Submission No 109

INQUIRY INTO PLANNING SYSTEM AND THE IMPACTS OF CLIMATE CHANGE ON THE ENVIRONMENT AND COMMUNITIES

Organisation: Manyana Matters Environmental Association

Date Received: 3 November 2023

INQUIRY INTO THE PLANNING SYSTEM AND THE IMPACTS OF CLIMATE CHANGE ON THE ENVIRONMENT AND COMMUNITIES

A submission from Manyana Matters Environmental Association Inc.

Climate change is menacing our environment and endangering our communities. The inadequacy of the current planning system in NSW, particularly regarding outdated DAs and inappropriate zoning decisions, exacerbates these effects. The system must be reshaped to account for the impacts of climate change.

In this submission:

A. Manyana Matters: our objectives and reach.
B. The proposed and approved developments in the Red Head villages that are threatening our natural environment through biodiversity loss, already at heightened risk due to climate change.
C. The physical and psychological impacts of past and potential natural disasters on the people in our communities.
D. Recommendations for changes to the NSW planning system to protect the environment and communities from the impacts of outdated DAs and inappropriate zoning decisions, and from future impacts of climate change.

A. Manyana Matters Environmental Association (Manyana Matters)

Manyana Matters Environmental Association Inc. is a volunteer community-based organisation, initially formed in 2018 and incorporated in 2020 in response to environmental threats following the 2019/20 Black Summer bushfires.

Our objectives are to:

- Preserve, protect and enhance the natural, social, and cultural environment of Bendalong, North Bendalong, Manyana, Cunjurong Point, Berringer (the "Red Head villages"), and the surrounding Conjola National Park.
- Ensure a sustainable future for the plant, animal, and human communities of this region.
- Champion and support broader environmental campaigns throughout NSW and Australia.

Our primary campaign is to save a 20ha block of bushland in the centre of Manyana, one of the few substantial pieces of bushland not burnt in the 2019/20 Black Summer fires that destroyed 95% of the adjacent Conjola National Park. This forest has become a refuge for wildlife that survived the fires, it serves to seed the recovery of neighbouring bushland and provides succour for residents traumatised by the event. It is threatened with clearing for housing under an outdated DA. The block is presently a Controlled Action under the EPBC Act. Our vision is for it to be declared the Manyana Special Conservation Reserve and become part of the Conjola National Park. Past and present politicians from all parties and all levels of government have shown tangible support for the campaign.

We are a volunteer community-based organisation with no political affiliation. Manyana Matters enjoys widespread support in our community. We have several hundred financial members and almost 500 subscribers to our mailing list. More broadly, we have 5,500 Facebook followers and over 4,000 Instagram followers. We have a reach of many hundreds of thousands of like-minded people through our links with state and national environmental organisations.

Our stories have been covered by the media locally, nationally and internationally. In 2021 we attracted state-wide attention with our Open Letter calling to save the Manyana forest, published in

the Sydney Morning Herald[1]. The Change.org petition to Halt the Extinction of the Endangered Greater Glider, started by our President Bill Eger, has over 120,000 signatures.

B. The proposed and approved developments that are threatening our natural environment through biodiversity loss, already at heightened risk due to climate change

Manyana and the surrounding four Red Head villages have very special biodiversity values. With approximately one fifth of the terrestrial species of NSW having been identified in this area[2], it could be described as a biodiversity hotspot[3].

Currently there are two large developments being proposed or planned for the area. Both developments will directly impact vulnerable, endangered and critically endangered species and will destroy endangered and critically endangered ecological communities (EECs) and threatened species habitats listed under the NSW Biodiversity Conservation Act and the Federal EPBC Act.

- Manyana Beach Estate is a 20ha block of native forest. The current owner purchased the property in 2017. The land is zoned Residential and has development approval granted by the NSW Government (as a 3A Major Development) in 2008 and a Construction Certificate issued by Shoalhaven City Council. Under current planning laws, the developer's plan to destroy this forest is considered lawful even though their Environmental Impact Statement was produced in 2006. Due to the work of Manyana Matters and our supporters, this development is presently a Controlled Action under the Federal EPBC Act.

- Inyadda Drive, North Manyana is 170ha of bushland. The block is zoned "Residential" even though it exists in a major bushfire corridor and experiences regular flooding. The two waterways on the property channel to EECs are adjacent to an Intermittently Closed and Open Lakes and Lagoons (ICOLL) that supports threatened species such as the Pied Oystercatcher and the critically endangered Hooded Dotterel. The block has changed hands many times since its residential zoning in the 1980s. While the present zoning exists, proponents will continue in their attempts to develop it.

There are at least 68 listed threatened bird and animal species known to inhabit the village bushlands. Notably, the forests of the area are suitable habitat for the Greater Glider, which used to be regularly seen in the Manyana forest. Sadly, climate change, habitat destruction and habitat fragmentation have taken a huge toll on their numbers and in 2022, the Greater Glider was listed as Endangered under both the EPBC Act and the NSW Biodiversity and Conservation Act[4].

Within the village forests that are threatened with development there are Endangered Ecological Communities (EECs) including Littoral Rainforest, Bangalay Sand Forest, Swamp Oak Floodplain, Swamp Sclerophyll Forest and others. A Critically Endangered Ecological Community (CEEC) of Illawarra and South Coast Lowland Forest and Woodland is listed under the EPBC Act. This

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[1] See Appendix 1

[2] Atlas of Living Australia

[3] Biodiversity hotspots are regions that contain a high level of species diversity, many endemic species (species not found anywhere else in the world) and a significant number of threatened or endangered species. What are Biodiversity Hotspots? | Defenders of Wildlife

[4] A 2023 report by ecologist Garry Daly, commissioned by NSW NPWS, on the monitoring of arboreal mammals in various NSW south coast national parks concludes, amongst other things, that there is evidence of ecosystem collapse in eastern Australia due to the 2019-20 wildfires, resulting (with other unknown threatening processes) in the decline of the Yellow-bellied Glider and Greater Glider. Also, fragmentation of habitats without effective movement corridors will make populations of arboreal species not viable in the long term. See Appendix 4.

threatened ecological community is also a Serious and Irreversible Impact (SAII) Entity under the NSW Department of Environment's Biodiversity Assessment Method.

