



LOCAL GOVERNMENT MANAGING FLYING FOXES IN QUEENSLAND

CURRENT STATE OF PLAY

In 2013, the Queensland State Government introduced a new framework which:

- Allows private citizens and councils to carry out basic maintenance activities within a roost without a permit under a code of practice
- Gives local government the authority (as-of-right) to manage roosts within prescribed areas called Urban Flying-fox Management Areas (UFFMA) under a code of practice
- Maintains requirement for private citizens and councils (outside of a UFFMA) to seek approval to manage roosts (Flying-fox roost management permit)

IMPACTS OF THE CHANGES

Whilst the intention was to improve LG ability to respond without the need for a permit, there have been unintended results:

- Increase in council expenditure
- Increase in dispersals
- Increased community angst and response to this issue
- Increased community expectations that councils can and should act to 'control' flying-foxes

LG NOTIFICATIONS FOR PROPOSED AS-OF-RIGHT ACTIVITIES

| Year | Number of councils | Number of roosts | Number of notifications |
|------|--------------------|------------------|-------------------------|
| 2013 | 2 | 2 | 2 |
| 2014 | 19 | 36 | 61 |
| 2015 | 14 | 19 | 30 |
| 2016 | 24 | 41 | 149 |
| 2017 | 25 | 39 | 115 |

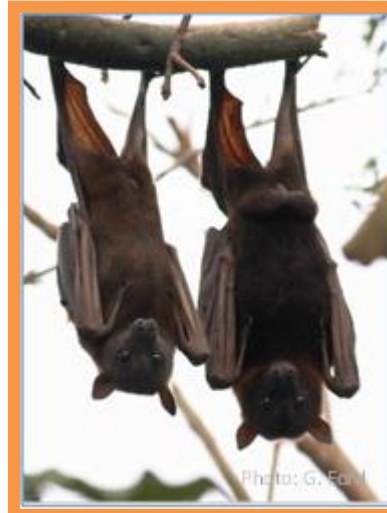
LGAQ ACTIVITIES

- Flying fox forums
- Dedicated webpages
- Guide to Best Practice Flying fox management
- Preferred supplier panel



LOCAL GOVERNMENT RESPONSES

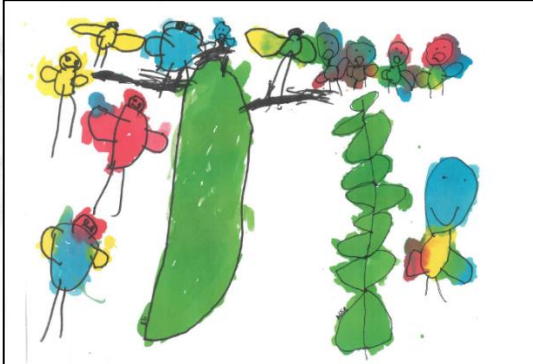
- Initial response was to increase dispersals and immediately respond to community concerns
- However, a number of more strategic responses are now occurring at a local level in lieu of state-wide coordination including:
 - Collaborative responses
 - Community engagement
 - Research and applying innovative techniques



BANANA SHIRE COUNCIL - COLLABORATION

The Day the Bats came to Kindy

Written by The Moura Community Kindergarten



After a little while all the trees were full of bats
and their babies.

