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**Re: Referral 2019/8424 Submission #3780 - Flying Fox deterrent Cairns Regional Council**

Please find below my comments on this proposed action detailing why I believe this proposed action should not be approved.

**Summary**

The planned dispersal has a high probability of having a significant impact on the national population of the Spectacled Flying-fox, has a high likelihood of failure, will contribute to an escalation of human-wildlife conflict both in Cairns city and greater region, will not improve animal welfare and will set a dangerous precedent for the management of endangered species and Nationally Important flying-fox camps.

There are also a number of misleading statements in the application.

**Likelihood of Significant Impact**

This activity is likely to cause a significant impact on the whole population of Spectacled flying-foxes for the following reasons:

1. This camp is a recognised Nationally Important Camp, and as such flying-foxes have a strong fidelity to the site. The history of the site and the persistence of its use despite a succession of management actions impacting on roost availability over the last five years leads to a conclusion that a city camp is essential to the network of camps used by the species. This increases both the likelihood of failure and the need for repeated actions, and the likelihood of significant impact to the whole of the population.
2. This camp is known to vast majority of, if not all, individual flying-foxes of the national population, and therefore will impact on more than just the flying-foxes present during the dispersal.
3. This camp has the potential to directly impact over 10% of the national population that may be roosting at the time of the dispersal
   1. There is no guarantee that the interim and final desired alternative sites may be safer than the CBD camp. Analyses in the dispersal plan give inadequate information on this, and places mentioned as potential preferred locations include those that were rejected as sites for the release facility for orphaned flying-foxes as being too dangerous for flying-foxes (report Rebecca Koller unpubl)
   2. The flying-foxes may move independently and not in the desired directions and become fragmented increasing vulnerability to predators and harassment
4. The species suffered both a food shortage and a heat stress event causing mass mortality of between 25 and 30% of the population during the past year, increasing the likelihood of the actions having a significant impact due to poor body condition as described in Part 5 R*eferral Guideline for Management Actions in Grey-headed and Spectacled Flying-fox camps*.
5. The species has recently been uplisted under the EPBC Act to Endangered based on 2015 nomination which described a 50% decline in the national population since 2004. Since then, the population has suffered further decline. Westcott et al (2018) assessed the population as having declined by 75% from ~250,000 in Nov 2004 to ~75,000 in Nov 2017 based on data from the National Flying-fox Monitoring Program. Re-assessment of the population accounting for the mass mortality of 23,000 flying-foxes from the November 2018 heat stress event suggests the population has now declined by 80 to 85% since November 2004 (personal communication to FFAC, David Westcott), clearly meeting the criteria for listing as critically endangered. Due to this decline, particularly the loss of between 25 to 30% of the national population within a year of the planned actions, any further impact to the species has a higher likelihood of being significant.
6. Dependent young have been observed in the camp in recent weeks which will not be independently flying before July, and may be injured and/or die as a result of the planned dispersal. Although this is likely to only be a small percentage of the population, any death or injury to pups should be avoided given the rapid population decline of the species.
7. Collective impact of successive in situ management activities increases the likelihood of a significant impact as described in Part 4 of the R*eferral Guideline for Management Actions in Grey-headed and Spectacled Flying-fox camps*. The proposed action follows a succession of roost management activities over the last five years that have seen all but one known roost tree in the “Novotel” section of the camp removed, and resulted in over-crowding of the ‘core’ roost trees in the library grounds and use of poorer quality roost trees in surrounding streets.
8. The Spectacled flying-fox is an MNES in its own right but also recognised as an MNES for its value to the World Heritage listed Wet Tropics. Any impact on the species may cause, in time, a negative impact on the Wet Tropics rainforests through loss of long distance pollination and long and short distance seed dispersal eco-services.

**Inadequate Relocation Plan**

It is stated that the proponent engaged Biodiversity Australia to conduct the relocation because of their experience, but no evidence of this is given either in the Relocation Plan nor the consultancy’s website. The Relocation Plan prepared by Biodiversity Australia is confusing to read, is inconsistent, contains misleading information and errors and appears to have been hastily put together.

