

# Operational Policy

## ***Interim policy for determining when a flying-fox congregation is regarded as flying-fox roost under section 88C of the Nature Conservation Act 1992***

Operational policies provide a framework for consistent application and interpretation of legislation and for the management of non-legislative matters by the Department of Environment and Science. Operational policies are not intended to be applied inflexibly in all circumstances.

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# Interim policy for determining when a flying-fox congregation is regarded as flying-fox roost under section 88C of the Nature Conservation Act 1992

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## 1 Purpose

This policy outlines a consistent set of principles that may be employed to determine whether or not a site satisfies each element of the flying-fox roost definition under section 88C (s88C) of the *Nature Conservation Act 1992* (NCA). It will aid decision making processes and help determine appropriate flying-fox management actions i.e. when to apply for a flying-fox roost management permit or when a local government authority may undertake roost management actions in accordance with the [Code of practice—Ecologically sustainable management of flying-fox roosts](#) or the [Code of Practice - Low impact activities affecting flying-fox roosts](#).

It is important to note that even when a congregation of flying-foxes does not meet the definition of a flying-fox roost, actions directed at the management of the site are still subject to s88 of the NCA, which prohibits unauthorised actions that kill, injure or harm flying-foxes. It is also important to note that actions to disturb or disperse flying-foxes from a site can have unintended consequences on other people in the community. The Department of Environment and Science (the department) recommends that any management of a congregation of flying-foxes is done in line with the principles set out in the [department's Flying-Fox Roost Management Guideline](#) regardless of whether it is regulated under s88C of the NCA as a roost.

## 2 Background

Flying-foxes are a protected native species that play a vital role in the ecology of native plants as long-range pollinators and seed dispersers. Two of the four species of flying-fox that occur in Queensland are threatened species nationally, and all are affected by significant habitat loss and landscape modifications.

Flying-foxes feed at night on fruit and nectar from trees and shrubs. They generally feed in a relatively solitary way and will spread out over a large area and feed with 1, or sometimes 2 or 3 flying-foxes in a food tree

Flying-foxes shelter and sleep during the day in trees usually in groups (sometimes in the thousands and tens of thousands) and may return to the same site on a daily basis for an extended period, however, an individual flying-fox will often change its roost location every few days or weeks. Flying-foxes are highly nomadic and regularly travel long distances. It is not uncommon for flying-foxes to fly tens of kilometres per night. They appear to be aware of the large-scale distribution of foraging resources and travel according to food availability and seasonal changes. It is generally accepted that flying-foxes have an affinity to particular roosting sites, and that certain sites can be occupied for extended or continuous periods, or in seasonal cycles.

The best available science, and widespread anecdotal evidence also indicates that flying-foxes have a strong tendency to utilise camp sites that are already being used by other flying-foxes. This means that flying-foxes have an affinity to cluster together in groups, and a tendency for these clusters to occur at specific repeated sites, even though individual flying-foxes may be highly nomadic.

In addition to this, it is well understood that this congregating/grouping behaviour is closely related to the social and breeding behaviour of flying-foxes – i.e. the forming of these congregations allows flying-foxes to engage in courtship and mating, provides a reliable site to return during late pregnancy and birthing and allows for specific 'creching' behaviours, whereby pups are left behind and protected at creche sites while mothers forage at night.

In Queensland, the NCA is the primary legislation that regulates flying-fox roost management. S88C of the NCA prohibits the destruction of a flying-fox roost, driving away or attempting to drive away flying-foxes from a roost and the disturbance of a flying-fox in a roost unless a person is authorised to do so.

Based on the underlying biological function of flying-foxes, and the structure of regulatory provisions, it is taken that s88C is in place because of two core elements of flying-fox ecology/biology:

1. The general tendency to repeatedly form roosts during the day at certain sites to support and facilitate breeding/rearing behaviours – regulation under s88C reduces the risks of disturbance to flying-foxes that

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may disrupt their ability to carry out these basic life cycle functions (mating, gestating or pup-rearing activities), including the potential abandonment of dependent young flying-foxes at the site;

- Without the restrictions of s88C, unfettered disturbance/dispersal of a roost has the strong potential to lead to negative community impacts at other sites, as the animals are extremely likely to form another congregation at another or several other unsuitable locations, where they would have detrimental nuisance impacts on the community. This pattern may also result in flying-foxes being driven away from multiple sites in quick succession disrupting normal feeding and mating behaviour.