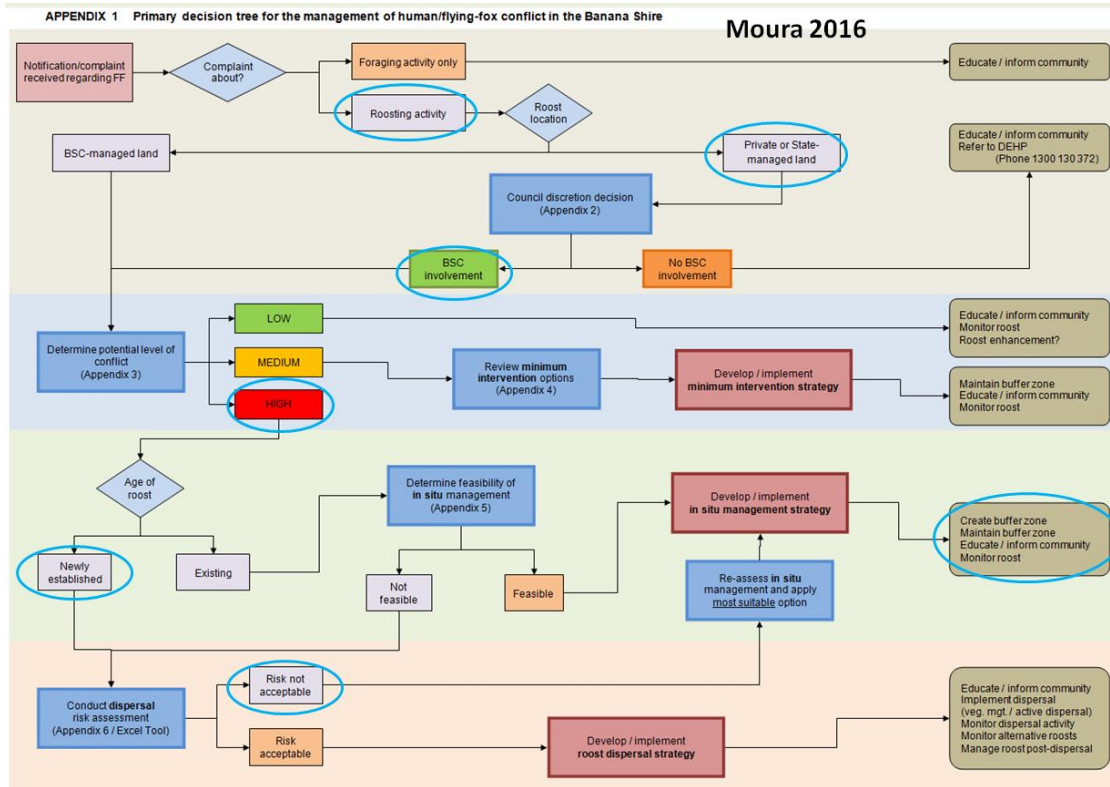


One day the Kindy kids
were having a party when
suddenly, the bats
appeared. Over the
following months more
and more bats came.
Soon there were too
many bats and the Kindy
kids had to make a big
change.

Books available for purchase from Moura
Kindy \$20 ea - mourakindy@bigpond.com or
Moura Kindy Facebook page

- Community meetings in collaboration with BSC, QH, DAF, & DES to provide information and give opportunity to ask questions, feedback, etc. provide resources, etc.
 - Information leaflets regularly circulated with updates to residents in the vicinity of the roost
 - Roost monitoring
 - In-kind support to kindy – yard maintenance at kindy, moving kindy to new location for a term, sinks to wash hands, shade shelters for play, fencing, etc. promotion of book “the day the bats came to kindy” written and illustrated by the kindy class affected
- Regular communication with affected stakeholders (email, phone calls, face to face)

BANANA SHIRE COUNCIL - COLLABORATION



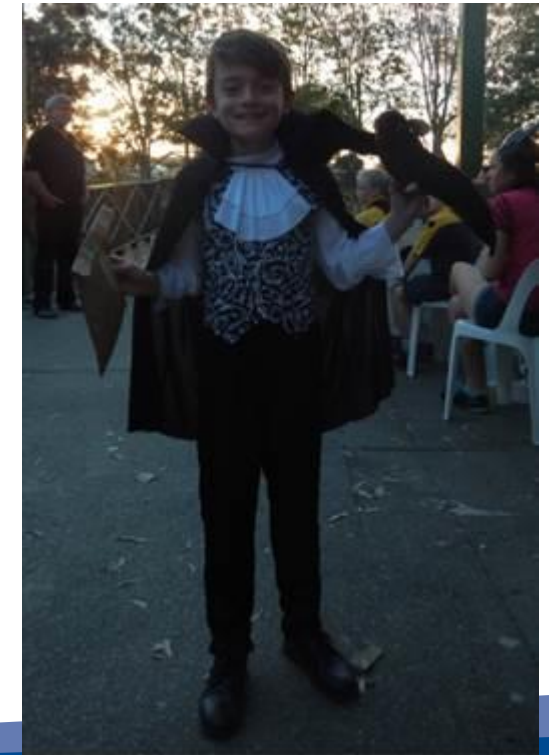
These events also prompted BSC to develop

- Statement of Management Intent
- Flying Fox Management Plan & Roosting Activity toolkit
- Vaccination program for BSC employees working with Flying foxes

LOGAN CITY COUNCIL –COMMUNITY ENGAGEMENT



Cultivating Community
Connectivity through
education



LOGAN CITY COUNCIL – SOCIAL MEDIA ENGAGEMENT

Logan City Council
6 October 2015 at 11:00 · 🌐

Go batty this Halloween Oct 31st in Beenleigh! Long ago on Halloween, people would gather around bonfires and ward off evil spirits. Attracted to the fire light were many small insects... and these attracted microbats. Seeing bats fly in and out of the firelight meant they became a feature of Halloween lore.