This poorly written relocation plan fails to consider a number of required elements for a dispersal of a camp of threatened flying-foxes planned within one year of the species having suffered population stress, as outlined in part 5 of the *Referral Guideline for management actions in grey-headed and spectacled flying-fox camps.*

Part 5 of the Referral Guideline recommends that when population stress has occurred within in the year prior to the proposed action, dispersal should be postponed. Significant impact is considered more likely after a period of significant population stress.

The guideline then lists required elements of a dispersal management plan much of which is actually missing from the submitted Relocation Plan or inadequately addressed as shown in the italicised comments adjacent to each element below:

‘These required elements of a dispersal management plan include:

* objectives of avoiding a long-term decline in the national population of the species or disruption to its breeding cycle *(this objective is absent from the relocation plan)*
* a strategy to achieve the objectives *(no strategy to avoid long-term decline is provided*)
* an assessment of potential relocation sites, other nationally-important flying-fox camps, and flying-fox activity in the region (*this is inadequately addressed. It is not clear if this has been done or remains to be done. The assessment of potential relocation sites fails to assess threats to flying-foxes in these sites, such as high incidence of high voltage electricity lines or barbed wire, or lack of access for post-dispersal monitoring. Except for one sentence relating to increased risk of air-strike should the camp relocate to Central Swamp, all negative risks are human-centric, and do not consider flying-fox welfare. A map is given of other nationally important camps but no information is given on their past or current usage by spectacled flying-foxes. There is no detail on flying-fox activity in the region.*)
* a dispersal methodology, including measures to minimise stress on flying-foxes in the camp and nearby camps, stop work triggers, responsibilities of participants (*No detail is given of the measures that will be applied to minimise stress on flying-foxes in the CBD camp and nearby camps, nor for stop work triggers. Reference is made to Bio-Diversity Australia’s internal Code of Practice for flying-fox management meeting and exceeding the provisions of DES CoP for flying-fox management. However, Appendix A, which should contain a copy of this internal CoP is missing. It should also be noted that DES is currently reviewing its CoP as part of its review of the Qld flying-fox management framework.*)
* a contingency plan in the event that animals relocate to an unacceptable location (*This is not given, unless it is to be assumed that* Rapid Reporting and Response program *(described p37) or normal deterrent activities as currently conducted will apply. )*
* awareness and assessment of potential impacts on other MNES resulting from any sequential dispersals (*While it is unlikely that this will apply in any interim or final locations, no attention has been given to this*)
* post-dispersal monitoring program (*This is inadequately addressed and appears to consist only of monitoring the flying-foxes at interim relocation sites for signs of stress on the day of the dispersal. There is no longer term post dispersal monitoring at the final location, splinter camps, other sites which may have had inputs from the dispersal, nor any pre-dispersal monitoring*)
* public communication program (*The public communication program is limited to informing the public about the dispersal and avoiding interference with the dispersal and only to the immediately “impacted” residents and businesses*.’

**Likelihood of failure of the dispersal attempt**

EcoSure (2014) and Roberts et al (2012, 2013) have clearly shown that dispersals have a high likelihood of failure, that flying-foxes return, that repeated efforts are needed, and that cost is high. In their review of 17 dispersals between 1990 and 2013, Roberts and Eby (2013) found that in 63% of cases, flying-foxes moved less than 600m, new camps were formed in 85% of cases, it was not possible to predict where alternative camps would form, conflict was not resolved in 71% of dispersals, repeat dispersal actions were found in all cases except where extensive vegetation removal took place, and the financial costs ranged from tens of thousands to $3 million. Ecosure’s analysis reinforced these findings.

BioDiversity Australia claims to have a high success rate in relocating flying-foxes but no evidence of this claim is provided. If this was the case, it is likely that this would be more widely known, particularly amongst councils which still rely on dispersal as their main method of management.

