



Environmental Approval & Compliance Solutions

Response to Public Comments on the Revised Flying-fox Relocation Management Plan

Cairns Regional Council

Document Control Summary

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Report Summary	
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Abstract	The Commonwealth Department of Agriculture, Water and the Environment is assessing an EPBC Act referral application prepared by Cairns Regional Council (CRC) (EPBC 2019/8424) to relocate the Cairns City Flying-fox Colony through the <i>preliminary documentation</i> process. NRA prepared a revised Flying-fox Relocation Management Plan (FFRMP) on behalf of CRC. In January 2020, CRC made the FFRMP available for public comment. This report provides a summary of comments received on the FFRMP and provides responses to those comments.

Citation
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1. Introduction

Cairns Regional Council (CRC) proposes to relocate a colony of Spectacled Flying-fox (*Pteropus conspicillatus*) (SFF)¹ currently roosting at the Cairns City Library (hereafter Cairns City FF colony) to a suitable alternative site. A referral application (EPBC 2019/8424) under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) relating to the proposed relocation was submitted to the Commonwealth Department of the Environment and Energy (DoEE)² for assessment. The decision notice from DoEE, dated 24 May 2019, advised that the proposed action was a *controlled action* and that the assessment approach would be via *preliminary documentation*.

CRC engaged NRA Environmental Consultants (NRA) to assist with the preparation of information to address the requirements of the *preliminary documentation*. This included the preparation of a revised Flying-fox Relocation Management Plan (FFRMP) (NRA 2019). In accordance with the requirements of *preliminary documentation*, CRC published the revised FFRMP on 6 January 2020 and made it available for public comment between 6 and 31 January 2020. The public comments were consolidated and provided to NRA in email correspondence on 4 February 2020 and 12 February 2020. This report provides a summary of the public comments as well as responses to the summarised comments.

This report was provided (R01 working copy) to CRC on 17 February 2020. CRC submitted the R01 version to DoEE on 20 February 2020. DoEE provided written advice on the next steps in the preliminary documentation assessment process on 5 March 2020. In this correspondence, DoEE also provided 12 public submissions received during the public comment consultation period. NRA and CRC independently reviewed the submissions, confirming that each of these had previously been received and addressed. One of the submissions contained a letter attachment that was not provided to NRA when compiling information for the R01 version of the report. This letter attachment has now been reviewed, incorporated into documentation and addressed in this final version (R02) of the report.

¹ The Spectacled Flying-fox is currently listed as endangered under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

² Now the Commonwealth Department of Agriculture, Water and the Environment.

2. Methods

The public comment submissions were considered and/or interrogated in the following stages.

1. An overview to identify common themes.
2. Scoring of each comment against the list of themes.
3. A review to develop descriptors that best represent the comments under each theme.
4. Development of responses to each theme and its associated descriptors.

3. Results

In total, 596 individual submissions containing comments in response to the revised FFRMP were received by CRC. A range of sentiments were expressed, ranging from supportive to unsupportive as well as non-committal or equivocal. The following general themes, which encompass the topics raised, were identified:

- alternatives
- aviation strike
- costs
- communication
- method
- risk to SFF
- risk to humans
- risk to trees.

The number of submissions discussing each theme, a set of descriptors for each theme, and responses are provided in **Table 1**. The complete set of individual submissions and their scores in relation to the above themes are presented in **Appendix A**.

Table 1: A summary of submissions received during CRC's public comment process presented in the form of themes and descriptors, and responses to each set of descriptors