The links between the ecologies represented by these two proposed developments and threatened fauna species are clear. Clearing these areas will potentially destroy foraging and/or nesting habitat for birds such as the Eastern Bristlebird, the Swift Parrot and forest owls, and animals including the grey-headed flying fox, spotted tail quoll and the long-nosed potoroo.

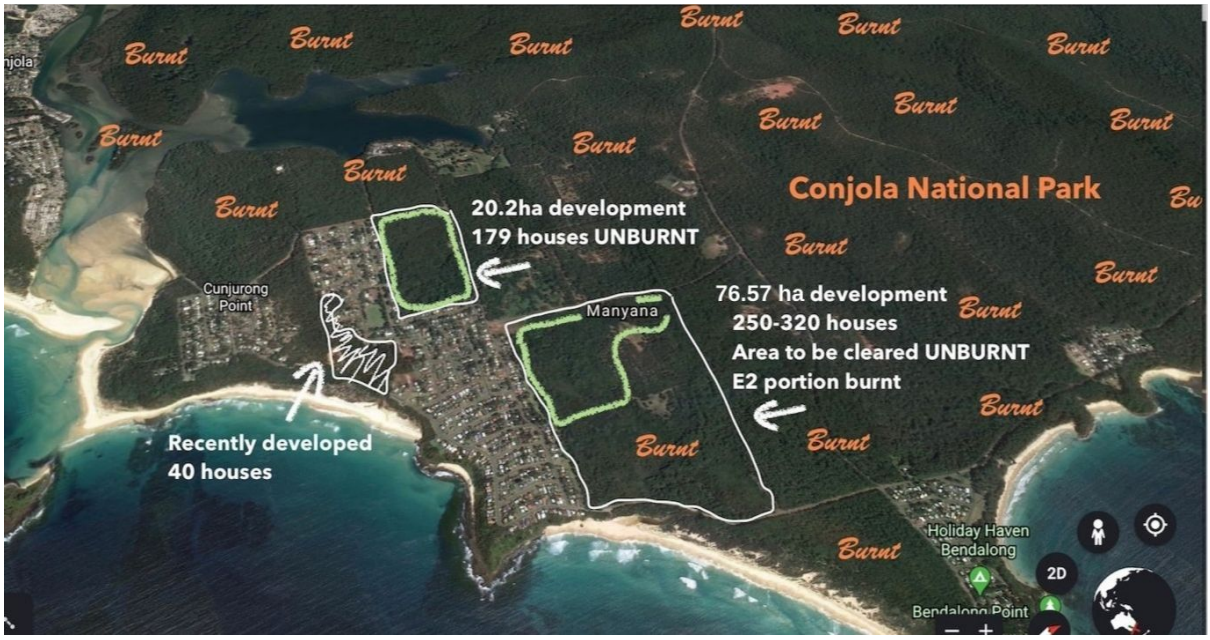
Appendix 2 lists some of the threatened species and ecological communities likely to be directly impacted by the proposed developments.

Appendix 3 is a compilation of all the threatened plant and animal species of the Red Head area.

In addition to these direct impacts, the destruction of these habitats will have significant flow-on indirect and prescribed impacts on the biodiversity values of the area. This includes edge effects such as increased human activity, weeds, domestic animals and pesticide residues, a reduction in downstream water quality and changes to existing water hydrology. These edge effects would directly impact many threatened species including the Critically Endangered Hooded Dotterel and other threatened shorebirds that nest locally. Notably the forests in and around the Red Head Villages are habitat for the critically endangered Swift Parrot and the endangered Greater Glider.

Developments like the ones at Manyana that destroy viable habitat, are proposed for flood areas or bushfire zones, and/or put lives and homes at risk, especially in this time of climate change, are inconsistent with the principles of Economically Sustainable Development (ESD)[5], one of which is to invoke the Precautionary Principle. They also ignore the findings of the NSW Scientific Committee, established by the Threatened Species Conservation Act, which determined that "the clearing of native vegetation" is a "KEY THREATENING PROCESS" under the Act[6].

The image below shows the location of the two proposed development areas in relation to the spread of the Black Summer fires of 2019/20.



[5] What is ecologically sustainable development (ESD)?

[6] Clearing of native vegetation - key threatening process listing | NSW Environment and Heritage

Coastal Residents United

Manyana Matters has recently joined Coastal Residents United, an alliance of community groups from along the entire NSW coast. It is becoming increasingly evident that outdated DAs and planning decisions are threatening sensitive ecosystems across the state. The alliance estimates that there are at least 90 approved development applications located on the NSW coast that are as old as 10 years and up to 40 years old.

Critically, they do not account for the impacts of the 2019-2020 bushfires or climate change. These approvals and decisions were made when flooding and extreme bushfire events were far less frequent than they are today. With climate change, their frequencies will increase.

Individually, and under the current planning system, they could proceed without understanding the environmental damage they will cause. The environmental threats posed by these "Zombie" DAs need to be assessed as a whole so that their cumulative impacts are understood and acted upon.

These developments exemplify the changes required to the planning system in NSW

As mentioned above, one of the proposed Manyana developments is relying on a Development Approval that was granted 15 years ago, in 2008. The other is attractive to developers because it is zoned Residential, a zoning decision from the 1980s. Both proposed development zones disregard the impact of environmental catastrophes such as the Black Summer fires and the increasingly negative impacts of climate change. Neither account for the totality of development approvals in the state and their cumulative impact on habitats, threatened species and ecological communities.

