



COMMUNITIES COMMITTEE MEETING

AGENDA

21 JUNE 2022

Your attendance is required at a Communities Committee meeting of Council to be held in the Council Chambers, 232 Bolsover Street, Rockhampton on 21 June 2022 commencing at 09:00am for transaction of the enclosed business.

A handwritten signature in black ink, appearing to be "C. P.", is positioned above the typed name of the Chief Executive Officer.

CHIEF EXECUTIVE OFFICER
16 June 2022

Next Meeting Date: 19.07.22

Please note:

In accordance with the *Local Government Regulation 2012*, please be advised that all discussion held during the meeting is recorded for the purpose of verifying the minutes. This will include any discussion involving a Councillor, staff member or a member of the public.

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1 OPENING

1.1 Acknowledgement of Country

2 PRESENT

Members Present:

The Mayor, Councillor A P Williams (Chairperson)
Deputy Mayor, Councillor N K Fisher
Councillor S Latcham
Councillor C E Smith
Councillor C R Rutherford
Councillor M D Wickerson
Councillor D Kirkland
Councillor G D Mathers

In Attendance:

Mr E Pardon – Chief Executive Officer

3 APOLOGIES AND LEAVE OF ABSENCE

4 CONFIRMATION OF MINUTES

Minutes of the Communities Committee held 17 May 2022

5 DECLARATIONS OF INTEREST IN MATTERS ON THE AGENDA

6 BUSINESS OUTSTANDING

Nil

7 PUBLIC FORUMS/DEPUTATIONS

Nil

8 OFFICERS' REPORTS

8.1 FLYING FOX ROOST MANAGEMENT PLAN

File No:	1160
Attachments:	1. Draft Flying Fox Roost Management Plan ↓
Authorising Officer:	Doug Scott - Manager Planning and Regulatory Services Alicia Cutler - General Manager Community Services
Author:	Karen Moody - Coordinator Health and Environment

SUMMARY

This report provides the Flying-Fox Roost Management Plan for Council Approval.

OFFICER'S RECOMMENDATION

THAT Council approves the Flying-Fox Roost Management Plan.

COMMENTARY

Flying-foxes are a native animal that play an important role in dispersing seeds and pollinating flowering plants within our environment. However, from time to time flying-fox roosts conflict with residential areas of our region.

Within the Rockhampton Regional Council area, the three main roosts that conflict with residential areas are located at the Rockhampton Botanic Garden, Kabra and Westwood. Actions taken to date have been ad hoc and have had varying degrees of success.

The development of a plan to coordinate the future management of these roosts will assist Council to plan appropriate actions in relation to the management of these roosts. The plan will also inform the community of the reasons for the decisions.

The developed plan provides background and legislative context to the management of flying-foxes as well as outlines a wide range of options for consideration in the management of the flying-fox roosts.

BACKGROUND

In 2021 the State Government announced a 2021-2024 Flying-Fox Roost Management grant program. This program delivers \$2 million of grant funding in 6 competitive rounds over 4 years. Rockhampton Regional Council was successful in round 1 of this grant program to develop a flying-fox roost management program to assist with future management of flying-fox roosts.

The plan has been developed by Ecosure in consultation with Council staff.

PREVIOUS DECISIONS

The first draft of the Flying-Fox Roost Management Plan was presented to Council at the Communities Committee meeting on 19 April 2022. Feedback from Councillors and staff were then provided to Ecosure for incorporation into the management plan.

BUDGET IMPLICATIONS

The development and approval of this plan has limited budget impacts, 85% of the costs in developing the plan were covered with the grant money received, the difference has been covered through the operational budget.

LEGISLATIVE CONTEXT

There is no legislative responsibility for Council to have a developed flying-fox management program. The program outlines Councils responsibilities under the *Nature Conservation Act 1992* in relation to management activities that may be undertaken at the relevant roosts.

LEGAL IMPLICATIONS

There are no legal implications to the approval of this plan. On ground actions have legal implications if not conducted in accordance with the *Nature Conservation Act 1992*.

STAFFING IMPLICATIONS

There are no staffing implications on the approval of this plan.

RISK ASSESSMENT

There are no identified additional risks to approving this plan.

CORPORATE/OPERATIONAL PLAN

The appropriate management of flying-foxes contributes to meeting outcome 1.4 of the Corporate Plan – Healthy Living and Active Lifestyles by ensuring the public can enjoy all of Councils amenities including the entire Rockhampton Botanic Gardens.

CONCLUSION

The Flying-Fox Roost Management Plan has been developed to assist Council in the future management of flying-fox roosts within our community. This includes consultation with the community and staff and the document is now ready for approval.

FLYING FOX ROOST MANAGEMENT PLAN

Draft Flying Fox Roost Management Plan

Meeting Date: 21 June 2022

Attachment No: 1



 **ecosure**
improving ecosystems

FLYING-FOX ROOST MANAGEMENT PLAN

DRAFT R1

May 2022

ROCKHAMPTON REGIONAL COUNCIL



Acknowledgements

We acknowledge the Traditional Owners of this country and pay respect to all Aboriginal and Torres Strait Islander peoples. Traditional Custodians in the Rockhampton Area the First Nations Darumbal peoples. We acknowledge the Elders past, present and emerging and acknowledge the spirits and ancestors of the Clans that lived in this area.

Thanks to the Department of Environment and Science for the supply of historical roost data, and to the Queensland Herbarium/Department of Environment and Science/CSIRO for sharing information and spatial data on flying-fox foraging resources in the area.

We would also like to acknowledge and thank Council for the provision of data and support during the development of this Plan.



Acronyms and abbreviations

ABLV	Australian bat lyssavirus
ACP Act	<i>Animal Care and Protection Act 2001</i> (Queensland)
AEC	Australian Ethics Committee
AIHW	Australian Institute of Health and Wellbeing
ASAP	As soon as possible
ATSB	Australian Transport Safety Bureau
AVA	Australian Veterinary Association
BFF	Black flying-fox (<i>Pteropus alecto</i>)
CA Act	<i>Civil Aviation Act 1998</i> (Queensland)
CASA	Civil Aviation Safety Authority
CASR	Civil Aviation Safety Regulations
CDC	Centres for Disease Control and Prevention
Council	Rockhampton Regional Council
COVID-19	Sudden Acute Respiratory Syndrome SARS-CoV-2
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAWE	Department of Agriculture, Water and the Environment (Commonwealth)
DECCW	Department of Environment, Climate Change and Water (New South Wales)
DELWP	Department of Environment, Land, Water and Planning (Victoria)
DES	Department of Environment and Science (Queensland)
DMP	Damage Mitigation Permit
DoE	Department of the Environment (now DAWE)
DPI	Department of Primary Industries (New South Wales) (now DPIE)
DPIE	Department of Planning, Industry and Environment (New South Wales)
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EVNT	Endangered, vulnerable and near threatened
FF	Flying-fox
FFMP	Flying-fox Management Plan
FFRMP	Flying-fox Roost Management Permit
GHFF	Grey-headed flying-fox (<i>P. poliocephalus</i>)



HeV	Hendra virus
HSE	Heat Stress Event
ICAO	International Civil Aviation Organisation
IUCN	International Union for the Conservation of Nature
LGA	Local government area
Low Impact COP	<i>Code of Practice – Low impact activities affecting flying-fox roosts (DES 2020c)</i>
LRFF	Little red flying-foxes (<i>P. scapulatus</i>)
Management COP	<i>Code of Practice – Ecologically sustainable management of flying-fox roosts (DES 2020a)</i>
MERS	Middle East Respiratory Syndrome MERS-CoV
MNES	Matters of national environmental significance
MOS	Manual of Standards
NC Act	<i>Nature Conservation Act 1992 (Queensland)</i>
n.d.	No date
NSW	New South Wales
OEH	Office of Environment and Heritage (New South Wales)
the Plan	RRC Flying-fox Roost Management Plan
PPE	Personal Protective Equipment
Qld	Queensland
RBG	Rockhampton Botanic Gardens
REs	Regional Ecosystems
PMST	Protected Matters Search Tool
RRC	Rockhampton Regional Council
RSPCA	Royal Society for the Prevention of Cruelty to Animals
SARS	Sudden Acute Respiratory Syndrome SARS-CoV-1
SEQ	South-East Queensland
SL	Special least concern species (conservation status of taxon under the <i>Nature Conservation Act 1992</i>)
SOMI	Statement of Management Intent
UFFMA	Urban Flying-fox Management Area
VM Act	<i>Vegetation Management Act 1999 (Queensland)</i>
WHA	Wildlife Health Australia
NC Animals Regulation	Nature Conservation (Animals) Regulation 2020



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1 Introduction

The Rockhampton Regional Council Flying-fox Management Plan (the Plan) provides Rockhampton Regional Council (Council) with a framework to manage issues that may be associated with three high-conflict flying-fox roosts in the Rockhampton Local Government Area (LGA) and any new emerging sites, whilst ensuring flying-foxes and their ecological services are conserved.

The Plan will focus on three roosts that, at times, experience high conflict with surrounding residents and community members: Rockhampton Botanic Gardens (RBG), Kabra township, and Westwood township. However, it has been developed in a way to assist Council with management and mitigation actions available upon emergence of new roosting sites. The Plan details short- and long-term management actions for the three focal roosts, and provides a framework for assessing and implementing management actions at new, emerging roosts.

The objectives of the Plan are to:

- minimise impacts to the community and avoid future conflicts
- outline management actions that can be utilised at roosts, and which management actions require permits/approvals
- ensure actions are in accordance with relevant legislation
- clearly define roles and responsibilities for management actions
- facilitate an evidence-based, adaptive approach to management
- improve community understanding and appreciation of flying-foxes including their ecological role
- improve community resilience to flying-fox impacts
- minimise amenity impacts associated with roosting flying-foxes
- support long-term conservation of flying-foxes in appropriate locations
- ensure management is sympathetic to flying-fox behaviours and requirements, and that flying-fox welfare is a priority during all activities
- ensure roost management does not contribute to loss of biodiversity or increase threats to threatened species/communities
- effectively communicate with stakeholders during planning and implementation of management activities.

Three species of flying-foxes occur in Queensland: grey-headed flying-fox (*Pteropus poliocephalus*) (GHFF), black flying-fox (*P. alecto*) (BFF), and little red flying-fox (*P. scapulatus*) (LRFF). Roosts in Rockhampton are mainly occupied by BFF, and often at times by the highly transient LRFF. Rockhampton is located at the northern extent of the current known range of the GHFF, with occasional GHFF occupation noted in the LGA. As native animals, all flying-foxes and their roost habitat are protected under the Queensland *Nature*



Conservation Act 1992 (NC Act). The GHFF is classified as threatened, therefore is afforded additional protection under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

1.1 Stakeholders

Stakeholders with an interest in the Rockhampton roost sites and/or flying-foxes include:

- community visitors and businesses in/around Rockhampton Botanic Gardens
- nearby residents/businesses
- Rockhampton South Kindergarten and Westwood State School, with flying-foxes roosting on or adjacent to school grounds
- Rockhampton Regional Council and the Rockhampton Airport
- Department of Environment and Science (DES)
- wildlife carers, researchers, conservationists and community groups such as Batcare Capricornia
- Traditional Custodians - in the Rockhampton area, the First Nations Darumbal peoples are the traditional custodians.

Feedback has been sought from many of these stakeholders through consultation over the past several years, and Council will consult with all key stakeholders prior to Plan implementation.

1.2 Legislation overview

All three flying-fox species located in the Rockhampton LGA and their roost sites are protected in Queensland under the NC Act. The GHFF is also protected as a vulnerable species under the Commonwealth EPBC Act, affording it additional protection.

Under Queensland legislation, local governments have an 'as-of-right' authority under the NC Act to manage flying-fox roosts in mapped Urban Flying-fox Management Areas (UFFMAs) in accordance with the Code of Practice – Ecologically sustainable management of flying-fox roosts (Management COP) (DES 2020a). The Management COP outlines how local governments operating under section 61 of the Nature Conservation (Animals) Regulation 2020 (NC Animals Regulation) may:

- a) destroy a flying-fox roost;
- b) drive away, or attempt to drive away, a flying-fox from a flying-fox roost ('drive away' is defined to mean "cause the flying-fox to move away from the roost; or if the flying-fox has moved away from the roost, deter the flying-fox from returning to the roost"); and/or
- c) disturb a flying-fox in a flying-fox roost.



The document details key obligations prior to, during, and following undertaking such management actions to ensure that the chance of management actions under this code resulting in harm to flying-foxes is avoided. Refer to Appendix 1 for key obligations when undertaking nudging and/or dispersal attempts.

The Flying-fox Roost Management Guideline (DES 2020b) has also been developed to provide local government with additional information that may assist decision making and management of flying-fox roosts. Councils are required to apply for a flying-fox roost management permit (FFRMP) to manage flying-fox roosts outside an UFFMA, or for management actions not specified in the COP. It must be noted that this 'as-of-right' authority does not oblige Council to manage flying-fox roosts, and does not authorise management under other relevant sections of the NC Act or other legislation (such as the Vegetation Management Act 1999 [VM Act]).

Anyone other than local government is required to apply to the Department of Environment and Science (DES) for a FFRMP for any management directed at roosting flying-foxes, or likely to disturb roosting flying-foxes. Certain low impact activities (e.g. mowing, minor tree trimming) do not require approval if undertaken in accordance with the Code of Practice – Low impact activities affecting flying-fox roosts (DES 2020c).

The Animal Care and Protection Act 2001 also provides for animal welfare, and any management must comply with this legislation.

Key Commonwealth and State legislation specific to flying-fox management is summarised in further detail in Appendix 1.



2 Flying-fox ecology & impacts

2.1 Ecological role

Flying-foxes, along with some birds, make a unique contribution to ecosystem health through their ability to move seeds and pollen over long distances (Southerton et al. 2004). This contributes directly to the reproduction, regeneration, and viability of forest ecosystems (DAWE 2020). It is estimated that a single flying-fox can disperse up to 60,000 seeds in one night (DELWP 2015). Some plants, particularly *Corymbia* spp., have adaptations suggesting they rely more heavily on nocturnal visitors such as bats for pollination than daytime pollinators (Southerton et al. 2004).

Flying-foxes may travel 100 km in a single night with a foraging radius of up to 50 km from their roost (McConkey et al. 2012) and have been recorded travelling over 500 km in two days between roosts (Roberts et al. 2012). In comparison, bees, another important pollinator, move much shorter foraging distances of generally less than one kilometre (Zurbuchen et al. 2010).

Long-distance seed dispersal and pollination make flying-foxes critical to the long-term persistence of many plant communities (Westcott et al. 2008, McConkey et al. 2012), including eucalypt forests, rainforests, woodlands and wetlands (Roberts 2006). Seeds that are able to germinate away from their parent plant have a greater chance of growing into a mature plant (DES 2018). Long-distance dispersal also allows genetic material to be spread between forest patches that would normally be geographically isolated (Parry-Jones and Augée 1992, Eby 1991, Roberts 2006). This genetic diversity allows species to adapt to environmental change and respond to disease pathogens. Transfer of genetic material between forest patches is particularly important in the context of contemporary fragmented landscapes.

Flying-foxes are considered 'keystone' species given their contribution to the health, longevity and diversity among and between vegetation communities. These ecological services ultimately protect the long-term health and biodiversity of Australia's bushland and wetlands. In turn, native forests act as carbon sinks (Roxburgh et al. 2006), provide habitat for other animals and plants, stabilise river systems and catchments, add value to the production of hardwood timber, honey and fruit (Fujita 1991), and provide recreational and tourism opportunities worth millions of dollars each year (DES 2018).

2.2 Flying-foxes in urban areas

Flying-foxes appear to be roosting and foraging in urban areas more frequently. In a study of national flying-fox roosts, 55.1% occurred in urban areas and a further 23.5% in agricultural areas (Timmiss 2017). Furthermore, the number of roosts increased with increasing human population densities (up to ~4000 people per km²) (Timmiss 2017). There are many possible drivers for this urbanising trend, as summarised by Tait et al. (2014):

- loss of native habitat and urban expansion



- opportunities presented by year-round food availability from native and exotic species found in expanding urban areas
- disturbance events such as drought, fires, cyclones
- human disturbance or culling at non-urban roosts or orchards
- urban effects on local climate
- refuge from predation
- movement advantages, e.g. ease of manoeuvring in flight due to the open nature of the habitat or ease of navigation due to landmarks and lighting.

2.3 Roost preferences

Little is known about flying-fox roost preferences; however, research indicates that apart from being in close proximity to food sources, flying-foxes choose to roost in vegetation with at least some of the following general characteristics (SEQ Catchments 2012):

- closed canopy > 5 m high
- dense vegetation with complex structure (upper, mid and understorey layers)
- within 500 m of permanent water source
- within 50 km of the coastline or at an elevation < 65m above sea level
- level topography (< 5° incline)
- greater than one hectare to accommodate and sustain large numbers of flying-foxes.

Proximity to water is a key attribute in roost location (Hall and Richards 2000, Roberts 2005) with one study suggesting that 94% of GHFF roosts in NSW were (at that time) located adjacent to or on a waterway or waterbody (Eby and Lunney 2002).

2.4 Flying-fox breeding cycle

Flying-foxes reach reproductive maturity in their second or third year of life. Reproductive cycles detailed below and in Table 1 are indicative and can vary by several weeks between regions, are annually influenced by climatic variables, and births can occur at any time of the year. All three species (GHFF, BFF, LRFF) have been present at various times in Rockhampton, therefore the breeding cycles of all three species are outlined below.

Expert assessment is required to accurately determine the phase in the breeding cycle to inform appropriate management timing.

Black and grey-headed flying-foxes

Mating begins in January with peak conception occurring around March to April/May; this mating season represents the period of peak roost occupancy (Markus 2002). Young (usually a single pup) are born six months later from September to November depending on species (Churchill 2008). The birthing season becomes progressively earlier, albeit by a few weeks, in



more northerly populations (McGuckin and Blackshaw 1991), however out of season breeding is not unusual and births may occur at any time of the year (Ecosure pers. obs. 2015-2021).

Young are highly dependent on their mother for food and thermoregulation. Young are suckled and carried by the mother until approximately four weeks of age (Markus and Blackshaw 2002). At this time, they are left at the roost during the night in a crèche until they begin foraging with their mother in January and February (Churchill 2008) and are usually weaned by six months of age around March. Sexual maturity is reached at two years of age with an average life expectancy of 5-7 years (Divljan et al. 2006; Fox et al. 2008). Individuals have been recorded to live to 18 years of age in the wild (Tidemann and Nelson 2011).

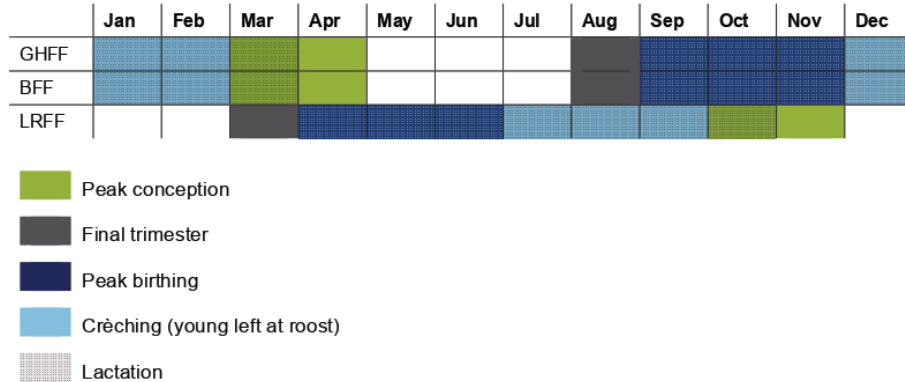
The critical reproductive period for BFF and GHFF is generally from August/September (when females are in late stages of pregnancy) to the end of peak conception around April/May. Dependent pups (Table 1) are usually present from September/October to February.

Little red flying-fox

The LRFF breeding cycle is approximately six months out of phase with BFF and GHFF (Table 1). Conception occurs around October to November, with peak birthing in April-June (McGuckin and Blackshaw 1991, Churchill 2008). Young are carried by their mother for approximately one month then left at the roost while she forages (Churchill 2008). Suckling occurs for several months while young are learning how to forage.

LRFF pups are particularly vulnerable to cold weather and can suffer hypothermia and fall from their crèche trees. If LRFF pups are present, rescuers and carers should be on stand-by during cold weather.

Table 1 Indicative flying-fox reproductive cycle



2.5 Local and regional context

Flying-foxes are highly nomadic, moving across their east coast range between a network of roosts. Roosts may be occupied continuously, annually, irregularly or rarely (Roberts 2005), and numbers can fluctuate significantly on a daily (up to 17% daily colony turnover; Welbergen



et al. 2020) and seasonal basis. A study by Welbergen et al. (2020) tracked individuals of all three species over a 60-month period and found that BFF, GHFF and LRFF roosted in an average of 12, 8 and 24 LGAs per year, respectively. The RBG, Kabra, and Westwood roosts form part of a network of roosts across the species' range (see Appendix 2). There are five known roosts within the Rockhampton LGA, with several others in the adjacent Livingstone, Central Highlands, and Gladstone LGAs (Figure 1).

Typically, the abundance of resources within a 20–50 km radius of a roost site will be a key determinant of the size of a roost (SEQ Catchments 2012). As such, flying-fox roosts are generally temporary and seasonal, tightly tied to the flowering of their preferred food trees. However, understanding the availability of foraging resources is difficult because flowering and fruiting may not occur each year and vary between locations (SEQ Catchments 2012).

A recent Queensland Government funded study by the Queensland Herbarium and CSIRO incorporated data from a range of sources to rank LRFF diet trees in bioregions across Queensland (Eyre et al. 2020). This was done using the method developed by Eby and Law (2008) by assessing the relative importance of LRFF diet tree species, the abundance of nectar produced during peak flowering periods, and the frequency of substantial flowering by a species, to obtain an overall Diet Plant Nectar score. Figure 2 shows the distribution of overall static nectar scores for remnant vegetation within 50 km of RBG, Kabra, and Westwood roosts. While this analysis is based on LRFF diet, there is substantial overlap in dietary preferences between LRFF, BFF and GHFF, and thus this mapping provides insight into all flying-fox occupation within the region.

Between 2019 and 2020, flying-foxes experienced significant population impacts across the east coast of Australia due to extreme weather events. Prolonged drought caused a mass food shortage from Coffs Harbour to Gladstone peaking around October 2019 (DES 2019), in which thousands of flying-foxes perished from starvation (Cox 2019, Huntsdale & Millington 2019). Following this, bushfires across the country resulted in the loss of large areas of native forest that provides natural foraging habitat for flying-fox populations. The total number of flying-foxes lost in these events is impossible to quantify but is likely to have been more than 100,000 individuals (M. Mo pers. comm. 2019).

With these types of events severely impacting natural areas, foraging and roosting resources in and around urban locations become even more important for flying-fox conservation.



Figure 1: Regional context

Rockhampton Regional Council
RRC Flying Fox Roost Management Plan

- Local government areas
- Rockhampton Regional LGA
- ▲ Flying-fox roost (DES data)



Job number: PR6831
 Revision: 0
 Author: EK
 Date: 3/03/2022



GCS GDA 1994
 Datum: GDA 1994
 Units: Degree

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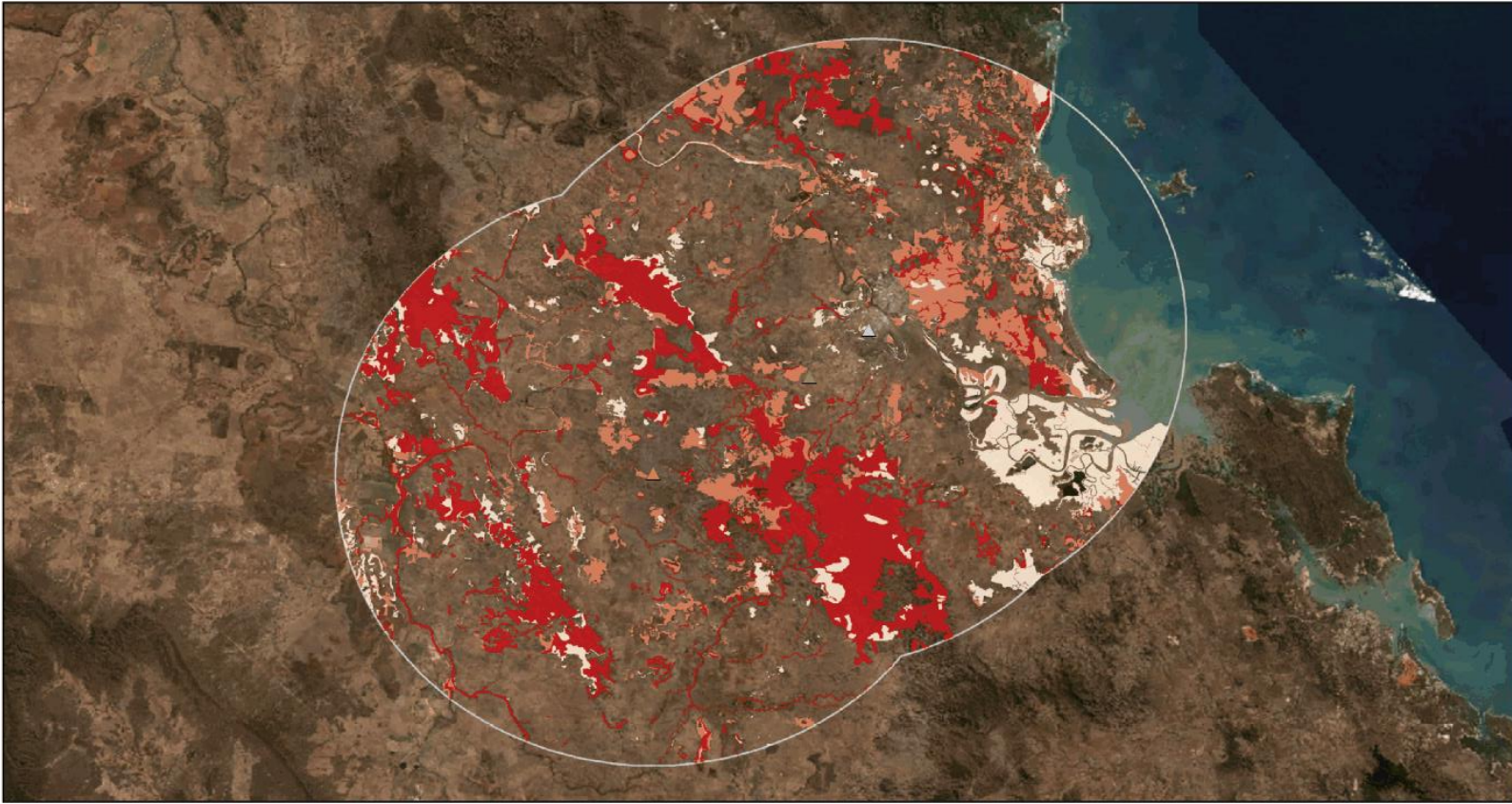


Figure 2: Distribution of the overall static nectar scores for remnant (2015) vegetation within 50 km of RBG, Kabra, and Westwood flying-fox roosts

Data courtesy of Qld Herbarium/DES/CSIRO
 Rockhampton Regional Council
 RRC Flying Fox Roost Management Plan

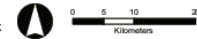
50 km buffer

Name	Overall nectar score*
▲ Kabra township	Low (0 - 6)
▲ Rockhampton Botanic Gardens	Medium (7 - 15)
▲ Westwood township	High (16 - 33)

* Eyre et al. 2020



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 Datum: GDA 1994
 Units: Degree

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2.6 Potential flying-fox impacts

2.6.1 Noise

A highly sociable and vocal animal, the activity heard from flying-foxes at roosts includes courting, parenting and establishing social hierarchy. Noise is often most disturbing pre-dawn, and during the breeding season (e.g., during mating March/April, and pup rearing in spring/summer).

2.6.2 Odour

Flying-foxes use pheromones to communicate with each other, which is the source of the characteristic musky smell around their roosts and some foraging trees. There are several factors that affect odour detectability and intensity, such as the number of flying-foxes, time of year, weather conditions, wind direction, and site characteristics.

Odour may be more intense at roosts during the breeding and rearing season as female flying-foxes use scent to find their pups after foraging, and males regularly mark their territories (Wagner 2008). Likewise, odour is stronger after rain as males remark branches in their territories.

2.6.3 Human and animal health concerns

Flying-foxes, like all animals, may carry pathogens which can be harmful to humans. These risks can be effectively mitigated through education, protocols, PPE, and basic hygiene measures. The key human and animal health risks associated with flying-foxes are lyssavirus and Hendra virus; the latter being particularly important for flying-fox roosts located in close proximity to horse paddocks. Further information on flying-foxes and human/animal health is provided in Appendix 3.

2.6.4 Faecal drop

Flying-foxes have an extremely fast digestive process with only 12-30 minutes between eating and excreting (SEQ Catchments 2012). Given that flying-foxes regularly forage 20 km from their roost (Markus & Hall 2004) and establish new roosts within 600 m – 6 km when dispersed (Eby and Roberts 2013, Ecosure 2014), attempting to relocate a roost will not reduce this impact. As such, faecal drop impacts are best managed at an individual property level.

Faecal droppings can cause health concerns, reduced amenity, create a slip hazard, requires time and resources to clean, and can damage paint if not promptly removed. Appropriate PPE and hygiene measures are required when cleaning any animal excrement. High-pressure hoses and specific cleaning products are available to assist cleaning. Flying-foxes can be deterred from roosting and foraging around areas of concern. Areas of concern, such as picnic tables and play equipment, could also be covered (e.g. with shade cloth).



2.6.5 Water quality concerns

Contamination of water supplies by any animal excreta (birds, amphibians and mammals such as flying-foxes) poses health risks to humans. This is particularly relevant for Kabra and Westwood township residents who rely on rainwater tanks for drinking water. There is no known risk of contracting bat-related viruses from contact with faecal drop or urine (Qld Health 2020). Household water tanks can be designed to minimise potential contamination, such as using first flush diverters to divert contaminants before they enter water tanks.

Tanks should be appropriately maintained and flushed, and catchment areas regularly cleaned of potential contaminants. Trimming vegetation overhanging the catchment area for the tank (e.g. flying-fox foraging vegetation overhanging the roof of a house) will also reduce wildlife activity and associated potential contamination. Tanks should also be appropriately maintained and flushed, and catchment areas regularly cleaned to remove potential contaminants. Tanks in urban areas are not for domestic drinking water supply and these areas are supplied with reticulated town water.

Pool maintenance practices (e.g. filtration, chlorination, skimming, vacuuming) should remove general contamination associated with wildlife droppings. Public water supplies are regularly monitored for harmful bacteria and are filtered and disinfected before being distributed. Management plans for community supplies should consider whether any large congregation of animals, including flying-foxes, occurs near the supply or catchment area. Should this occur, increased frequency of monitoring should be considered to facilitate early detection and management of contaminants if required.

There have also been concerns about water quality in artificial or natural waterbodies near a flying-fox roost. In stagnant waterbodies there may be an increase in bacteria and nutrients associated with many animals, including flying-foxes and/or native birds. Water quality monitoring should be considered if this is of concern.

2.6.6 Damage to vegetation

Large numbers of roosting flying-foxes can damage vegetation. Most native vegetation is resilient and generally recovers well (e.g. casuarina and eucalypts) and flying-foxes naturally move within a roost site allowing vegetation to recover. However, damage can potentially be significant and permanent, particularly in small patches of vegetation. Intervention may be required (as a last resort) to protect tree health if permanent damage is likely. Overall tree health within the RBG is of particular concern to Council, as is the potential damage to heritage-listed trees within the park. Management actions to deter flying-foxes from roosting in heritage listed trees and maintain the health of all trees within the RBG are considered in Section 5.

2.6.7 Flying-foxes and aircraft

The consequence of wildlife strikes with aircraft can be very serious. Worldwide, in civil and military aviation, fatal bird strike incidents have resulted in more than 532 human fatalities and 614 aircraft losses since the beginning of aviation (Shaw et al. 2019). Wildlife strikes cost the



commercial civil aviation industry an estimated US\$1.2 billion per annum (Allan 2002) and involve more than just the repair of damaged engines and airframes. Even apparently minor strikes which result in no damage can reduce engine performance, cause concern among aircrew and add to airline operating costs.

The main factors determining the consequences of strikes are the number and size of animal(s) struck, the phase of flight when struck and the part of the aircraft hit. The larger the animal, the greater the damage. Large animals can destroy engines and windshields and cause significant damage to airframe components and leading-edge devices. Strikes involving more than one animal (multiple strikes) can be serious, even with relatively small animals, potentially disabling engines and/or resulting in major accidents.

Historically, over 90% of reported strikes have occurred on or close to airports (ICAO 1999). Consequently, airports are the focus of management programs with the responsibility resting on airport owners and operators. It is, however, important that the whole airport community (including airline operators) and surrounding land managers are aware of wildlife strike as an issue and that all stakeholders become involved in reducing the hazard.

For any strike reduction program to be effective it is imperative that wildlife populations in the vicinity of an aerodrome are identified, monitored, and managed. Under international (International Civil Aviation Organisation Annex 14) and national legislation (Civil Aviation Safety Regulations (CASR) Part 139 Manual of Standards (MOS)) airport operators must identify potential wildlife hazards within 13 km of an aerodrome and engage with landowners to implement regular monitoring and, where required, mitigation strategies to help reduce the risk of strike associated with those hazards.

The RBG roost is less than 1 km from the boundary of the Rockhampton Airport and is of particular concern of airstrikes, and the Kabra roost is approximately 13 km from the Rockhampton Airport. The historic Fitzroy river roost (adjacent to the Rockhampton dump) also occurs within 13 km of the Rockhampton Airport. This roost has been vacant for approximately two years, however if re-established in the future, Council should notify the Rockhampton Airport.