Theme	Number of submissions with theme	Descriptors	Response
Alternatives	550 (92%)	<ul style="list-style-type: none"> There should be a more thorough consideration of the alternatives to the proposed FFRMP. The FFRMP is likely to be unsuccessful. 	<ul style="list-style-type: none"> Practicable alternatives to the proposed action are described in the FFRMP (Section 3.2). The alternatives are: <ul style="list-style-type: none"> 'Do nothing. The 'do nothing approach' (<i>ie</i> cease all actions), is likely to culminate in the loss of roost trees at the Cairns City Library site, reducing the aesthetic qualities of the area and the value of the area as habitat, and perpetuate the risk of potential negative human interaction with flying-foxes. The viability of the Cairns City FF colony will rely on its capacity to occupy a suitable habitat. Maintain the current approach. The current approach is not sustainable (<i>ie</i> the Cairns City FF colony is causing damage to the roost trees). Heavily pruning the trees and reducing them temporarily to a height that would render them undesirable for SFFs to roost in. Pruning is already undertaken to the maximum permitted. Removing and replacing the trees around the library with trees that are too small to be used as roosts for SFFs. Removing heritage listed trees is not permitted, is undesirable, and will reduce the aesthetic qualities of the area. Installing netting for at least the medium-term (<i>ie</i> 12-24 months) to deter SFFs from breeding and roosting at the site. CRC has determined that the costs to install and maintain the netting are materially significant. An alternative relocation site.' The Cairns City FF colony is located centrally in Cairns CBD, an area that has been zoned for development since 1876. Development and associated change in the CBD, including land parcels surrounding the library site, will continue. The management of fauna, including flying-foxes, will be an ongoing consideration. The action of relocating the Cairns City FF colony out of the CBD presents a solution to the land use conflict. Maintaining the status quo will forego the opportunity to relocate a flying-fox colony to a site that would offer improved chances of the recovery of the SFF. It would also be likely to result in the loss of heritage listed trees. Both outcomes are undesirable. Other alternatives that have been suggested are not practicable. The likelihood of relocation success is discussed in the FFRMP (see Section 3.3). As noted in the FFRMP, CRC is committed to undertaking 'management and deterrent activities until the current site occupied by the Cairns City FF colony has been abandoned'.
Aviation strike	425 (71%)	<ul style="list-style-type: none"> The dispersal of SFF from the Cairns City FF colony during relocation presents an unacceptable risk of air strike. The proposed relocation site (Cairns Central Swamp) is unsuitable due to risk of air strike. Information presented in the FFRMP about air strike is misleading. A risk assessment for air strike has not been undertaken. 	<ul style="list-style-type: none"> Information on air strike is provided in Section 3.1 of the FFRMP; reporting that 'In terms of suitability as a relocation site, Cairns Central Swamp...is within the same or near same bird/bat strike hazard zone as the current Cairns City FF colony location with respect to the CRC Planning Scheme 2009 (CRC 2009) and 2019 (CRC 2019) respectively, yet it has a far lower frequency of flight path intersects compared to the Cairns CBD (Appendix F)'. The information used for the reporting is presented in the FFRMP and is in the public domain. The CRC Planning Scheme is prepared pursuant to statutory requirements by a Government entity. The presented flight path information is prepared by a government-owned organisation, Airservices Australia, which, among other things, is responsible for Australia's airspace management. The claim of misleading is rejected. The precise target site for relocation (<i>ie</i> expected to be within Lot 115 on NR800836 and/or Lot 122 on SP136287) will be determined during implementation planning following consideration of deciding factors pertinent to site refinement. The presence of several flying-fox colonies across Cairns City (including the Cairns City FF colony and the colony roosting at the Cairns Central Swamp (Anderson Street, Manunda), near the proposed relocation site) means that there is an existent risk of air strike. As noted in the FFRMP (Sections 3.6.2 and 3.6.3), stakeholder consultation and risk assessment associated with the proposed relocation will be undertaken during the implementation phase.
Costs	516 (87%)	<ul style="list-style-type: none"> The FFRMP has not assessed the economic or social impacts of the management action. Relocation of the Spectacled Flying-fox colony will remove a tourist attraction. Continued flying-fox dispersal and deterrence in the Cairns CBD will result in unsustainable financial costs to ratepayers 	<ul style="list-style-type: none"> The FFRMP has been prepared in response to the information request from the regulator that administers the EPBC Act. Alternative opportunities exist for visitors to the Cairns region to visit other large flying-fox roost sites, such as the colonies at Cairns Central Swamp (Anderson Street, Manunda), Gordonvale and Edmonton, which are listed on the National Flying-fox Monitoring Viewer. Each of these sites can be viewed from publicly accessible areas and all contain SFF. As noted in the FFRMP (Section 3.5), CRC has committed to commissioning a pilot study to explore approaches to flying-fox deterrence and management with the aim of reducing future financial costs.
Communication	453 (76%)	<ul style="list-style-type: none"> A consistent and evidenced-based reason for the FFRMP has not been communicated. The reasons given for relocation are misleading. The objectives of the FFRMP have not been communicated consistently. The FFRMP proposes a management action that, according to legislation, is dispersal and deterrence; therefore, the term 'relocation' is misleading. 	<ul style="list-style-type: none"> As noted in Section 2 of the FFRMP, the data from the Cairns City FF colony attributes a large number of juvenile deaths to this colony. The FFRMP noted that: <ul style="list-style-type: none"> 'After comparing a subset of this data with available mortality data from other flying-fox colonies across the Wet Tropics bioregion, the Bats and Trees Society of Cairns Inc. reported disproportionately high rates of mortality (and juvenile bat abandonment) associated with the Cairns City FF colony in 2017 (Appendix C). The reasons for the high rates of pup mortality are not known; however, the high mortality rates may, at least in part, be due to the diminishing quality of the roost site.' 'In the absence of information to the contrary, the current situation involving high rates of pup mortality is considered likely to be interfering with the recovery of SFF. In response to these circumstances, CRC seeks to change its strategy of managing the Cairns City FF colony to active management that encourages the flying-foxes to move from the Cairns City FF colony to a suitable location outside of the Cairns CBD (Figure 1).' The claim of misleading is rejected. The information in Section 2 invokes the precautionary principle, which the Minister must consider in making decisions. <ul style="list-style-type: none"> 'The precautionary principle is that lack of full scientific certainty should not be used as a reason for postponing a measure to prevent degradation of the environment where there are threats of serious or irreversible environmental damage' (EPBC Act). CRC has publicly declared its intention to move the Cairns City FF colony out of the CBD on several occasions, including at the 4th Annual National Flying-fox Forum, which was held in Cairns in November 2018 (prior to submission of the referral). In the course of planning high profile actions of this nature, public contact prevails while the objectives, alternatives and decisions related to the action undergo refinement. Planning for the Cairns City FF colony relocation has been no