Find out things you never knew about Australian bats and watch them fly out for their evening feed. With free kids activities and BBQ - there's even a prize for best batty dressed!

Contact us on 3412 4491 or environment@logan.qld.gov.au to book your spot! For more event information visit: [#CityofLogan](http://ow.ly/SSF2e)



Logan City Council
Published by Teena Lee Dawkins [?] · Just now · 🌐

Heat stress and our furry friends. Another hot day has been forecast across the City of Logan for today and tomorrow.

While we often have the luxury of air-conditioning to keep us cool, please remember our furry friends and native wildlife. Temperatures around 38 degrees can lead to heat stress and even death from dehydration for many animals, including flying-foxes. Make sure pets have a place to rest in the shade with good ventilation. Keep an eye out for heat stress warning signs and if any animals are in distress or injured call 1300 ANIMAL (1300 264 625). For more information, visit <http://bit.ly/1B8fjJ7>



Logan City Council
Published by Teena Lee Dawkins [?] · January 15 at 10:41am · 🌐

With summer well and truly here, the migratory little red flying-foxes have returned to holiday briefly in Logan.

Unlike the black and grey-headed flying-foxes, 'little reds' are a bit more talkative and noisy and generally like to hang out in larger numbers, similar to a really good party! Whilst they can be a bit more disruptive, wildlife experts have advised they will move on in the coming weeks to head back up north and give birth to their young.

It can be pretty spectacular to watch in the evening their fly-out in search for food or their next stopping point on their way home.

If you'd like to know more, visit <http://bit.ly/2035eJj>



111,612 people reached

Boost Post

547 Likes 37 Comments 857 Shares



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17 Love 1 On Post 16 On Shares

366 Comments 40 On Post 326 On Shares

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LEAF - Logan Eco Action Festival
Page Liked · May 27 · 🌐

With Batman Sten and Bats QLD at Logan Eco Action Festival.

1 Comment

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Shaun Sten <https://m.facebook.com/Batman-Sten>
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LOGAN CITY COUNCIL – EDUCATION FOR ALL AGES

What bat is that?

There are more than 90 species of bats living in Australia. They are a mammal that belongs to a group scientists call Chiroptera, which means 'hand-wing'.

There are two types of bats: micro-bats and mega-bats. Mega-bats are the larger fruit and flower eating bats you see hanging upside down in trees or flying overhead at dusk. They are commonly known as fruit bats or, due to their fox-like faces, flying-foxes.

Four species of bats are native to mainland Australia. Three of these: the grey-headed flying-fox, black flying-fox and the little red flying-fox are found in Logan. The fourth, spectacled flying-fox lives up north.

We can thank flying-foxes for keeping our forests healthy, for use by us and by other animals like koalas.

Did you know?

Grey-headed flying-foxes were listed nationally 'vulnerable to extinction' under Federal legislation. Black flying-foxes can live up to 20 years. They generally like to live in the very tops of trees.

Grey-headed flying-foxes don't have babies until they reach 6-10 years old and only have one baby a year. In addition to eating fruits and blossoms, sometimes you'll see them chewing leaves and testing the salt from mangrove leaves.

Females little red flying-foxes are the smallest of the megabats, and care for their young for several months while they develop the basic skills of finding food. They will eat fruit, sap and insects and cultivated food when other food resources are low. Little reds often crash land in trees and need to climb a tree limb to take off again.

Bats have more than 30 different calls used to defend their home, fight over food and find their babies. Stop and listen, can you work out what they're chatting about?

Little red flying-foxes (P. scapulatus)

are the smallest of the flying-foxes. This reddish-brown species move seasonally from Western Australia down to South Australia, following the patterns of flowering eucalypts and papercakes. They like to share camps with the black and grey-headed but only form temporary camps and don't tend to stay too long. Little reds are the most widespread and roost in trees in clusters, but have a poor or like a bunch of bananas. How many can you count hanging together in a tight bunch?