C. The physical and psychological impacts of past and potential natural disasters on the people in our communities

The International Panel on Climate Change (IPCC)'s Sixth Assessment Report published in 2021 projects that extreme climatic events will increase[7]. This is already the lived experience for many. The devastating 2019-20 Australian Black Summer bushfires gained worldwide attention. A staggering 5.5 million hectares burnt in NSW alone, 33 people died and over 3,000 homes were destroyed. This catastrophic event directly affected the people of the Red Head villages.

The following are real life examples of the effects of catastrophic bushfire and the need to understand that the NSW planning system is failing in its approvals of the placement of new housing developments in bushfire and flood prone areas.

Conjola Park

On New Year's Eve 2019, when the Currowan mega-fire bore down on the tiny Red Head coastal villages of Cunjurong Point, Manyana & Berringer Lake, residents watched in horror as, across the water, the town of Conjola Park was consumed by flames. As the destruction at Conjola Park demonstrated, the proposed housing developments in bushfire zones would not be able to withstand a worst-case bushfire attack scenario. Theoretical modelling that is applied by consultants for dwellings to withstand bushfire need to be understood in the face of increasing catastrophic climate change events like the Black Summer fires.

Water and power supply and communications

Historically, power and water supplies fail under these extreme conditions. In the Red Head villages, the water supply provided by the domestic systems failed during the bushfire. Taps and hoses were no more than a low-pressure dribble due to the number of residents and fire fighters trying to access the water supply. Only the valiant efforts of residents and the Rural Fire Service (RFS) and some serendipitous changes in wind direction prevented the loss of many homes in our five villages.

[7] Regional fact sheet - Australasia

The electricity supply to Manyana and surrounding villages was destroyed during the New Year's Eve fire. For 11 days, 240v fire-fighting equipment or defences were rendered useless. Fuel bowsers could not pump fuel so the fire fighting vehicles, residents and visitors could not refuel. Residents donated diesel fuel to keep the fire trucks operational.

Mobile phone towers were destroyed by the fires, cutting off phone and internet access to the area for many days.

Road access

Bushfire disruption of the 12km single access road through dense bushland to the villages has long been identified as a threat that cannot be resolved. The road is easily rendered inaccessible by fire, falling trees or power poles. This happened on New Year's Eve 2019 (and also in 2001). No firefighting resources could get through to reinforce the 2 tankers from the Manyana RFS. The cutting of this road could have resulted in a catastrophe. Population increases to this area would exacerbate this threat.

The human experience

In 2019/20 , RFS volunteer Bill Eger (retired) spoke about his experience of extreme fire behaviour.

"We were west of Lake Tabourie trying to contain the Currowan fire. It was 3am and we decided that we should backburn. I made the weather observations. Almost no wind, 6 degrees Celsius, 85% humidity. We put the burn in about halfway down a gully on the downslope. I was pretty pessimistic that it would burn under those conditions but it ran downslope pretty quickly, entered a rainforest at the bottom and blew up like a bomb. That fire behaviour was something that we hadn't seen before that year. I have to say it scared me because it ran way too hard for the weather, we couldn't predict it anymore. As far as I am aware no containment lines held. It ran for 74 days and the only thing that stopped it was the ocean and torrential rain. We saw this same off the books fire behaviour out of Grafton and Coffs Harbour earlier in that year."

Colin Beszant, Volunteer Firefighter and Treasurer of MMEA Inc. recalls the moment of realisation regarding the difficulties when trying to protect life and property:

"By the end of New Year's Day our two crews had managed to prevent widespread loss of property and the emphasis switched to maintaining control and preparing for the next forecasted Catastrophic Danger Rating for Saturday 4 January 2020.

A key part of that preparation was how to get three thousand holiday makers and residents out of the villages through to the Princes Highway along the only road in and out which was blocked by downed trees and poles. This had to happen before the Saturday because there were genuine fears that there could be serious loss of life when the next fire front was due. Another serious issue was getting supplies to those remaining in the villages and the people stranded awaiting evacuation. This included food, essential supplies and medical requirements.

At the time I recall conversations among the members of the Brigade concerning the issues of having just one access road from the highway to the villages and how the addition of some 600 extra residences will further complicate an already complicated extraction process when any future fire emergency arises. At the time there were real concerns that these people just couldn't be evacuated in time."

The Final Report of the NSW Bushfire Inquiry in July 2020 notes: "The season showed us what damage megafires can do, and how dangerous they can be for communities and firefighters. And it is clear that we should expect fire seasons like 2019-20, or potentially worse, to happen again*."*

The fires changed everything. It brought home the reality of how susceptible the Red Head Village communities are to the danger of bushfire.

These examples further demonstrate that large housing developments in bushfire zones such as the many small villages along the NSW coast place residents, emergency service workers and property at risk, increasingly so under climate change.

Social and health impacts

Risk of bushfire is a major social and health impact issue. Bushfires result in deaths and injury, trauma and psychological stress, loss of home and property and fears about future bushfires.

The early start of the 2023/24 bushfire season in Queensland and Northern NSW is already seeing environmental destruction and property loss. This has triggered anxiety in local residents, with the memories of Black Summer still fresh and raw in their minds. Many residents of the Red Head Villages report experiencing "eco-grief", the sense of loss that arises from experiencing or learning about environmental destruction or climate change.[8]

This is a worldwide phenomenon. According to the journal Nature, climate-related weather events and environmental changes, for example, have been linked to a wide variety of acute and chronic mental health experiences, including: strong emotional responses, such as sadness, distress, despair, anger, fear, helplessness, hopelessness and stress; elevated rates of mood disorders, such as depression, anxiety, and pre- and post-traumatic stress; increased drug and alcohol usage; increased suicide ideation, attempts and death by suicide; threats and disruptions to sense of place and place attachment; and loss of personal or cultural identity and ways of knowing.[9]

These social and health impacts are not trivial. Bushfires and floods are traumatic events for everyone involved. The planning system does not address these impacts and in fact potentially puts people in the path of catastrophic events. The system must adapt to account for real effects on people's social and mental health by protecting people from harm and protecting the natural habitats, flora and fauna from which people draw solace, connection and joy.