Flying-foxes are large (~1 kg) animals that transit in large numbers at relatively low altitudes. Consequently, in terminal airspace, where aircraft are also operating at low altitudes, they may present a significant risk to air safety particularly prior to first light and post last light, daily. Between 2008 and 2017, flying-foxes and bats¹ were involved in 1,303 strikes in Australia and accounted for 10% of damaging strikes (ATSB 2019). Most notably, between 2016 and 2017 flying-foxes was the most struck flying animal.

¹ Due to inconsistent species reporting, species reported to the Australian Transport Safety Bureau (ATSB) include: flying fox, bat, fruit bat, micro bat, freetail bat, eastern freetail bat, mouse-eared bat, and spectacled flying-fox. ATSB reported that it is likely that many of the strikes involving animals reported as 'bats' actually involved flying-foxes.



2.6.8 Protecting flying-foxes and other fauna

2.6.8.1 Extreme weather impacts

Heat

Heatwaves can cause mortality in any fauna, and mass die-offs in a number of species has been reported (e.g. Gordon et al. 1988, Saunders et al. 2011).

Flying-foxes are especially susceptible to extreme heat. Temperatures above 38°C, consecutive hot days, lactation, age and other weather variables such as high humidity contribute to the likelihood of a Heat Stress Event (HSE) (Bishop 2015, Welbergen et al. 2008). Flying-foxes may die of either heat stroke, or dehydration associated with saliva spreading used for evaporative cooling. Mass mortality commonly occurs when temperatures exceed 42°C (Welbergen et al. 2008, Bishop et al. 2019), however humidity interferes with evaporative cooling, therefore temperatures as low as 40.6°C have caused HSEs in Queensland (Bishop 2015, Collins 2014).

Thirty-five HSEs have occurred in Australia since 1994 (Lab of Animal Ecology 2020) including the largest on record, 45,500 deaths across 52 SEQ roosts in the summer of 2014 (Welbergen et al. 2014). During this event, consecutive days with temperatures in the high thirties and early forties compounded the effects of heat stress (Table 2).

Table 2 Bureau of Meteorology Daily Maximum Temperature

Dec 2013 29 th	Dec 2013 30 th	Dec 2013 31 st	Jan 2014 1 st	Jan 2014 2 nd	Jan 2014 3 rd	Jan 2014 4 th
40.0°C	29.8°C	28.1°C	29.1°C	32.0°C	36.8°C	41.9°C

The Flying-fox Heat Event Response Guidelines SEQ (Bishop & Lyons 2018) provides information for decision makers during HSEs and should be adopted by Council when responding to HSEs in Rockhampton.

A range of intervention methods are used by wildlife rescue and carers to reduce mortality in roosts, including direct spraying of affected animals by hand, or using ground-based or canopy-mounted sprinklers/hoses to simulate a rain shower. These methods were reviewed by Mo and Roache (2020) who found that evaluation of the efficacy of heat stress interventions has been largely anecdotal rather than empirical. Intervention also has the potential to exacerbate HSEs through disturbance, or increasing humidity with spraying. To address this lack of empirical data, the NSW government approved a scientific trial of various methods in combination with flying-fox behaviour and temperature monitoring (currently underway).

Storms

Wildlife rescue must only occur when it is safe for human access. Storm events result in tree loss and damage to vegetation, and resulting fauna habitat loss including roost space for flying-foxes. The loss of tree crowns can open up the canopy, which may result in a hotter drier climate in these areas with little canopy cover. Increased sunlight and drier soils also



favour weed proliferation which can further degrade the habitat. Habitat restoration is critical to ensure sufficient recruitment over time to allow such canopy losses to be replaced as soon as possible.

Storms can also result in injury and mortality in flying-fox roosts, particularly when flightless young are present (during summer, which coincides with storm season).

Drought

Drought and associated lack of natural food sources for flying-foxes can lead to mass mortality and pup abandonment events. Urban roosts with varied and consistent food sources provided by urban parks, street plantings and residential areas become more important during these times. Continued protection of urban roosts, such as the RBG, will be important to limit impacts of more frequent drought under climate change.

Bushfires

Due to the urban nature of the RBG, the risk of a bushfire is quite low. The risk of bushfires within Kabra and Westwood are slightly higher due to the surrounding remnant vegetation. With the increasing impacts of climate change and more severe bushfire seasons in Australia, evident in the 2019-20 bushfire season, flying-foxes are extremely vulnerable to widescale habitat loss (Bat Conservation and Rescue Queensland 2019, Baranowski et al. 2021). With large areas of roosting and foraging habitat burnt during bushfires, flying-foxes are forced to relocate and find alternative suitable roosting and foraging habitat (Baranowski et al. 2021). This can disrupt flying-foxes breeding cycle and the ability to find adequate food for survival (Bat Conservation and Rescue Queensland 2019). Significant loss of habitat in areas affected by bushfire can lead to larger influxes of flying-foxes in urban habitats as they attempt to seek adequate roosting and foraging habitat (Baranowski et al. 2021). This may lead to increasing conflict in communities such as Rockhampton, Kabra and Westwood, therefore preparedness for influxes in particularly severe bushfire seasons is key.



3 Assessment of roosts

3.1 Rockhampton Botanic Gardens

3.1.1 Site description

The RBG is a State Heritage site located on the southern outskirts of Rockhampton, 1 km from Rockhampton Airport, on a reserve of approximately 70 ha, with roughly 30 ha of cultivated space. It is bordered by the Rockhampton Zoo, the Rockhampton Golf Club, residential properties, Murray Lagoon and Yeppen Yeppen Lagoon. The RBG was established in 1869 and became heritage listed in 1999. The RBG hosts a variety of native and exotic plant species in its living collection. There are a number of buildings and points of interest on the grounds of the RBG, including a community services building, Gardens Tearooms, a children's playground and the Rockhampton War Memorial.

The roost generally extends from Murray Lagoon to the vicinity of the clock roundabout on Ann Street, occupying a variety of fig trees (*Ficus spp.*) jacaranda (*Jacaranda mimosifolia*), hoop pine (*Araucaria cunninghamii*), mango (*Mangifera indica*), kauri pine (*Agathis robusta*), African baobab (*Adansonia digitata*) and yellow flame-tree (*Peltophorum pterocarpum*) (Figure 3). Flying-foxes have also been observed feeding on a variety of other trees on site, including Moreton Bay ash (*Corymbia tessellaris*), Queensland blue-gum (*Eucalyptus tereticornis*), coolabah (*Eucalyptus coolabah*), kwai muk (*Artocarpus lingnanensis*), elephant apple (*Dillenia philipensis*), bumpy satinash (*Syzygium cormiflorum*), Hill's fig (*Ficus hillii*), weeping fig (*Ficus benjamina*) and banyan fig (*Ficus bengalensis*).

3.1.2 Land tenure

The RBG roost is located on Lot 521 SP300242, classified as a Reserve (Figure 3).

3.1.3 Ecological values

The RBG roost does not meet the criteria for a nationally important roost, as no GHFF have been recorded roosting in the RBG. However, GHFF may occur here in the future as they have been recorded at nearby sites, such as Kabra township.

A WildNet search identified five threatened fauna species occurring within 1 km of the RBG roost (DES 2022):

- Caspian tern (*Hydroprogne caspia*) (special least concern [SL])
- Australian painted snipe (*Rostratula australis*) (endangered [E])
- Latham's snipe (*Gallinago hardwickii*) (SL)
- black-tailed godwit (*Limosa limosa*) (SL)
- glossy ibis (*Plegadis falcinellus*) (SL).



Other threatened species that may, are likely to, or are known to occur within a 1 km buffer area of the RBG roost generated by the Protected Matters Search Tool (PMST) can be found in Appendix 4.

3.1.4 Flying-fox occupancy

BFF are more regularly seen in the RRC LGA than LRFF, but usually are in lower numbers. LRFF are nomadic and move from roost to roost following flowering eucalypts. LRFF periodically join existing BFF roosts, often in large influxes. Flying-foxes were first recorded on the RBG grounds in August 2019 (RRC 2021), with a gradually increasing number of BFF and LRFF over the last two years (Figure 4).

LRFF typically roost in the Rockhampton area during the summer months, however since late May 2021, a birthing roost of LRFF has been established on the RBG grounds (Figure 4).

During the most recent count on the 13th of January 2022, 12,150 BFF and 500 LRFF were recorded at the RBG roost.



Figure 3: Rockhampton Botanic Garden flying-fox roost extent

Rockhampton Regional Council
RRC Flying-fox Roost Management Plan

- LRFF extent (13/01/2022)*
- BFF extent (13/01/2022)
- Cadastral boundary

* LRFF have since vacated this site

Job number: PR6831
Revision: 0
Author: EK
Date: 22/02/2022

GCS GDA 1994
Datum: GDA 1994
Units: Degree

0 12.5 25 50
Metres

PR6831_MP3_RoostExtent_RGB
A4

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3.1.4.1 Issues to date

A number of concerns have been raised with the increasing numbers of BFF and LRFF over the last two years. Bamboo plants have been significantly damaged by flying-foxes roosting in the western section of the RBG along Murray Lagoon. Australian white ibis (*Threskiornis moluccus*) roost on bamboo platforms flattened by roosting flying-foxes (Plate 1). Ibis have been recorded roosting in large numbers in this area, though ibis egg and nest removal is often unable to be conducted due to continuous presence of flying-foxes or ibis chicks. Flying-fox presence has also impacted other wildlife management programs in the RBG, such as cattle egrets (*Bubulcus ibis*).



Plate 1 Flying-fox roosting area with vegetation damage and roosting ibis, RBG

Many flying-foxes roost in the fig trees overhanging and surrounding the Gardens Tearooms (Figure 3), resulting in faecal matter on amenity surfaces. This area is a popular location for patrons to eat, so large amounts of faecal matter has raised health concerns. Contractors on behalf of the RBG regularly conduct cleaning in this area, often on a nightly basis, which leads to further safety hazards for staff and visitors due to the wet grounds and potential for the growth of mould.

The RBG has experienced significant damage to vegetation, with tree branches up to 30 cm in diameter breaking due to the high density of flying-foxes roosting. This creates a hazard for staff and visitors and results in a loss of aesthetic value.

There are several sensitive sites (e.g. hospitals, childcare centres, schools, aged care facilities) within 2 km of the RBG roost (Figure 5). The Rockhampton South Kindergarten is located directly to the east of the RBG, where flying-foxes have been recorded roosting in fig trees along the fence line of the kindergarten (in the Arid Garden Beds). More recently, an influx of 50,000 LRFF has pushed BFF to roost closer to the kindergarten which has raised concerns amongst the community. Other sensitive sites are shown in Figure 5.



3.1.4.2 Flying-fox strike risk

Rockhampton Airport is located 1 km away to the north-west of the RBG. Flying-foxes² are currently listed as high and moderate risk species in the Rockhampton Airport species risk assessment (Avisure 2022). In the previous five years (2017-2021) flying-foxes have been involved in 35 confirmed on-airport strikes, including five multiple strikes, at Rockhampton Airport (Avisure 2022). Of these, six strikes resulted in adverse effects to planned flight include unserviceable aircraft, aircraft damage, and flight delays and cancellations (Avisure 2022).

Between January 2017 and July 2019, flying-foxes accounted for 14% of confirmed on-airport and airport vicinity strikes at Rockhampton Airport (Avisure 2022). Since the appearance of the RBG flying-fox camp in August 2019, flying-foxes accounted for 36% of confirmed on-airport and airport vicinity strikes (Avisure 2022). This increasing trend in strikes poses an increased damaging strike risk to aircraft operations, particularly before first light and after last light daily when transit activity peaks.

² Species include LRFF, unidentified flying-fox, and GHFF.



Figure 5: Sensitive sites within 2 km of RBG roost

Rockhampton Regional Council
RRC Flying Fox Roost Management Plan

□ 2 km buffer	● Airport	● School
▲ Flying-fox roost	● Childcare centre	● University
● Sensitive sites	● Equine facility	
● Aged care facility	● Hospital	

Job number: PR6831
 Revision: 0
 Author: EK
 Date: 22/02/2022

GDA 1994 MGA Zone 56
 Projection: Transverse Mercator
 Datum: GDA 1994
 Units: Metre

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3.1.4.3 Management response to date

Since flying-foxes have occupied the RBG, Council have reactively managed the roost, however no long-term management plan has been developed. Various management techniques have been adopted by Council. Ecosure have also conducted regular monitoring at this roost since December 2019.

RRC attempted dispersal of the BFF within the RBG on 19-21 May 2020. The equipment used included lighting towers, handheld spotlights, beacon lights, strobe lights, electric leaf blowers and tree mounted sprinklers to actively disperse the colony. As prescribed in the Code of Practice (DES 2020a), dispersal activity was undertaken during the dawn fly in for a maximum of 3 hours each morning. Following this, an assessment was undertaken to determine the extent of the colony and monitor for any signs of distress including panting, wing fanning, excessive licking, and low roosting individuals. No signs of distress were observed within the roosting colony during these assessments (Ecosure 2020). The number of BFF at the RBG declined during and after the dispersal activities until 5 June 2020 when Ecosure confirmed that no flying-foxes remained at the RBG (Ecosure 2020).

Following the return of BFF in late 2020, RBG gained media attention when local wildlife carers reported hundreds of dead or distressed juvenile BFF within the colony (Stünzner 2020). An ABC article suggested a link between dispersal activities at RBG and the abandonment of BFF pups by their mothers (Stünzner 2020). It is unlikely that the dispersal activities in May 2020 (when no dependent juveniles were present) contributed to the event in December. Maximum daily temperatures at Rockhampton Airport, approximately 2 km from RBG, were recorded at 39 and 38.5 degrees Celsius on 6 and 7 of December respectively. Other (possibly compounding) factors that may have contributed to the mortality event were drought- or fire-associated food shortages in the region.

RRC attempted dispersal in May 2021. In June 2021, sprinklers were installed in the RBG around the Gardens Tearooms and in fig trees leading towards Murray Lagoon to deter flying-foxes roosting in these areas (RRC 2021).

A second, smaller mortality event impacted LRFF in June and July 2021 which was again reported on by the ABC (Stewart et al 2021). This article suggested that a number of juvenile LRFF required rescuing after they "had their homes disturbed". However, Ecosure understands that no dispersal or other applied management actions (including sprinkler operation) were undertaken on LRFF by RRC while pups were present (M Elgey, pers. comm., 29 June 2021). It is more likely that juvenile LRFF were found dead or distressed due to hypothermia caused by normal winter temperatures and being left alone at night while their mothers foraged.

Contractors have been regularly cleaning the Gardens Tearooms area on the grounds to manage the faecal droppings of flying-foxes roosting in the surrounding fig trees.

In early 2022, Council undertook vegetation modification during a short window prior to the arrival of LRFF to the region. A significant amount of bamboo was removed in an attempt to reduce the potential habitat for LRFF to return to and reduce nesting habitat for Australian white ibis. Since this removal, approximately 50,000 LRFF have returned to the RBG and are



causing little concern (as of 25/02/2022), though their occupation has pushed BFF further towards the Rockhampton South Kindergarten, causing concern amongst the community.

Since August 2019, Rockhampton Airport have liaised with RRC through their twice-yearly Wildlife Hazard Management Committee to share information, identify risks and ensure collaborative management of RBG. RRC also performs regular monitoring of RBG which is shared monthly to Rockhampton Airport, in addition to monthly surveys performed by the airport's wildlife hazard management consultants (Avisure). The frequent information assists Rockhampton Airport in communicating changes in risk to various stakeholders, including the Airport Reporting Officers, pilots, and airlines. As of January 2022, RRC have agreed to share Ecosure's flying-fox monitoring data with Avisure to include in their quarterly and annual wildlife hazard management reports to identify populations changes in the Rockhampton region.

3.2 Kabra township

3.2.1 Site description

Kabra is a small township within the RRC LGA, approximately 15 km southwest of Rockhampton (Figure 1). The Kabra roost is located in the centre of the township and is bordered by Morgan Street and Moonmera Street. The roost is generally located on Council land in between private properties along Middle Creek, however during times of large influxes, flying-foxes have been known to roost on adjacent private properties (Figure 6).



3.2.2 Land tenure

Flying-foxes have historically roosted in trees on Council reserve land, and regularly roost within trees on the adjacent private property, Lot 7 K4221 (Figure 6). During times of large influxes, most notably in February 2014, flying-foxes have roosted in trees on other surrounding private properties (Lot 15-20 K4221) (Figure 6). In December 2018, flying-foxes were roosting in a patch of vegetation at the end of Bunerba Street (Figure 6).

3.2.3 Ecological values

GHFF have been recorded in the Kabra roost on three recorded occasions. The number of GHFF has not exceeded 10,000 individuals and does not regularly host more than 2,500 individuals, therefore does not meet the criteria for a nationally important roost.

A WildNet search resulted in no detected threatened species within a 1 km radius of the Kabra roost, however the GHFF is a vulnerable species known to occur in the area.

A list of threatened species that may, are likely to, or are known to occur within 1 km of the Kabra roost generated by the PMST can be found in Appendix 4.

3.2.4 Flying-fox occupancy

All three species of flying-foxes have been recorded in Kabra. BFF are seen more regularly in Kabra than LRFF, but are usually seen in smaller numbers. LRFF are nomadic and move from roost to roost following the flowering eucalypts. They periodically move into existing BFF roosts, often in large influxes. LRFF typically roost in the Rockhampton area during the summer months. In August 2017 and August 2019, GHFF have been recorded roosting in Kabra in small numbers (Figure 7).

Flying-foxes have been recorded on a regular basis in Kabra for a number of years, since at least 2012. One large influx of LRFF was recorded in February 2014, with some smaller influxes generally throughout the summer months. During the large LRFF influx, Council have reactively managed the Kabra roost, however no long-term management plan has been developed. The last occupation of flying-foxes recorded in Kabra was February 2021 (Figure 7). No flying-foxes were observed during a site visit on the 18th of January 2022.

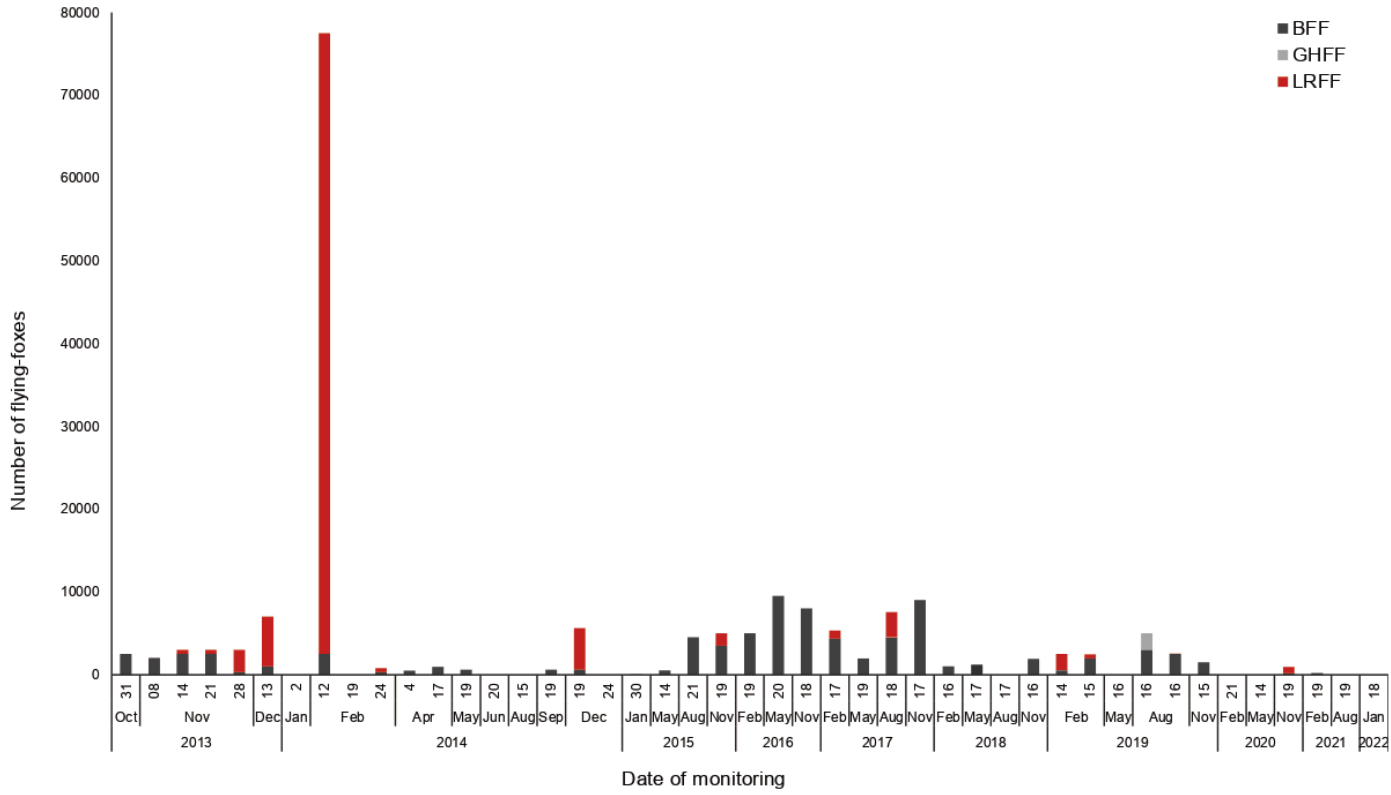


Figure 7 Historic roost count for Kabra Township (Source: DES, Ecosure, RRC 2022)

3.2.4.1 Issues to date

Residents in Kabra rely on rainwater tanks as their main water supply, which has been a concern for many residents due to the fear of contaminated rainwater from flying-fox faecal droppings and urine. Residents have also been impacted by faecal droppings on their property and have experienced significant impact from noise and odour associated with living near a flying-fox roost.

Flying-fox roosting trees have experienced significant vegetation damage, such as slumping/breaking branches and defoliation on both Council land and private property (Plate 2). This is especially evident during times of large influxes.



Plate 2 Flying-fox roosting trees, Kabra

There has been reports that some shooting/attempted shooting of flying-foxes has occurred during high influx periods. This is an illegal act, as flying-foxes are native species protected under the EPBC Act (Appendix 1).

There are no sensitive sites located within 2 km of the Kabra roost, however the Rockhampton Airport is located approximately 12.5 km northeast of the roost. There is also concern for



potential Hendra Virus disease transmission, due to many horses residing on the surrounding private properties.

3.2.4.2 Management response to date

Council have reactively assisted residents with water drops and roof cleaning during the large influx of LRFF in February 2014. During this time, Council have also conducted vegetation removal and thinning of roost trees along Middle Creek on Council land to minimise flying-fox roosting. After this large influx, Council also offered green waste collection for private landholders to dispose of green waste if they chose to conduct vegetation modification on their private properties. Since the vegetation trimming, there has been no recorded large influxes of flying-foxes.

Council have invested resources into residents of Kabra of the important ecological value of flying-foxes and the legality of protecting native species.

3.3 Westwood township

3.3.1 Roost description

Westwood is a small township located within the RRC LGA, approximately 45 km south-west of Rockhampton. Flying-foxes typically roost in trees near the Westwood Hall, adjacent to the Capricorn Highway (Figure 8). During large influxes (notably in February 2018), flying-foxes have been recorded roosting in trees surrounding the Westwood State School, on the corner of Galton Street and Herbert Street, and several other private properties in the area.

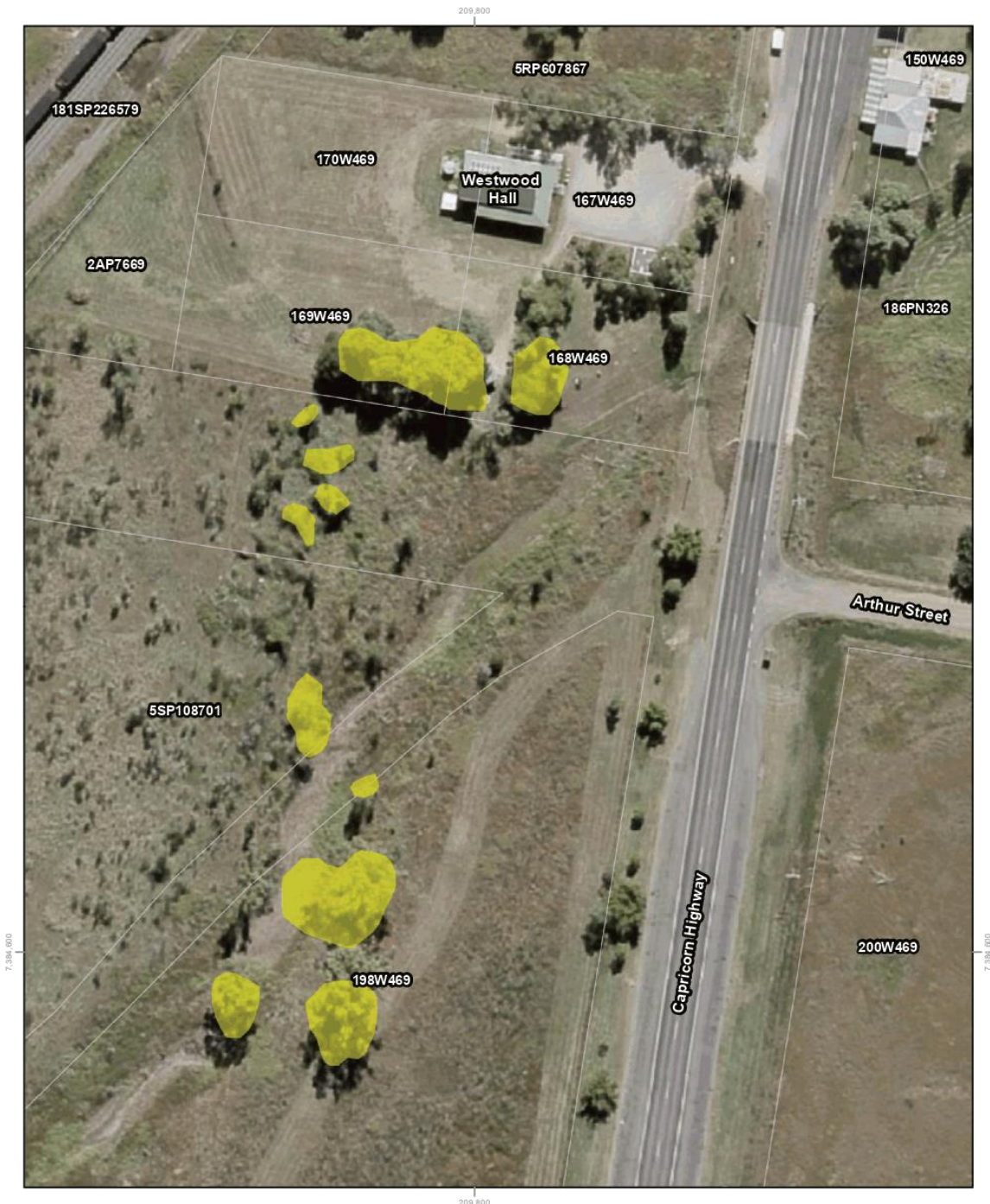


Figure 8: Westwood township flying-fox roost extent

Rockhampton Regional Council
RRC Flying-fox Roost Management Plan

Legend:
 BFF extent (18/01/2022)
 Cadastral boundary

ecosure

Job number: PR6831
 Revision: 0
 Author: EK
 Date: 22/02/2022

Scale: 0 5 10 20 Meters

GDA 1994 MGA Zone 56
 Projection: Transverse Mercator
 Datum: GDA 1994
 Units: Meter

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3.3.2 Land tenure

The primary roost trees are located on Council reserve land, Lot 167-170 W469 (Figure 8). Flying-foxes also regularly roost in trees on the adjacent private property (Lot 5 RP607867) directly north of the Council reserve land. During a large influx of LRFF in February 2018, flying-foxes were roosting in trees on the Westwood State School property, Lot 501 SP179894.

3.3.3 Ecological values

The Westwood roost does not meet the criteria for a nationally important roost as no GHFF have been recorded roosting in Westwood. However, GHFF may occur here in the future due to being recorded at nearby sites, such as the Kabra roost.

A WildNet search resulted in no detected threatened species within 1 km of the Westwood roost. A list of threatened species that may, are likely to or known to occur within a 1 km buffer area of the Westwood roost generated by the PMST can be found in Appendix 4.

3.3.4 Flying-fox occupancy

Both BFF and LRFF have been recorded at the Westwood roost. BFF are seen more regularly in Westwood than LRFF, but are usually seen in smaller numbers (Figure 9). LRFF are nomadic and move from roost to roost following flowering eucalypts. They periodically move into existing BFF roosts, often in large influxes. LRFF typically roost in the Rockhampton area during the summer months.

BFF have been recorded on a regular basis in Westwood since at least 2012, typically with less than 1000 individuals at any one time (Figure 9). One large influx of LRFF was recorded in February 2018, with an estimation of 48,900 individuals (Figure 9). During this large influx, Council have reactively managed the Westwood roost, however no long-term management plan has been developed. Since this large influx, only small numbers of BFF and LRFF have been recorded roosting here (Figure 9).

2,070 BFF were recorded during a site visit on the 18th of January 2022. Some were observed carrying dependent juveniles, while many young were starting to hang independently.

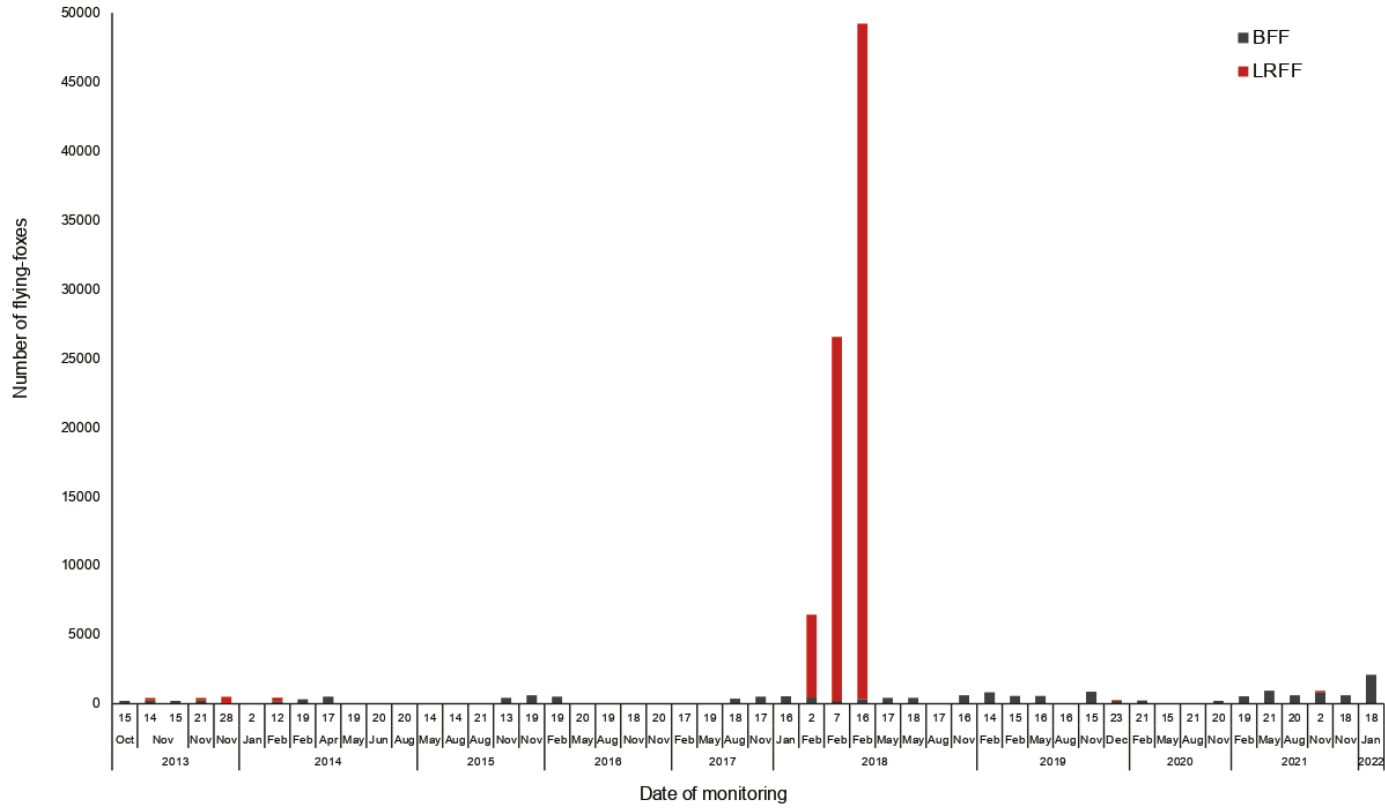


Figure 9 Historic roost count for Westwood Township (Source: DES, Ecosure)

3.3.4.1 Issues to date

Health and safety concerns have been raised due to the close proximity of the public toilet facilities on the Westwood town hall grounds and the potential for contamination of the rainwater supply (Plate 3). Community events such as markets and Anzac Day parades are held at the Westwood Hall, where the proximity to flying-foxes is of concern for the health and safety of attendees. In addition to contamination of the water supply of the town hall toilet blocks, contamination of the rainwater supply for nearby residents is also of concern.



Plate 3 Flying-fox roosting tree above public toilet block, Westwood.

Residents have raised concerns for the health and safety of children, particularly during large influxes of flying-foxes. In February 2018, a large number of LRFF roosted in trees at the front of the school. As a result, the school pick-up location was diverted to the back of the school, causing disruptions to the wider community. Some parents also refused to allow their children to go to school to prevent close contact with the flying-foxes. Another safety concern is vegetation damage caused by the high density of roosting flying-foxes at times (Plate 4). During the large influx of LRFF, branches of roosting trees broke close to powerlines (Plate 5). This caused concerns for people living nearby as it provided a falling hazard and potential for electrocution or power outages in the township. There is a report of a resident getting scratched by a flying-fox, though the resident did not seek medical treatment.