Is it a bird? Is it a plane? NO, it's a bat!

Bats are NOT birds!

They are however the only mammal which can truly fly! Other mammals such as squirrel gliders and sugar gliders, do not fly but glide through the air giving the appearance of flight.

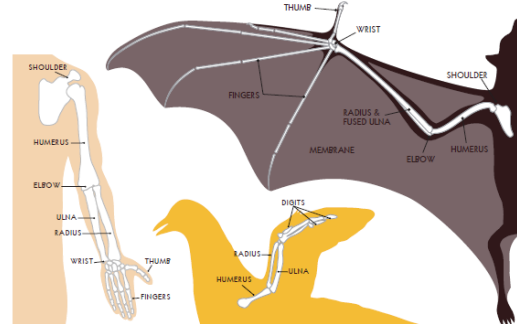
Bats can hold food and hang onto branches with their clawed thumbs. When cold or wet you can see them wrap their wings around themselves.

Bat wings are thinner than a bird's, are more agile and can move quicker than birds. Below is a diagram of the skeletal structure of a bat's wing. It is almost identical to a human hand and arm, only elongated and much smaller.



Bats also have a thin membrane of elastic-like skin which stretches across the fingers to form the wing. The membrane is so thin it appears transparent when flying. If you feel the skin on your eyelid, that is what their winged membrane feels like! The finger bones of bats are more flexible than other mammals, and they are flattened instead of circular, making it even more flexible.

To enable sustained flight, bats must have well developed chest and forearm muscles to power strong wing beats. Bats use a lot of energy so have to launch themselves from a high perch, dropping down to build up speed before flying upwards. People mistake this behaviour as a form of swooping but this is not the case.



Grey-headed Flying-fox (Pteropus poliocephalus)

How to recognize Grey-headed bats:

- They are the only bats with fur right down their legs to their toes!
- They have a noticeable orange/brown furry collar which goes around their neck.
- Belly fur is grey with flecks of white or ginger.
- Back fur can be grey or can have silver or frosted appearance.

Where do they like to live?

- Grey-headed are regarded as one population moving within a national range.
- They are often loyal to the same site returning year after year, some even returning to the exact same branch of the same tree!
- They like a variety of habitats such as rainforest, wet and dry Eucalypt forests, mangroves and paperbark swamps often sharing a roost with Black flying-foxes.

Breeding:

- Grey-headed don't have babies until they are between 6-10 years old.
- Pregnant females form maternity camps just before they give birth, to one pup, between September to November.
- Mothers carry their young while they forage for the first few weeks before leaving babies in a crèche tree.

What do they eat?

- Grey-headed love to forage on fruits and blossoms of more than 60 different types of plants. Eucalypt blossoms and native figs are their favourite. Yum!
- Sometimes they chew leaves and taste the salt from mangroves.
- They can go the distance and fly 100km round trip for their dinner.

Threats:

- Disturbance of roosting sites
- Unregulated shooting
- Powerlines and barbed wire fences
- Habitat loss
- Domestic dogs

Status:

- Protected by State legislation (Nature Conservation Act 1992)
- Protected by Federal legislation (Environmental Protection & Biodiversity Act 1999)

Where do Grey-headed bats occur?

- Grey-headed can be found along the east coast of Australia from Rockhampton, in central Queensland to South Australia.
- Recent reports have observed them in Tasmania.
- Many Grey-headed are found all year round in Logan, but are more widespread in summer.

Learn more at: www.logan.qld.gov.au/wildlife



The night shift/ Seeing in the dark

We depend on forests for fresh air, food and to provide valuable timber. But did you know forests rely on flying-foxes?

Forests are dependent on flying-foxes because they pollinate forest flowers and scatter seeds in their search for food.

Flying-foxes are nocturnal and have big eyes and good hearing which help them navigate their way over vast distances. They travel much further than day-flying birds and bees. In one night, flying-foxes can travel up to distances of 100km in their search for food! Eucalypts, figs, grasses, figs and figs are their favourite food. Flying-foxes will also forage in gardens, parks and orchards and have a choice of around 80 species of different plants to choose from. Using their big eyes and noses, flying-foxes see, smell and find food in the dark.

Pollen is collected on the fur of bats while they feed on the nectar of flowers. Sticking to the head and neck area, they are then able to pollinate many



Baby grey-headed flying-foxes

Fact:

If bats cannot find native forests to live in they find other places to live and feed including patches of bushlands in urban areas.