MMEA believes that allowing outdated DA approvals and planning decisions to stand does not account for the human impacts of climate change.

Housing

It is undeniable that NSW is experiencing an acute shortage of affordable housing to cater to the needs of renters and new homeowners. However, claims that additional housing subdivisions in coastal villages surrounded by sensitive ecosystems will provide affordable housing are not supportable. The most recent Census statistics (2016) show over 60% of homes in the Red Head Villages were unoccupied on census night. They are predominantly second or "holiday" homes. Estimated starting prices for new homes in these subdivisions are more than $1 million.

The Shoalhaven City Council (SCC) Growth Management Strategy V1 -2011 (GMS), a document SCC adopted in 2012 and are still working under, identifies Manyana (and all the Red Head villages) as "Coastal Villages having the following attributes": Small settlements, few services, commercial activity limited to typically general stores. High vacant dwelling rate.

The Red Head Villages GMS states there is a *"lack of permanent population base to sustain higher order services and facilities."* It highlights the "*significant bushfire hazard that is posed by the surrounding bushland and the fact that Bendalong has one road in and out".*

Growth considerations in the GMS are "development controls to protect existing character and development controls to protect environmental values and hazards".

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[8] Ecological grief (or eco-grief), or climate grief Ecological grief - Wikipedia.

[9] https://www.nature.com/articles/s41558-018-0092-2

The working document "Guiding Future Growth, Shoalhaven Character Assessments (Feb 2020)" states that the Red Head Villages are "highly sensitive to change" and the recommendation is to "maintain the current character".

Additional residential and affordable housing should be planned in and around the rural towns and cities that already have appropriate infrastructure in place, i.e., education, public transport, health, social and emergency services, retail etc. This is where new infrastructure can be most efficiently built and would enhance opportunities for growth in regional populations.

Properties in fire and flood zone areas are subject to unaffordable insurance premiums and in many cases they are uninsurable. This is evidence from the professional risk assessment sector that developments in these areas are inadvisable and potentially dangerous.

Manyana Matters' view is that the focus of infrastructure growth in the Red Head Villages, and for similar villages on the NSW coast, should be on infrastructure services that improve resilience to dangerous climate change, such as enduring power and water supplies and communication systems. These measures would better protect human life and property and would serve to provide communities with a stronger sense of safety and preparedness during emergency situations. These are tangible responses to alleviate anxiety and grief.

In the context of climate change, developments that clear native vegetation and cause increasing menace to threatened species and endangered ecological communities in the name of contributing to affordable, rental or first home housing supplies, only serve to further endanger communities. The planning system must be amended to reflect this.

Passing the Buck – State v. Local Government denial of responsibility

Manyana Matters has experienced numerous incidents where NSW Ministers and Planning Departments have asserted that local councils can simply rescind or revoke outdated 'Zombie' DA approvals if they no longer comply with the Local Environment Plan. The response of local government is that such action carries an unacceptable risk of legal action from a developer.

State Government deferring responsibility to Local Government cannot be justified especially when many of these old DAs were approved through State government processes like Gateway, and State significant development processes (Part 3A) which have bypassed Local Government planning instruments.

It is crucial that the power to rescind or revoke outdated DA approvals is fully clarified in legislation without increasing risk of liability to local councils. The State Government should take full responsibility for these actions.

D. Recommendations for changes to the NSW planning system to protect the environment and communities from the impacts of outdated DAs and inappropriate zoning decisions, and from future impacts of climate change.

1) The NSW planning system should be designed to acknowledge that, in the context of climate change, housing developments in vulnerable regions that clear native vegetation and increasingly menace threatened species and endangered ecological communities only serve to further endanger communities.
2) The State Government should take responsibility for retrospective changes to zoning decisions and development approvals where action is required to protect communities and the environment.
3) Outdated (Zombie) development approvals should be required to be reassessed in the light of current planning legislation and environmental imperatives. Developments that destroy sensitive and critical habitat should not be approved. More specifically:

a) Place an immediate moratorium on developments in bushfire affected areas approved before the 2019 /20 Black Summer bushfires.

b) Require development consents approved before the 2019 /20 Black Summer bushfires that have not been substantially commenced be reassessed under current environmental and planning legislation.

c) Impose a statutory lapsing provision for development consents more than 5 years old that have not been substantially commenced, while enabling the holder of the consent to seek a new approval within 2 years.

d) Amend planning laws to ensure that any compensation that may be payable by the lapsing of a development consent is capped to unimproved land value and defined to be zero for any development consent more than 10 years old with the statutory presumption that the holder of consent had no intention of acting on the consent.

e) Clarify the definition of commencement in legislation to ensure genuine and substantial commencement, to prevent proponents from exploiting loopholes for land banking.

4) Zoning decisions that no longer reflect current and anticipated threats to communities and the environment must be reviewed and amended. A sunset or review clause on all zoning decisions should be implemented.

5) Local authorities should be required to report approved or pending DA and zoning decisions in real time to the Environmental Protection Authority (EPA.) The EPA should be empowered to assess the cumulative effects of proposed developments on the overall status of threatened species, endangered ecological communities and other impacts such as flood and fire risks at a state and regional level.

6) The EPA should be fully resourced to monitor actions by developers and significant consequences should be legislated for deliberate actions that mislead or omit important environmental information regarding threatened species.

7) Developers that damage environmental assets prior to development approval should face prohibitive fines and should not be rewarded by subsequently gaining development approval because the site no longer holds environmental value.

8) Planning policy should reassess the concept of allowing significant population increases in coastal zones with increasing risk of extreme weather events caused by climate change.

