



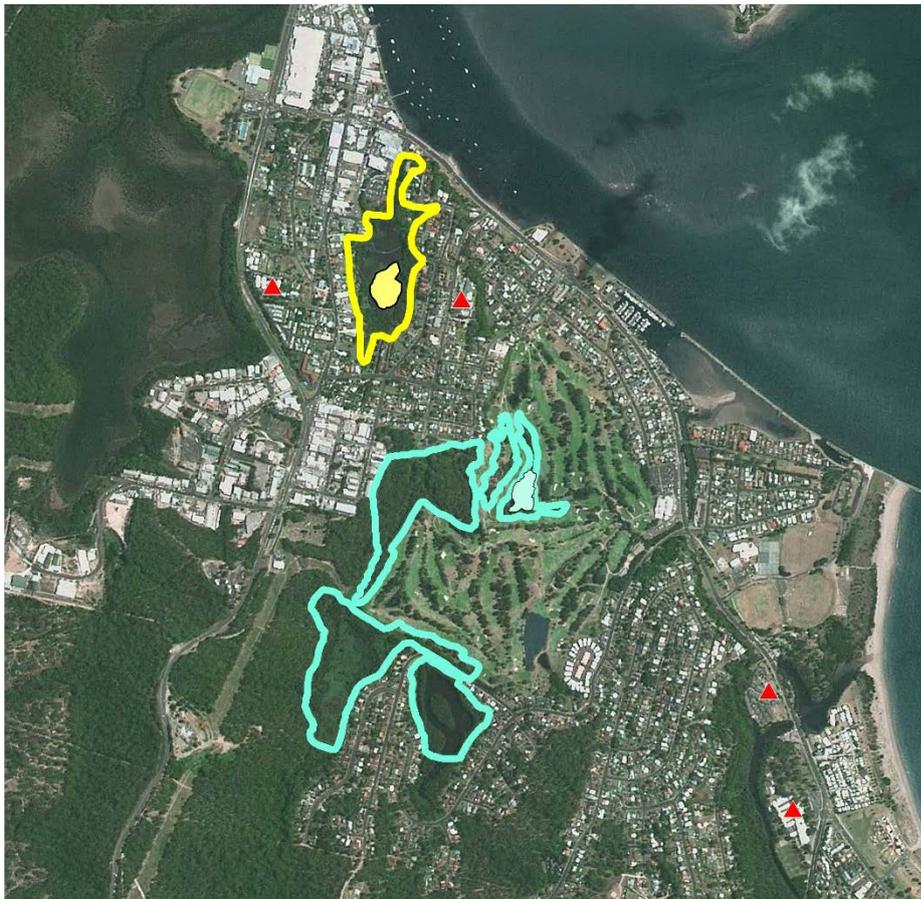
SAVING OUR SPECIES

# Flying-foxes in Batemans Bay

## Camp management case study

### Summary

The grey-headed flying-fox (*Pteropus poliocephalus*) is vulnerable to extinction in New South Wales. The Batemans Bay flying-fox camp in the Water Gardens is an example of a roost site within a small council reserve surrounded by residential homes, while the flying-fox camp on the Catalina Country Club Golf Course is an example of a roost site within recreational and commercial land. During a period from March to July 2016, unusually large numbers of flying-foxes descended on Batemans Bay, causing the camp footprint to expand into adjacent areas and increasing impacts on residents and businesses.



Flying-fox camps in the Water Gardens (yellow area at top) and Catalina Country Club Golf Course (blue area at centre), with outlines showing the extent of the camps during March and July 2016. Red triangles represent the locations of hospitals, schools and aged care centres.

Grey-headed flying-foxes were first recorded at these locations in 2012. The Water Gardens is the main camp while the Catalina camp was rarely occupied until 2016. Residents along the boundary of the Water Gardens can be impacted by droppings fouling property and vehicles, noise and odour, as well as fears of disease.