There is no vegetation corridor that the flying-foxes can be moved along to a new site, and the fidelity of the site would suggest that it would take many years to completely break the association with this camp. That the flying foxes have continued to use this site despite disturbances from construction and development and extensive roost tree removal over the last five years suggests that a CBD location is important as part of the species’ network of camps. This will increase the probability that the dispersal will fail to remove flying-foxes from Cairns city.

**Dangerous precedent for management of Endangered Species and of Nationally Important Flying-fox Camps**

In April 2018, the FFAC was asked to consider removal of the spectacled flying-foxes in the CBD camp as a management option as the mortality and abandonment had reached a record high of 1148 animals in the 2017-2018 rearing season during the construction activities of two hotels immediately opposite (within 50m) of the camp on two sides of the Cairns Library grounds (EPBC Referral 2016/7840, the second hotel was not referred so no mitigation measures were applied).

Three management options were considered: 1. Management as is- doing nothing differently; 2. Develop conditions for developers that minimise impacts and stresses to flying-fox camps and changes to flying-fox legislation; and 3. Relocate the flying-foxes from the CBD camp.

The largest risk for each of the options was, respectively:

Option 1: Do nothing. Continued increased mortality and abandonment levels due to construction and development and potential loss of further roost trees (EPBC Referral 2017/8115. This referral proposed the removal of up to 16 further trees in Novotel grounds, including three known roost trees with combined capacity of 1,000 flying-foxes, and was approved as Not a Controlled Action in July 2018.)

Option 2: Appropriate mitigation measures for developers and legislative changes to flying-fox management. Low likelihood of changes to legislation and/or conditions to the development within a short time frame.

Option 3: Relocating the CBD camp. Initial expense and long-term on-going costs; high likelihood of failure, and, that despite this action being considered solely for the welfare of the animals in the CBD camp, this relocation could be perceived as an “easy fix” to any flying-fox camp that may cause minor issues with local government of residents, thereby setting an unfortunate precedent.

The likelihood of this risk was considered very high. It was noted at this meeting that if option 3 was accepted, messaging was vital to educate the community and ensure that animal welfare was understood to be the only determinate, and only reason, for consideration of removal of the spectacle flying-foxes from the CBD camp through deterrence (Treadwell Kerr et al 2018a,b). This community education has not been conducted increasing both the risk of human-wildlife conflict and setting a dangerous precedent.

The risk of setting a precedent was seen almost immediately in the media (eg: Calchino, C. (2018). Cairns Post 23 April 2018) The absence of this messaging beyond the first page of the referral document relocation plan, and the inclusion of human conflict and economic impacts as reasons for dispersal, further increases the risk of setting a dangerous precedent for management of Nationally Important Camps and threatened species.

**Animal Welfare**

As well as concerns regarding the safety of alternative roosting sites, we are concerned about the fates of the over 1200 flying-foxes that came into care this season, should they return to the CBD Library site.

Within the last year, the flying-fox population, not just those in Cairns city, suffered a food shortage, assumed to be due to the very dry Dry season, which resulted in a record numbers of 500 abandoned pups and adults in poor body condition coming into care. These were not all from the CBD camp, which had similar numbers from last year when only the CBD colony was affected, but from the entire region, and included large numbers of tick paralysis and pups with cleft palette, all indicative of insufficient food resources.

In November, 23,000 flying-foxes died in the first heat stress event affecting Spectacled flying-foxes, and an extra 700 pups came into care. The camps affected were all in Cairns, although there were reports of 2000 spectacled flying-foxes affected in Ingham. The worst affected camps were in the southern suburbs of Cairns, with one camp in Edmonton losing its entire population of 11,000+ animals. These camps have not been resettled.