Conclusion

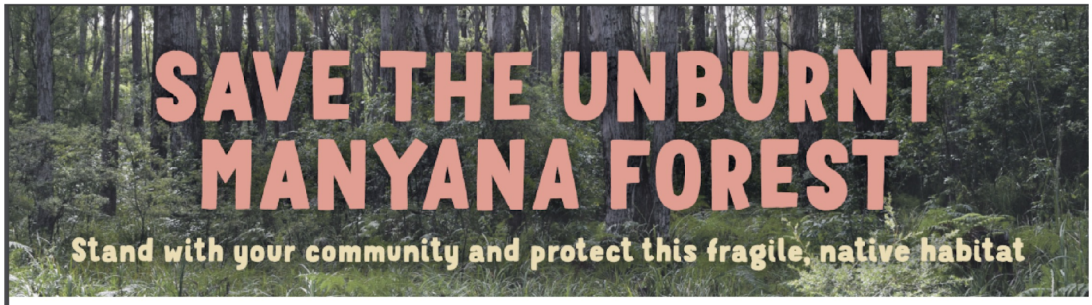
Outdated development approvals and zoning decisions do not take account of climate driven disasters like the Black Summer fires or the floods of the north coast. They do not take account of biodiversity loss or the physical and psychological risks to communities and individuals. They allow disregard of current environmental and planning policies and legislation. Their persistence is a failure of the NSW planning system. This needs to be addressed.

Future planning policy and instruments must prioritise consideration and mitigation of the increasing impacts of climate change.

"...if we make the right decisions at this critical moment, we can safeguard our planet's ecosystems, its extraordinary biodiversity and all its inhabitants. What happens next, is up to every one of us." – Sir David Attenborough.

Friday 3rd November 2023

APPENDIX 1
MANYANA MATTERS OPEN LETTER Sydney Morning Herald - June 29, 2021.



Open Letter to the Hon. Ministers Sussan Ley, Rob Stokes, Matt Kean, Shelley Hancock and Shoalhaven City Council

The vestige of pristine, unburnt native forest slated for the Manyana Beach Estate development in the Shoalhaven, South Coast NSW is a complete ecosystem and a biodiversity hotspot. Its significance has been magnified by the 2019-20 catastrophic bushfires.

Many threatened species have been recorded on this site and it has become a refuge for the fauna that escaped the flames. It is a vital source of regeneration for the surrounding incinerated Conjola National Park and a powerful symbol of hope and healing for the people of the South Coast who were so badly traumatised by the Currowan Mega-Blaze.

We, the undersigned, urge federal, state and local governments to act immediately to save this essential and precious habitat in Manyana from irreversible destruction.

We call upon:

- Federal Environment Minister, Sussan Ley, to deny approval of this development under the Environment Protection and Biodiversity Conservation Act.
- NSW Planning and Public Spaces Minister, Rob Stokes, to acquire this priceless land for the environment, the community – and the State.
- NSW Environment Minister, Matt Kean, to take meaningful action to protect this land as part of the State's natural environment in line with ministerial responsibilities.
- NSW State Member for South Coast and Minister for Local Government, Shelley Hancock, to support the acquisition of this forest and do everything to encourage Shoalhaven City Council to play its part in the conservation of this precious bushland.
- Shoalhaven City Council to stand with the local community and play an active and constructive role in ensuring this bushland is saved.

As our political leaders, you have a duty to protect our vulnerable natural environment and the power to save this rare piece of mature Australian forest for future generations.

We implore you to do all you can to secure this forest forever as the Manyana Special Conservation Reserve.

Signed:

Alfred Wellington, CEO, Jerringa Local Aboriginal Land Council
Amanda Findley, Shoalhaven Mayor
Angela Colliver & Greg Mills, Directors, Future Gen Education
Annette Aldrick, Shoalhaven City Councillor
Annette Tesoriero, Chair, Shoalhaven Health & Arts
Anthony Ash Brennan, filmmaker
Basha Stasak, Nature Program Manager, Australian Conservation Foundation
Bill Egee, President, Manyana Matters Environmental Association
Bonnie Cassen, Editor, The New Bush Telegraph
Brendan Ryan BSc MSc, Director, OMVI Ecological
Bridget Ikin, filmmaker
Brigitte Nairn, President, Milton Branch, National Park Association of NSW
Caroline Rothwell, artist
Chris Gambian, Chief Executive, Nature Conservation Council
Chris Grounds, Conservation Officer, Birdlife Shoalhaven
Claudia Karvan, actor, producer
Dr Allen Bryce, former CVO* Northern Territory
Dr Andrew Turner, former CVO Victoria
Dr Bill Scanlan, former Manager, Australian Animal Health Committee Secretariat
Dr Helen Scott-Orr, former CVO NSW & former Australian Government Inspector-General of Biosecurity
Dr Hugh Millar, former CVO Victoria
Dr Ian Wells, former CVO Queensland
Dr Jennifer Kent, climate change academic, author
Dr Jonica Newby, science journalist
Dr Katharine Brown *CPSS,* Principal, GroundEd Land Management & Education
Dr Liz Hanna *PhD, MPH, BA, RCCN, RN FPHAA, FACN,* Chair, Environmental Health Working Group World Federation of Public Health Associations
Dr Martine Maron *BSc (Hons I), PhD,* Professor, School of Earth & Environmental Sciences, University of Queensland
Dr Peter Black, former Chief Research Scientist, Office of the Chief Veterinary Officer of Australia
Dr Peter Hooper, former CVO Northern Territory
Dr Rick Symons, former CVO Queensland
Dr Ron Glanville, former CVO Queensland
Dr Stuart Blanch, Senior Manager, Towards Two Billion Trees, WWF
Dr Tim Cadman *BA (Hons), MA (Cantab), PhD (UTas),* Research Fellow, Law Futures Centre, Griffith University
Harry Burkitt, Campaign Manager, Colong Foundation for Wilderness
Ingrid Leusch, Publisher, The New Bush Telegraph
Jackie French AM, author, historian, ecologist
Janet Laurence, artist
Jennifer Turpin, artist
John Levett, Shoalhaven City Councillor
John Maynard, film producer
John Perkins, The Friends of Durras, President
Kaye Gartner, Shoalhaven City Councillor
Kirstin Scholtz, General Manager (Asia, Pacific, Africa), Wild Ark
Lara Merrett, artist
Markus Zusak, author
Michael Caton, actor
Monica Mudge, President & Founder, Treading Lightly
Nina Digiglio, Shoalhaven City Councillor
Paddy Crumlin, National Secretary, President, International Transport Workers Federation, Maritime Union of Australia
Paul Greene, singer, songwriter
Paul Livingston, actor, writer
Paul Mitchell & Deb Shapira, Coordinators, South Coast Labor Environment Action Network (LEAN)
Peter Hudson OAM, environmental campaigner
Phil Smith, Director, Speaking 4 The Planet
Professor John Edwards, former CVO Western Australia
Rob Dunn, President, Birdlife Shoalhaven
Sam Regester, Campaign Manager, Greenpeace
Tassia Koiesnikow, Chair, Sutherland Shire Environmental Centre
The Hon. Alex Greenwich MLA, Member for Sydney, Chair of the NSW Legislative Assembly Committee on Environment and Planning
The Hon. David Shoebridge MLC
The Hon. Kate Washington MLA, Member for Port Stephens, Shadow Minister for Environment, Heritage & Rural Health
The Hon. Mark Pearson MLC
Virginia Young, Director International Forests and Climate programme, Australian Rainforest Conservation Society

