

SHANNON CREEK WILDLIFE CONSERVANCY



Specialising in the conservation of Rufous Bettong (*Aepyprymnus rufescens*)
& Koala (*Phascolarctus cinereus*)
for the Clarence Valley LGA & Community
In accordance with NSW Private Land Agreement No 0474
& Terms associated with adjoining public conservation lands

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21st July 2026

SUBMISSION. On behalf of the Clarence Environment Centre
Skinner Street, South Grafton, NSW 2460

To the:

Clarence Valley Council
Flying-Fox Camp Management Plan 2026

This submission has been prepared by a long-term Flying-fox Team *Lyssavirus* vaccinated and general wildlife volunteer carer, under the membership jurisdiction of Clarence Valley WIRES (1996 to 2018)

We thank Clarence Valley Council for preparing this updated plan for the care and security of the important Clarence Valley's Flying-fox population, while considering the needs of local residents who might be impacted by living close to a colony of native arboreal animals. We feel the Plan has been developed without bias and with sympathy and understanding for both sides of what unfortunately can turn into a passionate argument when the two parties collide.

While admitting to not being entirely *au fait* with all plans, protocols, strategies and legislation, both State and Local that refer to or affect flying-fox/human relationships and dispute management, we nevertheless offer the following comments, information and suggestions. We hope they may in some way help to clarify a few points, or maybe add some knowledge that might beneficially assist in the final Plan.

General responses and comments:

The very first things noticeable in the Draft Plan are the photographs announcing and promoting the document. Two of these depict subjects that rate some initial mention.

1a) Maclean. Old school buildings - It is pleasing to note the old netball court against the reserve has gone, and the rainforest is recovering well. However it is still apparent that the old school buildings remain rundown and ugly. This needs some serious consideration by State Government, with ramifications of future necessary repairs and renovations calculated against investment in a new high school for the expected increase in student numbers, in a more suitable location. Until this subject is addressed, we suggest no further site disturbance or funds should go into trying to improve outdated buildings.

1b) Glenreagh. Barbed-wire fencing - The photograph depicting flying-fox habitat along the Orara River at Glenreagh (GeoLink) clearly depicts loose barbed-wire fencing erected close to or within a flying-fox camp and known fly-out pathways. At the very least Council should be looking to mandate all fencing utilising barbed wire must include at least one row of plain wire as the top strand.

2) Residents' complaints, general comments

From a non-residents' viewpoint, in the case of the Maclean colony we do see that things may have calmed down, with impacted home-owners perhaps more accepting of their flying-fox neighbours. If so, this could

be through support of the animals by many school students; natural attrition of strongly opposed school staff and residents; more sympathetic new home owners; information provided and gains made under the initial Management Plan, and Council's considerate responses to complaints while still promoting the colony's welfare.

3) Media responsibilities - However a month or so ago it was worrying to hear Channel 9's TV popular program A Current Affair, and its presenter Ally Langdon's strong support of a complaining Maclean resident who wanted their bat colony gone. We suggest media networks should be advised to warn their presenters of programs that thrive on controversial issues to make themselves aware of sensitive local issues and risks involved in taking sides with uninformed bias.

CVC Flying-fox Camp Management Plan

Responses

2.3.3 Land tenure & zoning. Council assets and activities (p22)

In the case of the Maclean showground and cemetery grounds we suggest Council might look to the future of these assets by actions under this Plan and consider new flood-free sites to suit increasing population needs and climate change variables. The current sites of both these assets could affectively be rezoned C2, then revegetated to create another area of rainforest for the flying-foxes, including plantings where suitable between the grave-stones with attractive shady rainforest species, a car park area, and beautification of the site for general recreation and visitor viewing of the evening bat flyouts.

2.3.7 Management response to date (p23)

Under the 2020 Flying-fox Management Strategy there was the option of voluntary buy-back and on-selling of impacted properties to those who wouldn't mind living beside a flying fox camp. This would be seen as a responsible move by Council, since building approvals caused the situation in the first place, however the action has not been implemented beyond ongoing investigations and costs are obviously inhibiting.

The number of privately owned C2 Environmental Conservation properties within the mapped Gully zone somewhat negates the claim of property devaluation and diminished rental returns, and in fact proves that home owners can, and do, support the flying-foxes, even by purchasing property with an aim of actually assisting the camp.

Example: In 2020 a Land for Wildlife property manager moved from the Pillar Valley and purchased an 8.5ha property 18-30 Kerry Street, Maclean (Lot 356, DP 752388 - listed as DP751388) (see map attached), with the specific intent of providing and protecting habitat for the flying-foxes.