Under s88C of the NCA, 'flying-fox roost' is defined as follows:

**flying-fox roost** means a tree or other place where flying-foxes congregate from time to time for breeding or rearing their young.

In this section **breeding** includes gestating.

The delineation of which sites are, or are not, 'roosts' is critical to the scope of what is regulated under s88C.

Many places/trees where flying-foxes congregate are occupied regularly, and clearly meet the definition under s88C. However in some cases the circumstances are more complex, and the definition has been interpreted and implemented in a number of different ways, particularly in relation to newly established sites or sites that are very infrequently occupied by flying-foxes.

### 3 Policy statement (or determination)

This Operational Policy clarifies several key aspects of the flying-fox roost definition and provides a consistent application of the definition whilst having regard to the variable nature of flying-fox biology and behaviour.

This Operational Policy is intended as a guide to interpretation only and individual circumstances may apply. The policy does not over-ride or replace the terminology included within the NCA.

### 4 Policy considerations

The scope of sites regulated under s88C are not always easily identifiable, however there are four key elements of the flying-fox roost definition to consider:

- The number/density element (i.e. size of congregation required to represent a roost)
- The temporal element (i.e. 'from time to time')
- The behavioural (breeding/lifecycle) element (i.e. 'congregate...for breeding, gestating or rearing their young') and
- The spatial element (i.e. a 'tree or other place').

These four elements, or 'policy considerations', are outlined further in this document.

### 5 Defining categories of flying-fox congregations

The following table describes the categories of flying-fox congregations. A site may change throughout time to meet any or all the following stages: i.e. a 'Permanent roost' may become a 'Historical roost' after 5 years of inoccupancy.

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**Table 1: Categories of flying-fox congregations**

Congregation Type	Congregation characteristics	DES view of congregation protection under s88C
<b>Permanent Roost</b>	<ul style="list-style-type: none"> <li>• The site has previously met the requirements to satisfy the roost definition under this policy</li> <li>• Includes Continuous Use sites*</li> <li>• Includes Seasonal Use sites**</li> <li>• Includes New Congregations which satisfy the requirements of the roost definition under this policy</li> </ul>	<b>Protected under s88C</b>
<b>New Congregation</b>	<ul style="list-style-type: none"> <li>• A site where flying-foxes have not been known to congregate previously, or where occupation has not yet met the criterion for 'from time to time'</li> <li>• Includes 'splinter camps'</li> <li>• <i>May</i> include overflow from existing roost sites into trees that have previously not been occupied by flying-foxes</li> </ul>	<b>Not protected under s88C</b>
<b>Historical Site</b>	<ul style="list-style-type: none"> <li>• A site that has previously met the 'roost definition' requirements but hasn't been occupied by flying-foxes for a period of 5 consecutive years</li> <li>• If flying-foxes resume occupancy of an Historical Site, the site should be classified as a New Congregation until it has once more met the density, temporal, behavioural and spatial aspects that allow it to once again be classified as a Permanent Roost</li> </ul>	<b>Not protected under s88C</b>
<b>Destroyed Roost</b>	<ul style="list-style-type: none"> <li>• A site that has been destroyed either legally/illegally or destroyed through natural events (e.g. cyclone, fires etc) and is no longer being occupied by flying-foxes, and not capable of being occupied by flying-foxes.</li> </ul>	<b>Not protected under s88C</b>

**\*Continuous Use** – indicates that the site is permanently, or almost permanently, occupied by flying-foxes

**\*\*Seasonal Use** – indicates that a site is occupied by flying-foxes during certain periods as a result of the availability of nearby food sources such as nectar/flowers or due to climactic changes such as seasonal temperature variations.

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### **5.1 The number/density element - determining the number of flying-foxes, or density of flying-foxes required to meet the definition of a roost**

The definition of congregate means – to come together, assemble, especially in large numbers. In general, a congregation of 50 or more flying-foxes is needed to satisfy the number/density requirements of the roost definition, however if there is strong evidence of continuous or very consistent occupation and breeding and rearing activities a number less than 50 may be acceptable in meeting that condition in limited cases.