Theme	Number of submissions with theme	Descriptors	Response
			<p>exception. Throughout this process, CRC has consistently reported its intention to move the colony is for the benefit of the SFF. The assessment in Section 2 of the FFRMP supports this statement and provides evidence that, under current management practices, without intervention, the colony is not likely to be sustainable. The reasons for this, as provided in the FFRMP, are as follows.</p> <ul style="list-style-type: none"> - ‘The progressive loss of roost trees from surrounding areas of the CBD has increased the reliance on a small number of roost trees around the Cairns City library; there being four trees, one of which has received structural support interventions on two occasions, one in the past six months (<i>pers. comm.</i> CRC Arborist, 2 August 2019).’ - A reduction in available trees ‘has resulted in a more intensive and persistent use of the primary roost trees surrounding the library. This increase in roost tree use at the library is causing more frequent and sustained damage to the trees. Over time, this reduces the available canopy area that can be used by the flying-foxes. Further, the damage is reducing the health of the trees, which has devolved risks to public safety (<i>eg</i> falling branches).’ - ‘The high usage of the limited number of trees by SFF is progressively decreasing the health of the trees and contributing to the further loss of roosting space. This deterioration in tree health/roost quality will likely continue unless the demand on the roost trees is reduced (by the SFF population reducing or more roost trees becoming available) and the trees are permitted adequate time to recover.’ - ‘The health of roost trees at the library site, and therefore viability of the site as a SFF roost, is diminishing.’ <ul style="list-style-type: none"> • CRC will incorporate methods of dispersal and deterrence into implementation of the relocation action. However, the intent is to relocate the colony from their current location in Cairns city to Cairns Central Swamp, hence the use of the term relocation.
Method	488 (82%)	<ul style="list-style-type: none"> • The methods for relocation are not adequately described. • The methods for monitoring are not detailed. • The change management decision table is too simplistic. • There is no guarantee that SFF will move to the proposed relocation site. • Detailed contingency plans need to be prepared. • The proposed relocation site does not provide suitable habitat for SFF. 	<ul style="list-style-type: none"> • As noted in the FFRMP (Section 3.6), the proposed action ‘will be undertaken in accordance with an Implementation Plan prepared prior to commencement of the proposed action’. This includes the relocation methods. • Monitoring will use established methods reported as follows (from Section 3.6.4 of the FFRMP). <ul style="list-style-type: none"> - ‘Pre-relocation: <ul style="list-style-type: none"> o baseline monitoring for the purpose of habitat assessment at Cairns Central Swamp, which will include BioCondition monitoring in accordance with DEHP (2017) o baseline monitoring at Cairns Central Swamp for the purpose of assessing unintended consequences to other flora and fauna, which is to be undertaken cognisant of accepted methods (<i>eg</i> Eyre <i>et al.</i> 2018) o preliminary monitoring of SFF (monthly counts) at known roost sites in the Cairns region... in accordance with methods used by DoEE for the national monitoring program (DoEE 2019), including at least one survey for the presence of dependant pups at the Cairns City FF colony on the day prior to commencement of the relocation action. - During relocation: <ul style="list-style-type: none"> o daily monitoring of SFF at the current site of the Cairns City FF colony o daily monitoring of SFF at Cairns Central Swamp o daily monitoring of SFF at intermediate sites should these occur as a component of the relocation action to Cairns Central Swamp. - Following relocation (and to continue for three years): <ul style="list-style-type: none"> o annual monitoring of SFF habitat condition at Cairns Central Swamp o periodic monitoring at Cairns Central Swamp (<i>ie</i> once in the wet season and once in the dry season)...to assess unintended consequences to other flora and fauna, which is to be undertaken cognisant of accepted methods (<i>eg</i> Eyre <i>et al.</i> 2018). o annual monitoring at the current site of the Cairns City FF colony site undertaken following the wet season to evaluate tree condition o regular monitoring of SFF (monthly counts) at known roost sites in the Cairns region, including (but not limited to) the current site of the Cairns City FF colony and the relocation site at Cairns Central Swamp.’ <p>As noted in the FFRMP (Section 3.6.4), monitoring will be subject to annual review and any revisions agreed in writing with the relevant Commonwealth administering authority.</p> <ul style="list-style-type: none"> • The change management matrix was designed to provide prompts to identify where changes to management measures are required. This allows rapid identification of the need for problem solving and decision making in cases where a change management is triggered. • CRC will use strategic methods to guide the colony during relocation. It is acknowledged that relocated flying-foxes may use alternative sites for roosting on the day following relocation. Pending approval of the action, CRC will remain committed to relocating the Cairns City FF colony. • As noted in the FFRMP (Section 3.1), with regard to suitability of the proposed relocation site (Cairns Central Swamp): <ul style="list-style-type: none"> - ‘is a former roost site for SFF (Garnett <i>et al.</i> 1999) - contains approximately 30 ha of remnant rainforest and paperbark swamp that is suitable habitat for the SFF, and was determined to be as suitable for the establishment of a flying-fox release enclosure (Appendix D; WPSQ 1978-1993, NRA 2005) - has been recently surveyed to confirm habitat is suitable for SFF’.
Risk to SFF	517 (87%)	<ul style="list-style-type: none"> • The FFRMP will remove available habitat. • No enhancement of habitat has been undertaken at the proposed relocation site. • The Cairns City FF colony habitat has been used by SFF for a substantial period of time (<i>eg</i> since 1915). 	<ul style="list-style-type: none"> • As noted in the FFRMP (Section 3.3), the action will relocate the flying-foxes without removing the trees currently used as roosting habitat. Given their heritage status, the removal of the trees is not permitted. • CRC will consider and review options to enhance habitat at the proposed relocation site during the implementation phase. • While there have been reports of flying-fox activity in the Cairns region since 1889 (Westcott 2013), the date of colony establishment at Cairns library is understood to be more recent (‘at least 30 years’ according to Cohen (2017)). The proposed relocation site at Cairns Central Swamp has had a long history of supporting flying-fox colonies, with earliest report being from 1931 (WPSQ 2000).