This practice should be promoted and encouraged, perhaps including discussions with other landowners about the benefits of having their adjoining properties rezoned C2 under the Lands Management Plan

We believe in this case that a good deal of responsibility should instead fall on local real estate agents, to transparently announce the presence and likely impacts of a flying-fox colony while showing clients around houses close to the camps, and also to assist in ensuring ongoing correct home ownership for the health and wellbeing of their clients and the community in general.

On the other hand, those who purchase and move into known flying-fox mapped habitat, and then complain, should be assertively discouraged.

2.7 Regional flying-fox foraging resources (p37)

(a) Mapping - It concerns us that mapping for this Part suggests a large portion of the Clarence Valley LGA contains only moderate-value flying-fox foraging habitat, and that only in summer to autumn.

Pre-European settlement Australia's natural forests were in no way diminished by having one vast united organism like flying-foxes dependent on them. This can only demonstrate that the trees evolved to serve, and be served, by the animals. The immense array of Australian Myrtaceae plant species clearly had an established need to be pollinated by flying-foxes, with separate tree species designed to flower in reaction to different seasonal and weather conditions in order to attract their vital service providers. A very large majority of these species would have been concentrated around the measureless, heavily treed floodplains

of the East Coast's many river catchments, with the majority around the largest of them all - the Clarence River.

(b) The Great Koala National Park (GKNP) -

The Executive Summary explains that this Plan will apply to future management of all flying-fox camps within Clarence Valley Council (LGA). In which case the GKNP, which covers the greater mid to western portion of the Clarence Valley, should be worth a mention in the Plan. We believe benefits afforded to the flying-foxes, and also the CV residents by the GKNP has potential to be considerable. As native fruits and nectar resources restore, above the subsistence meals the animals try to gain from local garden nectar and fruits, not only will orchardist-bat conflicts decrease but flying-foxes might also establish new camps as other suitable habitats regenerate closer to their natural food sources.

In his report on flying-foxes, which turned into his popular book *"Flying Fox and Drifting Sands"* (1938), Francis Ratcliffe (Biologist Oxford Uni UK) while watching the evening's fly-out estimated that by their travelling speed across a 100' x 300' transect he was seeing some 200,000 animals.

Awed by the spectacle he revisited the camp the following year, about which he reported: *"When I reached the clearing where the men had been working the year before, and where I had sat in the warmth of their fire and watched the foxes' flight, I found a forest of flourishing banana plants."*

Ratcliffe also observed within his report: *"Luckily for the fruit-growers, flying foxes seem to rate the forest flowers more highly than man's artificial products ... They follow the blooming of the eucalypts and seem to be aware of the ripening of every wild fig in the jungles... so that orchard fruit is usually more or less immune if there happens to be a good crop of blossom in the locality. Luckily also the bats prefer their fruit to be fully ripe, and thus most of the commercial crop is safely picked and packed away before it has attracted attention."*

In summary of his year-long surveys he also firmly stated: *"More important, however, was the conclusion, arrived at after carefully assessing all the available evidence, that the flying-fox population of Australia was in process of a natural and fairly rapid decline. Perhaps natural is hardly the correct word to use, for this decline has undoubtedly been caused by the spread of human settlement, which has mowed down the jungle and ring-barked the eucalyptus forest over thousands of square miles."*

3.1 Stakeholders. Community Engagement (p40). Table 5

This list should include tourists and tourism operators. There are many situations where the presence of flying-foxes has become a tourist draw-card, and numerous people are keen to witness the spectacle of a nightly fly-out, or are attracted to view a well-occupied daytime roost.

3.3 Community feedback (p42)

An online survey (2020) found that 27 respondents thought it extremely important for management actions to include a method of reducing noise from a flying-fox camp. This resulted in consideration of sound barrier fencing installations, and **5.4 Camp Management Actions Table 8 (p47-48), 01 & 03 - Allocate resources to enable implementation (p47):**

Table 8, A03, includes preparation of a fact sheet advising residents on potential nuisance mitigation methods including sound proofing their homes.

We reiterate, however, that any funds to be spent on subsidising impacted residents should not include those residents who have knowingly purchased and moved into a property in proximity to a traditional flying-fox camp since 2010, when the first PoM was released. Not unless actions by Council or other parties have further disrupted and altered the everyday natural functions of a bat colony.

We also see sound proofing a home as a likely unnecessary expense. Flying-foxes make most noise on dusk during their wakening and fly-out period, not an overly lengthy event and one that gradually diminishes while people are awake and occupied. Squabbles in a forest full of feeding bats can be noisy and continuous, but that would not be considered by this CMP, and besides would hardly disturb those living within hearing distance who are used to the sound. During dispersal or disturbance efforts the noise from stressed animals is also considerable, but that is avoidable by simply avoiding those events, which is in line with the Plan.