Plate 4 Flying-fox roosting trees with vegetation damage, Westwood



Plate 5 Vegetation damage near powerlines, Westwood.

Westwood State School is a sensitive site located within 1 km of the Westwood flying-fox roost (Figure 10). There is also concern for potential Hendra virus disease transmission, due to many horses residing on the surrounding private properties.

3.3.4.2 Management response to date

Council provided residents with fresh water drops during the large LRFF influx to mitigate potential issues with contaminated rainwater. Council provided assistance in supplying green waste removal services for residents conducting vegetation modification on private properties. Council also provided vegetation modification assistance to the property directly adjacent to the north of the town hall.

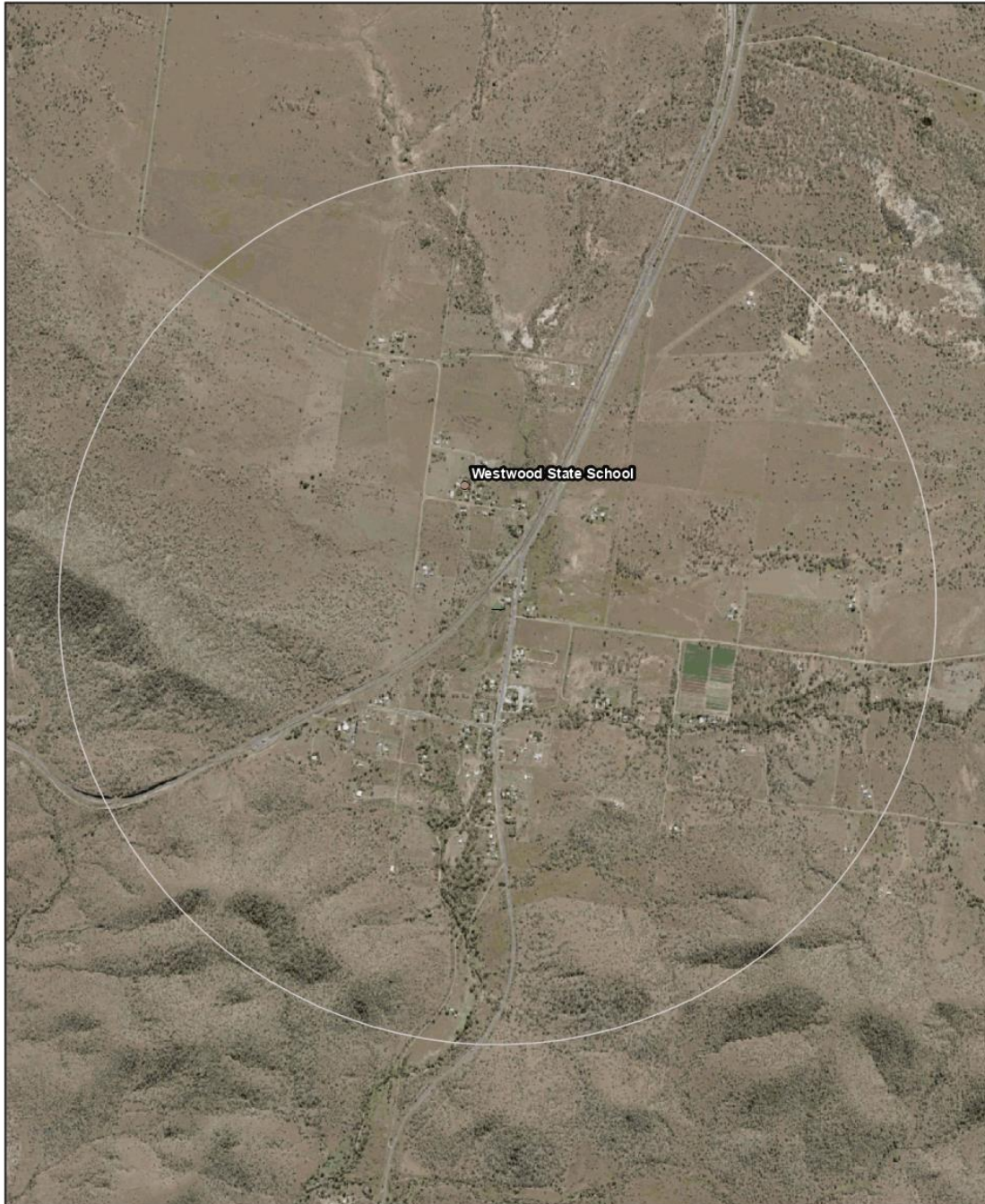




Figure 10: Sensitive sites within 2 km of Westwood township roost

Rockhampton Regional Council
RRC Flying Fox Roost Management Plan

2 km buffer
▲ Flying-fox roost
 Sensitive sites
● School


 Job number: PR6831
 Revision: 0
 Author: EK
 Date: 17/02/2022


 0 100 200 400
 Metres

GDA 1994 MGA Zone 56
 Projection: Transverse Mercator
 Datum: GDA 1994
 Units: Metre

Data Sources: © Ecosure Pty Ltd 2021; State of Queensland 2021; Image includes material © State of Queensland (Department of Resources); © Planet Labs, Netherlands B.V. reproduced under licence from Planet and GeoEye, all rights reserved, 2021.
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4 Community engagement

Early and effective community engagement and education has benefits for both communities and land managers. These benefits include increasing community understanding and awareness of flying-foxes, their critical ecological role, and factors that need to be considered in developing a management approach. Engaging with the community is equally important to ensure land managers understand impacts associated with a roost to effectively manage community concerns. Council sought to consult with all stakeholders with an interest in the flying-fox roosts during the development of the Plan. The results of the engagement are detailed below.

4.1 Online survey results

The community online survey was advertised via social media and Council marketing and was open for three weeks (24 January - 14 February 2022). Survey results are summarised in Appendix 5. The survey was completed by 237 people. Forty-seven percent of survey respondents identified as residents or business owners impacted by a roost, 39% identified as residents or business owners not impacted by a roost, with the remainder identifying as members of club or occasional visitors to the Rockhampton region.

Approximately 99% of respondents identified Rockhampton as being the general location of experienced impacts. Respondents' proximity to the roost from their home was only answered by 43% of respondents, amongst these responses, 4% lived within 100 m or less of a roost, and the majority (55%) living between 300 m and 1 km of a roost. Most respondents experienced impacts in recreational areas/RBG and their home, with a small number of respondents experiencing impacts at work, and the Rockhampton South Kindergarten (Figure 11).

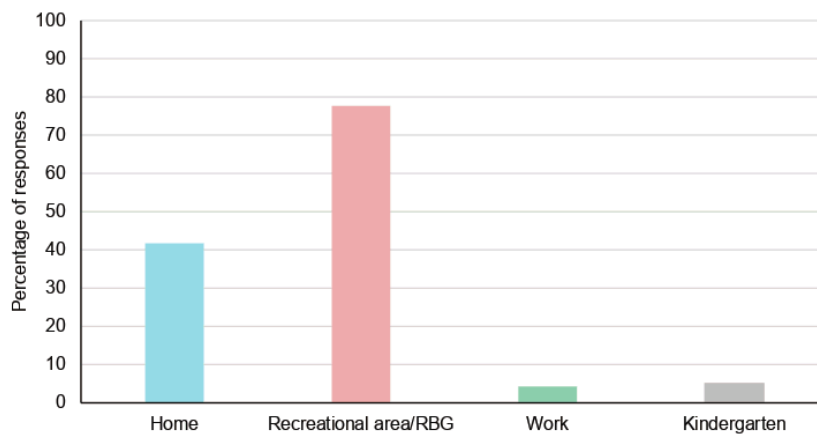


Figure 11 Responses to the question: "Where are you being impacted (home, work, recreational area)?"



Given that the times respondents experienced impacts was an open-ended question, distinguishing exactly when respondents experienced impacts was somewhat subjective, and percentages are only a rough approximation. Majority of the responses listed 'all day', daylight hours or anytime when visiting the gardens (~42%). This was followed by impacts during dusk/evening/night (~34%), then followed by impacts in the morning/dawn (~22%). The smallest percentage of respondents listed 'all times' or '24/7' (~9%). Note that the distinction between 'all day' and 'all times' were assumed, as many responses listed 'all day' were given alongside context of 'when visiting the gardens', however 'all times', were not given context of visiting the gardens, so may or may not be an indication of impacts experienced 24 hours a day.

The community was asked to respond a range of statements about flying-foxes. The majority of respondents were aware that flying-foxes are a native species (85.4%) protected under legislation (87.2%). In response to the statement that flying-foxes 'are increasing in numbers', 54.3% of respondents answered true. In response to the statement that flying-foxes 'are decreasing in numbers', only 26.2% of respondents answered true, with the remainder answering false (50.2%), don't know (21%) and don't care (2.6%). The majority of respondents acknowledged that flying-foxes perform important ecological roles (70%) and that flying-foxes are migratory, moving between Rockhampton and other parts of Australia (66%). When prompted statements regarding disease transmission, 67.7% of respondents believed that flying-foxes 'carry disease that is easily transmitted to humans and animals' and only 45% of respondents believed that flying-foxes 'carry disease that can be easily prevented in humans and animals'.

Respondents were asked to address how strongly they agreed with certain statements. The majority of respondents agreed to some extent (56.9%) that flying-foxes were important to the environment. When prompted with the statement that 'flying-foxes are a pest and should be managed', 65% of respondents agreed to some extent and 31.5% disagreed to some extent. Most respondents acknowledged that living next to bushland presents some challenges in relation to wildlife (72.2%), and also agreed to some extent that Council should balance conservation and resident amenity (77%).

The community was asked to assess their experience or interaction with flying-foxes in Rockhampton and their responses were predominantly negative. Sixty percent responded as negative, 26.7% responded as positive and 14.4% responded as neutral.

Note multiple responses could be selected for some questions which accounts for >100% total. Of the 237 survey respondents, only 26.6% responded to the question regarding what they like about flying-foxes. Respondents who felt positively about flying-foxes especially appreciated their role in the ecosystem as pollinators (93.7%), being able to live with native wildlife (92%) and enjoy watching them roost /flying out (88.8%). Other comments that were added regarding the positive experience with flying-foxes included the tourism opportunities they provide in Rockhampton.

When asked what issues relating to flying-foxes are of concern (Figure 12), three issues stood out by a large margin, with mess from droppings (73.5%), smell (66.5%) and fear of disease (59.9%) mentioned in a majority of the responses. Noise and damage to vegetation were



followed shortly after mentioned in 48.5% and 45% of responses, respectively. Other concerns listed included flying-fox habitat protection (29.5%), flying-fox welfare (28.6%), misinformation about flying-foxes (24.2%), flying-fox conservation (24.2%), fruit loss at orchards (22.9%), foraging in my yard (22.5%) and visual amenity (19.4%). Other comments given by respondents also outlined the threat of strike risk and damage to aircrafts at the nearby Rockhampton Airport.

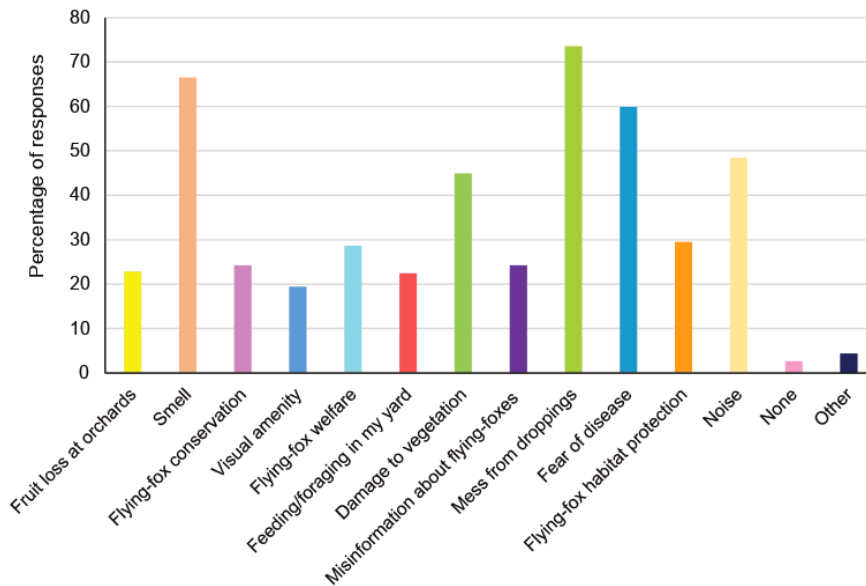


Figure 12 Responses to the question: "Which of the following topics relating to flying-foxes are of concern to you?"

When respondents submitted an answer as to how they had personally been impacted one of the flying-fox roosts, the impacts experienced were similar to the issues they were concerned about. Of 133 answers given, the top three impacts answered in open ended questions were a loss of amenity/loss of recreational space (~53%) particular in regards to the Rockhampton Botanic gardens, followed by impacts of smell (~49%) and excrement/mess (~43%). Other highly cited impacts include noise, disease risk, property damage and flying-foxes eating fruit from their gardens. A range of other impacts were listed such as a loss of work, vegetation damage, bat flies, biodiversity loss around flying-fox roosts, being scratched by flying-foxes, water contamination (rain water tanks and pools), power outages (Kabra), lack of education around flying-foxes, the increase in ibis numbers in the RBG and disruption to their pets.

Respondents expressed similar concerns for flying-fox welfare, removal of habitat and concerns over a lack of awareness or appreciation for the species. The following is a sample of comments illustrating the range of perspectives on flying-foxes in Rockhampton:

- *Poop dropping on roofs, cars etc, horrible stench from their roosting areas, noise and also stripping/killing the vegetation.*



- *Danger to planes landing; affects on local community run kindergarten; the 'bat fly/ticks' that fall off them onto anyone walking/seated under their roosts; the management of Ibis and Egrets no longer taking place.*
- *I love the flying foxes and will often go to the gardens to see them. Please take care of them!*
- *The flying foxes at the botanic gardens cafe makes the outdoor space unattractive and unusable.*
- *Can no longer meet at Gardens for coffee. Easy to fall as some paths are slippery with faeces. Smell is intolerable. Walkways blocked under collapsed bamboo due to bats. People are being pushed out of this vital space. People are at risk of disease through food contamination. Other wildlife eg parrots are reducing in nos. Cannot eat under banyans as faeces of bats and ibis are continually falling.*
- *I fully understand that living near a roost can be a very noisy, smelly, and messy experience. But with climate change severely affecting flying fox populations, they need safe, natural habitats where they can flourish.*
- *The flying foxes need to be seen as an asset, not a 'pest' animal. They are a protected species for a reason, rather turn the roost into a tourist attraction. It is right next to the zoo - you literally could not ask them to be in a more convenient location as far as education goes. People could visit the Zoo AND see a free flying native animal (do talks etc.).*

The majority of respondents considered it important that Council protect vegetation and other environmental values in parklands and bush areas (88.9%). This issue was ranked as highly important (rated 10) for 52.2% of respondents.

The most supported management option for respondents was protecting and enhancing flying-fox habitat in low conflict areas (55.6%) (Figure 13). Buffer between people and flying-foxes using non flowering plants and buffers using deterrents were also supported by majority of the respondents (52% and 53.4% respectively). Land use planning and education/research were supported by 43% of respondents, with the remaining management options having support from less than 20% of respondents.

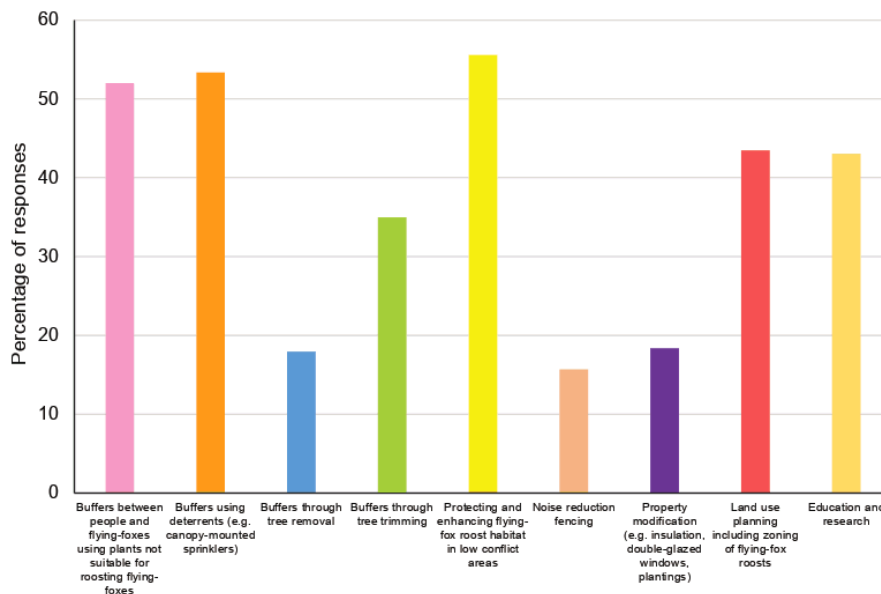


Figure 13 Responses to the question: “Which of the following management options do you supports?”

Only 77.6% of respondents answered which education options they supported. Out of the respondents who answered, the most supported education options were educational signage (54.9%), website with links and up-to-date information (52.7%) and fact sheets with up-to-date information regarding flying-foxes or the roost (50.5%). Additional education options listed still had relatively high support (30-45%). Seventeen percent of responses to this question were classified as ‘other’, which primarily consisted of responses not approving any education options, as it does not remove flying-foxes from the area. Though, some responses given outlined reiterating the importance of flying-foxes for future generations and their importance in the ecosystem and pollination.

When respondents were asked what management options were not appealing, roughly 45% did not support vegetation removal/trimming, stating that Rockhampton needs more vegetation, not less. Sixty-four percent of respondents were interested to know more information about plants to avoid attracting or attract flying-foxes to their yard. Of these respondents, 76% would like to know about plants to avoid attracting flying-foxes to their backyard, while 31% would like to know about plants to attract flying-foxes to their yard.

5 Management options analysis

Figure 3 outlines a site-specific assessment of flying-fox impact management options commonly used across Australia, and their suitability for the RBG, Kabra, and Westwood roosts, as well as emerging roosts. Descriptions and examples of management options are provided in Appendix 6.

Table 3 Management options analysis (see Appendix 6 for option descriptions).

Management options	Advantages & disadvantages	Suitability for RBG, Kabra and Westwood Township sites	Suitability for emerging roost	Permits required	Appraisal
Education and awareness programs	<p>Advantages: Low cost, promotes conservation of flying-foxes, contributes to attitude change which may reduce general need for roost intervention and reduce anxiety, increasing awareness and providing options for landholders to reduce impacts can be an effective long-term solution, can be undertaken quickly, will not impact on ecological or amenity value of the site.</p> <p>Disadvantages: Education and advice itself will not mitigate all issues, and in isolation would not be acceptable to the community.</p>	Collecting and providing information should always be the first response to community concerns in an attempt to alleviate issues without the need to actively manage flying-foxes or their habitat. Council has engaged with affected residents to provide information on human health, legislation, and the importance of flying-foxes. Continued education and ensuring all residents have access to the latest health information is required. Increased education targeting students, parents, and teachers at Westwood State School and Rockhampton South Kindergarten should also be implemented to address potential future influxes of flying-foxes in the RBG and Westwood roosts.	Proactive engagement with surrounding landholders and sensitive site occupants/attendees (e.g. schools, hospitals) is vital to address impacts and concerns before they arise.	No	Continue and increase at all three sites, particularly at Westwood State School and Rockhampton South Kindergarten
Subsidy program - property modification / item	<p>Advantages: Property-level impact mitigation (e.g. double-glazing, indoor odour-neutralising pots, noise attenuating insulation, car covers, boundary barriers such as dense plantings with fragrant flowers) is one of the most effective ways to reduce amenity impacts. It provides more certain outcomes compared with attempting to manage flying-foxes or their habitat. It is relatively low cost, can be included in building design and materials, will not</p>	Property modification is not likely to be well-received by the community as a management option (see Section 4.1). However, it may be more supported if costs were able to be assisted by a Council-funded subsidy program. It also may have had poor support in the community survey as the majority of respondents resided near the RBG, so this result does not necessarily represent the wants/needs of Kabra and Westwood residents, where flying-foxes roost close to residential properties.	Suitable for emerging roosts in high conflict areas, particularly if residents are experiencing impacts related to noise and smell, or other issues that	No	Investigate subsidy options and communicate options with affected residents

Management options	Advantages & disadvantages	Suitability for RBG, Kabra and Westwood Township sites	Suitability for emerging roost	Permits required	Appraisal
	<p>impact on the roost and may add value to the property.</p> <p>Disadvantages: May be cost-prohibitive for private landholders, unlikely to fully mitigate community concerns.</p>	<p>RBG: Few residents affected and low support from community for this management option. May be supported by Rockhampton South Kindergarten if flying-foxes continue to roost in close proximity.</p> <p>Kabra/Westwood townships: Property modification is ideal as costs can be more easily budgeted than for roost management, which is hard to predict. Council should investigate potential for a Council-funded subsidy program, and opportunities to apply for grants to supplement such a program. Residents in these areas rely on rainwater tanks for drinking water supply, so subsidies could be used to assist in providing water contamination solutions. See Appendix 6 for further information regarding subsidy programs.</p>	could be alleviated through an item/property-based subsidy program		
Subsidy program - services	<p>Advantages: Service subsidies (e.g. assistance with cleaning faecal drop) may encourage tolerance of living near a roost; promotes conservation of flying-foxes; can be undertaken quickly; will not impact on the site; would reduce the need for property modification.</p> <p>Disadvantages: Costly over a large scale which must be considered if proposed development intends to increase dwelling density around roost.</p>	<p>Kabra/Westwood townships: This management technique has been successfully adopted at Westwood and Kabra townships (see Sections 3.2.4.2 and 3.3.4.2). While it can be costly over a large scale, it is suitable for these sites that are smaller with fewer impacted residents than larger townships.</p> <p>RBG: Council currently assists cleaning in/around the RBG Gardens Tearooms. This has proven costly over the long-term, and other management techniques should be adopted to prevent flying-foxes from roosting in close proximity to the Gardens Tearooms. Ongoing cleaning may still be required on a reactive basis.</p> <p>Mess from droppings was identified as a main concern for many community members. Service subsidies to clean faeces off amenities would therefore be highly regarded.</p>	Suitable for emerging roosts in high conflict areas, particularly if residents are experiencing impacts related to mess from faecal matter (e.g. on cars, solar panels, in water tanks), or other issues that could be alleviated through a service-based subsidy program.	Council to investigate potential for a Council-funded subsidy program which may include service subsidies, and opportunities to apply for grants to supplement such a program. See Appendix 6 for further information regarding subsidy programs.	Continue at all sites when required (e.g. during flying-fox occupancy and/or influxes)

Management options	Advantages & disadvantages	Suitability for RBG, Kabra and Westwood Township sites	Suitability for emerging roost	Permits required	Appraisal
Routine roost management	<p>Advantages: Can improve amenity at the site as well as impacts to biodiversity such as weeds on the site and in downstream areas.</p> <p>Disadvantages: Will not generally mitigate amenity impacts for nearby landholders. Weed removal and bushfire management has the potential to reduce roost availability and reduce numbers of roosting flying-foxes. Removing weeds also changes the microclimate which can increase roost temperature and therefore susceptibility to HSEs.</p>	<p>Kabra/Westwood townships: Residents (notably those at Kabra and Westwood) are able to maintain properties in accordance with the Low Impact COP. Where Council considers appropriate, vegetation in high conflict areas at each site (e.g. around Westwood State School) may be thinned, removed or lopped so it is less attractive for roosting in future. Council removed vegetation in Kabra following the large LRFF influx in 2014; this vegetation should be managed/improved to restore ecological values to the site, without attracting flying-foxes back.</p> <p>RBG: Roost management is likely not required at RBG as vegetation is already regularly maintained, being a heritage listed site. The heritage listing may impact Council's ability to manage roost vegetation.</p>	<p>Avoid undertaking roost management activities that are likely to discourage flying-fox roosting at low conflict sites (e.g. weed removal). Encourage roosting at low conflict sites through habitat improvement activities.</p> <p>For an emerging roost in a high conflict area, roost vegetation should be managed to discourage roosting (e.g. vegetation thinning, weed removal).</p>	No permit required for weed management or habitat improvement.	Continue in suitable areas and at appropriate times (ideally in the non-breeding season or adapted during the breeding season to be less disruptive)
Alternative habitat creation	<p>Advantages: If successful in attracting flying-foxes away from high conflict areas, dedicated habitat in low conflict areas will mitigate all impacts and helps flying-fox conservation. Rehabilitation of degraded habitat that is likely to be suitable for flying-fox use could be a more practical and faster approach than habitat creation.</p>	<p>RBG: The Fitzroy River roost, located in proximity to the RBG, is an ideal alternative roost for flying-foxes in the RBG and is a lower conflict site. Council should avoid disturbance to this habitat to encourage flying-foxes roosting here (e.g. liaising with Council contractors and educating the public). Council should aim to identify suitable roost habitat in low conflict locations and restore and/or</p>	If emerging roost is in high conflict location, Council should aim to identify suitable roost habitat in low conflict locations and	No	Avoid disturbance at Fitzroy River roost. Identify alternative, low-conflict sites for habitat restoration/enhancement

Management options	Advantages & disadvantages	Suitability for RBG, Kabra and Westwood Township sites	Suitability for emerging roost	Permits required	Appraisal
	<p>Disadvantages: Generally costly, long-term approach so cannot be undertaken quickly, previous attempts to attract flying-foxes to a new site have not been known to succeed.</p>	<p>enhance habitat to encourage flying-fox roosting. Habitat enhancement should aim to maintain good canopy health through weed and vine removal, and maintain good canopy succession (i.e. lower, mid and upper storey) to prevent complete forest deterioration during large flying-fox influxes and provide refuge habitat during HSEs. This is likely to be well received by the community, as the most supported management option from the community survey was protecting and enhancing flying-fox habitat in low conflict areas.</p> <p>Kabra/Westwood townships: Given that flying-fox occupancy is relatively low and transient at Kabra and Westwood townships, this costly option is not justified currently. However, Council could investigate potential alternative sites for habitat enhancement as a long-term management solution.</p>	<p>restore and/or enhance habitat to encourage flying-fox roosting there. At low conflict sites, habitat should be improved to encourage roosting (as row above).</p>		
Provision of artificial roosting habitat	<p>Advantages: Artificial roosting habitat (e.g. suspended ropes) could be considered to supplement the canopy if weed removal or roost management affects available roosting space.</p> <p>Disadvantages: No guarantee that flying-foxes would use artificial habitat but collaborating with a researcher on varying design options would increase the likelihood of success.</p>	<p>To date artificial habitat structures have not been effective. Further trials could be considered with the aim of reducing pressure on roosting vegetation where this is a main concern.</p>	<p>Potentially suitable to enhance a low-conflict emerging roost where the pressure on roosting vegetation where this is a main concern.</p>	No	<p>Investigate for sites where vegetation damage is a main concern</p>
Protocols to manage incidents	<p>Advantages: Protocols for managing incidents (e.g. HSEs, unauthorised disturbances) can reduce the risk of negative human/pet-flying-fox interactions. Low cost, promotes conservation of flying-foxes, can be undertaken quickly. In some cases, infrastructure problems such as power black-outs from flying-foxes being electrocuted on powerlines may be</p>	<p>Council should respond to HSEs as per the Flying-fox Heat Event Response Guideline for south-east Queensland (Bishop et al. 2019) or consider developing a region-specific HSE document. Council should continue to engage with wildlife carers and nearby residents, particularly during potential mass mortality events such as HSEs and post-storm recovery.</p>	<p>Protocols for managing incidents should be established at both low and high conflict emerging roosts.</p>	No	<p>Continue to manage incidents in close communication with local carers</p>

Management options	Advantages & disadvantages	Suitability for RBG, Kabra and Westwood Township sites	Suitability for emerging roost	Permits required	Appraisal
	<p>avoided by proactive management (e.g. adding spacers on powerlines).</p> <p>Disadvantages: Will not mitigate amenity impacts.</p>				
Research	<p>Advantages: Support research that improves understanding and more effectively mitigates impacts. For example, outdoor odour-neutralising technology could be used to mitigate odour impacts to residents. Develop understanding of native flowering event in area.</p> <p>Disadvantages: Generally, cannot be undertaken quickly, management trials may require cost input.</p>	<p>Smell was identified as the second highest concern associated with flying-foxes amongst the community. As the survey was predominantly completed by those impacted at the RBG, an odour-neutralising trial could be conducted at this site – focusing on high trafficked areas such as the Garden Tearooms.</p> <p>New research should be reviewed at least annually and incorporated into management where appropriate.</p>	<p>Odour-neutralising trial could be considered at high conflict sites where odour is regarded as the major impact. Research should be ongoing for both low and high conflict sites.</p>	<p>Research permit and Animal Ethics Committee (AEC) approval required for outdoor odour-neutralising trial</p>	<p>Investigate outdoor odour-neutralising trial</p>
Appropriate land-use planning	<p>Advantages: Planning for future land use where possible, will reduce potential for future conflict between community and flying-fox roosts.</p> <p>Disadvantages: Will not generally mitigate current impacts.</p>	<p>Incorporate planning controls where possible.</p>	<p>Incorporate planning controls where possible.</p>	<p>No</p>	<p>Investigate</p>
Property acquisition	<p>Advantages: Allows affected landholders to move away from a roost, mitigating all impacts. Supports flying-fox conservation.</p> <p>Disadvantages: Costly; property owners may not want to sell.</p>	<p>This option is considered cost-prohibitive and unlikely to be accepted by affected residents.</p>	<p>This option is considered cost-prohibitive and unlikely to be accepted by affected residents.</p>	<p>No</p>	<p>Not suitable</p>
Buffers through vegetation	<p>Advantages: Can provide a buffer between the community and flying-fox roosts which can reduce concerns in some instances.</p>	<p>RBG: Buffers should be created between flying-fox habitat and the Rockhampton South Kindergarten at RBG to prevent flying-foxes</p>	<p>Suitable at high conflict sites where residents</p>	<p>Possibly under VM Act* Relevant</p>	<p>Consider at RBG if other methods (below) are</p>



Management options	Advantages & disadvantages	Suitability for RBG, Kabra and Westwood Township sites	Suitability for emerging roost	Permits required	Appraisal
removal	<p>Disadvantages: Removing vegetation can reduce buffering benefits of the vegetation to noise, odour and visual impacts, with potential to create additional conflict. Vegetation removed may exacerbate the impacts of HSEs.</p>	<p>roosting along the boundary fence or on the kindergarten grounds. The community survey revealed very low acceptance of vegetation removal (trimming was more accepted) as a management option, so other buffering methods should be explored first (below). Buffers should also be created around the Gardens Tearooms, though visual and olfactory deterrents would be more suitable here (below).</p> <p>Kabra township: Buffers should be created between vegetation lining the creek (bordered by Morgan and Moonmera Street) and residential properties in this block. During influxes, flying-foxes roost on or adjacent to private properties west of this block. Given these vegetation patches are relatively small and located very close to residential dwellings, creating buffers through vegetation removal may be difficult. However, residents are able to maintain properties in accordance with the Low Impact COP.</p> <p>Westwood township: The current roosting location in Westwood township is not problematic, though buffers may be required in future for vegetation adjacent to Westwood State School. Vegetation could be managed around the Westwood Hall and/or toilet block if flying-foxes are causing damage to amenity or health concerns.</p> <p>Where there is a high infestation of weeds or a dense mid/understorey (particularly below a low canopy), weed and understorey management may sufficiently alter buffer habitat, making it unfavourable for roosting flying-foxes. If weeds and/or understorey are not present, trees may require trimming to create a buffer.</p>	<p>are in close proximity to flying-fox roosting habitat. Vegetation removal should be avoided/limited at low conflict sites to avoid inadvertent dispersal of flying-foxes.</p>	<p>approvals/permits may also be required at RBG if it is a heritage listed site.</p> <p>Weed removal can occur as a general maintenance program and is permitted under the DES Low Impact COP. If undertaking vegetation works outside of the Low Impact COP, DES notification will be required.</p>	<p>unsuccessful. Consider at Kabra roost currently and Westwood in future.</p>
Buffers without vegetation removal –	<p>Advantages: Canopy-mounted water sprinklers to create buffers have been effective at many roost sites in Queensland with no welfare impacts observed during</p>	<p>Kabra township: Given that residents in Kabra rely on rainwater tanks for their water supply, CMS are unlikely to be feasible as a buffering method. Other methods, such as PROVolitans,</p>	<p>Suitable at high conflict sites where residents are in proximity</p>	<p>Notification to DES and possible approval</p>	<p>Trial D-ter and PROVolitans lighting in fig trees</p>

Management options	Advantages & disadvantages	Suitability for RBG, Kabra and Westwood Township sites	Suitability for emerging roost	Permits required	Appraisal
visual deterrents, taste deterrent, noise emitters, canopy mounted sprinklers (CMS)	<p>monitoring.</p> <p>Visual deterrents – such as plastic bags, fluoro vests (GeoLINK 2012), and balloons (Ecosure pers. comm. 2016) in roost trees have shown to have localised effects, with flying-foxes deterred from roosting within 1–10 m of the deterrents. Lights tend to have limited effectiveness in deterring roosting. For example, a high-intensity strobe light was trialled in the Sydney Botanic Gardens to deter roosting; flying-foxes demonstrated only a slight reaction and lights did not deter flying-foxes from roosting (van der Ree & North 2009). However, a recent study identified a light that flying-foxes perceive as abnormal (Oikkola 2019), which PROVolitans trialled above the canopy of a roost tree, reporting an 80% decrease in the number of flying-foxes roosting in the tree. PROVolitans lights may offer a non-harmful method of flying-fox deterrence for future trials.</p> <p>D-ter is a smell and taste deterrent commonly used as a bird repellent but has also been trialled as a deterrent for flying-foxes (van der Ree and North 2009). The overall success of D-ter was deemed limited as it was only effective short-term and in individual trees (van der Ree and North 2009).</p> <p>Disadvantages: Can be logistically difficult (installation and water sourcing) and may be cost-prohibitive. Misting may increase humidity and exacerbate HSEs, and overuse may impact other environmental values of the site.</p> <p>Water restriction consideration required.</p> <p>The type and placement of visual deterrents</p>	<p>could be trialled to create a buffer between residential dwellings directly adjacent to flying-fox habitat along the creek. This is not deemed essential currently as flying-foxes are only transiently occupying this roost.</p> <p>Westwood township: Similarly, there is little need for buffers currently as flying-foxes are not regularly roosting adjacent to residential properties or Westwood State School. PROVolitans and/or D-Ter trials could be considered if deemed appropriate in the future.</p> <p>RBG: Visual, olfactory and audio methods could be trialled to deter flying-foxes from roosting in specific trees (e.g. heritage listed trees or those at risk of permanent damage), to preserve tree health. While D-ter has a very localised effect, it could be used to deter flying-foxes from specific, individual trees, such as figs directly adjacent to the Gardens Tearooms. PROVolitans lights should also be trialled to deter flying-foxes from high conflict areas, such as surrounding the Gardens Tearooms and the kindergarten (if flying-foxes establish roosting site there). Given the structure and size of these figs, CMS may be logistically difficult to install and have limited effectiveness.</p>	to flying-fox roosting habitat. Buffering method (e.g. CMS) should be determined on a site-specific basis.	under the VM Act* (if removing vegetation to install sprinklers).	surrounding Gardens Tearooms and Rockhampton South Kindergarten at RBG. Also trial deterrence methods in other heritage listed trees or trees likely to be permanently damaged by roosting flying-foxes (if unsuccessful, vegetation removal and/or nudging may need to be considered at RBG). Investigate for future use at Kabra and Westwood townships.