In February 2018, a smaller Heat Stress event occurred affecting a few hundred flying-foxes, all (except one) breeding males. Many of these were from the CBD as other occupied camps were not accessible to rescue affected animals. All these male flying-foxes were in poor condition with no body fat and had put all their resources into preparing for the breeding season. While most were too far gone to survive, 19 male flying-foxes were rescued and fed to regain body condition and were then soft released from the rehabilitation and creche facilities in Kuranda. A number of older pups were released at the same time. Only one of the males remained in Kuranda, the others are assumed to have returned to the CBD camp to continue the business of mating. A number of the hand-reared pups may have followed them. (In radio-tracking studies of released hand-reared pups in Sydney, it was found that some pups had moved distances of up to 310km to other camps, presumably by following other flying-foxes. Augee & Ford 1999).

Much time and expenditure has been invested into the care of these adults and pups, and this effort could be compromised if these animals have returned to the CBD only to be dispersed to potentially unsafe locations.

There is also a question whether dispersals may contravene animal cruelty legislation. Dispersals impact on flying-foxes through added stress, may disrupt social cohesion and have the potential to cause harm to individuals.

The Department of Environment and Energy is aware of the huge contribution of flying-fox carers to the community, and the very large economic, physical and mental costs to wildlife carers. Dispersals of flying-fox camps which contain rehabilitated and hand-reared flying-foxes devalues this effort, and increases mental anguish of the bat carers and bat care community.

**Potential for increased conflict between flying-foxes and humans**

The Flying-fox Advisory Committee was formed in November 2015 with the prime objective of educating and engaging with the community about Spectacled flying-foxes. Bat Chats during school holidays at the Library grounds, presentations to schools, bat stalls at community events including EcoFiesta ad Carnival on Collins, and the annual Bat Festival have reached thousands of locals and visitors to Cairns.

However, while many of these events have had positive media attention, the media is still running negative stories which has not helped public perception. A large proportion of the Cairns public are still ignorant about flying-fox ecology and biology, including a loud vocal minority who want the bats gone. They have no understanding of how flying-foxes use the landscape and the importance of a network of camps. Overall, much of the Cairns community is not ecologically literate to understand the original motivation behind consideration of relocation of the flying-foxes to a safer site.

Therefore, any dispersal, regardless of its motivation, will increase human-wildlife conflict. Comments on media reports of this dispersal show this, with both anti-bat people and pro-bat people engaging in sometimes spirited discussion.

The Relocation Plan in fact increases this conflict by including conflict, economic factors and pressure on trees as reasons for the dispersal. The pressure on trees is a direct outcome from previous management actions approved by Council. A previous 2013 dispersal plan developed for Council, citing conflict and economic factors as the motivation, was abandoned because of the expense and likelihood of failure. The FFAC was formed with a focus on education to dispel the myths and misapprehensions held by the community to assist with in situ management so to site conflict as a reason for dispersal is misleading. The relocation plan fails to detail economic potential of bat tourism barely acknowledging that not all impact on the community is negative.

The last paragraph of the Relocation Plan is especially concerning. It states ”The ability for the community to become educated in the process and take part – through the rapid response platform also allows for the community to take ownership of the issue. This has been proven

to promote better community attitudes towards the works as demonstrated with previous projects by BioDiversity …” This is a recipe for increasing human-wildlife conflict and escalating this to human-human conflict as extremists both for and against bats will become involved and cause further division of the community as has been seen in places like Maclean NSW and Charters Towers, Qld, where to have a flying-fox sticker on your car can incite violence against a person (personal experience, Sera Steves, FFAC community representative). Media reporting of this is already exacerbating conflict (Bateman, 2019)

Involving the community in keeping flying-foxes away from the CBD will negate the past education work of the FFAC, particularly its Bat Chats, makes a mockery of CRC slogan “Living under one sky” and will give confused messages to the many tourists who enjoy the flying-foxes.

**Misleading information in the dispersal**

The relocation plan contains many statements that are misleading particularly when referring to the Flying-fox Advisory Committee and the Cairns Release facility for rehabilitated and hand-reared flying-foxes.