### **5.2 The temporal element - addressing ‘from time to time’**

Typically, for a tree or other place where flying-foxes are present, ‘from time to time’ should be interpreted as:

#### **5.2.1 For cases where there is evidence of birthing and/or dependant young for two or more continuous periods of time, each period consisting of 10 consecutive days or more (this includes 2 consecutive periods of 10 days i.e. 20 consecutive days).**

To be clear, a new congregation would not meet the temporal aspect within the first 10 days of the congregation being at the new tree or place. However, once flying-foxes have been present a second time for a period of 10 consecutive days then the temporal aspect of the roost definition will have been satisfied.

#### **5.2.2 For cases where flying-foxes have been present for breeding or rearing their young for two or more periods of time, each period consisting of 30 consecutive days or more (this includes 2 consecutive periods of 30 days i.e. 60 consecutive days).**

To be clear, a new congregation would not meet the temporal aspect within the first 30 days of the congregation being at the new site. However, once flying-foxes have been present a second time for a period of 30 days then the temporal aspect of the roost definition will have been satisfied.

This gives a landholder a window of opportunity (once flying-foxes have congregated for the first time) to modify a site in a way that discourages flying-foxes from congregating and thereby developing an ongoing affinity to the particular site. However, once a congregation has satisfied both the temporal and the behavioural aspects of the definition, the site should be regarded as a roost, and will be subject to regulation under s88C of the NCA.

In consideration of whether, and how often, flying-foxes have congregated in a tree or other place for breeding and rearing their young, a DES officer may refer to—

- [The National Flying-Fox Monitoring Viewer](#) (which includes camp census data from the National Flying-Fox Monitoring Program)
- Queensland Government flying-fox monitoring data
- Any departmental records that may refer to flying-fox activity at the tree or other place, for example—
  - Records of granted flying-fox roost management permits, or applications for permits;
  - Records of notifications under the Code of Practice – Ecologically sustainable management of flying-fox roosts; and
  - Records on any departmental databases, registers, or correspondence systems (e.g. complaints to the department) that indicate presence of flying-foxes in the area.

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**5.2.3** Data and recordings of flying-fox presence are essential in determining whether flying-foxes have been congregating 'from time to time.' Upon receiving a report of a new congregation a departmental officer may choose to accept and record this information or may organise a site inspection by a 'Person knowledgeable about flying-fox behaviour' to conduct a survey of the site and to provide advice to the department on its standing as a roost.

**5.2.4** A [flying-fox roost assessment form](#) may also be submitted to [wildlife.management@des.qld.gov.au](mailto:wildlife.management@des.qld.gov.au) when there is an intention to assess and record the presence of a roost in the Queensland flying-fox roost monitoring database.

### 5.3 The behavioural element - addressing 'for breeding and rearing purposes'

As flying-foxes typically feed at night and congregate during the day to rest, breed etc, 'congregate...for breeding or rearing their young' should be interpreted as:

#### 5.3.1 Daytime use of a tree or other place by multiple flying-foxes:

In a month that is considered typical for mating, gestating, rearing or creching for that species (see table 2 below); or

Where there is specific evidence of mating, gestating, rearing or creching of flying-foxes (outside of a month that is considered typical for breeding or rearing activity)

**Table 2. Typical months for breeding and rearing activities for flying-foxes in Queensland (allowing for possible geographical and/or climatic variation across the State)**

Breeding or rearing activity	Grey-headed & Black flying-fox	Spectacled flying-fox	Little red flying-fox
Peak conception followed by 6 months gestation	March–July	April - August	October–February
Peak birthing and dependent young under wing (first 4 weeks)	September–October	October- November	April–May
Rearing (including caring for and 'creching' young flying-foxes until they are capable of sustained independent flight)	November–January	December- February	June–August
Potential period not associated with breeding/rearing activities	February	March	September

### 5.4 The spatial element - how to determine roost boundaries

*Note: in this section 'tree' refers to 'tree or other place' in accordance with the roost definition in s88C of the NCA.*

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5.4.1 Flying-foxes congregate in many different ways depending on the species, land topography and/or access to contiguous vegetation. They may congregate largely in one tree, or a cluster of trees, with smaller groups or individuals settling in contiguous or other nearby trees as flying-foxes come and go.