Management options	Advantages & disadvantages	Suitability for RBG, Kabra and Westwood Township sites	Suitability for emerging roost	Permits required	Appraisal
	would need to be varied regularly to avoid habituation. May appear an eye-sore and lead to increase in rubbish in the natural environment.				
Noise attenuation fencing	<p>Advantages: Standard noise attenuation fencing is intended to alleviate amenity issues for residents. Advice from an acoustic consultant may provide site-specific alternatives.</p> <p>Disadvantages: Noise attenuation fencing is costly and can be considered unsightly if not cleaned of faecal drop.</p>	<p>Kabra/Westwood township: Noise was identified as an issue to the two residents (one from Kabra and one from Westwood) that responded to the community survey. To avoid the high costs associated with permanent acoustic fencing, and where flying-fox presence is transient, temporary fencing could be erected in property backyards. Residents/businesses could have the ability to fold down the acoustic fence when there are no flying-foxes present and erect it when flying-foxes return to the site.</p> <p>RBG: Given the limited number of residents impacted currently, noise-attenuation fencing is not justified at this stage. It was also the least supported management option in the community survey. Council should liaise with Rockhampton South Kindergarten; if noise is a primary concern, noise attenuation fencing should be considered.</p>	Potentially suitable at high conflict sites where noise is identified as the main concern for residents. Not suitable for low conflict sites due to cost.	No	Consider and liaise with residents at Kabra and Westwood townships and Rockhampton South Kindergarten
Nudging using low intensity disturbance	<p>Advantages: Can encourage flying-foxes to shift away from high conflict areas next to residential areas.</p> <p>Disadvantages: May lead to inadvertent dispersal if not done at the correct time, frequency or duration. Resource intensive with flying-foxes quickly returning to their favoured roost trees.</p>	<p>Kabra township: Given the narrow width of much of the site, it is unlikely that nudging will be effective and will shift flying-foxes closer to other residents or cause the roost to splinter into private residential yards (as has done before during large influxes). Since Council undertook vegetation management following the LRFF influx in 2014, there have been no large influxes of flying-foxes. Given this, the above management techniques should sufficiently reduce impacts at this site, without the need for nudging or dispersal.</p> <p>Westwood township: The current roosting location is low conflict and does not require nudging. Nudging attempts at this site may shift flying-foxes closer to Westwood State School or nearby residential backyards. If a large number of</p>	Early intervention nudging may be suitable for new roosts in high conflict areas to prevent the roost from establishing in high conflict locations (e.g. directly adjacent to residents or sensitive sites).	Nudging may be done at certain times under the Management COP and Council's as-of-right but should be during the day to avoid inadvertent dispersal/splintering of the roost which would require a FFRMP. If	Only suitable where other management techniques have been effectively implemented and proven unsuccessful in alleviating impacts.



Management options	Advantages & disadvantages	Suitability for RBG, Kabra and Westwood Township sites	Suitability for emerging roost	Permits required	Appraisal
		<p>flying-foxes establish a long-term roosting site in trees adjacent to the school, and other management techniques (e.g. buffers) are ineffective, nudging may be considered in future.</p> <p>RBG: While nudging flying-foxes away from the Gardens Tearooms may alleviate current issues, it may also shift flying-foxes closer to nearby sensitive receptors, such as the Rockhampton South Kindergarten, or nearby residential properties. Previous attempts to nudge flying-foxes from this location have had both positive and negative feedback from the community, but have ultimately been unsuccessful in shifting flying-foxes from high-conflict locations long-term. If other management techniques (e.g. buffers through vegetation removal, PROVolitans, D-Ter, lighting etc.) to shift flying-foxes away from high conflict areas (e.g. Garden Tearooms) are unsuccessful, and negative impacts increase, nudging only in very high conflict areas (Gardens Tearooms, the kindergarten, or significant heritage trees) may be considered in future.</p>		<p>attached young are present, nudging activities should be as passive as possible. Nudging is not appropriate if creching young are present.</p>	
<p>Passive dispersal through vegetation removal</p>	<p>Advantages: If successful can mitigate all flying-fox impacts at that site.</p> <p>Disadvantages: Likely less stressful on flying-foxes if done in a staged way than active dispersal, but risks as per active dispersal with additional impacts of losing native vegetation.</p>	<p>RBG: Vegetation removal is unlikely to be a viable option due to the RBG being heritage listed. It is also unlikely to be supported by the community, as vegetation removal was the second least selected management option in the community survey. Given the size of the site and number of potential roosting trees, flying-foxes are unlikely to vacate the RBG completely even if some trees are removed (i.e. nudging effect rather than dispersal).</p> <p>Westwood: Any means of dispersal is not deemed necessary currently, given the relatively low number of transient flying-foxes occupying the roost, and their low-conflict roosting location. As above, if a large number of flying-foxes establish a long-term roosting site in trees adjacent to Westwood State School, and other management</p>	<p>Early intervention dispersal through tree removal may be suitable for new roosts in high conflict areas to prevent the roost from establishing in high conflict locations (e.g. directly adjacent to residents or sensitive sites).</p>	<p>Removal of vegetation would require approval.</p>	<p>Only suitable where other management techniques have been effectively implemented and proven unsuccessful in alleviating impacts.</p>

Management options	Advantages & disadvantages	Suitability for RBG, Kabra and Westwood Township sites	Suitability for emerging roost	Permits required	Appraisal
		<p>techniques (e.g. buffers and nudging) are ineffective, passive dispersal may be considered in future.</p> <p>Kabra: Any means of dispersal is not deemed necessary currently, given the relatively low number of transient flying-foxes occupying the roost. Removal of vegetation from Council-managed land is likely to push flying-foxes onto private land (as previously during influxes), and private residents may not be receptive to removing trees from yards.</p>	<p>Suitability for vegetation removal will need to be determined on a site-specific basis.</p>		
Active dispersal through disturbance	<p>Advantages: If successful can mitigate all flying-fox impacts at that site.</p> <p>Disadvantages: Multiple studies show that dispersal is rarely successful, especially without significant vegetation removal (not suitable for this site) or high levels of ongoing effort and significant expenditure (e.g. several years of daily works and over \$1M for Sydney Botanic Gardens). Flying-foxes will almost always continue to roost in the area (generally within 600 m, Roberts and Eby 2013), and often splinter into several locations which may result in more widespread impacts. Appendix 7 provides a summary of research conducted on flying-fox dispersals in Australia.</p>	<p>Active dispersal is very costly with highly unpredictable outcomes and can often worsen human-wildlife conflict. As such, it is not currently recommended for RBG, Kabra, or Westwood roosts. While previous dispersal and nudging attempts at the RBG have had temporary success, none have provided a long-term solution for the conflict at the site. If conflict increases and/or alternative management strategies are deemed ineffective following effective implementation, dispersal may be considered at high conflict sites (e.g. if LRFF begin roosting on Westwood State School grounds again). However, with the above management strategies implemented, the potential need for dispersal is considered very low.</p>	<p>Early intervention dispersal may be suitable for new roosts in high conflict areas to prevent the roost from establishing at the site. Once a roost has established, the suitability of dispersal significantly decreases.</p>	<p>Dispersal in accordance with the Management COP is permitted under Council's as-of-right authority with notification to DES.</p>	<p>Only suitable where other management techniques have been effectively implemented and proven unsuccessful in alleviating impacts</p>



6 Management approach

Table 4 outlines management actions for the RBG, Kabra township, and Westwood township, based on site-specific analysis of available flying-fox impact management options. An overview of the approach in the short-term is to reduce current impacts on residents through:

- creating buffers between residential dwellings/businesses and flying-fox habitat, mainly at Kabra township and RBG, through weed management, vegetation trimming (not removal), and potentially CMS, as well as trialling D-ter and PROVolitans lighting around the Gardens Tearooms
- continuing to assist residents in Kabra and Westwood township with cleaning services (e.g. cleaning faeces off cars and rooves) during flying-fox influxes, and cleaning faeces off amenities in the RBG (particularly around Gardens Tearooms) on a reactive basis (less frequently than currently if buffering solutions are successful)
- offering impacted residents novel approaches to reducing noise and odour impacts e.g. temporary fencing, indoor odour-neutralising gel pots, consider trialling an outdoor odour neutralising product (initially trialled by Eurobodalla Shire Council at a flying-fox roost on the Sunshine Coast – see Appendix 6 for further detail)
- increasing education within the community, particularly at Westwood State School and Rockhampton South Kindergarten, through interpretive signage and school-based information sessions, as well as providing up-to-date information on flyers and Council's website (most popular educational tools identified during the community survey).

Education will form an important part of the ongoing management (short and long-term) of flying-foxes at the RBG. The community survey revealed some misinformation amongst the community, with only ~57% of people agreeing to some extent that flying-foxes are important to the environment. Fear of disease was also identified as one of the top three issues concerning community members. Educational material should aim to cover key messages in a way that educates and informs, rather than cause alarm, e.g. emphasising that there is no risk associated with living or playing near a flying-fox roost (Queensland Government 2021) – 'no touch, no risk'. Council should aim to provide residents at Kabra and Westwood township of methods to prevent contamination of water tanks (see Section 2.6.5). Council should also proactively engage with students, teachers, and parents of Westwood State School and Rockhampton South Kindergarten to provide key information and avoid concern associated with sudden, large influxes near schools/kindergartens. If flying-foxes begin to encroach onto school/kindergarten property, vegetation trimming and/or sprinklers should be considered to provide a buffer between the roost and school/kindergarten property. Staff at both facilities should also undertake sweeps of the school grounds each morning prior to student arrivals to check for flying-foxes on the ground, to prevent health risks to students. This will be particularly important during large influxes of flying-foxes (e.g. LRFF influx in summer months).

In addition to education, long-term management approaches to alleviate impacts to the community include:



- implementing long-term service and property subsidies programs for primary and secondary-affected residents (based on proximity to roost), particularly during large flying-fox influxes
- avoiding disturbance to flying-fox habitat at nearby Fitzroy River roost to encourage RBG flying-foxes to roost there
- identify suitable roost habitat in low conflict locations in proximity to the three roosts, and across the region more broadly, and restore and/or enhance habitat to encourage flying-fox roosting.

Active management, including nudging and/or dispersal activities, should only be considered for very high conflict sites where other management techniques have been effectively implemented and proven unsuccessful in alleviating impacts. Where necessary, nudging attempts should be as passive as possible (e.g. lighting as opposed to noise), particularly when attached young may be present, to avoid welfare impacts. No form of nudging is appropriate in areas where creching young are present as it will likely result in harm and breach legislation. Further it will not be effective when flightless young are present.

If active management techniques are planned, Council will develop a Project Health and Safety Plan to protect the safety of personnel, flying-fox welfare, and to manage any other associated risks.

Table 4 Management actions to be implemented at RBG, Kabra, and Westwood roosts. Note costs are indicative only for external assistance (i.e. estimates not provided for Council time).

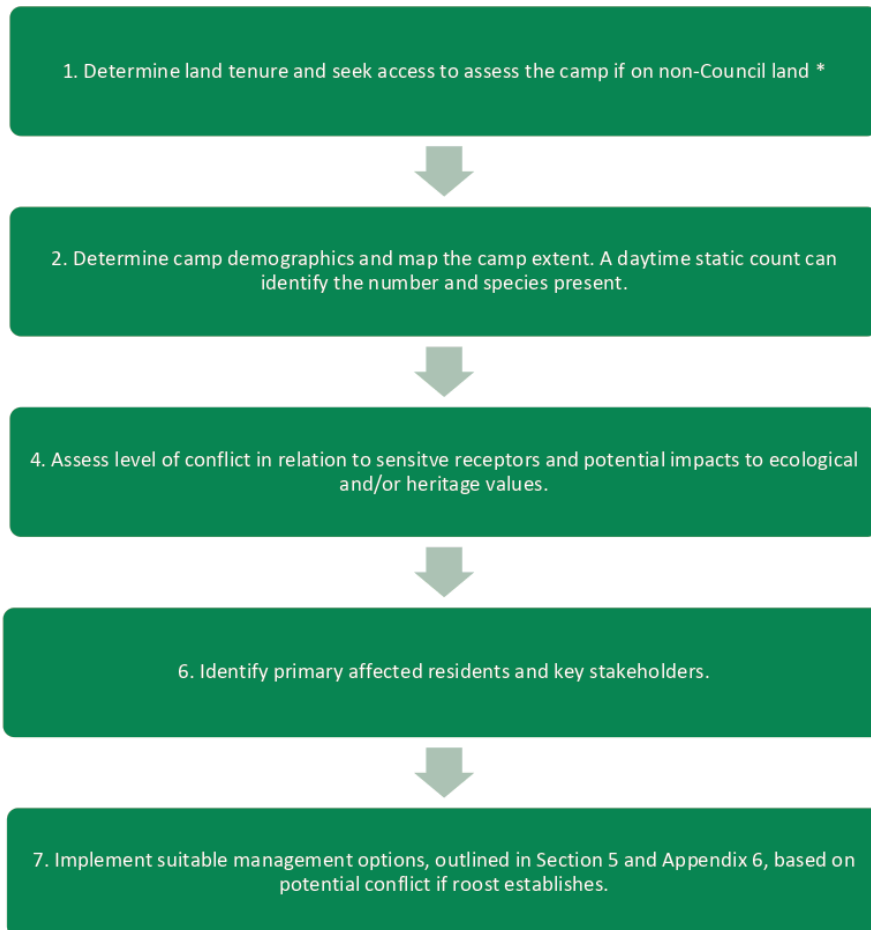
Management type	Management action	Indicative costs (ex GST)	Timeframe
Education	Increase education within the community to ensure access to up-to-date health information is available, and residents are aware of impact mitigation options available at a property level (e.g. methods to prevent water tank contamination, odour-neutralising gel pots, noise attenuation fencing, vegetation management on private land) and legislative responsibilities. Educational tools should include flyers, regularly updating Council's website, and installing interpretive signage at RBG. Direct, one-on-one engagement may be required for primary-affect residents.	Council time.	ASAP
	Facilitate community information sessions, targeting primary-affected residents and students, teachers, and parents at Westwood State School and Rockhampton South Kindergarten. Information sessions should be offered prior to the predicted influx of LRFF in summer months and continue during large influxes.		ASAP
Active removal of flying-fox carcasses	Teachers at Westwood State School and Rockhampton South Kindergarten should undertake sweeps of the grounds to identify and remove flying-foxes in a safe manner, thus reducing health risks to students. Sweeps should be done every morning while flying-foxes are roosting adjacent to grounds and during large influxes of flying-foxes. Otherwise, sweeps may be undertaken once weekly during other times.	Westwood State School and Rockhampton South Kindergarten staff time.	ASAP and ongoing during large influxes
Buffer	Trial D-ter and PROVolitans lighting in fig trees surrounding Gardens Tearooms and vegetation bordering Rockhampton South Kindergarten at RBG to deter flying-foxes from these high-conflict areas and create a 20 m buffer where possible. If unsuccessful, CMS and/or vegetation removal may need to be considered.	≈ \$10,000	ASAP
	Create a 20 m buffer (where possible) between residential properties and flying-fox habitat at Kabra township roost through weed removal and vegetation trimming and/or removal. Buffers should be created between vegetation lining the creek (bordered by Morgan and Moonmera Street) and residential properties in this block. During influxes, flying-foxes roost on or adjacent to private properties west of this block. As such, residents should be directed to the Low Impact COP for information on how they can maintain vegetation on their properties. Vegetation adjacent to Westwood State School should also be trimmed to create a 20 m buffer between the school boundary and flying-fox habitat, with the anticipation that flying-foxes may once again occupy this area.	≈ \$30,000 (including labour, environmental assessments, offset)	By November 2022 (prior to next anticipated LRFF arrival)
Subsidy program	Investigate a subsidy program for residents to modify properties and assist with the cost of services. Subsidies could be provided for items (e.g. vehicle covers, carports, clothesline covers, clothes dryers, pool/spa covers, shade cloths, rainwater first-flush diverters, high-pressure water cleaners, air conditioners, fragrance dispensers or deodorisers, double-glazing of windows, door seals, screen planting, tree netting, and lighting) or services (e.g. clothes washing, cleaning outside areas and property,	Variable as budget allows.	ASAP

Management type	Management action	Indicative costs (ex GST)	Timeframe
	solar panel cleaning, car washing, removing exotic trees, or contributing to water/electricity bills). Alternatively, a nominal amount of money could be offered to residents based on their proximity to the flying-fox roost, on the basis they can prove the relevance of expenditure to mitigating flying-fox impacts. Further information regarding subsidy programs (e.g. subsidy options, means of delivery, and potential outcomes) is provided in Appendix 6. Council should aim to engage one-on-one with affected residents to establish how their concerns could be addressed through a subsidy program.		
Habitat improvement	Avoid disturbance to Fitzroy River roost habitat to encourage flying-foxes to roost at this low conflict site.	Council time (e.g. liaising with Council contractors and educating the public)	ASAP and ongoing
	Identify suitable roost habitat in low conflict locations and restore and/or enhance habitat to encourage flying-fox roosting. Habitat enhancement should aim to maintain good canopy health through weed and vine removal, and maintain good canopy succession (i.e. lower, mid and upper storey) to prevent complete forest deterioration during large flying-fox influxes and provide refuge habitat during HSEs.	Costs will depend on extent of restoration efforts.	By the end of 2022
Active management (nudging and/or dispersal)	Active management will only be considered for very high conflict sites where other management techniques have been effectively implemented and proven unsuccessful in alleviating impacts.	Costs will depend on the size of the roost, location, resources and personnel required to undertake initial works, and ongoing costs to maintain nudging/dispersal outcomes	Only when required



6.1 Management framework for emerging roosts

Emerging roosts will be assessed and managed in accordance management options detailed in Section 5 and Appendix 6. The following flow chart outlines a general procedure to assess and manage emerging flying-fox camps in Rockhampton LGA.



* Early management intervention at an emerging roost may be possible without state approval, before it meets the criteria for a flying-fox roost (see DES 2021). In this case, it is important to note that the NC Act still applies, meaning any actions to kill, injure or harm flying-foxes are prohibited, and native vegetation is protected. Planning required to properly coordinate management actions to avoid community and flying-fox impacts should always be prioritised over the speed of management actions implemented.



7 Plan administration

7.1 Evaluation and review

A review of the Plan, including community consultation and expert input, should be scheduled annually. The Plan shall remain in force until a revised version is adopted by Council.

The following may trigger an earlier Plan update:

- changes to relevant policy/legislation
- new management techniques becoming available
- outcomes of research that may influence the Plan
- incidents associated with the roosts.

Progress and priority of management actions in the Plan will be evaluated annually by Council.

7.2 Reporting

Council will complete the DES evaluation form for actions under its as-of-right authority, returned within six weeks of the date of as-of-right actions being completed, and will comply with any reporting obligations under other permits or approvals obtained to implement the Plan.



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Appendix 1 Legislation

State

Nature Conservation Act 1992 (NC Act)

As native species, all flying-foxes and their roosting habitat are protected in Queensland under the NC Act. State approval is required to:

- d) destroy a flying-fox roost;
- e) drive away, or attempt to drive away, a flying-fox from a flying-fox roost ('drive away' is defined to mean "cause the flying-fox to move away from the roost; or if the flying-fox has moved away from the roost, deter the flying-fox from returning to the roost"); and/or
- f) disturb a flying-fox in a flying-fox roost.

The [Code of Practice – Ecologically sustainable management of flying-fox roosts \(Management COP\) \(DES 2020a\)](#) outlines how local governments operating under section 61 of the Nature Conservation (Animals) Regulation 2020 (NC Animals Regulation) may undertake the above management actions. Key obligations for such management actions include:

- DES must be notified at least two business days prior to commencing any management actions by completion of the [flying-fox roost management notification form](#), unless an authorised person from DES provides written advice that these actions can commence earlier.
- No roost tree may be destroyed if there are flying-foxes in the tree or within 20 m of the tree.
- Management actions must cease completely if a flying-fox is killed, injured or found on the ground during works, and DES must be notified immediately.
- Any nudging attempts (i.e. to move flying-foxes within a roost site) should be undertaken with methods that minimise all possible disturbance to flying-foxes.
- Any dispersal attempts must be properly coordinated by the *person in charge*, may only occur with a *person knowledgeable about flying-fox behaviours* and may only occur in the early evening or early morning. See the Management COP for additional conditions.
- Council must send DES a [flying-fox roost management evaluation form](#) within six weeks of the date of notification, detailing the outcomes of management actions.

Refer to the Management COP for further detail regarding Council's obligations prior to, during, and following undertaking nudging and/or dispersal activities.

Note that the definition under Queensland law means that once a flying-fox roost is



established, it remains as such even when it is unoccupied. The *Interim policy for determining when a flying-fox congregation is regarded as a flying-fox roost under section 88C of the NC Act* (DES 2021) has recently been released and is currently in consultation. It is our understanding that the Plan aligns with this roost policy, however amendments can be made to the Plan in consultation with DES if required.

A 'flying-fox roost' is defined under the NC Act as 'a tree or other place where flying-foxes congregate from time to time for breeding or rearing their young'.

Council 'as-of-right' management

Under the NC Act, local governments have an 'as-of-right' authority under the NC Act to manage flying-fox roosts in mapped Urban Flying-fox Management Areas (UFFMAs), without the requirement for a permit, in accordance with the Management COP (DES 2020a).

Councils must however still notify DES of the planned management. Notification is by means of a completed flying-fox management notification form from the DES website submitted at least two business days prior to commencing any management actions, unless an authorised person from DES provides written advice that these actions can commence earlier. Local governments may also choose to, with the relevant landholder's permission, exercise their as-of-right authority on private land. Notification is valid for all notified management actions within a four week timeframe.

The *Flying-fox Roost Management Guideline* (DES 2020b) has also been developed to provide local government with additional information that may assist decision making and management of flying-fox roosts. Councils are required to apply for a flying-fox roost management permit (FFRMP) to manage flying-fox roosts outside an UFFMA, or for management actions not specified in the Management COP. It must be noted that this 'as-of-right' authority does not oblige Council to manage flying-fox roosts, and does not authorise management under other relevant sections of the NC Act or other legislation (such as the *Vegetation Management Act 1999* [VM Act], see also Section 2.3). Anyone other than local government is required to apply to DES for a FFRMP for any management directed at roosting flying-foxes, or likely to disturb roosting flying-foxes. Certain low impact activities (e.g. mowing, minor tree trimming) do not require approval if undertaken in accordance with the *Code of Practice – Low impact activities affecting flying-fox roosts* (Low Impact Code) (DES 2020c).

Low impact roost management

All landholders – private or public – can undertake low impact activities such as mulching, mowing and weeding near flying-fox roosts, as well as allowing trimming of up to 10% of the total canopy of the roost without a FFRMP if it is done in accordance with the Low Impact Code (DES 2020c). This authorisation is provided these activities not being undertaken with the intention of destroying the roost, or disturbing or driving away the flying-foxes.

Flying-fox roost management permits

Councils wishing to manage flying-fox roosts located outside an UFFMA or to conduct flying-fox management activities that are not Code-compliant, must apply to DES for a FFRMP.



Under the NC Animals Regulation, a FFRMP may only be approved for management of a flying-fox roost where its resident flying-foxes are causing or may cause damage to property; or represent a threat or potential threat to human health or wellbeing. The Management COP may generally also apply where such a requirement is stated on the FFRMP. Such a permit is valid for a period of one year, or up to three with a DES-approved flying-fox management plan (e.g. this Plan).

Anyone other than local government is required to apply for an FFRMP to conduct flying-fox roost management activities.

Flying-fox management statements and planning

Council has a Statement of Management Intent (SoMI) to articulate the approach that Council will take to the management of flying-fox roosts in the Rockhampton Region (RRC 2014). Council's intent is to manage flying-fox roosts on Council-owned or controlled land, and to have no involvement in the management of roosts solely on State or private land.

Local councils may also opt to develop a FFMP for the whole of their local government area (LGA). If the FFMP is approved by DES, the local council can be granted three years' approval to manage flying-foxes outside their UFFMAs under an FFRMP.

The *Flying-fox roost management guideline* was developed to provide local councils and other entities wishing to manage flying-fox roosts with additional information that may assist their decision-making, including developing SOMIs and FFMPs (DES 2020b).

Vegetation under the NC Act 1992

All plants native to Australia are protected under the NC Act. Prior to any clearing of protected plants, a person must refer to the flora survey trigger map to determine if the clearing is within a high risk area.

- in a high risk area, a flora survey must be undertaken and a clearing permit may be required for clearing endangered, vulnerable and near threatened (EVNT) plants and their supporting habitat.
- if a flora survey identifies that EVNT plants are not present or can be avoided by 100 m, the clearing activity may be exempt from a permit. An exempt clearing notification form is required.
- in an area other than a high risk area, a clearing permit is only required where a person is, or becomes, aware that EVNT plants are present.
- clearing of least concern plants will be exempt from requiring a clearing permit within a low risk area.

Vegetation under the Fisheries Act 1994

All marine plants, including mangroves, seagrass, saltcouch, algae, samphire vegetation and adjacent plants (e.g. melaleuca and casuarina), are protected under Queensland law through provisions of the *Fisheries Act 1994*. Approval must be gained from Fisheries Queensland to



destroy, damage, or disturb any marine plant. Under the Fisheries Act, a 'marine plant' includes:

- a) a plant (a 'tidal plant') that usually grows on, or adjacent to, tidal land, whether it is living or dead, standing or fallen;
 - The *Fisheries Act* does not define 'adjacent' as it relates to marine plants. In the absence of a definition, the Fish Habitat Management Operational Policy describes the application of 'adjacent' in terms of when a marine plant development permit application would be required for disturbance of plants in or adjacent to the tidal zone.
- b) the material of a tidal plant, or other plant material on tidal land;
- c) a plant, or material of a plant, prescribed under a regulation or management plan to be a marine plant.

Vegetation Management Act 1999

The clearing of native vegetation in Queensland is regulated by the VM Act, the *Sustainable Planning Act 2009* and associated policies and codes.

The type of clearing activity allowed, and how it is regulated, depends on:

- the type of vegetation (as indicated on the regulated vegetation management map and supporting maps)
- the tenure of the land (e.g. freehold or Indigenous land)
- the location, extent and purpose of the proposed clearing
- the applicant proposing to do the clearing (e.g. state government body, landholder).

Depending on these factors, clearing activities will either:

- be exempt from any approval or notification process
- require notification and adherence to a self-assessable code
- require notification and adherence to an area management plan
- require a development approval.

VM Act exemptions allow native vegetation to be cleared for a range of routine property management activities without the need for a development approval or notification. A number of VM Act exemptions may apply to clearing vegetation that is flying-fox roosting or foraging habitat. However, specific advice should be obtained from Department of Natural Resources and Mines for each proposed vegetation clearing activity.

No explicit VM Act exemptions for clearing flying-fox roosting or foraging vegetation were in place as of September 2017.

Animal Care and Protection Act 2001

The *Animal Care and Protection Act 2001* (the ACP Act) provides for animal welfare. The ACP



Act is administered by Biosecurity Queensland within the Department of Agriculture and Fisheries. The ACP Act applies to all living vertebrate animals, including wildlife. To comply with the ACP Act flying-fox management actions must not cause mental or physical suffering, pain or distress.

Civil Aviation Act 1998 (CA Act)

The CA Act establishes Australia's Civil Aviation Safety Authority (CASA) functions in relation to civil aviation, with particular emphasis on safety. Civil Aviation Safety Regulations 1998 Part 139 contains specific requirements for wildlife hazard management.

Council and/or DES should ensure Rockhampton Airport is aware of large influxes to the area so that strike risk can be managed, and Council must ensure this legislation is adhered to when considering events with aircraft.

Commonwealth

Environment Protection and Biodiversity Conservation Act 1999

The Commonwealth's EPBC Act provides protection for the environment, specifically matters of national environmental significance (MNES). A referral to the Commonwealth Department of Agriculture, Water and the Environment (DAWE) is required under the EPBC Act for any action that is likely to significantly impact on an MNES.

MNES under the EPBC Act that relate to flying-foxes include:

- world heritage sites (where those sites contain flying-fox roosts or foraging habitat)
- wetlands of international importance (where those wetlands contain flying-fox roosts or foraging habitat)
- nationally threatened species and ecological communities.

The GHFF is listed as a vulnerable species under the EPBC Act, meaning it is an MNES. It is also considered to have a single national population. DAWE has developed the Referral guideline for management actions in GHFF and SFF roosts (DoE 2015) (the Guideline) to guide whether referral is required for actions pertaining to the GHFF.

The Guideline defines a nationally important GHFF roost as one that has either:

- contained $\geq 10,000$ GHFF in more than one year in the last 10 years, or
- been occupied by more than 2500 GHFF permanently or seasonally every year for the last 10 years.

Provided that management at nationally important roosts follows the mitigation standards below, DAWE has determined that a significant impact to the population is unlikely, and referral is not likely to be required. Referral will be required if a significant impact to any other MNES is considered likely as a result of management actions outlined in the Plan. Self-assessable criteria are available in the Significant Impact Guidelines 1.1 (DoE 2013) to assist



in determining whether a significant impact is likely; otherwise, consultation with DAWE will be required.

Mitigation standards:

- The action must not occur if the roost contains females that are in the late stages of pregnancy or have dependent young that cannot fly on their own.
- The action must not occur during or immediately after climatic extremes (HSE, cyclone event), or during a period of significant food stress.
- Disturbance must be carried out using non-lethal means, such as acoustic, visual and/or physical disturbance or use of smoke.
- Disturbance activities must be limited to a maximum of 2.5 hours in any 12-hour period, preferably at or before sunrise or at sunset.
- Trees are not felled, lopped or have large branches removed when flying-foxes are in or near to a tree and likely to be harmed.
- The action must be supervised by a person with knowledge and experience relevant to the management of flying-foxes and their habitat, who can identify dependent young and is aware of climatic extremes and food stress events. This person must assess the relevant conditions and advise the proponent whether the activity can go ahead consistent with these standards.
- The action must not involve the clearing of all vegetation supporting a nationally-important flying-fox roost. Sufficient vegetation must be retained to support the maximum number of flying-foxes ever recorded in the roost of interest.

If actions cannot comply with these mitigation measures, referral for activities at nationally important roosts is likely to be required.

Appendix 2 Species profiles

Black flying-fox (*Pteropus alecto*)



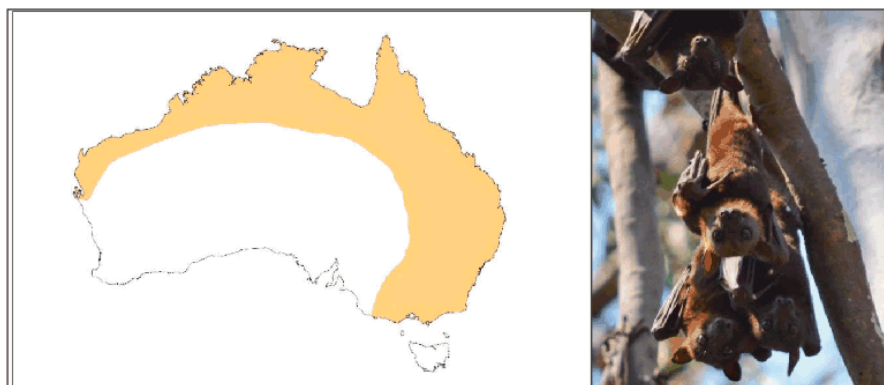
Black flying-fox indicative species distribution, adapted from OEH 2015

The BFF has traditionally occurred throughout coastal areas from Shark Bay in Western Australia, across Northern Australia, down through Queensland and into NSW (Churchill 2008). Since it was first described there has been a substantial southerly shift by the BFF (Webb and Tidemann 1995). This shift has consequently led to an increase in indirect competition with the threatened GHFF, which appears to be favouring the BFF (DoE 2016).

They forage on the fruit and blossoms of native and introduced plants (Churchill 2008), including orchard species at times. BFF are largely nomadic animals with movement and local distribution influenced by climatic variability and the flowering and fruiting patterns of their preferred food plants. Feeding commonly occurs within 20 km of the roost site (Markus and Hall 2004).

BFF usually roost beside a creek or river in a wide range of warm and moist habitats, including lowland rainforest gullies, coastal stringybark forests and mangroves. Roost sizes can change significantly in response to the availability of food and the arrival of animals from other areas.