*Chief Veterinary Officer

"...if we make the right decisions at this critical moment, we can safeguard our planet's ecosystems, its extraordinary biodiversity and all its inhabitants." – Sir David Attenborough

Sponsored by **Manyana Matters Environmental Association Inc,** who acknowledges the Traditional Custodians of country throughout Australia and their connections to land, sea and community.

To find out more about our campaign and take action, follow and like us:
/manyanamatters @manyanamatters @manyana_matters

APPENDIX 2

IMPACT OF PROPOSED DEVELOPMENTS ON ENDANGERED ECOLOGICAL COMMUNITIES AND THREATENED SPECIES

- Removal of 6.57 hectares of Swamp Oak Floodplain Swamp Forest of the Sydney Basin Bioregion. South East Corner Bioregion listed as **endangered ecological community**, Swamp Oak Floodplain Forest of the NSW North Coast, Sydney Basin and South east Corner Bioregions under the NSW Biodiversity Conservation Act 2016 and Coastal Swamp Oak (Casuarina glauca) Forest of NSW and South East Queensland under the Environment Protection and Biodiversity Conservation Act 1995 (EPBC Act).
- Removal of 7.66 hectares of Woollybutt – White Stringybark – Forest Red Gum grassy woodland on coastal lowlands of the southern Sydney Basin Bioregion and South East Corner Bioregion listed a component of the **endangered ecological community**, Illawarra Lowlands Grassy Woodland in the Sydney Basin Bioregion under the BC Act and the **critically endangered ecological community**, Illawarra and south coast lowland forest and woodland ecological community under the EPBC Act. This threatened ecological community is also a **Serious and Irreversible Impact (SAII) Entity under the BAM.**
- Removal of 8.31 hectares of Bangalay - Old-man Banksia open forest on coastal sands, Sydney Basin Bioregion and South East Corner Bioregion, a component of the **endangered ecological community** Bangalay Sand Forest of the Sydney Basin and South East Corner bioregions under the BC Act.
- Removal of 1.80 hectares of Blackbutt - Turpentine - Bangalay moist open forest on sheltered slopes and gullies, southern Sydney Basin Bioregion.
- Impact Swamp Sclerophyll EEC
- Bangalay Paperbark Woodland
- Northern Coastal Sands/Shrub Fern Forest
- Moist Bangalay Forest.

The proposals will remove habitat for threatened species that would utilise the sites including:

- 17.77 hectares of potential foraging and nesting habitat for Eastern Bristlebird (Dasyornis bracypterus)
- 24.34 hectares of potential foraging habitat, for forest owls such as the Barking Owl (Ninox connivens), Powerful Owl (Ninox strenua) and Masked Owl (Tyto novaehollandiae)
- 24.34 hectares of potential foraging habitat for the Spotted-tailed Quoll (Dasyurus maculatus)
- 24.34 hectares of potential foraging and nesting habitat for Brush-tailed Phascogale (Phascogale tapoatafa)
- 17.77 hectares of potential habitat for Long Nosed Potoroo (Potorous tridactylus tridactylus)
- 17.77 hectares of potential foraging habitat for nectarivorous species such as the Regent Honeyeater (Anthochaera phrygia), Swift Parrot (Lathamus discolor) and Grey-headed Flying-fox (Pteropus poliocephalus).

APPENDIX 3
A COMPILATION OF ALL THE THREATENED PLANT AND ANIMAL SPECIES OF THE RED HEAD AREA

Table 1: Threatened species known from the Red Head Area. Updated 1 11 2023. (Excludes marine species). Data sources include NSW BioNet Atlas, impact assessment and other surveys of the locality as well as the observations of local ecologist Brendan Ryan.