Theme	Number of submissions with theme	Descriptors	Response
		<ul style="list-style-type: none"> The persistence of SFF roosting at the Cairns City FF colony, despite the history of maintenance actions and change, is indicative of the fidelity of the colony. This suggests that the relocation is likely to fail and the need for repeated action will be necessary. The action will affect more individuals than just the SFFs present when dispersal actions are undertaken. The FFRMP has not adequately assessed the potential for significant impacts on a species that was (in 2019) transferred from Vulnerable to Endangered under the EPBC Act. The action has the potential to directly impact over 10% of the national population that may be roosting at the time of dispersal. The FFRMP has not adequately accounted for the large decrease in the SFF population resulting from the November 2018 heat wave. The SFF birthing season is broader than the dates specified in the report. The recovery plan for SFF was made in 2010 and needs to be updated. There is no management plan for SFF in the Cairns region. The proposed pilot study is a mitigation measure for management activities that are known to impact flying-foxes, not a strategy to avoid long-term population decline. Ethics approvals will be required to undertake the pilot study. 	<ul style="list-style-type: none"> The potential for relocation to be unsuccessful is acknowledged and discussed in the FFRMP (Section 3.3). As noted in Section 2, the available evidence indicates that the colony is not sustainable at the current location. Therefore, CRC remains committed to the relocation and acknowledges that the need for 'management of SFFs in Cairns City is highly likely to persist in perpetuity' (from Section 3.3). The potential for significant impacts to SFF are considered in the FFRMP (Section 3.4). As noted in the FFRMP, the following measures will be undertaken to avoid causing significant impacts. <ul style="list-style-type: none"> 'The proposed action is to occur over three to five years, with continuation determined by the demonstrated achievement of agreed performance outcomes. Establishing a term of the action, which is reliant on demonstrated performance, is an important factor in the assessment of potential risk of causing environmental harm. The monitoring results of the action will dictate its continuation within the three to five year period and will provide the evidence for cessation or continuation of the action. The proposed action will only occur between May and September (<i>ie</i> outside of the SFF pup rearing season in accordance with DoE (2015)). This will specifically aim to avoid a disruption to the species' breeding cycle. The proposed action will cease if dependant pups are present. The proposed action will cease if an SFF death caused by the action is recorded. For the deterrence component, the success criterion is nil SFF deaths due to the action recorded at Cairns City FF colony. For the relocation component, the success criterion is nil SFF deaths due to the action recorded at Cairns City FF colony. For the relocation component, relating to Cairns Central Swamp, the success criterion is no increasing trend in pup mortality relative to estimated population, as measured against the available data for the available breeding seasons from 2014 onwards recorded at Cairns City FF colony, due to the action.' The Commonwealth Referral Guideline for Management Actions in Grey-headed and Spectacled Flying-fox Camps (DoE 2015) states that: 'The action must not occur during or immediately after climatic extremes (heat stress event, cyclone event), or during a period of significant food stress'. CRC acknowledges this requirement, but will defer to the relevant Commonwealth administering authority to clarify the timeframe that would qualify as immediately after a heat stress event. As noted in the FFRMP (Section 3.4), the relocation will be undertaken between May and September to avoid the pup rearing season. The potential for SFF births to occur outside of the October to April pup-rearing season is addressed in Section 3.6.5 of the FFRMP through incorporation of the following measure. <ul style="list-style-type: none"> 'The relocation action is to be rescheduled to occur when no dependant pups can be detected by a suitably