Little red flying-fox (*Pteropus scapulatus*)



Little red flying-fox indicative species distribution, adapted from OEH 2015

The LRFF is widely distributed throughout northern and eastern Australia, with populations occurring across northern Australia and down the east coast into Victoria.

The LRFF forages almost exclusively on nectar and pollen, although will eat fruit at times and occasionally raids orchards (Australian Museum 2010). LRFF often move sub-continental distances in search of sporadic food supplies. The LRFF has the most nomadic distribution, strongly influenced by availability of food resources (predominantly the flowering of eucalypt species) (Churchill 2008), which means the duration of their stay in any one place is generally very short.

Habitat preferences of this species are quite diverse and range from semi-arid areas to tropical and temperate areas, and can include sclerophyll woodland, melaleuca swamplands, bamboo, mangroves and occasionally orchards (IUCN 2015). LRFF are frequently associated with other *Pteropus* species. In some colonies, LRFF individuals can number many hundreds of thousands and they are unique among *Pteropus* species in their habit of clustering in dense bunches on a single branch. As a result, the weight of roosting individuals can break large branches and cause significant structural damage to roost trees, in addition to elevating soil nutrient levels through faecal material (SEQ Catchments 2012).

Throughout its range, populations within an area or occupying a roost can fluctuate widely. There is a general migration pattern in LRFF, whereby large congregations of over one million individuals can be found in northern roost sites (e.g. Northern Territory, North Queensland) during key breeding periods (Vardon and Tidemann 1999). LRFF travel south to visit the coastal areas of south-east Queensland and NSW during the summer months. Outside these periods LRFF undertake regular movements from north to south during winter–spring (July–October) (Milne and Pavey 2011).

Grey-headed flying-fox (*Pteropus poliocephalus*)

Grey-headed flying-fox indicative species distribution (adapted from DPIE 2019)

The GHFF is found throughout eastern Australia, generally within 200 kilometres of the coast, from Finch Hatton in Queensland to the north to Melbourne, Victoria (DPIE 2019). This species now ranges into South Australia and individual flying-foxes have been reported on the Bass Islands and mainland Tasmania (Driessen et al. 2011). It requires foraging resources and roost sites within rainforests, open forests, closed and open woodlands (including melaleuca swamps and banksia woodlands). This species is also found throughout urban and agricultural areas where food trees exist and will feed in orchards at times, especially when other food is scarce (DPIE 2019).

All the GHFF in Australia are regarded as one population that moves around freely within its entire national range (Webb and Tidemann 1996, DAWE 2021). GHFF may travel up to 100 kilometres in a single night with a foraging radius of up to 50 kilometres from their roost (McConkey et al. 2012). They have been recorded travelling over 500 kilometres over 48 hours when moving from one roost to another (Roberts et al. 2012). GHFF generally show a high level of fidelity to roost sites, returning year after year to the same site, and have been recorded returning to the same branch of a particular tree (SEQ Catchments 2012). This may be one of the reasons flying-foxes continue to return to small urban bushland blocks that may be remnants of historically used larger tracts of vegetation.

The GHFF population has a generally annual southerly movement in spring and summer, with their return to the coastal forests of north-east NSW and south-east Queensland in winter (Ratcliffe 1932, Eby 1991, Parry-Jones and Augee 1992, Roberts et al. 2012). This results in large fluctuations in the number of GHFF in New South Wales, ranging from as few as 20% of the total population in winter up to around 75% of the total population in summer (Eby 2000). They are widespread throughout their range during summer, but in spring and winter are uncommon in the south. In autumn they occupy primarily coastal lowland roosts and are uncommon inland and on the south coast of New South Wales (DECCW 2009).

There is evidence the GHFF population declined by up to 30% between 1989 and 2000 (Birt



2000, Richards 2000 cited in DPIE 2019). There is a wide range of ongoing threats to the survival of the GHFF, including habitat loss and degradation, culling in orchards, conflict with humans, infrastructure-related mortality (e.g. entanglement in barbed wire fencing and fruit netting, and power line electrocution) and competition and hybridisation with the BFF (DECCW 2009). For these reasons it is listed as vulnerable to extinction under NSW and federal legislation.



Appendix 3 Human and animal health

Flying-foxes, like many animals, carry pathogens that may pose human health risks. Many of these are viruses which cause only asymptomatic infections in flying-foxes themselves but may cause significant disease in humans or other animals that are exposed. In Australia, the most well-defined of these include Australian bat lyssavirus (ABLV), Hendra virus (HeV) and Menangle virus. Specific information on these viruses is provided below.

Excluding those people whose occupations require contact with bats, such as wildlife carers and vets, human exposure to ABLV, HeV and Menangle virus, their transmission and frequency of infection is extremely rare. HeV infection in humans requires transfer from an infected intermediate equine host (i.e. close contact with an infected horse) and spread of the virus directly from bats to humans has not been reported.

These diseases are also easily prevented through vaccination, personal protective equipment, safe flying-fox handling (by trained and vaccinated personnel only) and appropriate horse husbandry. Therefore, despite the fact that human infection with these agents can be fatal, the probability of infection is extremely low, and the overall public health risk is also judged to be low (Qld Health 2016).

Below is current information at the time of writing. Please refer regularly to Queensland Health for up-to-date information on bats and health.

Disease and flying-fox management

A recent study at several roosts before, during and after disturbance (Edson et al. 2015) showed no statistical association between HeV prevalence and flying-fox disturbance. However, the consequences of chronic or ongoing disturbance and harassment and its effect on HeV infection were not within the scope of the study and are therefore unknown.

The effects of stress are linked to increased susceptibility and expression of disease in both humans (AIHW 2012) and animals (Henry & Stephens-Larson 1985; Aich et. al. 2009), including reduced immunity to disease.

Therefore, it can be assumed that management actions which may cause stress (e.g. dispersal), particularly over a prolonged period or at times where other stressors are increased (e.g. food shortages, habitat fragmentation, etc.), are likely to increase the susceptibility and prevalence of disease within the flying-fox population, and consequently the risk of transfer to humans.

Furthermore, management actions or natural environmental changes may increase disease risk by:

- forcing flying-foxes into closer proximity to one another, increasing the probability of disease transfer between individuals and within the population.



- resulting in abortions and/or dropped young if inappropriate management methods are used during critical periods of the breeding cycle. This will increase the likelihood of direct interaction between flying-foxes and the public, and potential for disease exposure.
- adoption of inhumane methods with potential to cause injury which would increase the likelihood of the community coming into contact with injured/dying or deceased flying-foxes.

The potential to increase disease risk should be carefully considered as part of a full risk assessment when determining the appropriate level of management and the associated mitigation measures required.

Australian bat lyssavirus

ABLV is a rabies-like virus that may be found in all flying-fox species on mainland Australia. It has also been found in an insectivorous microbat and it is assumed it may be carried by any bat species. The probability of human infection with ABLV is very low with less than 1% of the flying-fox population being affected (Qld Health 2020) and transmission requiring direct contact with an infected animal that is secreting the virus. In Australia three people have died from ABLV infection since the virus was identified in 1996 (Qld Health 2020).

Domestic animals are also at risk if exposed to ABLV. In 2013, ABLV infections were identified in two horses (Shinwari et al. 2014). There have been no confirmed cases of ABLV in dogs in Australia; however, transmission is possible (McCall et al. 2005) and consultation with a veterinarian should be sought if exposure is suspected.

Transmission of the virus from bats to humans is through a bite or scratch but may have potential to be transferred if bat saliva directly contacts the eyes, nose, mouth or broken skin. ABLV is unlikely to survive in the environment for more than a few hours, especially in dry environments that are exposed to sunlight (Qld Health 2020).

Transmission of closely related viruses suggests that contact or exposure to bat faeces, urine or blood does not pose a risk of exposure to ABLV, nor does living, playing or walking near bat roosting areas (Qld Health 2020, Qld Health 2016).

The incubation period in humans is assumed similar to rabies and variable between two weeks and several years. Similarly, the disease in humans presents essentially the same clinical picture as classical rabies. Once clinical signs have developed the infection is invariably fatal. However, infection can easily be prevented by avoiding direct contact with bats (i.e. handling). Pre-exposure vaccination provides reliable protection from the disease for people who are likely to have direct contact with bats, and it is generally a mandatory workplace health and safety requirement that all persons working with bats receive pre-vaccination and have their level of protection regularly assessed. Like classical rabies, ABLV infection in humans also appears to be effectively treated using post-exposure vaccination and so any person who suspects they have been exposed should seek immediate medical treatment. Post-exposure vaccination is usually ineffective once clinical manifestations of the disease have commenced.



If a person is bitten or scratched by a bat they should:

- wash the wound with soap and water for at least five minutes (do not scrub)
- contact their doctor immediately to arrange for post-exposure vaccinations.

If bat saliva contacts the eyes, nose, mouth or an open wound, flush thoroughly with water and seek immediate medical advice.

Hendra virus

Flying-foxes are the natural host for Hendra virus (HeV), which can be transmitted from flying-foxes to horses. Infected horses sometimes amplify the virus and can then transmit it to other horses, humans and on two occasions, dogs (Qld Health 2017). There is no evidence that the virus can be passed directly from flying-foxes to humans or to dogs (AVA 2015). Clinical studies have shown cats, pigs, ferrets and guinea pigs can carry the infection (DPI 2015).

Although the virus is periodically present in flying-fox populations across Australia, the likelihood of horses becoming infected is low and consequently human infection is extremely rare. Horses are thought to contract the disease after ingesting forage or water contaminated primarily with flying-fox urine (CDC 2014).

Humans may contract the disease after close contact with an infected horse. HeV infection in humans presents as a serious and often fatal respiratory and/or neurological disease and there is currently no effective post-exposure treatment or vaccine available for people. The mortality rate in horses is greater than 70% (DPI 2014). Since 1994, 81 horses have died, and four of the seven people infected with HeV have lost their lives (DPI 2014, Qld Health 2017).

Previous studies have shown that HeV spillover events have been associated with foraging flying-foxes rather than roost locations. Therefore, risk is considered similar at any location within the range of flying-fox species and all horse owners should be vigilant. Vaccination of horses can protect horses and subsequently humans from infection (Qld Health 2017), as can appropriate horse husbandry (e.g. covering food and water troughs, fencing flying-fox foraging trees in paddocks, etc.).

Although all human cases of HeV to date have been contracted from infected horses and direct transmission from bats to humans has not yet been reported, particular care should be taken by select occupational groups that could be uniquely exposed. For example, persons who may be exposed to high levels of HeV via aerosol of heavily contaminated substrate should consider additional PPE (e.g. respiratory filters), and potentially dampening down dry dusty substrate.

Coronaviruses

There is no evidence of SARS or SARS-like, MERS or MERS-like, 2019-nCoV or 2019-nCoV-like viruses in Australian wildlife (including bats). Novel CoV-2019 (COVID-19) is not closely related to any known Australian bat coronaviruses and there is no suggestion that 2019-nCoV (COVID-19) is present in Australian wildlife, although further surveillance and studies are



recommended. There is no evidence that livestock or pets such as dogs or cats can be infected with 2019-nCoV (COVID-19) and no evidence to suggest that any animals (livestock, pets or wildlife) in Australia might be a source of infection of 2019-nCoV (COVID-19). Regardless, appropriate personal hygiene (e.g., washing hands) is always recommended before and after contact with animals (Wildlife Health Australia 2020).

Ectoparasites

Bat flies are highly specialised ectoparasites that feed on the blood of bats. There are two families of bat flies; Nycteribiidae and Streblidae, though only species belonging to Nycteribiidae have been observed on flying-foxes in Australia (WHA Bat Focus Group members pers. comm. 2020). They are generally considered to be highly host-specific and are usually only found on or near bats. This is predominantly due to them being obligate parasites, meaning they need regular blood meals to remain viable (WHA Bat Focus Group members pers. comm. 2020). There is limited available literature on the relationship between bat flies and flying-foxes in Australia. However, ectoparasite loads appear to be higher in little-red flying-fox roosts, perhaps due to their very close roosting style/structure (Ecosure pers. obs.).

To date, there has been limited research on the effect of bat fly bites on humans, though the risk of transmitting diseases to humans is considered low (WHA Bat Focus Group members pers. comm. 2020). Firstly, bat flies tend to remain very close to flying-fox roosts, and rarely remain after flying-foxes have left. As such, the only opportunity for contact between bat flies and humans would be if someone were to walk directly underneath a roost. The chance of this contact occurring will increase if the roost contains LRFF, is large, or if the flying-foxes are highly mobile (Ecosure pers. obs.), but is generally considered low. While bat flies generally do not cause issues for humans and they do not burrow into the skin the way a tick does, some people can react to bites (Dick and Patterson 2006).

There is no evidence to show that bat flies can transmit diseases that Australian flying-foxes may carry. A study by Vidgen et al. (2016) investigated the ability of bat flies in the *Cyclopodia* genus to carry Hendra virus. The study found no evidence of any bat fly carrying the virus, even those found feeding on virus positive black flying-foxes (Vidgen et al. 2016). There is some evidence to suggest that bat flies may be vectors for *Bartonella spp.* overseas (Kamani et al. 2014, Dietrich et al. 2016, Moskaluk et al. 2018). There appears to be no reports of zoonotic pathogens in Australian bat flies, indicating either a lack of presence or very low prevalence.

Overall, the risk of disease transmission from bat fly to human is considered very low as it relies on three infrequent factors; a bat fly carrying a zoonotic pathogen, contact between a bat fly and human, and the bat fly burrowing sufficiently into the skin to transfer the pathogen (WHA Bat Focus Group members pers. comm. 2020).

Measures to avoid bat fly bites are:

- Avoid walking directly under dense groups of roosting flying-foxes.



- If possible, postpone manual cleaning of fallen vegetation and debris under a roost for 1-2 weeks after it has emptied at which time flies without a bat host should have died. If this is not possible, consider machine clean-up options.
- Follow protective measures used to avoid tick bites, such as applying insect repellent, long pants and sleeves, and double-sided tape around wrists and ankles to trap biting insects.
- If bitten and a reaction occurs, seek medical advice.

General health considerations

Flying-foxes, like all animals, carry bacteria and other microorganisms in their guts, some of which are potentially pathogenic to other species.

Bat urine and faeces should be treated like any other animal excrement. Viruses are not transferred to humans from bat urine or faeces. As with any accumulation of animal faeces (bird, bat, domestic animals), fungi or bacteria may be present and care should be taken when cleaning faeces. This includes wetting dried faeces before cleaning or mowing, wearing appropriate PPE and maintaining appropriate hygiene. If disturbing dried bird or bat droppings, particulate respirators should be worn to prevent inhalation of dust and aerosols. See '[Work with bird and bat droppings](#)' for detail.

Contamination of water supplies by any animal excreta (birds, amphibians and mammals such as flying-foxes) poses a health risk to humans. Household tanks should be designed to minimise potential contamination, such as using first-flush diverters to divert contaminants before they enter water tanks. Trimming vegetation overhanging the catchment area (e.g. the roof of a house) will also reduce wildlife activity and associated potential contamination. Tanks should also be appropriately maintained and flushed, and catchment areas regularly cleaned to remove potential contaminants.

Public water supplies are regularly monitored for harmful microorganisms and are filtered and disinfected before being distributed. Management plans for community supplies should consider whether any large congregation of animals, including flying-foxes, occurs near the supply or catchment area. Where they do occur, increased frequency of monitoring should be considered to ensure early detection and management of contaminants.



Appendix 4 Protected Matters Search Tool results



Australian Government
**Department of Agriculture,
Water and the Environment**

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 20/01/22 15:17:06

[Summary](#)

[Details](#)

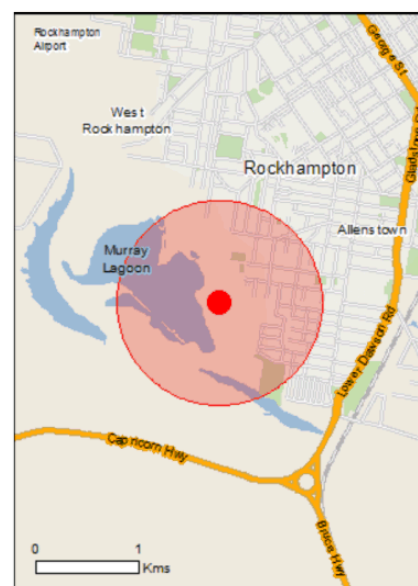
[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

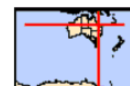
[Acknowledgements](#)



This map may contain data which are
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[Coordinates](#)

Buffer: 1.0Kms



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	2
Listed Threatened Species:	29
Listed Migratory Species:	16

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	21
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	None
Regional Forest Agreements:	None
Invasive Species:	30
Nationally Important Wetlands:	1
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Poplar Box Grassy Woodland on Alluvial Plains	Endangered	Community may occur within area
Weeping Myall Woodlands	Endangered	Community may occur within area

Listed Threatened Species [Resource Information]

Name	Status	Type of Presence
Birds		
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Epthianura crocea_macgregori Capricorn Yellow Chat, Yellow Chat (Dawson) [67090]	Critically Endangered	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Geophaps scripta_scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Neochmia ruficauda_ruficauda Star Finch (eastern), Star Finch (southern) [26027]	Endangered	Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Poephila cincta_cincta Southern Black-throated Finch [64447]	Endangered	Species or species habitat may occur within area

Name	Status	Type of Presence
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area
Turnix melanogaster Black-breasted Button-quail [923]	Vulnerable	Species or species habitat may occur within area
Mammals		
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat may occur within area
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area
Nyctophilus corbeni Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat may occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat likely to occur within area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour may occur within area
Plants		
Cupaniopsis shirleyana Wedge-leaf Tuckeroo [3205]	Vulnerable	Species or species habitat may occur within area
Cycas ophiolitica [55797]	Endangered	Species or species habitat may occur within area
Dichanthium setosum bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area
Eucalyptus raveretiana Black Ironbox [16344]	Vulnerable	Species or species habitat likely to occur within area
Marsdenia brevifolia [64585]	Vulnerable	Species or species habitat may occur within area
Samadera bidwillii Quassia [29708]	Vulnerable	Species or species habitat may occur within area
Reptiles		
Delma torquata Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area
Denisonia maculata Ornamental Snake [1193]	Vulnerable	Species or species habitat likely to occur within area
Egernia rugosa Yakka Skink [1420]	Vulnerable	Species or species habitat may occur within area
Furina dunmalli Dunmall's Snake [59254]	Vulnerable	Species or species

Name	Status	Type of Presence
Rheodytes leukops		habitat may occur within area
Fitzroy River Turtle, Fitzroy Tortoise, Fitzroy Turtle, White-eyed River Diver [1761]	Vulnerable	Species or species habitat may occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Marine Species		
Crocodylus porosus		
Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Cuculus optatus		
Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
Hirundapus caudacutus		
White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Monarcha melanopsis		
Black-faced Monarch [609]		Species or species habitat may occur within area
Monarcha trivirgatus		
Spectacled Monarch [610]		Species or species habitat known to occur within area
Myiagra cyanoleuca		
Satin Flycatcher [612]		Species or species habitat likely to occur within area
Rhipidura rufifrons		
Rufous Fantail [592]		Species or species habitat known to occur within area
Migratory Wetlands Species		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii		
Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus		
Osprey [952]		Species or species

Name	Threatened	Type of Presence
Tringa nebularia Common Greenshank, Greenshank [832]		habitat known to occur within area Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Chrysococcyx osculans Black-eared Cuckoo [705]		Species or species habitat likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area

Name	Threatened	Type of Presence
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat may occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat known to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area
Reptiles		
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area

Extra Information

Invasive Species [Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur

Name	Status	Type of Presence
Anas platyrhynchos Mallard [974]		within area Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Lonchura punctulata Nutmeg Mannikin [399]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Frogs		
Rhinella marina Cane Toad [83218]		Species or species habitat known to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Acacia nilotica subsp. indica Prickly Acacia [6196]		Species or species habitat may occur within area

Name	Status	Type of Presence
Cryptostegia grandiflora Rubber Vine, Rubbervine, India Rubber Vine, India Rubbervine, Palay Rubbervine, Purple Allamanda [18913] Eichhornia crassipes Water Hyacinth, Water Orchid, Nile Lily [13466]		Species or species habitat likely to occur within area
Hymenachne amplexicaulis Hymenachne, Olive Hymenachne, Water Stargrass, West Indian Grass, West Indian Marsh Grass [31754]		Species or species habitat likely to occur within area
Jatropha gossypifolia Cotton-leaved Physic-Nut, Bellyache Bush, Cotton-leaf Physic Nut, Cotton-leaf Jatropha, Black Physic Nut [7507] Lantana camara Lantana, Common Lantana, Kamara Lantana, Large- leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892] Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Parkinsonia aculeata Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]		Species or species habitat likely to occur within area
Parthenium hysterophorus Parthenium Weed, Bitter Weed, Carrot Grass, False Ragweed [19566]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Vachellia nilotica Prickly Acacia, Blackthorn, Prickly Mimosa, Black Piquant, Babul [84351]		Species or species habitat likely to occur within area
Reptiles		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to occur within area
Ramphotyphlops braminus Flowerpot Blind Snake, Brahminy Blind Snake, Cacing Besi [1258]		Species or species habitat may occur within area

Nationally Important Wetlands		[Resource Information]
Name		State
Fitzroy River Floodplain		QLD

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

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- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-23.4 150.4903

Acknowledgements

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- [Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
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Australian Government
**Department of Agriculture,
Water and the Environment**

EPBC Act Protected Matters Report

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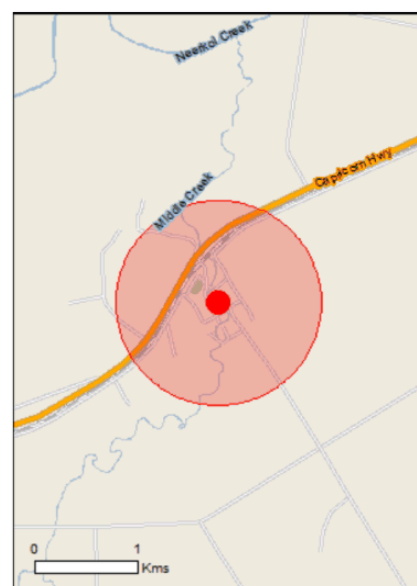
[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

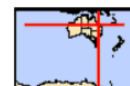
[Acknowledgements](#)



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[Coordinates](#)

Buffer: 1.0Km



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	3
Listed Threatened Species:	28
Listed Migratory Species:	15

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

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A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	20
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	None
Regional Forest Agreements:	None
Invasive Species:	28
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions	Endangered	Community may occur within area
Poplar Box Grassy Woodland on Alluvial Plains	Endangered	Community likely to occur within area
Weeping Myall Woodlands	Endangered	Community may occur within area

Listed Threatened Species [Resource Information]

Name	Status	Type of Presence
Birds		
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat may occur within area
Neochmia ruficauda ruficauda Star Finch (eastern), Star Finch (southern) [26027]	Endangered	Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Poephila cincta cincta Southern Black-throated Finch [64447]	Endangered	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Turnix melanogaster Black-breasted Button-quail [923]	Vulnerable	Species or species

Name	Status	Type of Presence
Mammals		
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	habitat may occur within area Species or species habitat may occur within area
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area
Nyctophilus corbeni Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat may occur within area
Petauroides volans Greater Glider [254]	Vulnerable	Species or species habitat may occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat likely to occur within area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour may occur within area
Plants		
Cossinia australiana Cossinia [3066]	Endangered	Species or species habitat may occur within area
Cycas megacarpa [55794]	Endangered	Species or species habitat may occur within area
Dichanthium setosum bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area
Eucalyptus raveretiana Black Ironbox [16344]	Vulnerable	Species or species habitat likely to occur within area
Marsdenia brevifolia [64585]	Vulnerable	Species or species habitat may occur within area
Samadera bidwillii Quassia [29708]	Vulnerable	Species or species habitat likely to occur within area
Reptiles		
Delma torquata Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area
Denisonia maculata Ornamental Snake [1193]	Vulnerable	Species or species habitat likely to occur within area
Egernia rugosa Yakka Skink [1420]	Vulnerable	Species or species habitat may occur within area
Furina dunmalli Dunmall's Snake [59254]	Vulnerable	Species or species habitat may occur within area

Name	Status	Type of Presence
Rheodytes leukops Fitzroy River Turtle, Fitzroy Tortoise, Fitzroy Turtle, White-eyed River Diver [1761]	Vulnerable	Species or species habitat may occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Marine Species		
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat may occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
Name	Threatened	Species list. Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Chrysococcyx osculans Black-eared Cuckoo [705]		Species or species habitat likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat may occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within

Name	Threatened	Type of Presence area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
Reptiles		
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area

Extra Information

Invasive Species [Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit, 2001.

Name	Status	Type of Presence
Birds		
<i>Acridotheres tristis</i> Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
<i>Anas platyrhynchos</i> Mallard [974]		Species or species habitat likely to occur within area
<i>Columba livia</i> Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
<i>Lonchura punctulata</i> Nutmeg Mannikin [399]		Species or species habitat likely to occur within area
<i>Passer domesticus</i> House Sparrow [405]		Species or species habitat likely to occur within area
<i>Streptopelia chinensis</i> Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
<i>Sturnus vulgaris</i> Common Starling [389]		Species or species habitat likely to occur within area
Frogs		

Name	Status	Type of Presence
Rhinella marina Cane Toad [83218]		Species or species habitat known to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Cryptostegia grandiflora Rubber Vine, Rubbervine, India Rubber Vine, India Rubbervine, Palay Rubbervine, Purple Allamanda [18913]		Species or species habitat likely to occur within area
Hymenachne amplexicaulis Hymenachne, Olive Hymenachne, Water Stargrass, West Indian Grass, West Indian Marsh Grass [31754]		Species or species habitat likely to occur within area
Jatropha gossypifolia Cotton-leaved Physic-Nut, Bellyache Bush, Cotton-leaf Physic Nut, Cotton-leaf Jatropha, Black Physic Nut [7507]		Species or species habitat likely to occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Parkinsonia aculeata Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]		Species or species habitat likely to occur within area
Parthenium hysterophorus Parthenium Weed, Bitter Weed, Carrot Grass, False		Species or species

Name	Status	Type of Presence
Ragweed [19566]		habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Vachellia nilotica Prickly Acacia, Blackthorn, Prickly Mimosa, Black Piquant, Babul [84351]		Species or species habitat likely to occur within area
Reptiles		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to occur within area

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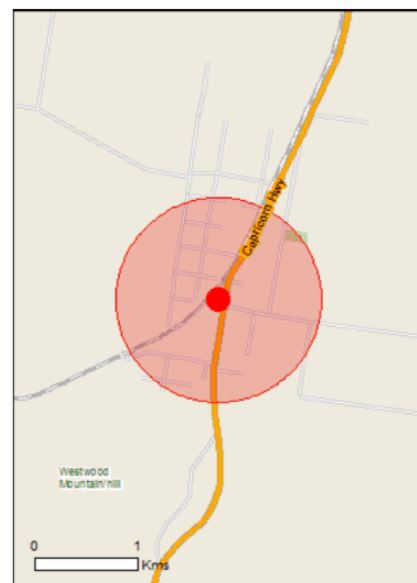
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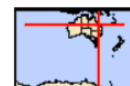
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[Coordinates](#)

Buffer: 1.0Km



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Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	None
Regional Forest Agreements:	None
Invasive Species:	23
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions	Endangered	Community may occur within area
Poplar Box Grassy Woodland on Alluvial Plains	Endangered	Community may occur within area
Weeping Myall Woodlands	Endangered	Community may occur within area

Listed Threatened Species [Resource Information]

Name	Status	Type of Presence
Birds		
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat may occur within area
Neochmia ruficauda ruficauda Star Finch (eastern), Star Finch (southern) [26027]	Endangered	Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Poephila cincta cincta Southern Black-throated Finch [64447]	Endangered	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Turnix melanogaster Black-breasted Button-quail [923]	Vulnerable	Species or species

Name	Status	Type of Presence
Mammals		
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	habitat may occur within area Species or species habitat may occur within area
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area
Nyctophilus corbeni Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat may occur within area
Petauroides volans Greater Glider [254]	Vulnerable	Species or species habitat may occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat likely to occur within area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour may occur within area
Plants		
Cadellia pentastylis Ooline [9828]	Vulnerable	Species or species habitat may occur within area
Cossinia australiana Cossinia [3066]	Endangered	Species or species habitat likely to occur within area
Cycas megacarpa [55794]	Endangered	Species or species habitat likely to occur within area
Dichanthium setosum bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area
Eucalyptus raveretiana Black Ironbox [16344]	Vulnerable	Species or species habitat likely to occur within area
Marsdenia brevifolia [64585]	Vulnerable	Species or species habitat may occur within area
Samadera bidwillii Quassia [29708]	Vulnerable	Species or species habitat may occur within area
Reptiles		
Delma torquata Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area
Denisonia maculata Ornamental Snake [1193]	Vulnerable	Species or species habitat may occur within area
Egernia rugosa Yakka Skink [1420]	Vulnerable	Species or species habitat may occur within area

Name	Status	Type of Presence
Furina dunmalli Dunmall's Snake [59254]	Vulnerable	Species or species habitat may occur within area
Rheodytes leukops Fitzroy River Turtle, Fitzroy Tortoise, Fitzroy Turtle, White-eyed River Diver [1761]	Vulnerable	Species or species habitat may occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Marine Species		
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat may occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area

Name	Threatened	Type of Presence
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Chrysococcyx osculans Black-eared Cuckoo [705]		Species or species habitat likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat may occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat may occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
Reptiles		
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area

Extra Information

Invasive Species [Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit, 2001.

Name	Status	Type of Presence
Birds		
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Lonchura punctulata Nutmeg Mannikin [399]		Species or species habitat likely to occur

Name	Status	Type of Presence
Passer domesticus House Sparrow [405]		within area Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Frogs		
Rhinella marina Cane Toad [83218]		Species or species habitat known to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Cryptostegia grandiflora Rubber Vine, Rubbervine, India Rubber Vine, India Rubbervine, Palay Rubbervine, Purple Allamanda [18913]		Species or species habitat likely to occur within area
Jatropha gossypifolia Cotton-leaved Physic-Nut, Bellyache Bush, Cotton-leaf Physic Nut, Cotton-leaf Jatropha, Black Physic Nut [7507]		Species or species habitat likely to occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Parkinsonia aculeata Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]		Species or species habitat likely to occur within area
Parthenium hysterophorus Parthenium Weed, Bitter Weed, Carrot Grass, False Ragweed [19566]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Prosopis spp. Mesquite, Algaroba [68407]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Vachellia nilotica Prickly Acacia, Blackthorn, Prickly Mimosa, Black Piquant, Babul [84351]		Species or species habitat likely to occur within area

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-23.6219 150.1559

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [Office of Environment and Heritage, New South Wales](#)
- [Department of Environment and Primary Industries, Victoria](#)
- [Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [Department of Environment, Water and Natural Resources, South Australia](#)
- [Department of Land and Resource Management, Northern Territory](#)
- [Department of Environmental and Heritage Protection, Queensland](#)
- [Department of Parks and Wildlife, Western Australia](#)
- [Environment and Planning Directorate, ACT](#)
- [Birdlife Australia](#)
- [Australian Bird and Bat Banding Scheme](#)
- [Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [Museum Victoria](#)
- [Australian Museum](#)
- [South Australian Museum](#)
- [Queensland Museum](#)
- [Online Zoological Collections of Australian Museums](#)
- [Queensland Herbarium](#)
- [National Herbarium of NSW](#)
- [Royal Botanic Gardens and National Herbarium of Victoria](#)
- [Tasmanian Herbarium](#)
- [State Herbarium of South Australia](#)
- [Northern Territory Herbarium](#)
- [Western Australian Herbarium](#)
- [Australian National Herbarium, Canberra](#)
- [University of New England](#)
- [Ocean Biogeographic Information System](#)
- [Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [Geoscience Australia](#)
- [CSIRO](#)
- [Australian Tropical Herbarium, Cairns](#)
- [eBird Australia](#)
- [Australian Government – Australian Antarctic Data Centre](#)
- [Museum and Art Gallery of the Northern Territory](#)
- [Australian Government National Environmental Science Program](#)
- [Australian Institute of Marine Science](#)
- [Reef Life Survey Australia](#)
- [American Museum of Natural History](#)
- [Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact Us](#) page.