Otherwise, beyond a possible brief spat from the Camp if one animal moves too close to another, it is apparent that a flying-fox colony resting peacefully during the daytime makes hardly any sound at all, with ordinary passers-by often not even aware of their presence unless they happen to look up.

In balance, the noise from a native flying-fox colony cannot possibly be considered worse than the racket from a flock of non-local native Corellas, which for some reason no one seems to bother about.

Table 8. Alternative habitat creation 08 (p51)

We find this to be a laudable positive action which, if properly actioned, will benefit all flying-fox camps as well as many affected residents by eliminating much of the stress and angst for both parties.

We suggest that the many kilometres of destroyed Clarence River riparian zones, currently overrun by exotic weeds and vines and useless for any native wildlife species, even birds, might be considered for weed work and revegetation by both assisted and natural regeneration. As a trial action this could begin at Lawrence, where rampant exotic vines and weeds of all types known in the Valley are strangling and overpowering the once beautiful forest above the ferry, and are the first thing travellers have to sit and look at while waiting for the ferry to arrive. It is a disgrace.

There are many other flood prone sections of the river where building is prohibited, all of which might beneficially be restored to great effect for flying foxes.

Appendix 2 Flying-fox ecology & behaviour. Flying-foxes in urban areas (p73)

Timmis *et al* in 2021 found that flying-foxes appeared to be roosting and foraging more frequently in urban areas. A possible explanation for this is drawn from a 2014 viewpoint by Tait *et al* (Point 2). *"Opportunities presented by year-round food availability from native and exotic species found in expanding urban areas"*.

It is not clear by this if the roosting and foraging flying-foxes seen in urban areas comprise only single, or one or two animals, or an entire colony. However, either way, these events can be put down to most of the other mentioned reasons - otherwise seen as human-related activities causing habitat loss.

One well-established and secure colony of flying-foxes on Susan Island in the Clarence River at Grafton has been known on a couple of occasions to decamp and settle in South Grafton itself, to the surprise of some nearby home owners, but with a surprising lack of any major outcry. These rare events appeared to coincide with the ripening of mangoes on a few neglected trees in gardens and also on Council lands around the urban district. The simple expedient of clearing away the fruit before fully ripe seems to resolve the problem before it arises.

Where flying-foxes arrive in a town garden as just one or two animals means they are in trouble, either sick or too weak from hunger to fly any distance in search of their natural food. One young flying-fox was known to stay in a flowering Grevillea bush for 3 days and nights before being rescued and revived. Others are known to chew on unripe coffee berries (a totally unnatural behaviour), while several others frequently take to the exotic Cocos palms, which harm their teeth, provide little in the way of sustenance and at times trap the animals' feet in their hard wooden scapes as the animal shifts along their tightly inrolled rims. Many others become entangled in netting while trying to reach some more attractive fruits, but sadly many gardeners are unaware of the safest type of netting to use and hardware stores don't care.

Dot Point #7 in this Part might beneficially be deleted. Flying-foxes are designed by nature to fly high, and *en route* to their foraging grounds move above the canopy of even the tallest trees that have no nectar or fruit on offer.

Appendix 2. Species profiles (p75)

Black Flying-foxes

This states "the southern limit of the species range has appeared to have settled around Sydney, NSW, showing no further extension southward since the 20th century (Roberts *et al.* 2012).

Since Billie Roberts' statement, following a drastic heat event in South Australia (Jan 2015), some emailed stories between rescuers brought the report - ***"The recent mass mortality event in Adelaide has turned up a couple of new findings -one of the flying-foxes that died has been identified as a Black FF, a first for SA."***

It also goes on to mention: *"Unfortunately the pathology undertaken by PIRSA on the body has also resulted in our first positive result for Hendra - not surprising, but it will understandably create ripples through the community and local government agencies."*

The above might go towards showing that Black flying-foxes may even be the main vector of the Hendra virus above the other species. However, as with *Lyssavirus*, it does show that not all bats carry the virus. This important point never gets mentioned, and we feel demands further research and some fully transparent reporting by governments. (See Hendra comment below)

Appendix 3 - Flying-fox related health considerations (p79)

Flying-fox faeces - There are plenty of mentions through the Plan of concerns posed by flying-fox faeces. This deserves some clarification as well as some further education. Flying-foxes as a rule are not known to defecate during flight. They do, however, spit out what to them is indigestible fibrous material from the fruit they have been chewing, which they hold in their mouths until all juices have been extracted. Hence the main concern by residents about flying-fox faeces will be about a build-up of guano under a roosting colony, while the fewer splatters seen on paths, cars and rooftops are mainly chewed fruit skins and seeds ejected from an animal that has been extracting its juice while arriving at its roosting camp.