As stated above, the FFAC community members agreed to consider the proposal of moving flying-foxes from the CBD, but after the media attention, wrote to council officers on the FFAC that they could not support a removal because of the lack of understanding and low ecological literacy of the community. They presented a comprehensive analysis of management options (Treadwell Kerr et al 2018) to be tabled at the next FFAC meeting which recommended a comprehensive community education strategy beyond the current education and engagement activities.

However, this document was not tabled. Discussion centred around using the release cage, which was to be sited at Central Swamp, a location known to flying-foxes and near the CBD camp, to attract flying-foxes from the CBD to this new location which was considered safer. This was to avoid the need for active dispersal or deterrent activities from the CBD library camp. The council officers considered however that active management might be necessary to move animals that had not left of their own accord, and to deter any that might try to land. The Community representatives considered the time frame suggested (June/July 2019) too soon, and would only support this, if at all, should it be scientifically supported and with appropriate approvals by DEE and DES (CRC 2018 July Minutes).

The examples given in the proponent’s Relocation plan to show cases where flying-foxes have been attracted to a release facility or other bats are misleading. The Tablelands example fails to mention that the wild bat colony was camped within a km of the creche/ release facility and that there was extensive continuous vegetation for flying-foxes to travel along. The Melbourne example fails to mention that the flying-foxes were moved along a vegetation corridor toward the captive flying-foxes, but that they actually stopped 1km short of the desired site.

Discussion regarding the release facility in the proponent’s relocation plan is confusing. Parts of the dispersal plan appears to have been written with the objective of moving the flying-foxes to Cairns Swamp as a nearby safer site than the city, using this concept of the release cage attracting animals from the CBD camp. However, Cairns airport advised that the Central Swamp site would pose an increased high risk of airstrike and a new site for the release cage needed to be found. This part of the dispersal plan has not been updated.

Due to the airport’s concerns about any sites north of the city, an exhaustive search for an alternative site for the release cage was undertaken on the south side of Cairns. The nearest such site was 10km (as the bat flies) away, far too far away to attract flying-foxes from the CBD (although there appear to be a few arguments in the Relocation plan that this was being considered). As such, the community representatives considered a dispersal to not be scientifically validated as there was too much uncertainty about where the flying-foxes would move to, and the risk of them moving to an unsuitable site was too high. There was no guarantee that any alternative sites would be safer than the current CBD site (BatSoc 2018; BatSoc 2019).

However, Cairns Council was determined to carry out a dispersal in June/July 2019 regardless (Spencer 2018). The subsequent food shortage and Heat Stress Event, resulting in a loss of 25 – 30% of the national population did not change their decision. At the February meeting of the FFAC, advice was given that the dispersal may be brought forward to April/May to facilitate substantial water infrastructure works on Aplin Rd which adjoins the Library site and the hotel (FFAC 2019).

The Relocation Plan reads as if the whole of the FFAC is in agreement that a dispersal from the CBD is necessary and implies that there has been consultation with the FFAC. The community representatives did not know the name of the consultancy engaged by Council until the Referral Notice was published and had no knowledge of where the flying-foxes were to be moved to, or the methodology. They have not been included in any discussions with BioDiversity Australia.

The community representatives believe that a dispersal is not scientifically or ecologically warranted, that it will lead to added stress on a population already stressed thus increasing the potential of harm, and that it has a low likelihood of success. Instead they believe that given time, the new release cage in Edmonton, which will be used from 2020, may become the focus of a new camp and that the hand-reared flying-foxes released here may return each year, including in two years after its first use, to breed. (BatSoc 2018)

In time, this may result in lower occupancy of the CBD camp, but it is likely that some flying-foxes may always be resident in the city.

**Conclusion**

This dispersal should not be approved as the relocation plan is inadequate, the motives are confused, and the species is under threat of extinction. Instead conservation measures should be immediately enacted to ensure the continued persistence of the species, and mitigation measures applied to reduce the impacts at this nationally important city camp.

**Name**

**Address**

**Contact details**

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