qualified person(s) at the current site of the Cairns City FF colony.' The national recovery plan for the spectacled flying fox produced in 2010 is current as at January 2020. In terms of significant impacts, for species listed as Endangered under the EPBC Act, assessments are framed against the whole population of the species, as opposed to a regional population (or subpopulations) (which may be assessed as 'important populations' for Vulnerable species). Therefore, the national recovery plan is presented at the correct scale of assessment for SFF, inclusive of the Cairns region population(s). The proposed pilot study aligns with the purpose of undertaking the relocation action, which addresses the issue of the Cairns City FF colony being unsustainable. The study will contribute to avoiding the long-term decline in the national population of SFF through exploring improved techniques for deterrence from an unsustainable roost location, for implementation post-relocation. The necessary ethics approvals will be sought prior to undertaking the study.
Risk to humans	498 (84%)	<ul style="list-style-type: none"> The FFRMP will lead to or increase the risk of flying-fox colony fragmentation and the proliferation of negative flying-fox and human interactions in the CBD and more widely in the Cairns region. Flying-foxes are linked to the spread of disease. Techniques used to disperse or deter flying-foxes present a risk to humans. 	<ul style="list-style-type: none"> As noted in Section 3.4 of the FFRMP, CRC is proposing to undertake the relocation over three to five years. If, during the relocation, flying-foxes relocate to undesirable sites, and if this is determined to likely be a consequence of the relocation, CRC will take corrective actions in accordance with the Implementation Plan. Flying-foxes and bats may carry diseases that can be harmful to humans; however, the risk of infection is low. The following information source (issued by the Queensland Government) provides advice on bats and human health: http://conditions.health.qld.gov.au/HealthCondition/condition/14/217/14/bats-and-human-health. As noted in Section 2 of the FFRMP, CRC engages a contractor to use techniques to deter flying-foxes from roosting in the Cairns CBD (outside of the Cairns City FF colony roost site). This has occurred on a daily basis for the past two years. The techniques are established; potential risks to human health can be, and are being managed, under existing protocols.
Risk to trees	77 (13%)	<ul style="list-style-type: none"> Previous planning decisions on the management and removal of trees surrounding the Cairns City FF roost should not be ignored as a factor that has contributed to the present issues of unsustainability of the roost. There is no evidence that the trees in the Cairns City FF Colony are dying. CRC has not adequately demonstrated attempts to improve tree health. Flying-foxes pose a risk to the health of trees at the proposed relocation site. 	<ul style="list-style-type: none"> An incremental loss of trees in the urban landscape surrounding the Cairns library has occurred as part of development of the Cairns CBD. The proposed relocation addresses present issues associated with the sustainability of the remaining roost trees at the site of the Cairns City FF colony. Decisions made to allow the removal of trees in the past do not change the present situation. The FFRMP provides evidence of a tree health problem prior to the removal of a roost tree (Appendix B). The FFRMP (Section 2) notes that one of the remaining roost trees 'received structural support interventions on two occasions, one in the past six months (<i>pers. comm.</i> CRC Arborist, 2 August 2019)'. CRC engaged the expertise of specialists in tree propping from interstate to save this tree. As stated in the FFRMP (Section 3.6.4), prior to relocation, CRC is committed to undertaking 'baseline monitoring at Cairns Central Swamp for the purpose of assessing unintended consequences to other flora and fauna'. The results of this monitoring will inform implementation planning. Following relocation (and to continue for three years), CRC will conduct 'periodic monitoring at Cairns Central Swamp (<i>ie</i> once in the wet season and once in the dry season)...to assess unintended consequences to other flora and fauna'.