Count	Species	Common Name	BC Act Status	EPBC Act Status
Plants				
1	*Baloskion longipes*	Dense Cord-rush	V	V
2	*Caladenia tessellata*	Thick-lipped Spider-orchid	E	V
3	*Correa baeuerlenii*	Chef's Cap Correa	V	V
4	*Cryptostylis hunteriana*	Leafless Tongue-orchid	V	V
5	*Cynanchum elegans*	White-flowered Wax Plant	E	E
6	*Genoplesium vernale*	East Lynne Midge Orchid	V	V
7	*Genoplesium baueri*	Bauer's Midge Orchid	E	E
8	*Melaleuca biconvexa*	Biconvex Paperbark	V	V
9	*Melaleuca deanei*	Deane's Melaleuca	V	V
10	*Prasophyllum affine*	Jervis Bay Leek Orchid	E	E
11	*Pterostylis gibbosa*	Illawarra Greenhood	E	E
12	*Pterostylis ventricosa*		CE	-
13	*Rhizanthella slateri*	Eastern Underground Orchid	V	V
14	*Rhodamnia rubescens*	Scrub Turpentine	CE	CE
15	*Syzygium paniculatum*	Magenta Lilly Pilly	E	V
16	*Thesium australe*	Austral Toadflax, Toadflax	V	V
17	*Wilsonia backhousei*	Narrow-leafed Wilsonia	V	V
18	*Zieria tuberculata*	Warty Zieria	V	V
Amphibians				
1	*Litoria littlejohni / Litoria watsoni*	Littlejohn's Tree Frog / Watson's Tree Frog (recent taxonomic separation)	E	E
2	*Mixophyes balbus*	Stuttering Frog	E	V
3	*Heleioporus australiacus*	Giant Burrowing Frog	V	V
4	*Litoria aurea*	Green and Golden Bell Frog	E	V
Birds				
1	*Diomedea gibsoni*	Gibson's Albatross	V,P	
2	*Haematopus fuliginosus*	Sooty Oystercatcher	V,P	
3	*Haematopus longirostris*	Pied Oystercatcher	E1,P	
4	*Thinornis rubricollis*	Hooded Dotterel	CE4A,P	
5	*Numenius madagascariensis*	Eastern Curlew	-	CE
6	*Sternula albifrons*	Little Tern	E1,P	
7	*Ninox strenua*	Powerful Owl	V,P,3	
8	*Tyto novaehollandiae*	Masked Owl	V,P,3	
9	*Tyto tenebricosa*	Sooty Owl	V,P,3	
10	*Hirundapus caudacutus*	White-throated Needletail	-	V
11	*Apus pacificus*	Fork Tailed Swift	-	M
12	*Hieraaetus morphnoides*	Little Eagle	V	
13	*Haliaeetus leucogaster*	White-bellied Sea-eagle	V	M
14	*Lophoictinia isura*	Square-tailed Kite	V	
15	*Pandion cristatus*	Eastern Osprey	V	
16	*Callocephalon fimbriatum*	Gang-gang Cockatoo	V	E
17	*Calyptorhynchus lathami lathami*	Glossy Black-cockatoo	V	V
18	*Pezoporus wallicus wallicus*	Eastern Ground Parrot	V	-
19	*Glossopsitta pusilla*	Little Lorikeet	V	
20	*Lathamus discolor*	Swift Parrot	CE	CE
21	*Pycnoptilus floccosus*	Pilot Bird	-	V
22	*Dasyornis brachypterus*	Eastern Bristlebird	E	E
23	*Anthochaera phrygia*	Regent Honeyeater	CE	CE
24	*Rhipidura rufifrons*	Rufous Fantail	-	M
25	*Myiagra cyanoleuca*	Satin Flycatcher	-	M
26	*Monarcha melanopsis*	Black-faced Monarch	-	M
27	*Symposiachrus trivirgatus*	Spectacled Monarch	-	M
28	*Daphoenositta chrysoptera*	Varied Sittella	V	
29	*Artamus cyanopterus cyanopterus*	Dusky Woodswallow	V	
Mammals				
1	*Dasyurus maculatus*	Spotted-tail Quoll	V	E
2	*Isoodon obesulus obesulus*	Southern Brown Bandicoot	E	E
3	*Phascolarctos cinereus*	Koala	E	E
4	*Cercartetus nanus*	Eastern Pygmy-possum	V	
5	*Petaurus norfolcensis*	Squirrel Glider	V	
6	*Petaurus australis*	Yellow-bellied Glider	V	-
7	*Petauroides volans*	Greater Glider	E	E

8	*Potorous tridactylus tridactylis*	Long-nosed Potoroo	V	V
9	*Pseudomys fumeus*	Smoky Mouse	CE	E
10	*Pseudomys novaehollandiae*	New Holland Mouse	-	V
Bats				
1	*Pteropus poliocephalus*	Grey-headed Flying-fox	V	V
2	Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	V	
3	Falsistrellus tasmaniensis	Eastern False Pipistrelle	V	
4	Miniopterus orianae oceanensis	Large Bent-winged Bat	V	
5	Scoteanax rueppellii	Greater Broad-nosed Bat	V	
6	*Chalinolobus dwyeri*	Large-eared Pied Bat	V	V
7	*Phoniscus papuensis*	Golden-tipped Bat	V	-

Key

Status

V = vulnerable on either/or the NSW BC Act 2016, or Commonwealth EPBC Act 1999

E = Endangered on either/or the NSW BC Act 2016, or Commonwealth EPBC Act 1999

EP = Endangered Population on either/or the NSW BC Act 2016, or Commonwealth EPBC Act 1999

CE = Critically Endangered on either/or the NSW BC Act 2016, or Commonwealth EPBC Act 1999

APPENDIX 4

REPORT BY GARRY DALY ON MONITORING OF ARBORIAL SPECIES IN SELECTED NSW SOUTH COAST NATIONAL PARKS – EXECUTIVE SUMMARY

MONITORING ARBOREAL MAMMALS IN CORRAMY REGIONAL PARK CONJOLA NATIONAL PARK MEROO NATIONAL PARK MURRAMARANG NATIONAL PARK AND SEVEN MILE BEACH NATIONAL PARK, NSW

Garry Daly

June 2023

EXECUTIVE SUMMARY

The NSW National Parks and Wildlife Service (NPWS) requested surveys be undertaken of arboreal mammals in Corramy Regional Park (RP), Conjola National Park (NP), Meroo NP, Murramarang NP and Seven Mile Beach NP, to gain contemporary data on the distribution and density of possums and gliders. The first four of these reserves were burnt during the Currowan wildfire in the 2019/20 bushfire season. Although not burnt by that wildfire, Seven Mile Beach NP was resurveyed as this population of Greater Glider *Petauroides volans* is isolated from that which exists along the Illawarra escarpment as a result of previous land clearing. This isolation may lead to population decline and local extinction.

The focal species of this study were the Greater Glider and the Yellow-bellied Glider *Petaurus australis* as they are forest-dependant marsupials listed under the NSW *Biodiversity Conservation Act 2016* (BC Act) and federally under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The main questions the survey addressed were: have the populations of these threatened species recovered since the Currowan wildfire and if they have not, why?