Did you know...

Many species of native trees flower at night to attract nocturnal species like flying-foxes. Some other tree species will only grow if their seeds are distributed far away from the parent tree through animals such as bats.

Bats also create new forests by dispersing seeds from the fruit they eat. They can spit the seeds out some distance away from the parent tree. They may also drop the seeds in flight or scatter small seeds while they feed on fruit.



Living with Bats

Your Questions Answered



Important Information Little Red Flying-foxes Fact Sheet

www.logan.qld.gov.au

A large number of Little Red Flying-foxes (Pteropus scapulatus) have taken up residence in the area. These flying-foxes are not the same species as the others that are generally found in Logan. Although Little Red does not pose a threat to humans, we would like to ensure you know how to manage them should they appear.

Little Red Flying-foxes are known to hang out at many different habitats. They are highly mobile, being able to pass their roosting sites and fly away at any time. As they pass through the area, they are visiting areas as the weathering of eucalypts, blackwood and wattle. The movement of these flying-foxes is not a threat to humans, but it is important that you know how to manage them should they appear.



Photo: Greg Brown

Flying-Foxes and your Health

Just like any wild animal such as snakes, birds and lizards, some flying-foxes may carry diseases which can be harmful to humans.

Disease Risk

Flying-foxes can carry the Australian Bat Lyssavirus (ABL) and Hendra virus. However, transmission to humans is extremely rare. ABL occurs in a very small percentage of flying-foxes. If it is caught by a human, it is transmitted to humans through a bite or scratch from an infected bat. The best prevention is not to touch a flying-fox. Flying-foxes may also have Hendra virus which can be transferred to humans. There is no evidence that the virus can be transferred directly from flying-foxes to humans. Humans are not exposed to the virus if bats fly overhead or feed/roost in gardens.

What to do if a flying-fox has passed away

- You may come across a dead flying-fox, particularly if it has been swept into a road or in a park. Do not directly handle the dead flying-fox.
- If you find a dead flying-fox in a public area (e.g., on the side of a road or in a park), call Council (07 3412 3412) to ask them to dispose of it. If the dead flying-fox is on private property, you should:
 - wear thick gloves (e.g., gardening gloves) and use a shovel to scoop it up.
 - wrap the body in at least two plastic bags and use a disposal of dead flying-foxes, contact Council for advice on waste management in your area.

What's that smell?

Flying-foxes produce an odour, mostly when at roosting times in the winter. This odour may be associated with roosting or bathrooming and is a natural part of their life cycle. The odour does not represent a risk to human health.

Living with Batty Neighbours

Flying-foxes have a very efficient digestive system, so food passes through them very quickly. This means they can often be seen roosting in trees and shrubs, but they do not defecate or urinate beneath their feet. This means they do not pose a serious health hazard. Go to Council's website for further information and see for living with flying-foxes: www.logan.qld.gov.au



The survival of flying-foxes depends on our ability to live with them. Council aims to manage flying-foxes in urban areas and through their future research.

SUNSHINE COAST COUNCIL – RESEARCH AND INNOVATIVE TECHNIQUES



- Development of Regional Flying Fox Management Plan
- Plan includes innovative techniques and research
- Roost management has incorporated innovative techniques
 - Canopy mounted sprinkler system, suggested by Dr Les Hall
- Research aimed at encouraging FF out of the urban footprint
 - QUT suitable habitat and potential conflict mapping

