)

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153 Peer-reviewed Studies or Articles Reporting Significant Effects from EMF Exposures on Wildlife (see pdf.3)

The Oceania Radiofrequency Scientific Advisory Association maintains a large database of published science on EMR.