To address these questions we undertook spotlight searches along 91 transects for 20min apiece. The survey methodology was the same as that used for previously undertaken, to allow statistical analyses of data. The searches were conducted with the aid of LED spotlights. Detections were by direct observation and call recognition. All species of vertebrates seen or heard were recorded and uploaded into the NSW BioNet database.

Eight (8) species of arboreal mammal were found during the 2023 surveys, being:

- Yellow-bellied Glider *Petaurus australis*;
- Squirrel Glider *Petaurus norfolcensis;*
- Greater Glider *Petauroides volans;*
- Common Ringtail Possum *Pseudocheirus peregrinus;*
- Sugar Glider *Petaurus breviceps;*
- Feathertail Glider *Acrobates frontalis;*
- Eastern Pygmy Possum *Cercatetus nanus* and
- Common Brushtail Possum *Trichosurus vulpecula*.

The Short-eared Possum *Trichosurus caninus* had previously been seen in Murramarang NP but not during these surveys.

For the Greater Glider, twenty-two (22) were recorded at Seven Mile Beach NP, one (1) in Corramy RP, one (1) in Conjola NP, one (1) in Meroo NP and two (2) in Murramarang NP. Results of this study indicate the population of Greater Gliders in Murramarang NP and Meroo NP have made little recovery after the 2019-20 wildfire.

For the Yellow-bellied Glider one (1) was detected in Corramy RP, one (1) in Conjola NP, six (6) in Meroo NP and six (6) in Murramarang NP. No Yellow-bellied Gliders have been found in Seven Mile Beach NP. There has been a recovery in the Yellow-bellied Glider population in Murramarang NP and Meroo NP but not the other reserves since the 2019-20 wildfire. The populations of Yellow-bellied Glider in Conjola NP and Corramy RP are small and isolated as a result of vegetation clearing for roads and other easements i.e. overhead powerlines.

Analysis of long-term data indicates with the exception of Seven Mile Beach there has been a sharp decline in the abundance of Greater Gliders since about 2007. The reason/s for this decline are not known but the Currowan wildfire impacted this species. There would have been direct loss of animals from heat and indirect impacts such as the loss of den sites with many large hollow-bearing trees being burnt.

Our data indicates the populations of Yellow-bellied Glider and Greater Glider in Conjola NP and Corramy RP are unsustainable due to habitat fragmentation and a decline that may not be linked to the 2019-20 wildfire. The proposed upgrade (to dual carriageway) of the Princes Highway will further fragment these reserves and isolate the eastern portion of Meroo NP and Murramarang NP from state forests/reserves to the west of the highway.

No Common Ringtail Possum were detected in Murramarang NP. This species has not been detected in the park during previous spotlight surveys. The Brushtail Possum was rarely detected except in Seven Mile Beach NP and Murramarang NP where it was highly associated with the picnic/camping area. The Sugar Glider was the most abundant arboreal mammal detected. Populations of Sugar Glider have increased since the 2020 wildfire. This recovery may be in part due to the regrowth of *Acacia* spp. post fire. Observing the Squirrel Glider in Seven Mile Beach NP was significant as this threatened species had not been previously recorded in that reserve. Observing the Eastern Pygmy Possum in Meroo NP was significant as this threatened species had not been previously recorded in that reserve. The crown land at South Durras supports Greater Glider and Yellow-bellied Glider. This land (several Lots) has unlogged old growth Spotted Gum-Blackbutt forest and should be included within the reservation system.

Other threatened species detected during the surveys include the:

- Powerful Owl *Ninox strenua* in Corramy RP and Murramarang NP
- Masked Owl *Tyto novaehollandiae* in Conjola NP, Seven Mile Beach NP, Meroo NP and Murramarang NP
- Sooty Owl *Tyto tenebricosa* in Murramarang NP and Meroo NP and
- Grey-headed Flying Fox *Pteropus poliocephalus* in Conjola NP.

The main threatening processes for the focal species of glider are considered to be fragmentation of habitat and the increased chance of another wildfire mediated by human induced climate change. These processes are expected to be ongoing but certain actions may reduce these impacts.

Conclusions and recommendation:

- Accept the upgrade of the Princes Highway south of Nowra will fragment reserves east and west of this easement unless vegetated overpasses are provided to facilitate the movement of animals. In particular the Yellow-bellied Glider and the Greater Glider will be impacted as they do not cross open ground;
- Accept the mechanisms previously installed by RMS to facilitate the movement of animals over the Princes Highway have largely failed and unless movement corridors for the Yellow-bellied Glider and the Greater Glider are provided the populations in Corramy RP, Conjola NP, Meroo NP (eastern section) and possibly Murramarang NP are not viable in the long-term;

- Gazette the parcel of crown land at South Durras into the reservation system as it has outstanding habitat for forest dependant fauna, is occupied by Yellow-bellied Glider and Greater Glider (plus threatened species of microbat and Powerful Owl), adjoins Murramarang NP and has been the subject of monitoring and scientific research (Craven and Daly 2021);
- There is evidence of ecosystem collapse over the eastern Australian landscape as a result of the 2019-20 wildfires. This fire season affected forest dependent species as reflected in the decline of the Yellow-bellied Glider and Greater Glider. However, the decline of most coastal populations of the Greater Glider in this region may be as a result of other (as yet unknown) threatening process(es);
- Although Murramarang NP is relatively large, the recent wildfire/drought indicate populations of Yellow-bellied Glider and Greater Glider are not secure in perpetuity. Security will require suitable habitat being retained in State Forests to the west of the park and for connectivity being provided via vegetated overpasses to provide forest cover over the Highway. There is also an opportunity for linkage with Meroo MP to the north, albeit this is over freehold land. The gazettal of areas of State Forest to National Park is recommended to create permanent east-west linkages for forest dependant fauna and
- Resurvey the populations of arboreal mammals in Murramarang NP to better understand the status of these species.