SUNSHINE COAST COUNCIL – RESEARCH AND INNOVATIVE TECHNIQUES



CANOPY MOUNTED SPRINKLER SYSTEM

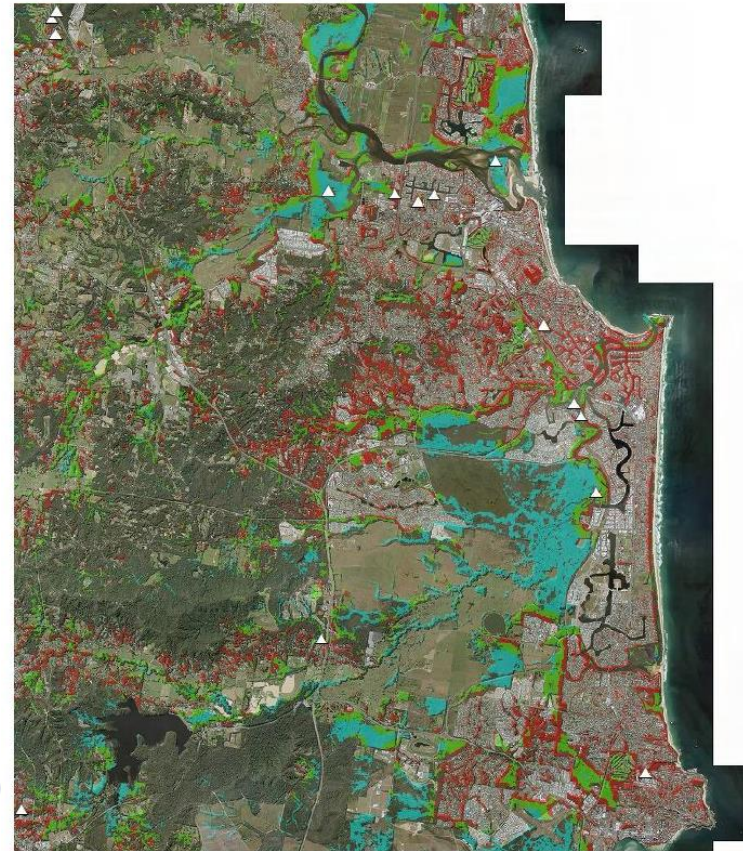
- Used to extend exclusion buffer by ‘nudging’ footprint
 - Empowers the residents with a method that can be used as needed
- Used in conjunction with vegetation management
- Has been largely effective long term

SUNSHINE COAST COUNCIL – RESEARCH AND INNOVATIVE TECHNIQUES

Human-bat conflict zones

Low Conflict Medium Conflict High Conflict

Roost sites



0 1 2 4 Kilometers

- SCC engaged QUT
- Produced a species distribution model for BFF, GHFF and LRFF
- Developed a potential conflict model
- Key findings:
- Distribution to food is not as high an influence as previously thought
- Identified 7 primary factors influencing site selection:
- Suitable roosting habitat (270km²) = 12% of total SCC area
- High conflict areas (72km²) = 27% of total suitable habitat!

SUNSHINE COAST COUNCIL – RESEARCH AND INNOVATIVE TECHNIQUES

This work will be used to:

- Protect and regenerate important roost habitats
- Assess future land use strategies that could impact flying foxes and humans
- Highlight human-bat contact areas and their degree of conflict for future planning and management.

Major focus is to identify suitable low-conflict areas outside the urban footprint and either establish, rehab or regenerate AND protect them, to encourage FF into these areas, rather than reactively forcing them out of less suitable areas.






LGAQ Annual Conference Resolutions 2017

2017

LGAQ lobby to provide:

1. Statewide management recognising that flying foxes travel large distances across multiple local government boundaries;
2. Funding to support the management of flying fox colonies and dispersal activities.



LGAQ Annual Conference Resolutions 2018

LGAQ lobby for:

1. a national and state unified and community-minded approach to the solution and management of flying foxes.
2. coordinate state-wide flying fox research to determine the preferred habitat of black and grey headed flying foxes and their movement patterns and use the findings to:
 - i) analyse the potential increase in flying fox colonies in urban areas and their associated impacts
 - ii) establish options to reduce the likelihood of additional flying fox colonies in urban areas
 - iii) develop an on ground program for the successful relocation of colonies away from affected urban areas.

MISSING PIECES

| Issue | Solution |
|---|---|
| Lack of a national strategy/approach for flying fox management | Adoption of the recommendations of the inquiry into flying-fox management in the Eastern States |
| Councils bearing the financial burden of managing high conflict roost sites | Funding program for councils to support future planning and implementation of these plans |
| Loss of centralised knowledge - no overarching data to examine the impacts of locally managed roosts and the overall impacts to the species | Data collection that shows roost management activity and the impact of that activity in resolving community conflict and conservation efforts |
| Need a greater understanding of flying fox habitat to provide options for habitat development | Applied Research such as that proposed in 2018 annual conference motion |
| Support for and regular communication with local government officers from the State Government - need a framework | Regular forum for engagement between local government and state government including training |
| Councils developing their own management plans, decision support tools and education/engagement pieces at a local | Development of planning and engagement tools provided at a state/national level to improve coordination and reduce costs |