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Appendix 5 Community survey results

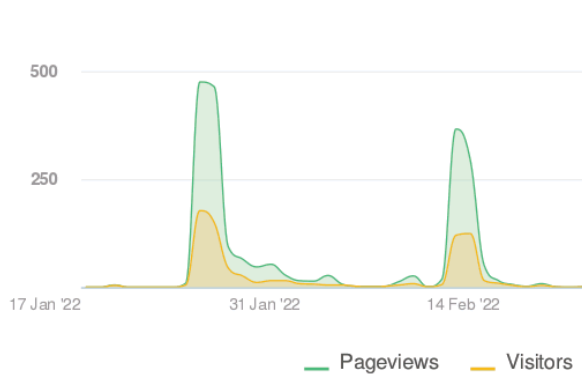
Project Report

15 April 2019 - 21 February 2022

Engage Rockhampton Region Flying-fox Roost Management Plan



Visitors Summary



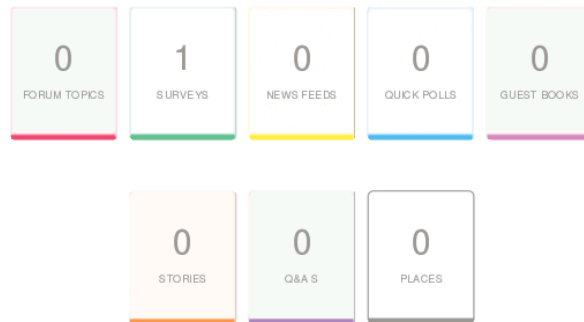
Highlights

TOTAL VISITS	824	MAX VISITORS PER DAY	177
NEW REGISTRATIONS	150	ENGAGED VISITORS	237
		INFORMED VISITORS	570
		AWARE VISITORS	748

Aware Participants		748		Engaged Participants		237	
Aware Actions Performed	Participants			Engaged Actions Performed	Registered	Unverified	Anonymous
Visited a Project or Tool Page	748			Contributed on Forums	0	0	0
Informed Participants	570			Participated in Surveys	237	0	0
Informed Actions Performed	Participants			Contributed to Newsfeeds	0	0	0
Viewed a video	0			Participated in Quick Polls	0	0	0
Viewed a photo	0			Posted on Guestbooks	0	0	0
Downloaded a document	0			Contributed to Stories	0	0	0
Visited the Key Dates page	0			Asked Questions	0	0	0
Visited an FAQ list Page	0			Placed Pins on Places	0	0	0
Visited Instagram Page	0			Contributed to Ideas	0	0	0
Visited Multiple Project Pages	322						
Contributed to a tool (engaged)	237						

Engage Rockhampton Region : Summary Report for 15 April 2019 to 21 February 2022

ENGAGEMENT TOOLS SUMMARY



Tool Type	Engagement Tool Name	Tool Status	Visitors	Contributors		
				Registered	Unverified	Anonymous
Survey Tool	Flying-fox Roost Management Plan - Community Survey	Archived	652	237	0	0

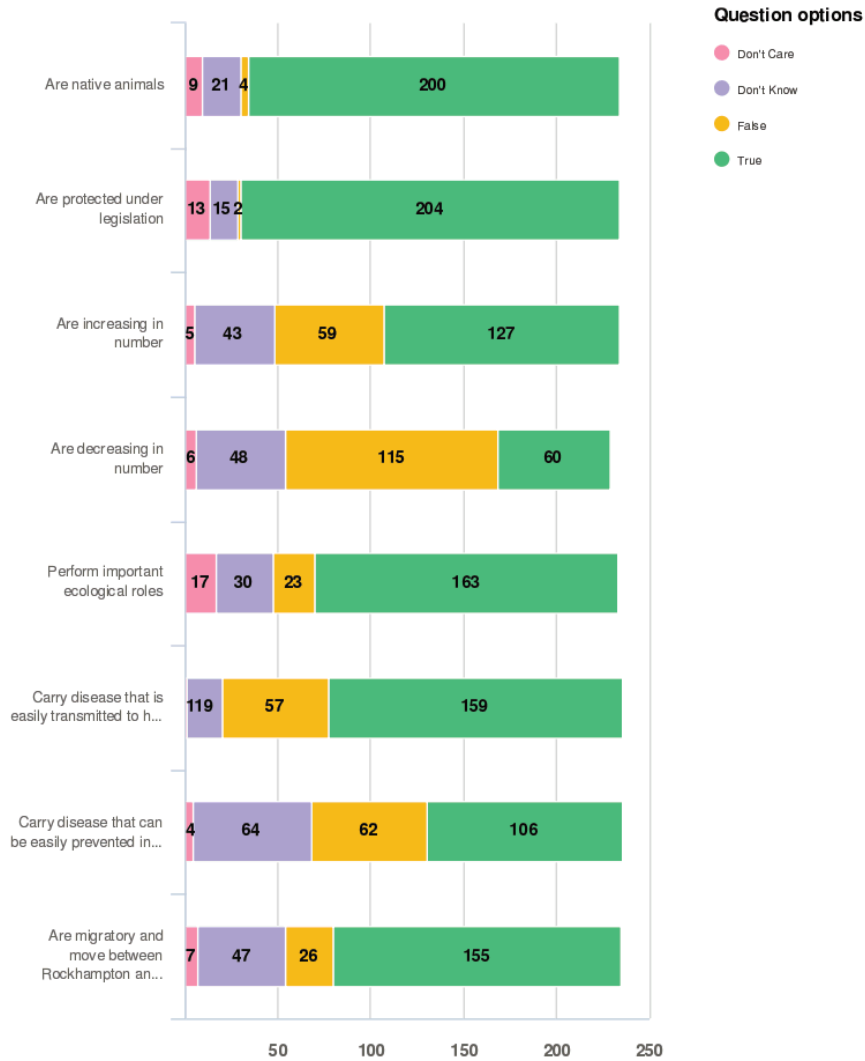
Engage Rockhampton Region : Summary Report for 15 April 2019 to 21 February 2022

ENGAGEMENT TOOL: SURVEY TOOL

Flying-fox Roost Management Plan - Community Survey

Visitors 652	Contributors 237	CONTRIBUTIONS 237
---------------------	-------------------------	--------------------------

Please select an answer for each of the following statements. Flying-foxes....



Optional question (237 response(s), 0 skipped)

Question type: Likert Question

Engage Rockhampton Region : Summary Report for 15 April 2019 to 21 February 2022

Please indicate how strongly you agree or disagree with the following statements:

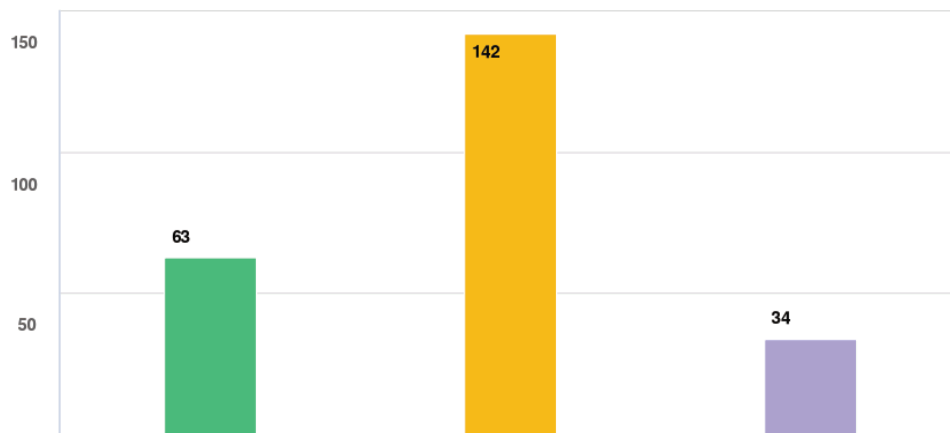


Optional question (237 response(s), 0 skipped)

Question type: Likert Question

Engage Rockhampton Region : Summary Report for 15 April 2019 to 21 February 2022

How would you rate your experience or interactions with flying-foxes?



Question options

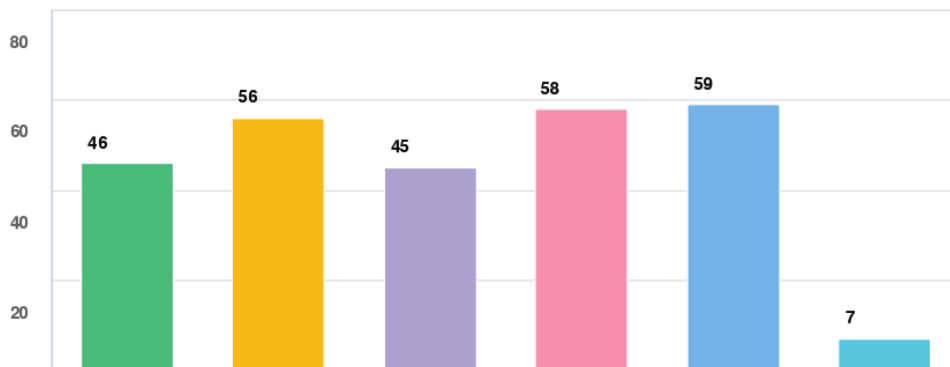
- Neutral
- Negative
- Positive

Optional question (236 response(s), 1 skipped)

Question type: Checkbox Question

Engage Rockhampton Region : Summary Report for 15 April 2019 to 21 February 2022

If your experiences with flying-foxes are positive, what do you like about them?



Question options

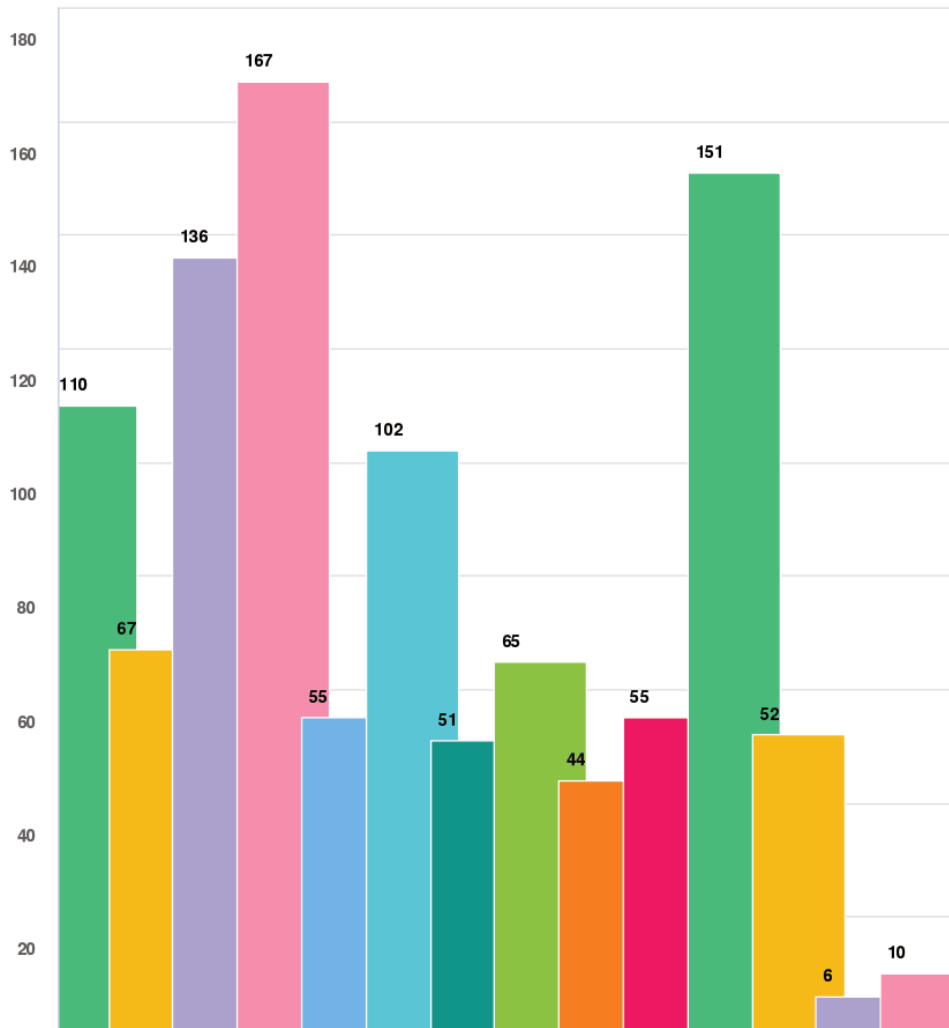
- Other
- Flying-foxes are great pollinators and seed dispersers and an important part of our ecosystem
- I appreciate being able to live with native wildlife
- I enjoy when they visit my backyard
- I enjoy watching them at the roost / flying out
- They are intelligent and social

Optional question (63 response(s), 174 skipped)

Question type: Checkbox Question

Engage Rockhampton Region : Summary Report for 15 April 2019 to 21 February 2022

Which of the following topics relating to flying-foxes are of concern to you?



Question options

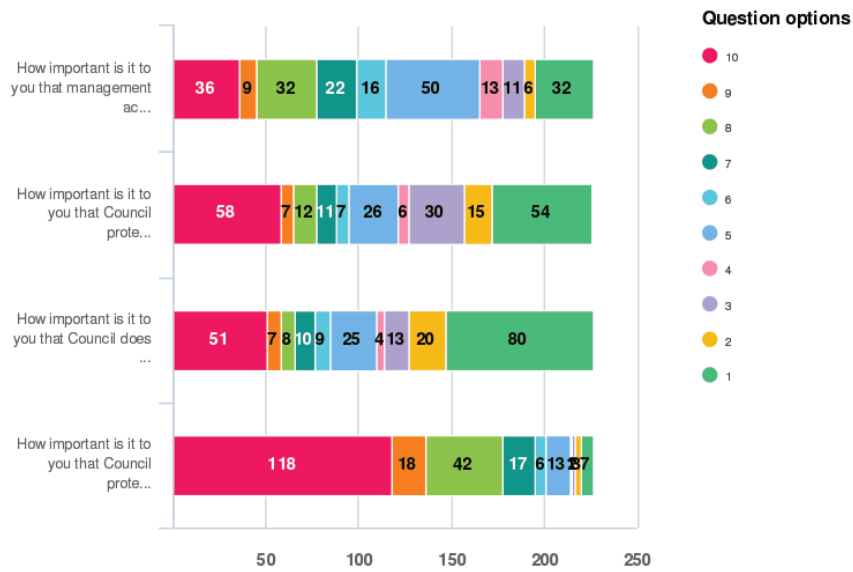
- Other
- None
- Fruit loss at orchards
- Smell
- Flying-fox conservation
- Visual amenity
- Flying-fox welfare
- Feeding/foraging in my yard
- Damage to vegetation
- Misinformation about flying-foxes
- Mess from droppings
- Fear of disease
- Flying-fox habitat protection
- Noise

Optional question (227 response(s), 10 skipped)

Question type: Checkbox Question

Engage Rockhampton Region : Summary Report for 15 April 2019 to 21 February 2022

Please rank the following in order of importance (1-least important) (5- Neutral) (10-most important)

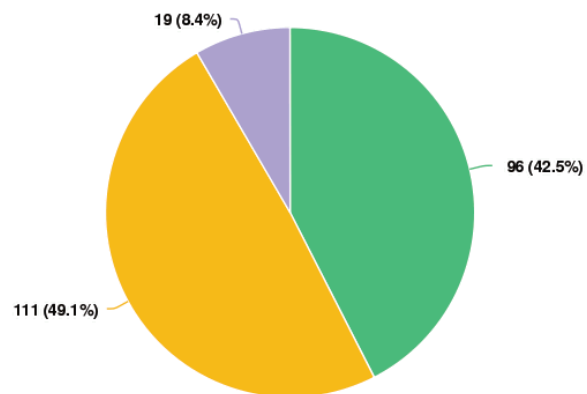


Optional question (227 response(s), 10 skipped)

Question type: Likert Question

Engage Rockhampton Region : Summary Report for 15 April 2019 to 21 February 2022

Do you live near a flying-fox roost?



Question options

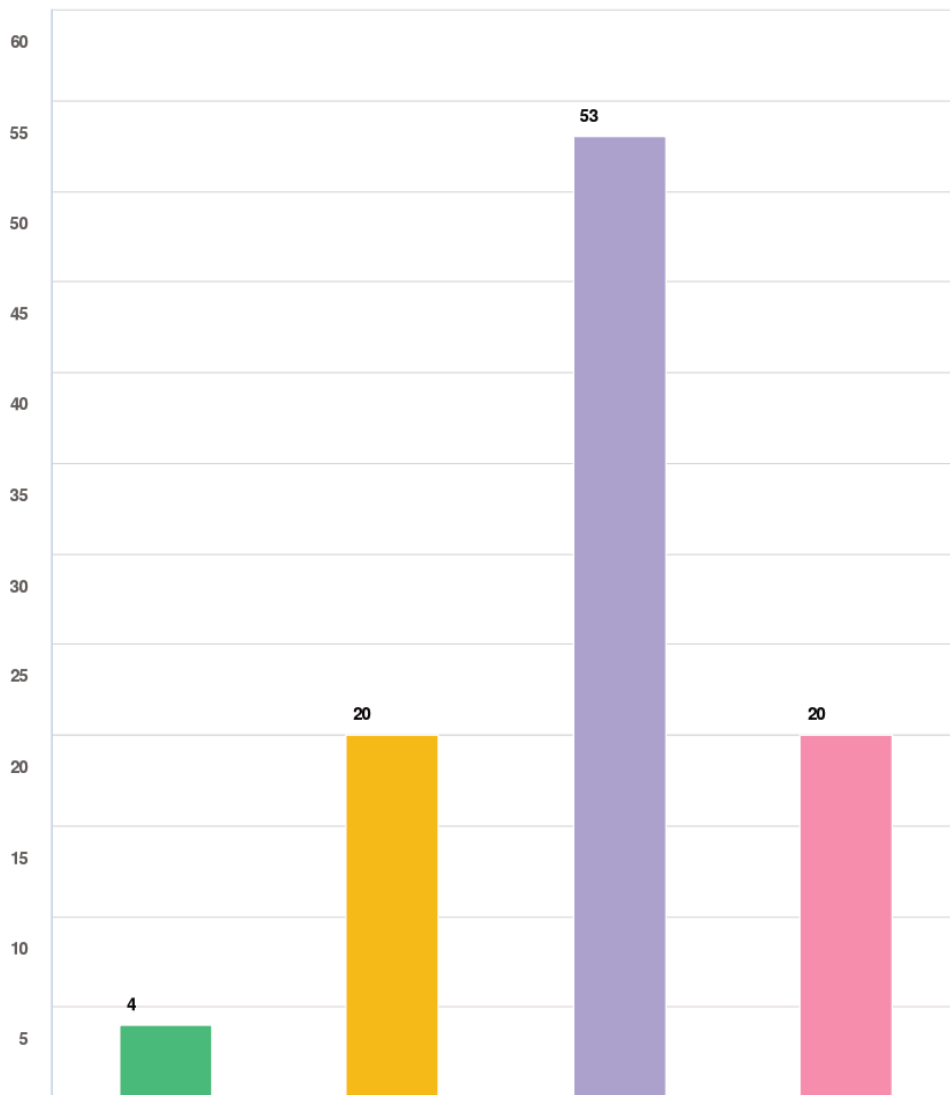
- Don't know
- No
- Yes

Optional question (226 response(s), 11 skipped)

Question type: Radio Button Question

Engage Rockhampton Region : Summary Report for 15 April 2019 to 21 February 2022

Approximately how far away is the roost from your home?



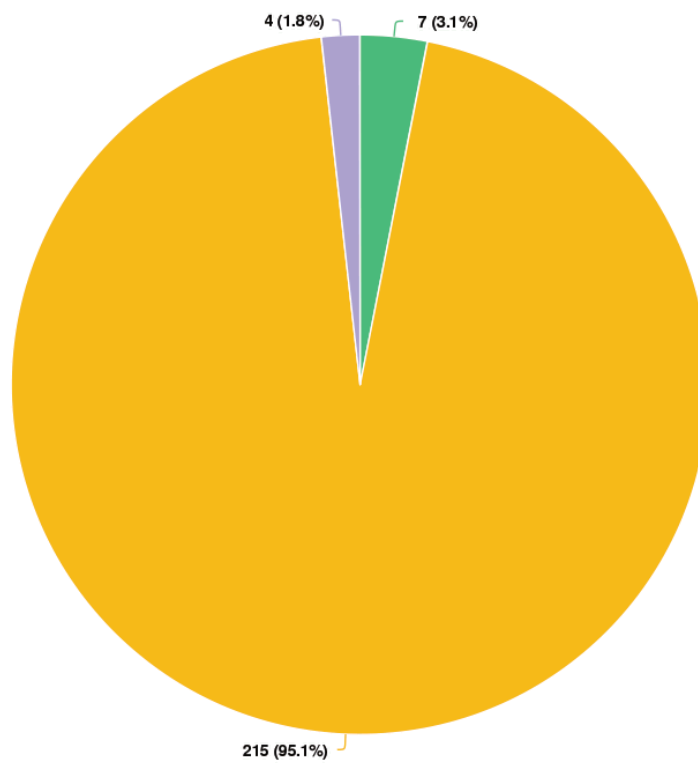
Question options

- Greater than 1 km away
- Greater than 300 m but less than 1 km
- 100-300 m
- 100 m or less

Optional question (96 response(s), 141 skipped)

Question type: Checkbox Question

Do you own a business near a flying-fox roost?



Question options

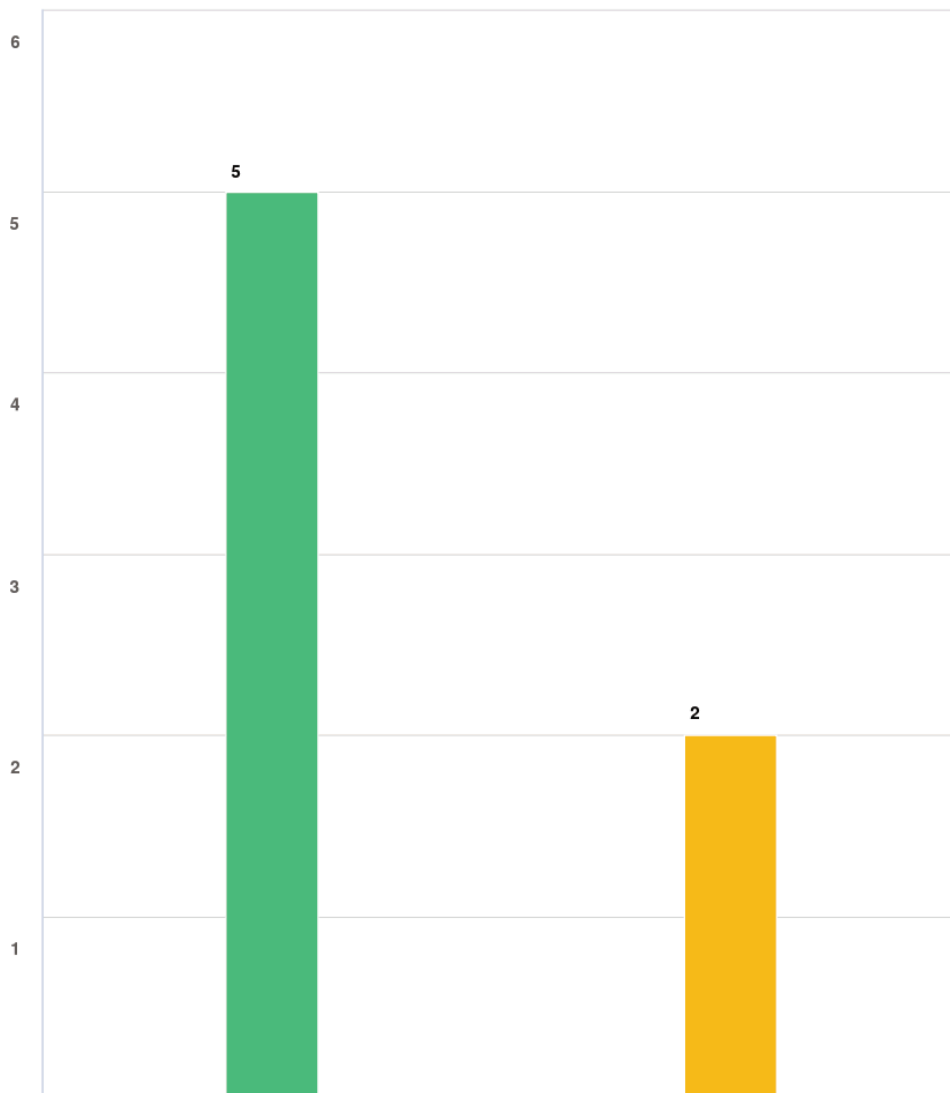
- Don't know
- No
- Yes

Optional question (226 response(s), 11 skipped)

Question type: Radio Button Question

Engage Rockhampton Region : Summary Report for 15 April 2019 to 21 February 2022

Approximately how far away is the roost from your business?



Question options

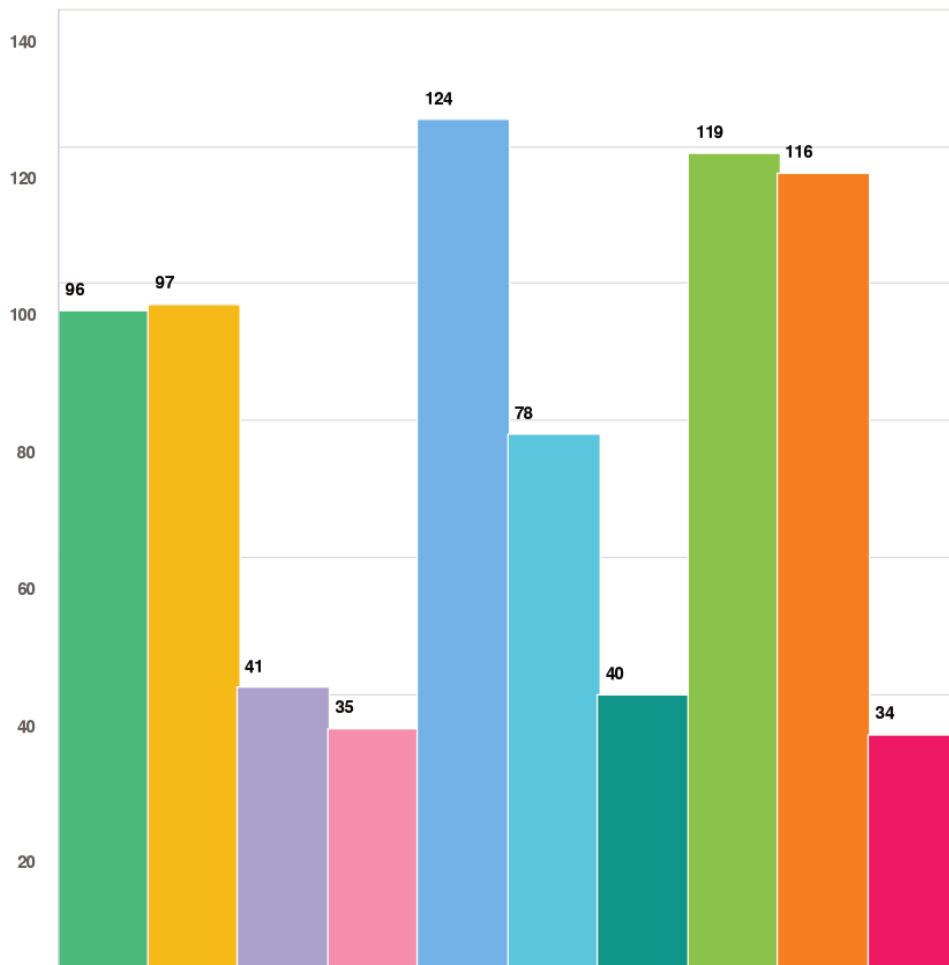
- Greater than 300 m but less than 1 km
- 100 m or less

Optional question (7 response(s), 230 skipped)

Question type: Checkbox Question

Engage Rockhampton Region : Summary Report for 15 April 2019 to 21 February 2022

Which of the following management options do you support?



Question options

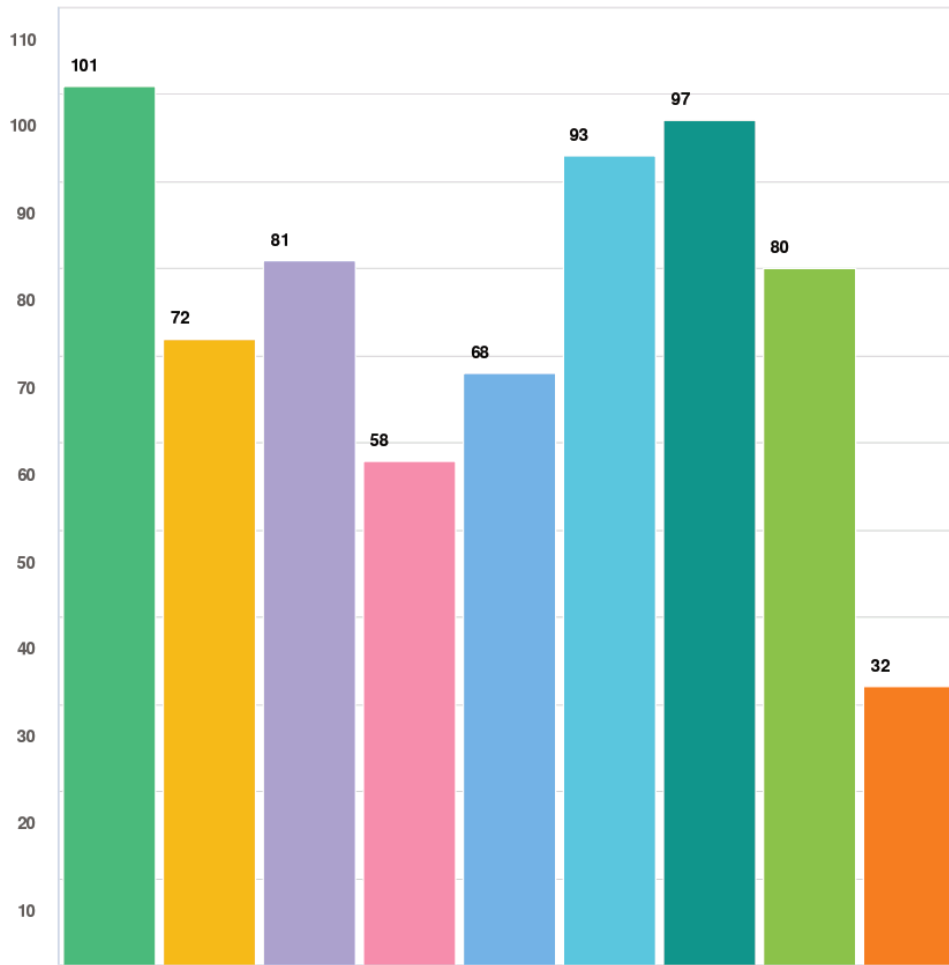
- Other
- Buffers between people and flying-foxes using plants not suitable for roosting flying-foxes
- Buffers using deterrents (e.g. canopy-mounted sprinklers)
- Buffers through tree removal
- Buffers through tree trimming
- Protecting and enhancing flying-fox roost habitat in low conflict areas
- Noise reduction fencing
- Property modification (e.g. insulation, double-glazed windows, plantings)
- Land use planning including zoning of flying-fox roosts
- Education and research

Optional question (223 response(s), 14 skipped)

Question type: Checkbox Question

Engage Rockhampton Region : Summary Report for 15 April 2019 to 21 February 2022

Which of the following education options appeal to you? Choose one or more, or suggest your own.



Question options

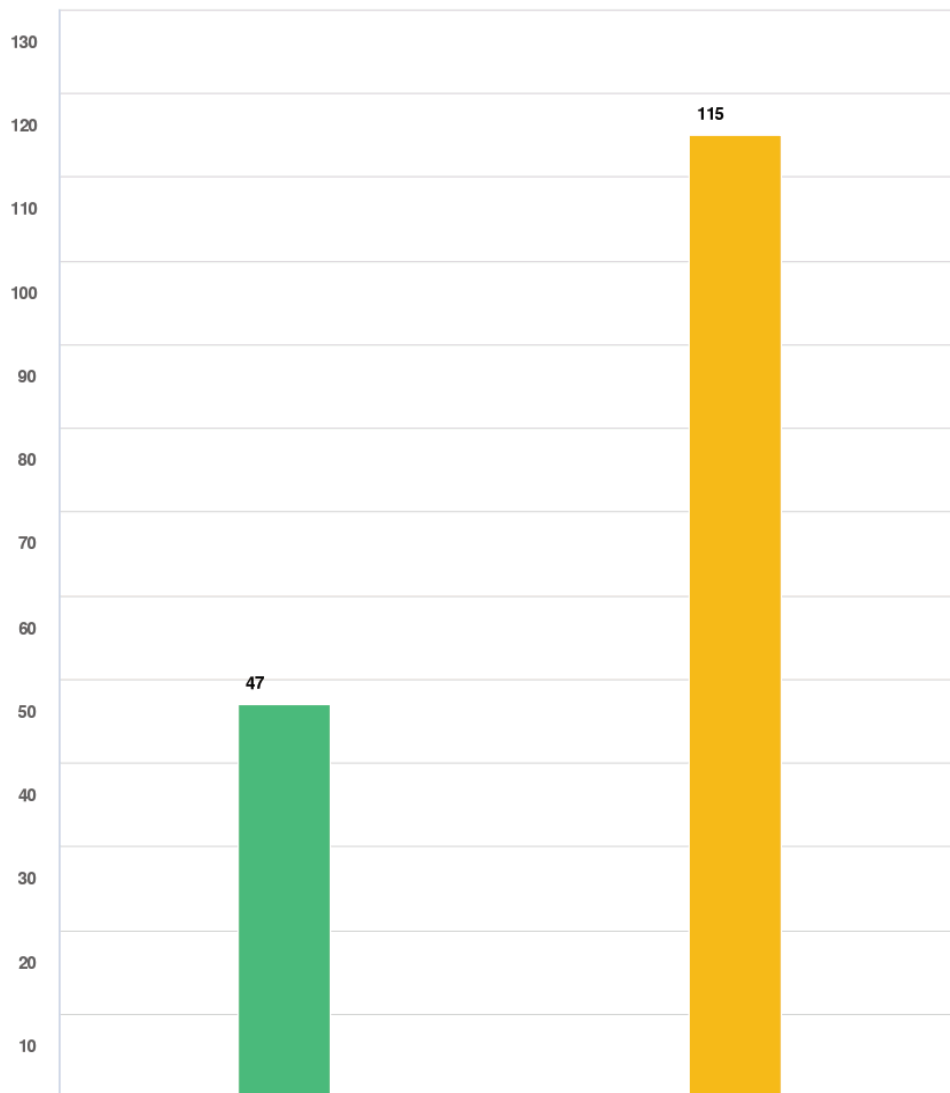
- Other
- School engagement programs
- Website with links to up-to-date information
- Fact sheets with up-to-date information regarding flying-foxes or the roost
- Promote the flying-fox roost as a natural asset to future residents
- Opportunities to meet a flying-fox
- Talks by Traditional Owners/wildlife carers/rangers
- Annual flying-fox night with flying-fox specialists, community and local government
- Educational signage

Optional question (184 response(s), 53 skipped)

Question type: Checkbox Question

Engage Rockhampton Region : Summary Report for 15 April 2019 to 21 February 2022

Would you like more information about garden plants that:



Question options

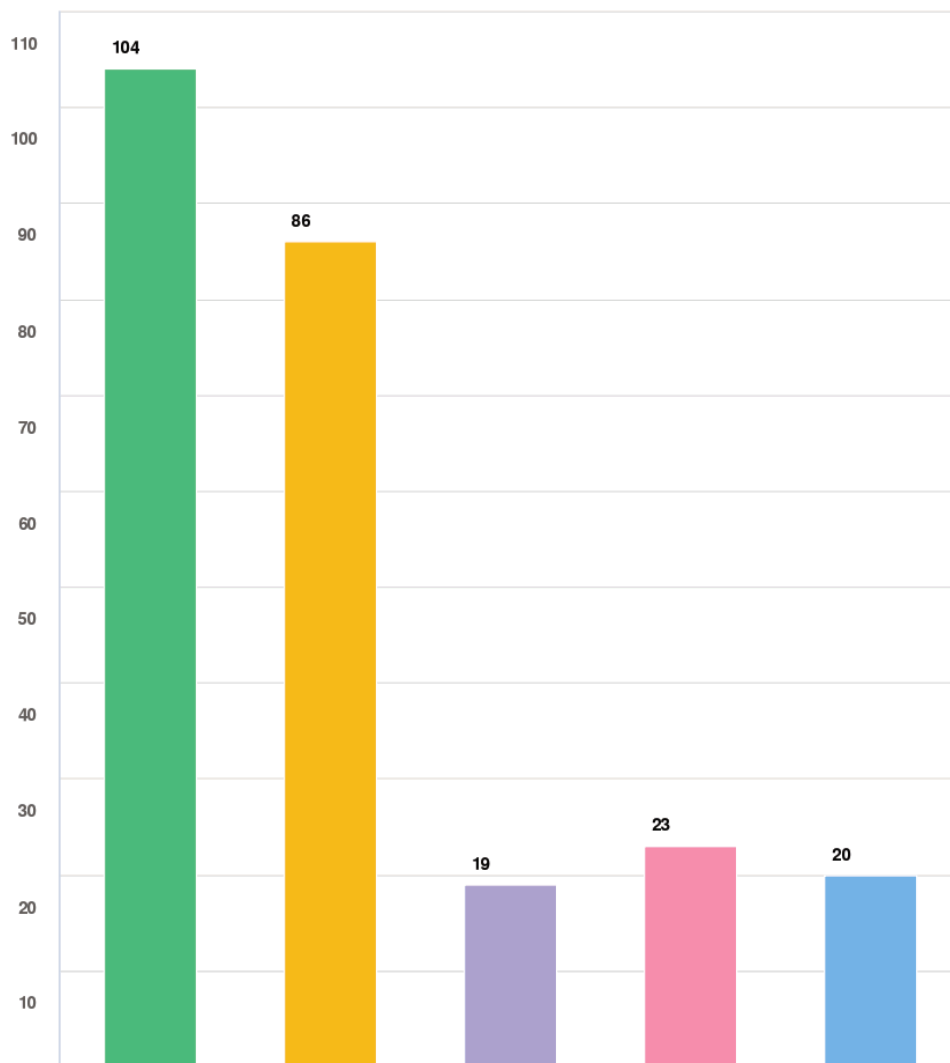
- Avoid attracting flying-foxes to your backyard.
- Attract flying-foxes to your backyard

Optional question (152 response(s), 85 skipped)

Question type: Checkbox Question

Engage Rockhampton Region : Summary Report for 15 April 2019 to 21 February 2022

Which of the following best describes you?