4. References

Cohen, M 2017, *Flying-fox Survey in the Cairns CBD (April, 2017)*, report to Cairns Regional Council by Dr Martin Cohen (Wild about Australia).

CRC 2009, *CairnsPlan 2009* [CairnsPlan 2009 was adopted as a consolidated planning scheme by Cairns Regional Council on 25 February 2009, and commenced on 1 March 2009. It was superseded by the CairnsPlan 2016 which commenced on 1 March 2016].

CRC 2019, *CairnsPlan 2016 Version 2.1* [Current version of the planning scheme; adopted by Cairns Regional Council on 23 October 2019 and commenced on and from 11 November 2019].

DEHP 2017, *Guide to determining terrestrial habitat quality. A toolkit for assessing land based offsets under the Queensland Environmental Offsets Policy. Version 1.2 April 2017*, Biodiversity Integration and Offsets, Ecosystem Outcomes, Department of Environment and Heritage Protection, <https://environment.des.qld.gov.au/assets/documents/pollution/management/offsets/habitat-quality-assessment-guide.pdf>, viewed 3 August 2019.

DoE 2015, *Referral Guideline for Management Actions in Grey-headed and Spectacled Flying-fox Camps, EPBC Act Policy Statement September 2015*, Australian Government Department of the Environment, Canberra.

DoEE 2019, *National Flying-fox monitoring viewer*, Department of the Environment and Energy, Canberra, viewed 22 July 2019, <<http://www.environment.gov.au/webgis-framework/apps/ffc-wide/ffc-wide.jsf>>.

Eyre, TJ, Ferguson, DJ, Hourigan, CL, Smith, GC, Mathieson, MT, Kelly, AL, Venz, MF, Hogan, LD & Rowland, J 2018, *Terrestrial Vertebrate Fauna Survey Assessment Guidelines for Queensland Version 3.0*, Department of Environment and Science, Brisbane.

Garnett, S, Whybird, O & Spencer, H 1999, 'The conservation status of the Spectacled Flying Fox *Pteropus conspicillatus* in Australia', *Australian Zoologist*, 31: 38–54.

NRA 2005, *Cairns Central Swamp Wetland Management Plan*, prepared by NRA Environmental Consultants for Cairns City Council [now Cairns Regional Council].

NRA 2019, *Cairns Flying-fox Relocation Management Plan*, R07, prepared by NRA Environmental Consultants for Cairns Regional Council, 13 December 2019.

Westcott, D 2013, *Flying-foxes and settlements in FNQ: evidence from the early Cairns newspapers*, Cairns and Far North Environment Centre, viewed 17 January 2019, <<https://caf nec.org.au/2013/09/17/flying-foxes-and-settlements-in-fnq-evidence-from-the-early-cairns-newspapers/>>.

WPSQ 1978–1993, *Archive documents pertaining to the Cairns Central Swamp*, Wildlife Preservation Society of Queensland.

WPSQ 2000, *Cairns Flying-fox Camp Survey and Map*, Wildlife Preservation Society of Queensland.

Appendix A:
Public comment submissions
received and scoring against
themes

(separate Excel spreadsheet)

Not for general distribution