## Actions to reduce flying-fox impacts

In early 2015, staff from Eurobodalla Shire Council and the Department of Planning, Industry and Environment (the Department) engaged with affected residents to hear their concerns and provide information. Later in the year, the Department gave approval to Council to selectively clear vegetation at the boundary of the Water Gardens to create buffer zones between the camp and neighbouring homes. In January 2016, Council offered free car and clothesline covers, free high-pressure cleaner loan and services to remove cocos palms that were attracting flying-foxes to gardens to residents within 300 metres of the camps.

Between March and July 2016, an unprecedented influx of flying-foxes arrived in Batemans Bay. They were likely drawn to the area to feed on nectar from the mass flowering of local spotted gum and red bloodwood trees. Flying-fox numbers became too large to accurately count, with estimates of up to several hundred thousand animals. This number potentially represented up to 40% of the national grey-headed flying-fox population. Occupied areas of both camps expanded, and residents previously not impacted by flying-foxes were now being affected. Across the region, evening fly-outs had a much greater fouling impact from droppings. Foraging activity in residential gardens and impacts on backyard fruit trees also increased. Several power outages occurred from flying-foxes electrocuted on powerlines. Many residents and businesses became distressed and frustrated and the public resources needed to respond to issues increased.



**Grey-headed flying-fox (*Pteropus poliocephalus*).** Photo: Dean Portelli/DPIE

The NSW Government committed emergency funding towards assisting the community and dispersing the camps. Council prepared a dispersal plan. The Commonwealth and NSW Governments provided relevant approvals for camp vegetation management and camp

dispersal. Council sought additional licences from the Department to remove vegetation at night when previously occupied areas were free of flying-foxes. This would create wider buffers between the camps and nearby homes.

Council undertook the approved dispersal activities using noise and light in June 2016. Some residents and members of volunteer organisations joined the dispersal teams. The objective of these dispersal activities was to reduce the area occupied by flying-foxes each night and to 'nudge' them into less problematic areas away from houses. After six weeks of activities, Council stopped the dispersal. By then, a large proportion of animals appeared to have left the region, and the remaining flying-foxes were confined to the Catalina camp. This decrease in numbers coincided with the end of mass flowering. Therefore, despite dispersal activities appearing to encourage movement within and between the camps, it is unclear whether flying-fox numbers reduced in response to dispersal activities, decreasing local food sources or new foraging opportunities elsewhere.

More recently, Council have trialled canopy-mounted sprinklers in the Water Gardens to discourage flying-foxes from roosting in trees near the reserve perimeter. Council also used flashing torches to reinforce these 'nudging' actions. During this time, flying-foxes descending on the Water Gardens appeared to divert towards the Catalina camp. Even when several thousand flying-foxes roosted in the Water Gardens, they were generally confined to a small central area away from houses. Adjacent residents appeared not to be affected by the camp and Council received few complaints. Nudging flying-foxes away from the perimeter using sprinklers may have played a part in this outcome.

## Lessons learnt

- It is important for land managers to educate, listen and support the community as they build resilience to the impacts of urban flying-fox camps. Understanding more about the ecology and population fluctuations reduced the level of concern of some residents.
- Involving the community in decision-making around managing flying-foxes and keeping them well-informed about actions can give them some sense of control.
- It is important to broaden the area of interest around a camp when exploring camp management decisions with the community. This acknowledges the potential for large and sudden changes in camp footprints and expands the area of community awareness in preparation for future impacts.
- Land managers should define what constitutes a successful dispersal before any dispersal action takes place. If residents expect dispersal to result in a permanent solution, they are likely to be disappointed.
- 'Nudging' management is worth investigating further.

## Further information

This case study has been prepared by the Department in collaboration with Eurobodalla Shire Council.

A more detailed account of this case study is published in the *Australian Zoologist*: [Congregations of a threatened species: mitigating impacts from grey-headed flying-fox \*Pteropus poliocephalus\* camps on the Batemans Bay community](#)

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