Question options

- Other
- Member of a club or group?
- Occasional visitor to the Rockhampton region
- Resident or Business owner not impacted by a roost
- Resident or Business owner impacted by a roost

Optional question (223 response(s), 14 skipped)

Question type: Checkbox Question



Appendix 6 Management options

Below is an overview of management options commonly used across Queensland and Australia which were considered in the development of the Plan.

Low impact options

Education and awareness programs

This management option involves undertaking a comprehensive and targeted flying-fox education and awareness program to provide accurate information to the local community about flying-foxes.

Such a program would include information about managing risk and alleviating concern about health and safety issues associated with flying-foxes, options available to reduce impacts from roosting and foraging flying-foxes, an up-to-date program of works being undertaken at the roost, and information about flying-fox numbers and flying-fox behaviour at the roost.

Residents should also be made aware that faecal drop and noise at night is mainly associated with plants that provide food, independent of roost location. Staged removal of foraging species such as fruit trees and palms from residential yards, or management of fruit (e.g. bagging, pruning) will greatly assist in mitigating this issue.

Collecting and providing information should always be the first response to community concerns in an attempt to alleviate issues without the need to actively manage flying-foxes or their habitat. Where it is determined that management is required, education should similarly be a key component of any approach.

The likelihood of improving community understanding of flying-fox issues is high. However, the extent to which that understanding will help alleviate conflict issues is probably less so. Extensive education for decision-makers, the media and the broader community may be required to overcome negative attitudes towards flying-foxes.

It should be stressed that a long-term solution to the issue resides with better understanding flying-fox ecology and applying that understanding to careful urban planning and development.

An education program may include components shown below.



Property modification

The managers of land on which a flying-fox roost is located would promote or encourage the adoption of certain actions on properties adjacent to or near the roost to minimise impacts from roosting and foraging flying-foxes:

- Create visual/sound/smell barriers with fencing or hedges. To avoid attracting flying-foxes, species selected for hedging should not produce edible fruit or nectar-exuding flowers, should grow in dense formation between two and five metres (Roberts 2006) (or be maintained at less than 5 metres). Vegetation that produces fragrant flowers can assist in masking roost odour where this is of concern.
- Manage foraging trees (i.e. plants that produce fruit/nectar-exuding flowers) within properties through pruning/covering with bags or wildlife friendly netting, early removal of fruit, or tree replacement.
- Cover vehicles, structures and clothes lines where faecal contamination is an issue, or remove washing from the line before dawn/dusk.
- Move or cover eating areas (e.g. BBQs and tables) within close proximity to a roost or foraging tree to avoid contamination by flying-foxes.



- Install double-glazed windows, insulation and use air-conditioners when needed to reduce noise disturbance and smell associated with a nearby roost.
- Include suitable buffers and other provisions (e.g. covered car parks) in planning of new developments.
- Turn off lighting at night which may assist flying-fox navigation and increase fly-over impacts.
- Consider removable covers for swimming pools and ensure working filter and regular chlorine treatment.
- Appropriately manage rainwater tanks, including installing first-flush systems.
- Avoid disturbing flying-foxes during the day as this will increase roost noise.

The cost would be borne by the person or organisation who modifies the property; however, opportunities for funding assistance (e.g. environment grants) may be available for management activities that reduce the need to actively manage a roost.

Odour neutralising trial

Odour neutralising systems (which modify odour-causing chemicals at the molecular level rather than just masking them) are commonly used in contexts such as waste management, food processing, and water treatment. They have the potential to be a powerful tool for managing odour impacts associated with flying-foxes. Two trials have been undertaken that utilised two different odour-neutralising systems. The indoor system uses a Hostogel™ pot containing a gel-based formula for neutralising indoor odour. These are inexpensive, only require replacement every few months, and may be sufficient to mitigate odour impacts in houses affected by flying-fox roosts. Initial results suggest there may be a positive localised effect in reducing flying-fox odour within homes. This option may be useful for affected residents (particularly those directly adjacent to the roost), as residents could choose whether or not they wish to have a gel-pot in their living space and can simply put the lid back on the pot when the odour is not impacting on them.

The outdoor system consists of a Vapourgard™ unit that dispenses an odour-neutralising vapour through diffuser pipes that are installed on boundary fences. A world-first trial was undertaken in April – June 2021 with the participation of residents living near a flying-fox roost at Porter Park, Sunshine Coast. The system followed a predetermined schedule (alternating on / off cycles) for 9 weeks and residents were asked to rate the flying-fox odour every day throughout the trial.

The trial identified that the odour-neutralising technique has the potential to be effective. However, objective results were difficult to obtain due to the significant negative experience of residents as a consequence of the large influxes of flying-fox numbers during the trial. If future trials confirm this technique is effective, the odour-neutralising system could be installed at high conflict roosts where odour is identified.



Subsidy programs

Subsidy programs provide Council with an opportunity to support impacted residents living near flying-fox roosts. There are a number of factors to consider when establishing a subsidy program, including who to offer subsidies to (e.g. who is eligible and how is this determined), what subsidies to offer (e.g. service-based or property-based), how subsidies should be offered (e.g. reimbursements for purchases or upfront funding), and how the program will be evaluated to determine effectiveness for reducing flying-fox impacts to residents. A recent report published by the NSW Department of Planning, Industry & Environment (Mo & Roache 2019) summarised the implementation and efficacy of subsidy programs across six councils in NSW: Eurobodalla, Ku-ring-gai, Cessnock, Tamworth, and Sutherland councils. This report provides insight into the aforementioned factors for Council's consideration, if a subsidy program is to be adopted.

Government initiatives that provide financial assistance commonly assess residents' eligibility based on a number of variables, including property distance from a roost, and deliver subsidies as partial or full reimbursements for purchases. It is important to consider that the popularity of certain subsidies likely varies across different communities, so affected residents should be consulted in the process of establishing an effective subsidy program. The NSW subsidy study (Mo & Roache 2019) found managers who design programs that best meet community needs have an increased probability of alleviating human-wildlife conflicts. Critical thresholds of flying-fox numbers at a roost and distance to a roost may also be used to determine when subsidies would apply. However, distance measures must be used with care as the extent to which a resident feels impacted is not a simple function of how close they live, as shown in a large-scale survey of 8,000 residents where there was no correlation between distance and level of bother within 300 m of a flying-fox roost (Lentini et al. 2020).

While subsidies have the potential to alleviate flying-fox impacts within a community, they can be negatively received if residents believe there are broader issues associated with flying-foxes that are not being addressed (Mo & Roache 2019). As such, it is important (as with any community-based program) to assess the needs of residents and have open, ongoing communication throughout the program to ensure the subsidies are effectively reducing impacts, and if not, how the program can be adapted to address these needs.

A brief description and examples of property and service-based subsidies is provided below.

Property modification/item subsidies

Fully funding or providing subsidies to property owners for property modifications may be considered to manage the impacts of the flying-foxes. Providing subsidies to install infrastructure may improve the value of the property, which may also offset concerns regarding perceived or actual property value or rental return losses. Focusing funds towards manipulating the existing built environment also reduces the need for modification and removal of vegetation. Examples of property modification subsidies include vehicle covers, carports, clothesline covers, clothes dryers, pool/spa covers, shade cloths, rainwater first-flush diverters, high-pressure water cleaners, air conditioners, fragrance dispensers or deodorisers, double-glazing of windows, door seals, screen planting, tree netting, and lighting (to



discourage flying-foxes). Of these, vehicle and clothesline covers and high-pressure water cleaners were the most common subsidies taken by residents (Mo & Roache 2019).

When offered, double-glazing windows was popular amongst residents and was able to achieve a 65% reduction in flying-fox noise (Mo & Roache 2019). Furthermore, in a study by Pearson and Cheng (2018), it was found using infrastructure such as double-glazing windows significantly reduced the external noise level measured inside a house adjacent to a roost. This finding was supported by post-subsidy surveys undertaken by Port Macquarie Hastings Council that showed that double-glazed windows were rated as being more effective in mitigating impacts than any other subsidised option (e.g. high pressure cleaners, clothesline covers, shade cloths etc.) (Reynolds 2021).

Sunshine Coast Council undertook several rounds of a private property grant trial in 2021-2022. The trial was used to facilitate property improvement or impact reduction infrastructure on eligible private properties. Feedback from this round confirmed that residents that have lived nearby a roost long-term are more likely to participate in the trial and experience more positive outcomes. It is acknowledged that residents that have only experienced short-term impacts may not be ready yet for this intervention. Council is currently implementing Round 2 of the grant trial where a one-off grant would be provided to eligible residents, which would be supported by ongoing roost management, education, research and monitoring.

Service subsidies

This management option involves providing property owners with a subsidy to help manage impacts on the property and lifestyle of residents. The types of services that could be subsidised include clothes washing, cleaning outside areas and property, solar panel cleaning, car washing, removing exotic trees, or contributing to water/electricity bills. The NSW subsidy study showed that while many property modification subsidies proved popular amongst residents (e.g. high-pressure cleaners, air conditioners), many raised concerns over the increase in water/electricity bills. Increases in bills can be difficult to quantify and justify, and has not yet been effectively offered by a council in a subsidy program.

Routine roost maintenance and operational activities

All persons are authorised to undertake low impact activities at roosts in accordance with the Code of practice—Low impact activities affecting flying-fox roosts. Low impact activities include weeding, mulching, mowing or minor tree trimming.

Protocols should be developed for carrying out operations that may disturb flying-foxes, which can result in excess roost noise. Such protocols could include limiting the use of disturbing activities to certain days or certain times of day in the areas adjacent to the roost and advising adjacent residents of activity days. Such activities could include lawn-mowing, using chainsaws, whipper-snippers, using generators and testing alarms or sirens.

Revegetation and land management to create alternative habitat

This management option involves revegetating and managing land to create alternative flying-fox roosting habitat through improving and extending existing low-conflict roosts or developing



new roosting habitat in areas away from human settlement.

Selecting new sites and attempting to attract flying-foxes to them has had limited success in the past, and ideally habitat at known roost sites would be dedicated as a flying-fox reserve. However, if a staged and long-term approach is used to make unsuitable current roosts less attractive, whilst concurrently improving appropriate sites, it is a viable option (particularly for the transient and less selective LRFF). Supporting further research into flying-fox roost preferences may improve the potential to create new flying-fox habitat.

Foraging trees planted amongst and surrounding roost trees (excluding in/near horse paddocks) may help to attract flying-foxes to a desired site. They will also assist with reducing foraging impacts in residential areas. Consideration should be given to tree species that will provide year-round food, increasing the attractiveness of the designated site. Depending on the site, the potential negative impacts to a natural area will need to be considered if introducing non-indigenous plant species.

The presence of a water source is likely to increase the attractiveness of an alternative roost location. Supply of an artificial water source should be considered if unavailable naturally, however this may be cost-prohibitive.

Potential habitat mapping using roost preferences and suitable land tenure can assist in initial alternative site selection. A feasibility study would then be required prior to site designation to assess likelihood of success and determine the warranted level of resource allocated to habitat improvement.

Provision of artificial roosting habitat

This management option involves constructing artificial structures to augment roosting habitat in current roost sites or to provide new roosting habitat. Trials using suspended ropes have been of limited success as flying-foxes only used the structures that were very close to the available natural roosting habitat. It is thought that the structure of the vegetation below and around the ropes is important.

Protocols to manage incidents

This management option involves implementing protocols for managing incidents or situations specific to particular roosts. Such protocols may include monitoring at sites within the vicinity of aged care or child care facilities, management of compatible uses such as dog walking or sites susceptible to heat stress incidents (when the roost is subjected to extremely high temperatures leading to flying-foxes changing their behaviour and/or dying).

Participation in research

This management option involves participating in research to improve knowledge of flying-fox ecology to address the large gaps in our knowledge about flying-fox habits and behaviours and why they choose certain sites for roosting. Further research and knowledge sharing at local, regional and national levels will enhance our understanding and management of flying-fox roosts.



Appropriate land-use planning

Land-use planning instruments may be able to be used to ensure adequate distances are maintained between future residential developments and existing or historical flying-fox roosts. While this management option will not assist in the resolution of existing land-use conflict, it may prevent issues for future residents.

Property acquisition

Property acquisition may be considered if negative impacts cannot be sufficiently mitigated using other measures. This option will clearly be extremely expensive, however is likely to be more effective than dispersal and in the long-term may be less costly.

Do nothing

The management option to 'do nothing' involves not undertaking any management actions in relation to the flying-fox roost and leaving the situation and site in its current state.

Buffers

Buffers can be created through vegetation removal, revegetation of non-flying-fox attractant vegetation and/or the installation of permanent/semi-permanent deterrents.

Creating buffers may involve planting low-growing, spiky, non-flowering plants between residents or other conflict areas and the flying-fox roost. Such plantings can create a physical and/or visual buffer between the roost and residences or make areas of the roost inaccessible to humans.

Previous studies have recommended that vegetation buffers consisting of habitat not used by flying-foxes, should be 300 m or as wide as the site allows to mitigate amenity impacts for a community (SEQ Catchments 2012). Buffers need to take into consideration the variability of use of a roost site by flying-foxes within and across years, including large, seasonal influxes of flying-foxes. The usefulness of a buffer declines if the flying-fox roost is within 50 m of human habitation.

Buffers through vegetation removal

Vegetation removal aims to alter the area of the buffer habitat sufficiently so that it is no longer suitable as a roost. The amount required to be removed varies between sites and roosts, ranging from some weed removal to removal of most of the canopy vegetation.

Any vegetation removal should be done using a staged approach, with the aim of removing as little native vegetation as possible. This is of particular importance at sites with other values (e.g. ecological or amenity), and in some instances the removal of any native vegetation will not be appropriate. Thorough site assessment will inform whether vegetation management is suitable (e.g. can impacts to other wildlife and/or the community be avoided?).

Removing vegetation can also increase visibility into the roost and noise issues for neighbouring residents which may create further conflict.



Suitable experts should be consulted to assist selective vegetation trimming/removal to minimise vegetation loss and associated impacts. The importance of under- and mid-storey vegetation in the buffer area for flying-foxes during heat stress events also requires consideration.

Buffers without vegetation removal

Permanent or semi-permanent deterrents can be used to make buffer areas unattractive to flying-foxes for roosting, without the need for vegetation removal. This is often an attractive option where vegetation has high ecological or amenity value.

While many deterrents have been trialled in the past with limited success, there are some options worthy of further investigation:

- Visual deterrents – Visual deterrents such as plastic bags, fluoro vests (GeoLINK 2012) and balloons (Ecosure, pers. comm.) in roost trees have shown to have localised effects, with flying-foxes deterred from roosting within 1–10 metres of the deterrents. The type and placement of visual deterrents would need to be varied regularly to avoid habituation. Potential for litter pollution should be considered and managed when selecting the type and placement of visual deterrents. In the absence of effective maintenance, this option could potentially lead to an increase in rubbish in the natural environment.
- Noise emitters on timers – Noise needs to be random, varied and unexpected to avoid flying-foxes habituating. As such these emitters would need to be portable, on varying timers and a diverse array of noises would be required. It is likely to require some level of additional disturbance to maintain its effectiveness, and ways to avoid disturbing flying-foxes from desirable areas would need to be identified. This is also likely to be disruptive to nearby residents.
- Smell deterrents – For example, bagged python excrement hung in trees has previously had a short-term localised effect (GeoLINK 2012). The smell of certain deterrents may also impact nearby residents, and there is potential for flying-foxes to habituate.
- Canopy-mounted water sprinklers – This method has been effective in deterring flying-foxes during dispersals (Ecosure personal experience), and current trials in Queensland are showing promise for keeping flying-foxes out of designated buffer zones. This option can be logistically difficult (installation and water sourcing) and may be cost-prohibitive. Design and use of sprinklers need to be considerate of animal welfare and features of the site. For example, misting may increase humidity and exacerbate heat stress events, and overuse may impact other environmental values of the site. Further information regarding canopy-mounted sprinklers is detailed below.
- Screening plants – A 'screen' can be created by planting a row of trees along the edge of a roost, with the aim of reducing visual impacts associated with flying-foxes. This technique can be particularly useful in cases where residents can suffer extreme reactions triggered by the mere sight of flying-foxes.



Canopy-mounted sprinklers

Installing canopy-mounted sprinklers (CMS) can be used to deter flying-foxes from a buffer. CMS can be installed either:

- without any roost tree trimming/removal or
- accompanied by selective roost tree trimming/removal.



Canopy mounted sprinklers installed by Sunshine Coast Council (source: National Flying-fox Forum 2016, Ecosure).

As CMS are operated by residents, clear guidelines on sprinkler use will need to be established with residents. To date CMS have been successful at other locations at discouraging flying-foxes from roosting in the buffer zone and enabling residents to have more control over flying-foxes near their properties.

Canopy-mounted sprinklers can be installed and effectively operated without the need for any vegetation removal, as long as the vegetation is not so thick as to restrict the extent of water spray. If vegetation thinning is required to allow sprinklers to operate effectively in some areas, approval will be required under the VM Act as exemptions do not exist for this purpose (see Appendix 1).

Water pressure must be firm so it is sufficient to deter flying-foxes, however, must not risk injuring flying-foxes (or other fauna) or knocking an animal from the tree. Water misting should be minimised as this is unlikely to deter flying-foxes and could exacerbate heat stress event effects. Flying-fox heat stroke generally occurs when the temperature reaches 42°C, however, can occur at lower temperatures in more humid conditions (Bishop 2015). Given that humidity is likely to increase with water in the environment, sprinklers may need to be turned off in



higher temperatures (e.g. >30°C) to avoid exacerbating heat stress (N.B. A NSW government-funded trial through Western Sydney University is currently underway to determine if sprinklers increase humidity and potential heat stress impacts; results should be considered for sprinkler usage).

Sprinklers should release a jet of air prior to water, as an additional deterrent and to cue animals to move prior to water being released. The intention of the sprinklers is to make the buffer unattractive, and effectively 'train' individuals to stay out of the buffer area.

If installed, sprinklers should be programmed to operate on a random schedule and in a staggered manner (i.e. not all sprinklers operating at the same time, to avoid excessive disturbance). Each activation should be for approximately 30-45 seconds per sprinkler. Each sprinkler should be activated up to five times between 0630 and 1600 avoiding critical fly-in or fly-out periods. To avoid flying-foxes habituating to the stimuli, sprinklers should only be operated by residents when flying-foxes are within range. Sprinkler settings would also need to account for seasonal changes (e.g. not in the heat of the day during summer when they may be an attractant, and/or could increase humidity and exacerbate heat events). Individual sprinklers may also need to be temporarily turned off depending on location of creching young, or if it appears likely that animals will be displaced to undesirable locations.

Infrastructure should ideally be designed to accommodate additional sprinklers should they be required in the future. Sprinklers should be designed and attached in a way that allows for future maintenance, replacement, and sprinkler head adjustments, with consideration given to vandalism if located in a publicly accessible area.

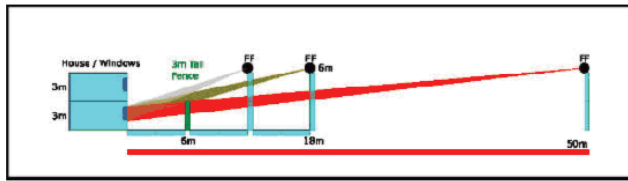
Noise attenuation fencing

Noise attenuation fencing aims to reduce noise and potentially odour where the roost is close to residents.



Example of noise attenuation fencing (source: <http://www.slimwall.com.au/gallery>)

This may also assist with odour reduction, and perspex fencing could be investigated to assist fence amenity. Although expensive to install, this option could negate the need for habitat modification, maintaining the ecological values of the site, and may be more cost-effective than ongoing management. If flying-fox roosts are located directly adjacent (or very close) to residential properties, fencing may need to be relatively tall, as indicated below.



Indicative scaled distances to achieve shielding for bats approximately 6 m elevated, to a typical window height (Air Noise Environment 2019). Image is indicative only with further investigation required.

To avoid the high costs associated with permanent acoustic fencing, and where flying-fox presence is transient, temporary fencing can be erected in property backyards (below). Residents/businesses can have the ability to fold down the acoustic fence when there are no flying-foxes present and erect it when flying-foxes return to the site (highly likely during melaleuca flowering periods).



Sound Block Acoustic Barrier (source: <https://fortressfencing.com.au/sound-block-acoustic-barrier-noise-barrier>)

Disturbance or dispersal

Nudging

Noise and other low intensity active disturbance restricted to certain areas of the roost can be used to encourage flying-foxes away from high conflict areas. This technique aims to actively 'nudge' flying-foxes from one area to another, while allowing them to remain at the roost site.

Unless the area of the roost is very large, nudging should not be done early in the morning as this may lead to inadvertent dispersal of flying-foxes from the entire roost site. Disturbance during the day should be limited in frequency and duration (e.g. up to four times per day for up to 10 minutes each) to avoid welfare impacts. As with dispersal, it is also critical to avoid periods when dependent young are present (as identified by a flying-fox expert).

Dispersal

Dispersal aims to encourage a roost to move to another location. Dispersing flying-foxes may be achieved in two ways:

- actively disturbing the roost pre-dawn as flying-foxes attempt to return from nightly foraging



- passively, by removal of all roosting habitat.

Dispersal via disturbance has been shown to reduce concerns and improve amenity in the short term, however, roosts are usually recolonised, and the conflict remains (Roberts & Eby 2013, Currey et al. 2018). Data from these and more recent studies show that in 95% of cases, dispersal did not reduce the number of flying-foxes from the local area (Roberts et al. 2021).

A review of dispersal attempts between 1990 and 2013 found that flying-foxes only moved within 600 m of the original site in 63% of cases (Roberts & Eby 2013). Similarly, another review of 69 dispersal attempts undertaken between 1992 and 2020 found that in 88% of dispersals, new camps established within 1 kilometre and resulted in new conflict sites (Roberts et al. 2021). In addition, a review of 25 dispersal attempts in Queensland between November 2013 and November 2014 found that when flying-foxes were dispersed, they did not move further than 6 km away from the original roost site (Ecosure 2014). Ultimately, these results indicate that, when dispersed, flying-foxes generally relocate within 600 m – 1 km of the original roost site, and do not travel further than 6 km away.

Driving flying-foxes away from an established roost is challenging and resource intensive. There is a range of risks associated with roost dispersal. These include:

- shifting or splintering the roost into other locations that are equally or more problematic
- impacts on animal welfare and flying-fox conservation
- impacts on the flying-fox population including disease status and associated public health risk
- impacts to the community associated with ongoing dispersal attempts
- increased aircraft strike risk associated with changed flying-fox movement patterns
- high initial and/or ongoing resource requirement and financial investment
- negative public perception from some community members and conservationists opposed to dispersal.

Despite these risks, there are some situations where roost dispersal may be considered. 'Passive' or 'active' is described further below.

Passive dispersal

Removing vegetation in a staged manner can be used to passively disperse a roost, by gradually making the habitat unattractive so that flying-foxes will disperse of their own accord over time with little stress (rather than being more forcefully moved with noise, smoke, etc.). This is less stressful to flying-foxes, and greatly reduces the risk of splinter colonies forming in other locations (as flying-foxes are more likely to move to other known sites within their roost network when not being forced to move immediately, as in active dispersal).

Generally, a significant proportion of vegetation needs to be removed in order to achieve dispersal of flying-foxes from a roost or to prevent roost re-establishment. For example, flying-



foxes abandoned a roost in Bundall, Queensland once 70% of the canopy/mid-storey and 90% of the understorey had been removed (Ecosure 2011). Ongoing maintenance of the site is required to prevent vegetation structure returning to levels favourable for colonisation by flying-foxes. Importantly, at nationally important roosts, sufficient vegetation must be retained to accommodate the maximum number of flying-foxes recorded at the site.

This option may be preferable in situations where the vegetation is of relatively low ecological and amenity value, and alternative known permanent roosts are located nearby with capacity to absorb the additional flying-foxes. While the likelihood of splinter colonies forming is lower than with active dispersal, if they do form following vegetation modification there will no longer be an option to encourage flying-foxes back to the original site. This must be carefully considered before modifying habitat.

There is also potential to make a roost site unattractive by removing access to water sources. However, at the time of writing this method had not been trialled so the likelihood of this causing a roost to be abandoned is unknown. It would also likely only be effective where there are no alternative water sources in the vicinity of the roost.

Active dispersal through disturbance

Dispersal is more effective when a wide range of tools are used on a randomised schedule with animals less likely to habituate (Ecosure pers. obs. 1997–2015). Each dispersal team member should have at least one visual and one aural tool that can be used at different locations on different days (and preferably swapped regularly for alternate tools). Exact location of these and positioning of personnel will need to be determined on a daily basis in response to flying-fox movement and behaviour, as well as prevailing weather conditions (e.g. wind direction for smoke drums).

Active dispersal will be disruptive for nearby residents given the timing and nature of activities, and this needs to be considered during planning and community consultation.

This method does not explicitly use habitat modification as a means to disperse the roost, however if dispersal is successful, some level of habitat modification should be considered. This will reduce the likelihood of flying-foxes attempting to re-establish the roost and the need for follow-up dispersal as a result. Ecological and aesthetic values will need to be considered for the site, with options for modifying habitat the same as those detailed for buffers above.

Early dispersal before a roost is established at a new location

This management option involves monitoring local vegetation for signs of flying-foxes roosting in the daylight hours and then undertaking active or passive dispersal options to discourage the animals from establishing a new roost. Even though there may only be a few animals initially using the site, this option is still treated as a dispersal activity, however it may be simpler to achieve dispersal at these new sites than it would in an established roost. It may also avoid considerable issues and management effort required should the roost be allowed to establish in an inappropriate location.

It is important that flying-foxes feeding overnight in vegetation are not mistaken for animals



establishing a roost.

Maintenance dispersal

Maintenance dispersal refers to active disturbance following a successful dispersal to prevent the roost from re-establishing. It differs from initial dispersal by aiming to discourage occasional over-flying individuals from returning, rather than attempting to actively disperse animals that have been recently roosting at the site. As such, maintenance dispersal may have fewer timing restrictions than initial dispersal, provided that appropriate mitigation measures are in place.

Unlawful activities

Culling

Culling is addressed here as it is often raised by community members as a preferred management method; however, culling is contrary to conservation legislation will not be permitted as a method to manage flying-fox roosts.



Appendix 7 Dispersal summary results

Roberts and Eby (2013) summarised 17 known flying-fox dispersals between 1990 and 2013, and made the following conclusions:

- In all cases, dispersed animals did not abandon the local area³.
- In 16 of the 17 cases, dispersals did not reduce the number of flying-foxes in the local area.
- Dispersed animals did not move far (in approx. 63% of cases the animals only moved < 600 metres from the original site, contingent on the distribution of available vegetation). In 85% of cases, new roosts were established nearby.
- In all cases, it was not possible to predict where replacement roosts would form.
- Conflict was often not resolved. In 71% of cases, conflict was still being reported either at the original site or within the local area years after the initial dispersal actions.
- Repeat dispersal actions were generally required (all cases except where extensive vegetation removal occurred).
- The financial costs of all dispersal attempts were high, ranging from tens of thousands of dollars for vegetation removal to hundreds of thousands for active dispersals (e.g. using noise, smoke, etc.).

Ecosure, in collaboration with a Griffith University Industry Affiliates Program student, researched outcomes of management in Queensland between November 2013 and November 2014 (the first year since the current Queensland state flying-fox management framework was adopted on 29 November 2013).

An overview of findings⁴ is summarised below.

- There were attempts to disperse 25 separate roosts in Queensland (compared with nine roosts between 1990 and June 2013 analysed in Roberts and Eby (2013)). Compared with the historical average (less than 0.4 roosts/year) the number of roosts dispersed in the year since the framework was introduced has increased by 6250%.
- Dispersal methods included fog⁵, birdfrite, lights, noise, physical deterrents, smoke, extensive vegetation modification, water (including cannons), paintball guns and helicopters.

³ Local area is defined as the area within a 20-kilometre radius of the original site = typical feeding area of a flying-fox.

⁴ This was based on responses to questionnaires sent to councils; some did not respond and some omitted responses to some questions.

⁵ Fog refers to artificial smoke or vapours generated by smoke/fog machines. Many chemical substances used to generate smoke/fog in these machines are considered toxic.



- The most common dispersal methods were extensive vegetation modification alone and extensive vegetation modification combined with other methods.
- In nine of the 24 roosts dispersed, dispersal actions did not reduce the number of flying-foxes in the LGA.
- In all cases, it was not possible to predict where new roosts would form.
- When flying-foxes were dispersed, they did not move further than six kilometres away.
- As at November 2014 repeat actions had already been required in 18 cases.
- Conflict for the council and community was resolved in 60% of cases, but with many councils stating they feel this resolution is only temporary.
- The financial costs of all dispersal attempts were considerable, regardless of methods used, ranging from \$7500 to more than \$400,000 (with costs ongoing).

Newly published research investigating the effectiveness of dispersal attempts (Roberts et al. 2021) has shown similar findings which are summarised below.

- Of the 48 roost dispersals attempted, only 23% were deemed a success at reducing conflict with communities, and this generally only occurred after extensive destruction of roost habitat.
- No project with a budget less than A\$250,000 was deemed successful.
- Repeat actions were required in 58% of cases, some for months and years following the initial activities.
- In 88% of cases, replacement roosts were established within one kilometre of the original roost, transferring conflict to neighbouring communities.



Revision History

Revision No.	Revision date	Details	Prepared by	Reviewed by	Approved by
00	3/03/2022	RRC Flying-fox Roost Management Plan DRAFT	Tegan Dinsdale, Graduate Wildlife Ecologist Ellie Kirke, Wildlife Biologist	Mitch Horan, Ecologist	Jess Bracks, Principal Wildlife Biologist
01	19/05/2022	RRC Flying-fox Roost Management Plan DRAFT R1	Ellie Kirke, Wildlife Biologist	Jess Bracks, Principal Wildlife Biologist	

Distribution List

Copy #	Date	Type	Issued to	Name
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8.2 COMMUNITY ASSISTANCE PROGRAM - MAJOR SPONSORSHIP

File No: 12535
Attachments: Nil
Authorising Officer: Alicia Cutler - General Manager Community Services
Author: Kerri Dorman - Administration Supervisor

SUMMARY

An application from the Black Dog Ball Inc for Major Sponsorship Assistance towards their Black Dog Ball 2022 event is presented for Council consideration.

OFFICER'S RECOMMENDATION

THAT Council considers the Major Sponsorship application from Black Dog Ball Inc for funding to assist with the staging of the Black Dog Ball 2022 to be held on Saturday 8 October 2022 and approves a sponsorship amount of \$10,000.00 towards the event.