5.4.2 Congregations can also move entirely into contiguous or other nearby trees over time, sometimes as a result of damage caused by flying-foxes to the trees or as a result of nearby disturbances to the site.

A case-by-case evaluation is needed when deciding what constitutes the boundary of a roost, based on occupation of the site over time.

In general, for a tree where the temporal and behavioural policy considerations are satisfied, a tree contiguous\* to a roost tree is typically considered part of that roost.

Non-contiguous\*\* trees are typically not considered to be part of the same flying-fox roost and should be considered separately to determine whether they satisfy the temporal and behavioural policy considerations.

In this setting:

**\*Contiguous means** - trees immediately adjacent to, adjoining or touching the existing vegetation that form the roost, for e.g. a relatively continuous canopy, or where canopies nearly touch, often of similar species or part of a similar ecological setting.

**\*Non-contiguous means** – trees separated by open grassland, urban areas or similar land uses; or trees of a distinct ecological setting, for e.g. where flying-foxes move from natural or semi-natural areas to nearby planted backyard/ornamental trees, or vice versa.

## 6 How does the department determine a roost site?

Any person in Queensland can use the above principles to help determine whether a site meets the requirements necessary to qualify as a roost, and therefore be regulated under s88C of the NCA .

If there is any uncertainty or confusion it is recommended that members of the public consult the department prior to conducting any works that may be subject to s88C of the NCA.

To maintain a consistent approach the [flying-fox roost assessment form](#) has been revised requiring approval by either the Manager of Southern Wildlife Operations or the Manager of Northern Wildlife Operations (depending on the location of the site), before being sent to [wildlife.management@des.qld.gov.au](mailto:wildlife.management@des.qld.gov.au) to be recorded as a roost site in the department's flying-fox database.

Once this decision has been made, departmental staff will supply advice in accordance with this decision until newer information renders another assessment necessary, such as an extended period of inoccupation.

## 7 Authorities

*Nature Conservation Act 1992* and Regulations

## 8 Definitions

**Flying-fox roost** - means a tree or other place where flying-foxes congregate from time to time for breeding or rearing their young.

**Person knowledgeable about flying-fox behaviour** - means a person, who may also be the person in charge, able to demonstrate experience in successfully:

- (a) classifying flying-fox species; and assessing flying-fox population numbers in particular roosts;
  - (c) identifying flying-fox breeding cycles including evidence of breeding and rearing activity in particular roosts;
- and

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- (d) recognising signs of (and circumstances which may result in)—
- i) distress in flying-foxes, and
  - ii) harm to flying-foxes, and
  - iii) abandoned dependent young flying-foxes.

**Contiguous vegetation** - trees immediately adjacent to, adjoining or touching the existing vegetation that form the roost, for e.g. a relatively continuous canopy, or where canopies nearly touch, often of similar species or part of a similar ecological setting.

**Non-contiguous vegetation** – trees separated by open grassland, urban areas or similar land uses; or trees of a distinct ecological setting, for e.g. where flying-foxes move from natural or semi-natural areas to nearby planted backyard/ornamental trees, or vice versa.

### Human Rights Act 2019 compatibility

The department is committed to respecting, protecting and promoting human rights. Under the [Human Rights Act 2019](#), the department has an obligation to act and make decisions in a way that is compatible with human rights and, when making a decision, to give proper consideration to human rights. When acting or making a decision under this Operational Policy, officers must comply with that obligation (refer to [Comply with Human Rights Act](#)).

### Disclaimer

While this document has been prepared with care it contains general information and does not profess to offer legal, professional or commercial advice. The Queensland Government accepts no liability for any external decisions or actions taken on the basis of this document. Persons external to the Department of Environment and Science should satisfy themselves independently and by consulting their own professional advisors before embarking on any proposed course of action.

### Approved By

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Signature

14.07.2021

Date

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