Hendra Virus (P80) - The regularly repeated comment that flying-foxes are the natural host for Hendra virus, which can be then be transmitted from them to horses, should be treated with caution. The HV/F-f connection is only an assumption - a fact that must finally be recognised, and truthfully noted in records and management plans

When the Hendra virus was found to have caused its first known horse death, the federal government allocated large sums of money in tests and trials to identify its source, and find how it was transmitted from its host to a horse. The response to this was that on the same day the virus was found in a flying-fox's saliva, all further funding was withdrawn, and research to identify possible other hosts was immediately stopped. Funding and research into how the virus was transmitted from flying-fox to horse still continued for a while, however every single experiment drew a blank.

Under normal controlled lab situations such thorough testing would have resulted in a conclusion that the virus was not, or unlikely to be, transmittable to a horse by a flying-fox. However, with the lucrative racing industry at stake, the already denounced flying-fox was an easy villain. Although the virus had also been discovered in dogs, pigs, and the family cat (which likes to curl up in a horse's manger in a warm stable and perhaps mark its territory in the process), funding eventually dried up and research was stopped.

Of course as things rest it cannot be safely claimed that the flying-fox is not the vector of the disease. But until proven with 100% certainty we urge truth and transparency for reasons of public education. In which case, we suggest that the brief comment at the end of the Hendra discussion in the Draft Plan, be changed to state that direct transmission from **bats to horses** has not yet been reported.

5. Camp Management Options & Actions. 5.4 Management actions. Table 8. #03 Appropriate land use planning (p47)

The goal here is for Human/flying-fox conflicts to be minimised, not increased by future development.

1) We unreservedly approve and appreciate the planned sympathetic care and consideration of flying-foxes during maintenance and operational works near a flying-fox camp, and strongly support the plan for only appropriate future developments to be located near flying-fox camps. However we have to wonder how this clause may be interpreted in the case of the Maclean flying-fox colony, where school buildings and facilities will inevitably in time need major upgrades or renovations.

In this instance we feel a need to yet again point out the long-term benefits in relocating the Maclean High School out of the traditional flying-fox camp to a more suitable, future flood free area. A new regional school will better meet the expected future increase in student numbers and rapid instructive advancements, but will also engender necessary pride for the students in their new regional school. Currently the present facility falls far short of that simple requirement for all school age children. (See attached photographs).

In which case, as in several times over the passing years, we urge Council to lobby State Government for their approval and funding of a much-needed new regional high school for the lower Clarence.

I write in response to a petition lodged with the Legislative Assembly of the Parliament of New South Wales by Ms Tamara Smith MP, Member for Ballina, on 15 February 2018, requesting the construction of a new high school in the lower Clarence region.

2) As stated, we appreciate the set of protocols and procedures for routine works etc. to keep noise and disturbance levels to a minimum. We believe this type of careful operating will prove acceptable to all concerned if carried out as set down. However we suggest that some certain works might perhaps be undertaken on or after dusk, when the flying-foxes have mostly left, at a time when the Camp is no longer a nursery.

3) We wonder if a more cost-effective approach by Council could be through incorporation of a Rural Lands Strategy (Urban counterpart), with proposed LEP rezoning of suitable larger/connected impacted properties to C2 (Connected Flying-fox Habitat)? If this could include a rate reduction benefit per hectare mapped as protected F-f roosting and nursery habitat, then the landowners themselves might address their individual health and noise management requirements for the own buildings, in exchange for the lower rates.

Table 8. Management actions. 05) Protocols and procedures to manage incidents (p48).

5.6 Flying-fox Incident Management Protocol (A flying-fox incident management protocol is recommended within Section 5.1 as action A05, to be prepared with further funding and consultation with Clarence Valley Council staff.

Response - During the author's 22 year service with WIRES, Clarence Valley branch, much of it was focused on caring for sick, injured and orphaned flying-foxes. In collaboration with Lismore and the Queensland Bat Sanctuary, a rough local Flying-fox emergency response to heat events was devised in a hurry (see attached doc). However it becomes quickly clear that in these drastic situations a single regional branch with a few trained vaccinated members is far from sufficient to do even close to a satisfactory job in what can be a massive task. A more professional set of procedures was developed, which in the main most branches collaborated to work with.

I am unsure if these types of documents have been stored by any branch, or by WIRES Inc, in the interim, given committees and carers attrition. However I take the liberty of including a copy here, which did not appear to call for any copyright requirements, as the assistance and rescue of animals in trouble was the main and major aim.

I thank CV Council for the opportunity to submit these comments and hope some might be found useful

Yours sincerely
Patricia Edwards
(SCWC co-manager)