COMMENTARY

Each year the ball is held in conjunction with the start of Queensland Mental Health Week. This year marks the ninth year for the Rockhampton region.

The Ball is managed by a committee of 3 ladies who are passionate and dedicated to raising awareness and support for essential mental health programs in Central Queensland. The applicant states to date they have raised \$290,000 and supported local programs and charities – Project Booyah, Access Recreation, Carinity Wharonga, Headspace, CQ Healthy Families, Anglicare, Mates in Construction, Carers Australia and +Assist. Application for this year's beneficiaries are still open.

Volunteers from local sporting clubs are also engaged to help with waitressing and bar staff for the evening. Donations to their sporting club are made in return for volunteering.

In the application it is stated the benefits to the Central Queensland region are three fold. Guests who support the Black Dog Ball have a belief that they can truly make a difference to those struggling in the community, if they work together. This provides a true sense of community spirit, and is displayed by the Ball's capacity to attract 800 plus guests.

Guests attend from Rockhampton, Rural Central Queensland including Bauhinia, Monto, Biloela and Clermont, and in previous years the Ball has attracted guests from as far north as Townsville and south to Northern New South Wales. Feedback from local clothing stores, who greatly benefit through the purchase of ball gowns and suits, hairdressers, beauty therapists, etc all are kept incredibly busy by ball guests.

The Rockhampton Regional Council will be acknowledged by the display of our logo on all printed promotional materials, in media releases prior to the event, on social media, and at the event itself.

Assessment

In accordance with the adopted Policy and Procedure, applications received through the Major Sponsorship Scheme will be assessed by Council against the following criteria:

- Applicant's capacity to undertake the event including any experience with similar events, relevant approvals and permissions required
 - Community need or desire for the event and how this was determined
 - Economic and community outcomes anticipated from the event
 - Number of participants, including out of area visitors
 - Value for money, including realistic budget with projected cost recovery
-

The Ball Committee strive to ensure their sponsors receive maximum exposure for their generosity via a professionally produced audio-visual presentation, vocally by their Master of Ceremonies, and via printed guest programs that every guest receives on the evening. In addition to this, as an Event Partner, sponsorship level, the Rockhampton Regional Council would have the opportunity to make a speech to guests as part of their official program. Council staff are working with the Ball Committee to present an Acquittal report for previous event that meet Council requirements.

PREVIOUS DECISIONS

Since 2013/2014 Financial Year, Council has provided a total of \$21,481.00 in sponsorship towards the event. Last year's major application was not received by closing date, hence a small application was submitted and approved for bins costs of \$981.00.

BUDGET IMPLICATIONS

Independent assessment by a panel of 4 have indicated an average sponsorship amount for each of the projects/events, which is within Council's Community Assistance Program Operational Budget, as well as taking into consideration the community value of events and projects.

LEGISLATIVE CONTEXT

Administered under the Major Sponsorship Policy and Procedure.

LEGAL IMPLICATIONS

Council administers the Community Assistance Program under a standard funding agreement and all funds are provided on a 'grants-basis'. Applicants are responsible for all aspects of event delivery.

STAFFING IMPLICATIONS

No staffing implications for this non-Council event.

RISK ASSESSMENT

Applicants are fully responsible for event delivery and must provide a final acquittal report outlining any receipts for expenditure, photographs, print media coverage, publications or other forms of documentation.

CORPORATE/OPERATIONAL PLAN

1.4.1 – Streamline Council's funding for community not for profit organisations to ensure fairness and equity.

CONCLUSION

Upon assessment of the information provided in the application against the rating tool and the community value of the event it is recommended Council approve the Assessment Panel's recommended funding allocation of \$10,000.00.

8.3 CMP UPDATES - HERITAGE MANAGEMENT STRATEGY

File No: 13866

Attachments:

1. Mt Morgan Commonwealth Bank CMP 2016 [↓](#)
2. AHS Capability Statement [↓](#)
3. RRC CMP Review Quote (Confidential)

Authorising Officer: Alicia Cutler - General Manager Community Services

Author: Emma-Jane Dwyer - Manager Community Assets & Facilities

SUMMARY

Best practice guidelines suggest that for Heritage Listed assets a Conservation Management Plan should be prepared. A body of work is currently required to update a number of CMPs to reflect current condition and work required. Advice has been received that the Mount Morgan Commonwealth Bank Building does not meet the criteria of State Significance. As such, a recommendation is sought to apply to remove this building from the register.

OFFICER'S RECOMMENDATION

THAT Council resolves as per section 257 of the *Local Government Act 2009* to delegate to the Chief Executive Officer the exercise of powers under sections 36, 36A, 43, 46, 48 of the *Queensland Heritage Act 1992* to apply to remove the Mount Morgan Commonwealth Building from the Queensland Heritage Register based upon the updated Statement of Significance.

COMMENTARY

Council has a number of Heritage Listed Assets that require an updated Conservation Management Plan.

A Conservation Management Plan (CMP) is a practical tool that helps owners, managers and assessing authorities make sound decisions about conserving and managing heritage places. It identifies the place's cultural heritage significance, sets out conservation policies to protect the cultural heritage significance of the place in the light of change and provides a strategy for putting these policies into action.

Conservation Management Plans currently exist (at various levels of update) for the following sites but require update:

- Archer Park Railway Station
- Mount Morgan Railway Station
- Rockhampton School of Arts
- Walter Reid Building
- North Rockhampton Borough Chambers
- South Rockhampton Cemetery
- Mount Morgan Coronation Lamp & Boer War Memorial
- Rockhampton City Hall
- Mount Morgan School of Arts
- Scotia Place
- Mount Morgan Cemetery
- Mount Morgan Commonwealth Bank Building

Due to the nature of the work involved, it makes sense to update all the CMP's in the one process.

Updated information Mount Morgan Commonwealth Bank Building

It is proposed that a review of the state listing is undertaken as the building does not appear to meet threshold for entry on the Queensland Heritage Register (QHR) but does meet the threshold at a local level (as a local heritage place). Although the building is entered on the Queensland Heritage Register, there is a recommendation for it to be removed from the QHR but remain as a local heritage place.

The Mount Morgan Commonwealth Bank's current Statement of Significance is entered on the Queensland Heritage Register as provided below:

Cultural Heritage Significance	
Criterion A	The former Commonwealth Bank as a branch of the Queensland Government Savings Bank demonstrates the regional development of the state and its presence is suggestive of the large number of workers present in the town because of the Mount Morgan Mine.
Criterion D	The building is characteristic of small timber banks in regional towns, modest in scale and finish, but occupying a prominent corner site.
Criterion E	The former bank building has aesthetic value for its contribution to the Central State School site, a large complex of timber buildings similar in form, scale and material to which the former bank building, sited prominently at the street intersection, forms a centrepiece.
Criterion G	Mount Morgan's only bank for 21 years and one which served the community for the best part of the 20th century, and as the premises of the institution which acted as an agent of the Commonwealth during the war, the former bank building has an important connection with the Mount Morgan community.

The information prepared for the CMP enabled a reassessment of the QHR Statement of Significance for the Mount Morgan Commonwealth Bank. The following points provide additional information that can be used when revising the Statement of Significance.

Recommended revision of the QHR Statement of Significance:

Significance Discussion	
Criterion A	<p>Whilst the former Commonwealth Bank has a known history as a branch of the Queensland Government Savings Bank (1913-1920), and later as a Commonwealth Bank of Australia branch (1921-1998), this assessment finds that the place does not demonstrate 'regional development of the state' or 'that its presence is suggestive of the large number of workers present in the town because of the Mount Morgan Mine.' outlined by the QHR criterion.</p> <p>The place is therefore considered to be of local heritage significance rather than state heritage significance. Its association is linked to the development of the Mount Morgan Township in the twentieth Century, demonstrating the evolution or pattern of the local area's history.</p>
Criterion D	<p>This assessment accepts 'The building is characteristic of small timber banks in regional towns, modest in scale and finish, but occupying a prominent corner site'. It appears that whilst there is an unknown quantity of smaller regional examples of banks of this type, the place is not of State significance under this criteria, due particularly to the condition and integrity of the building.</p> <p>The place is considered to potentially meet threshold for entry at a local level rather than a state level.</p>

Criterion G	<p>Whilst the place was Mount Morgan's only bank for 21 years (1929-1950) and 'served the community for the best part of the 20th century', the former bank building seems regarded for its function as a local bank, which in itself is not 'an important connection with the Mount Morgan community' at local or state heritage significance.</p> <p>All Commonwealth Banks acted as an agent of the Commonwealth during the war, not just Mount Morgan's branch.</p> <p>The place is not considered therefore to threshold for entry at a local or state level.</p>
--------------------	--

The removal of the Mount Morgan Commonwealth Bank from the State Heritage Register will allow the repairs required to protect this heritage asset to be completed at a lower cost to Council while remaining a useable building.

If the building is removed from the State Heritage Register, a CMP will no longer be required.

BACKGROUND

It is proposed to engage Heritage Consultants to undertake the following for each CMP:

- Desktop Review: Review of review of any previous reports, site information, and contextual history.
- Site inspection Review of sites (as required), including changes and issues.
- Assessment of Significance: Review of each place's significance and significant elements, including a review of MM Commonwealth Bank proposed for removal from the QHR
- Identification of Issues: This will include the condition audit which outlines the condition issues for prioritisation and confirms the recommended approach for maintenance and repair.
- Conservation Policy: Development of conservation policies what assist decision-making for the future care and maintenance.
- Action Plan: Management guidelines and recommended action plan and maintenance schedules (with guidelines for proposes maintenance and repair works).

The final report(s) will be a culmination of the abovementioned information which incorporates a contextual history, significance assessment, conservation policies, management guidelines, and recommended maintenance and repair schedules / action plan.

PREVIOUS DECISIONS

NIL

BUDGET IMPLICATIONS

NIL – The removal of the building form the State Heritage Register will limit the need to keep a CMP updated and enable repairs to be undertaken at a lower cost.

LEGISLATIVE CONTEXT

Cultural heritage significance needs to be considered in all aspects of managing a heritage place, from routine maintenance through to proposing changes. A CMP complements and enhances these routine activities by clearly guiding maintenance and conservation priorities ensuring that all heritage considerations and statutory obligations are addressed in line with the *Queensland Heritage Act 1992* (Heritage Act) which aims to protect Queensland's heritage from incompatible development and neglect and conserve it for the benefit of the community and for future generations

LEGAL IMPLICATIONS

Nil

STAFFING IMPLICATIONS

All works will be project managed by existing staff resources.

RISK ASSESSMENT

Nil

CORPORATE/OPERATIONAL PLAN

1.1.18 – Develop and implement three year forward community assets and facilities works program (renewals).

CONCLUSION

Queensland's heritage is embodied in its historic buildings, structures, gardens, cemeteries, archaeological sites, streetscapes, townscapes and landscapes and is a unique, diverse and irreplaceable cultural resource. Heritage values are the reasons why a place is important. Cultural heritage significance is the sum of these values and needs to be considered in all aspects of managing a heritage place, from routine maintenance through to proposing changes. A CMP complements and enhances these routine activities by clearly guiding maintenance and conservation priorities, ensuring that all heritage considerations and statutory obligations are addressed.

It is therefore recommended Council apply to update the Statement of Significance for the Mount Morgan Commonwealth Bank Building and as such apply to remove the building from the State Heritage Register.

CMP UPDATES - HERITAGE MANAGEMENT STRATEGY

Mt Morgan Commonwealth Bank CMP 2016

Meeting Date: 21 June 2022

Attachment No: 1

Mount Morgan
Commonwealth Bank Building
Conservation Management Plan
For Rockhampton Regional Council
AUGUST 2016



Australian Heritage Specialists Pty Ltd

Contact details are:

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1 Introduction

1.1 Background

The former Commonwealth Bank at Mount Morgan was constructed in 1913 as the Queensland Government Savings Bank, becoming a branch of the Commonwealth Bank of Australia in 1921. The bank closed in 1998 and has since been used for other commercial purposes. It is now vacant.

This Conservation Management Plan (CMP) has been prepared by Australian Heritage Specialists Pty Ltd (AHS), for Rockhampton Regional Council (RRC). The CMP is understood to be the first heritage report prepared for place since its entry onto the Queensland Heritage Register in 1992. This CMP was completed in June 2016.

1.2 Study Area

The study area comprises:

Item	Description
Address	38 Morgan Street, Mount Morgan QLD 4714
Description	Mount Morgan Commonwealth Bank Building (former)
LGA	Rockhampton Regional Council
Heritage Status	State Heritage Place (QHR 600746)
Property Description	L18 RN1545



Figure 1: Location of the study area in red (Google Earth 2016)





Figure 2: QHR Boundary (Mount Morgan Commonwealth Bank), EHP 2012



1.3 Aims

This report was prepared in accordance with guidelines and articles of the *Australia ICOMOS Burra Charter 2013* (Burra Charter) and James Semple Kerr's *Conservation Plan* (7th Edition, 2013).

The aim of this CMP is to provide:

- A brief and up to date history of the site based on existing records.
- Results of a brief site inspection including consideration of key significant elements.
- Review of the current significance statement and an update if necessary.
- An outline of issues and obligations arising from the significance of the place.
- Conservation policies, including general advice and conservation objectives.
- An Action Plan, including maintenance and action items to manage the place.

1.4 Previous Reports

No heritage reports appear to exist for the Commonwealth Bank Building Mount Morgan.

1.5 Dates

AHS commenced the CMP in April 2016. The fieldwork was undertaken on the 13th April 2016 and included brief stakeholder consultation with relevant parties. The CMP was completed in June 2016.

1.6 Personnel

The following personnel contributed to the development of this HAR:

- Benjamin Gall (AHS), Principal and Conservation Specialist.
- Gemmia Burden (AHS), Historian.
- Rochelle Lawrence, (AHS), Cultural Heritage Consultant.
- Darren Toohey, (RRC), Project Officer Communities and Facilities.

1.7 Glossary of Terms

Abbreviation	Definition
AHS	Australian Heritage Specialists Pty Ltd
Burra Charter	ICOMOS Australian Burra Charter for the Conservation of Heritage Places
CMP	Conservation Management Plan
EHP	Department of Environment and Heritage Protection
HAR	Heritage Assessment Report
LGA	Local Government Area
QHR	Queensland Heritage Register
QH Act	<i>Queensland Heritage Act 1992</i>
RRC	Rockhampton Regional Council
SLQ	State Library of Queensland



2 Historical Context

The following historical context for Mount Morgan Commonwealth Bank (former) is summarised from the Queensland Heritage Register entry for the place, prepared in 1992. The outline is brief and focussed on matters relating directly to the significance of the place, with limited scope and timing for significant historical research.

2.1 Mount Morgan Township

The township of Mount Morgan grew with the establishment of the Mount Morgan gold mine. It was originally part of Calliungal pastoral station, established as part of the pastoral expansion in the Rockhampton area following Charles and William Archer's settlement and development of Gracemere station (QHR 600508) in the mid-1850s. With the Fitzroy River used to receive goods and transport wool, the region quickly developed and Rockhampton became the major entry and exit port of central Queensland.

Stockman William Mackinlay originally discovered gold on Calliungal station. A year after his discovery, Edwin and Thomas Morgan took specimens to Gympie for assay (Fitzgerald 1982: 172; Queensland Places). Recognising the significant value of the gold, in 1882 the Morgan Brothers pegged claims, which encompassed most of the mountain top. In July, they formed a partnership with three Rockhampton businessmen before selling out to them 1886 when the Mount Morgan Gold Mining Company Limited was formed.

The township of Mount Morgan grew alongside the mine. In the 1880s, Mount Morgan had one of the richest gold deposits in the world and as this enormous value was realised, both Mount Morgan and Rockhampton boomed. Services and infrastructure were required by the growing population, which by 1889 reached 5,836. The first town survey was undertaken in 1884. The same year the state school was opened, which was quickly followed by a mail service, churches, and a hospital. In 1887 the Queensland National Bank, the first in the town, was opened, however this was a trading, rather than a savings bank, these activities at the time being kept separate. The Queensland National Bank was built on Morgan Street, with the later Queensland National Hotel separating it from the Post Office.



Figure 3: Town View of Mount Morgan, 1895 (SLQ Negative 9990)



Figure 4: Mount Morgan State School Building, 1914 (SLQ Negative 1914)



Figure 5: Queensland National Bank Building, Mount Morgan, c. 1888 (SLQ Negative 34248)

2.2 Government Savings Banks

2.2.1 Queensland Government Savings Bank

The Queensland Government Savings Bank was founded by one of the earliest pieces of legislation enacted by the government of the new colony of Queensland in 1861. Intended to encourage small deposit savings by working people, savings banks could be established by the gazettal of an application by ten or more house or landholders in any community of more than 500 people. In 1864, the Government Savings Bank Bill provided a government guarantee to protect trustees and deposits and to allow depositors to easily transfer accounts from one town to another. It was a great success and on 9 May 1887, the Savings Bank opened an agency at the Mount Morgan Post Office.

2.2.2 Commonwealth Bank

The Commonwealth Bank of Australia was founded under the Commonwealth Bank Act of 1911. This empowered the Bank to transact both savings and trading business under the security of a guarantee from the Federal government. It opened its first branch for business on 15 July 1912 in Melbourne and soon opened agencies in post offices throughout Victoria. The Queensland branch of the then Savings Bank Department of the Commonwealth Bank opened on 16 September 1912. The main office in Brisbane operated branches through 194 post offices across the state. Post offices were used as agencies throughout the country as they had been transferred to Commonwealth control after Federation. The Commonwealth Bank of Australia merged with the state banks of Tasmania in 1912, Queensland in 1920 and Western Australia and New South Wales in 1931.

In 1913, the Queensland Government Savings Bank opened its own branch on the corner of Morgan and Central Streets on an area that was designated a reserve for the purpose. It was a modest timber building with timber dowel balustrades along both streets.



The site was adjacent to the Central State School, which had constructed its first building in 1887.

The business and assets of the Queensland Government Savings Bank were transferred to the Commonwealth Bank on 8 December 1920 and the Commonwealth Bank in Mount Morgan operated from the premises from 3 January 1921.



Figure 6: Commonwealth Bank, 1922 (SLQ Negative 17788)

2.3 Boom and Bust

By the 1920s, there were three banks operating in Mount Morgan: The Queensland National Bank, the Bank of New South Wales and the Commonwealth Bank. Following the closure of the Bank of New South Wales in 1928 and the Queensland National Bank in 1929, the Commonwealth remained the only bank in Mount Morgan until 1950 when the ANZ bank opened a branch there. During the Second World War the Commonwealth Bank, its branches and agencies, acted as an agent for the government. As part of post-war growth in Australia, home loans were offered from 1946.

An office extension and brick strong room appear to have been added around the interwar period. The original verandahs of the bank were enclosed with weatherboard and louvres around 1950-1960, probably coinciding with the construction of the rear skillion for toilets and wash area at the rear of the building.

The external walls of the main building have been cut through some time after the enclosure of the verandahs. This was done to increase the interior office space for the main room, possibly in the 1970s. A set of concrete steps was added around 1980.

In 1990, the Mount Morgan mine closed, leading to a reduction of population and business in the town. The Commonwealth Bank ceased trading from this site in 1998. The building was subsequently used as the offices of Learning Network Queensland and an additional entry door and ramp was installed during this period.



A new roof has been installed also, presumed to have been undertaken in the last decade of the twentieth century. The original ridge ventilation detail appears to have been lost at this time (see figure 8). The building is not currently used for any permanent activity.



Figure 7: Commonwealth Bank, 1989 (SLQ Negative 201658)



Figure 8: Commonwealth Bank Building, 1994 (QHR)

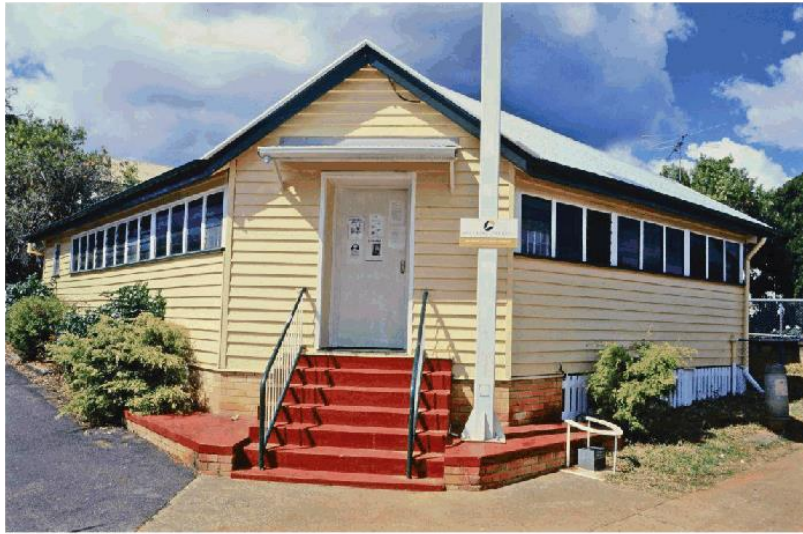


Figure 9: Commonwealth Bank Building, 2001 (QHR)



Figure 10: Commonwealth Bank Building, 2016 (AHS)



2.4 Brief Timeline

The following brief timeline provides a background of the events related to the former Commonwealth Bank at Mount Morgan:

Table 1: Brief timeline of events

Date	Summary
1850s	Calliungal pastoral station established following Charles and William Archer's settlement and development of Gracemere station.
1861	The Queensland Government established the Queensland Savings Bank.
1882	Morgan Brothers pegged claims at Mount Morgan. The township immediately followed.
1884	First town survey of Mount Morgan. School and hospital opened.
1887	Queensland Savings Bank agency commenced at the Mount Morgan Post Office.
1911	Commonwealth Bank Act of 1911 founded the Commonwealth Bank of Australia.
1913	The Queensland Government Savings Bank (the project site) opened on the corner of Morgan and Central Streets, Mount Morgan - on an area designated a reserve for the purpose.
1920s	The Commonwealth Bank of Australia merged with the Queensland Savings Bank. (The Commonwealth Bank in Mount Morgan operated from the premises from 3 January 1921). Three banks operating in Mount Morgan; the Queensland National Bank, the Bank of New South Wales and the Commonwealth Bank. Skillion office added to the southern elevation. Bank of NSW closed in Mount Morgan 1928. Queensland National Bank closed in Mount Morgan 1929
1950	ANZ bank opens in Mount Morgan.
1950s-1970s?	Enclosure of verandahs with weatherboard and louvres, removing dowel balustrades. Likely period of construction for strong room (note the 1922 photograph shows the northern verandah was possibly enclosed). Likely phase for construction of skillion toilets (?) The exterior walls of the main building were largely removed to combine verandahs into the office space.
1980	A set of concrete steps were added, replacing the original timber entrance stairs.
1990	Mount Morgan Mine closed. Roof replaced with zincume single sheet (custom orb), losing the vented ridge detail (c.1990)
1998	Commonwealth Bank ceased using the site
c. 2000	Learning Network Queensland commence use of the site and an additional entry door and ramp was installed during this period.
2016	Building not used for any fixed purpose.



3 Site Description

3.1 Overview

The former Commonwealth Bank building is situated on the corner of Morgan and Central Streets, Mount Morgan, in the north east corner of the Central State School site. The building is a single storey, timber framed structure clad in weatherboards and set on low stumps.



Figure 11: Building from Central Street, showing enclosed verandah and skillion office extension (AHS 2016)

3.2 Exterior

The building has a rectangular plan, truncated at the north east to allow for a principal corner entrance, with concrete steps and a small cantilevered awning existing. To the south are two skillion extensions, one that houses the strong room and offices and the other on the south east corner, which accommodates toilets. Banks of glass louvres under the eaves line the north and west sides of the building on the enclosed verandahs. The eastern side of the main building has a pair of sash windows shaded by a single sunhood, as does the western and southern elevations of the skillion office.



Figure 12: Main office windows (east)



Figure 13: Skillion office windows (west) - (AHS 2016)



3.3 Interior

The interior layout consists of the main building and enclosed verandahs, which are now open plan. There is a skillion office to the south west. The strong room and toilets are adjacent to the skillion office on the rear, the latter under its own roof.

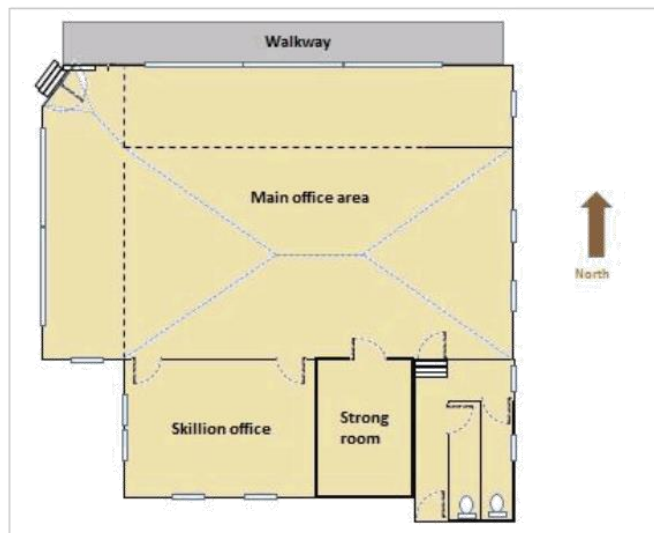


Figure 14: Internal floor plan (AHS 2016) [dotted lines show removed verandah walls]

A change in ceiling height demonstrates the position of former verandahs and associated walls, which have been cut out along most of the length of these elevations. The area in which the kitchenette exists shows evidence of a door frame which once lead from the main office onto the verandah.



Figure 15: Main office and enclosed former verandah (showing where how the walls have been removed)

The walls and ceiling of the main building, verandah and skillion office are lined with tongue and groove vertical joint (VJ) timber boards. To the south are offices and the concrete and masonry strong room, which is situated in-between the skillion office and fibrous cement (FC) clad toilet extension.



Figure 16: Skillion office (AHS 2016)



Figure 17: Strong room (AHS 2016)



Figure 18: Enclosed verandah / kitchenette (AHS 2016)

Limited fixtures and fittings exist from the period as a bank, apart from the counter and air-conditioning system in the main office (c.1960s) and a kitchenette on the north east section of the enclosed verandah (also c.1960s).



Figure 19: Toilet under skillion (AHS 2016)



3.4 Landscape and Setting

The building resides in a central location within the Mount Morgan Township, on the corner of Morgan and Central Streets and in direct proximity to the school. The setting is simple and uncluttered, apart from the recent access ramp, which poorly corresponds with the original intention of the truncated entry from the street.



Figure 20: Morgan Street ramp and overgrown plants



Figure 21: Central Street landscaping (AHS 2016)

A few small hedges and plantings, overgrown in places, exist. A chain wire fence is located along various boundaries, including the rear from Central Street. There is a signpost (c.1990s) and memorial noting "The National Trail No. 166" with associated horseshoe motif located adjacent to the entrance.



Figure 22: The National Trail memorial



Figure 23: Rear yard looing west (AHS 2016)



3.5 Condition and Issues

This section outlines key condition and issues observed during the physical inspection and should be read in conjunction with Section 3.

Table 2: Condition and observations of Heritage Buildings

Element	#	Condition/Observation
Power	1	Power is currently disconnected at the site.
Walls	2	The internal walls on the northern and western side of the building have been significantly damaged by termites. (This appears to have reached the frame and external cladding also in these areas).
Ceiling boards (skillion office)	3	The pine ceiling boards in the skillion office are loose in places; (however it does not appear to be from termite damage).
Roof	4	The roof sheeting is in good condition, however the roof line appears to be sagged on the northern side this could be due to the excessive span in the main office area where walls could have removed at some stage or suggested structural issues from termite attack.
Drainage	5	A number of downpipes have failed and/or are discharging water onto the footings and sub-floor areas.
Finishes (internally)	6	Internal finishes, including paintwork, floor coverings, kitchenette, toilets, furniture and fittings are all in extremely poor condition.
External paintwork**	7	External elements require repainting generally. In some areas, the substrate has completely failed, including the front door.
Vegetation	8	Vegetation in front of the access ramp has grown well out onto the footpath, which is a hazard. Other shrubs on the western and eastern sides are also promoting issues for building and pest management.
Toilets	9	Toilets are no longer functional and require repairs.

* An Asbestos register has been prepared for the site and has confirmed asbestos is present (Please refer to Appendix D).

Note: Condition observations are based on elements of primary and secondary significance that are easily observable during a site inspection. The above observations are not considered to be a comprehensive condition assessment generally undertaken during a dilapidation survey or structural inspection.

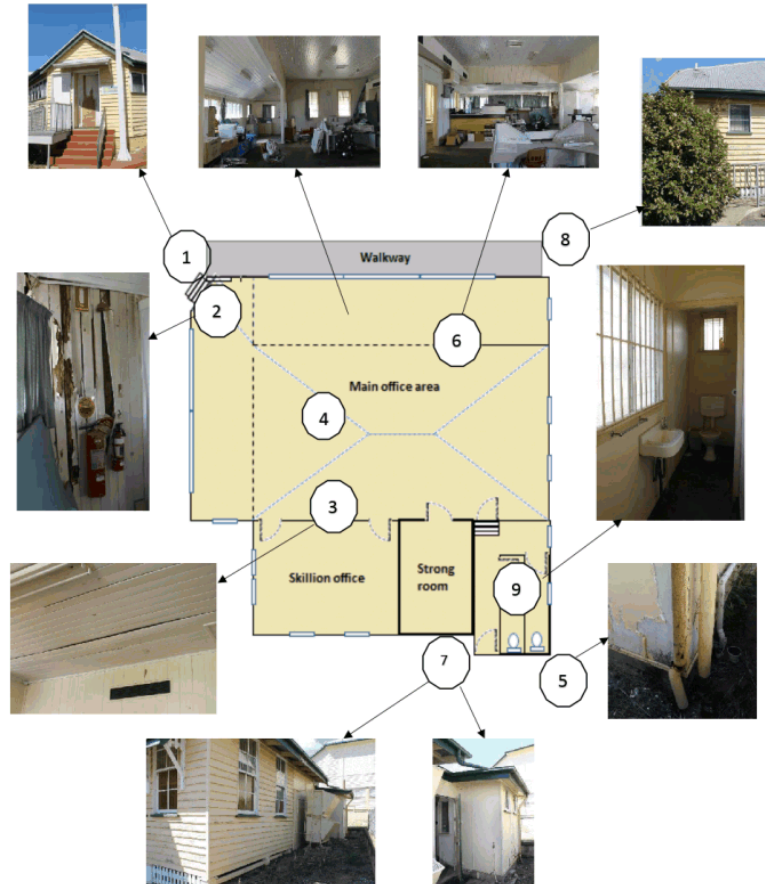


Figure 24: Examples of conditions and issues identified

4 Cultural Heritage Significance

4.1 Determining Historic Cultural Heritage Significance

Heritage recognises that some things from the past are important to people in the present and should be conserved for future generations. Heritage can be both tangible (buildings, archaeological places, landscapes, objects) or intangible (traditions, ideas, cultural practices). While some things are important because of their age, others are recognised for their associations, regardless of age.

The significance of a place including its elements is determined through the application of heritage criteria. The assessment and management of heritage is therefore the assessment and management of significance. In Australia, best-practice frameworks are guided by the Burra Charter, which outlines that tangible heritage exists in a place if it holds aesthetic, historic, scientific or social value for past, present or future generations. It is these values that are used to frame heritage criteria used by heritage agencies and statutory authorities. In Queensland, the *Queensland Heritage Act 1992* (Qld) identifies significance as:

Table 3: QHR criterion for entry

Criterion for entry onto the Queensland Heritage Register (state significance)	
A	If the place is important in demonstrating the evolution or pattern of Queensland's history.
B	If the place demonstrates rare, uncommon or endangered aspects of Queensland's cultural heritage.
C	If the place has potential to yield information that will contribute to an understanding of Queensland's history.
D	If the place is important in demonstrating the principal characteristics of a particular class of cultural places.
E	If the place is important because of its aesthetic significance.
F	If the place is important in demonstrating a high degree of creative or technical achievement at a particular period.
G	If the place has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.
H	If the place has a special association with the life or work of a particular person, group or organisation of importance in Queensland's history.

The relevant criteria for a place are grouped together into statements, which are collectively referred to as the statement of significance. (Note: a place must threshold for one or more criterion to be entered on the QHR).

4.2 Comparative Analysis

An assessment of significance is generally supported by a comparative analysis, which compares the place with other similar places to determine its degree of representativeness and rarity (amongst other things).



Table 4: Comparative Analysis

Register ID	Place	Comparisons / Associations
602471	Commonwealth Bank of Australia (former) – Townsville	Regional CBA bank. Comparative period of construction (1923), Regional prominence architecturally more sophisticated, as expected for a regional city, compared with Mount Morgan.
601338	Commonwealth Bank Building (former) – Gladstone	Regional CBA bank. Comparative period of construction (1928-9), Regional prominence architecturally more sophisticated, as expected for a regional city, compared with Mount Morgan.
600671	Commonwealth Bank of Australia – Mackay	Regional CBA bank. Early period of construction (1880) as another bank, Regional prominence architecturally sophisticated compared with Mount Morgan.



Figure 25: Commonwealth Bank of Australia (former) Townsville



Figure 26: Commonwealth Bank Building (former) Gladstone



Figure 27: Commonwealth Bank of Australia Mackay



4.3 Statement of Significance

4.3.1 Current Entry

The Mount Morgan Commonwealth Bank is entered on the Queensland Heritage Register as provided below.

Table 5: QHR Statement of Significance

Cultural Heritage Significance	
Criterion A	The former Commonwealth Bank as a branch of the Queensland Government Savings Bank demonstrates the regional development of the state and its presence is suggestive of the large number of workers present in the town because of the Mount Morgan Mine.
Criterion D	The building is characteristic of small timber banks in regional towns, modest in scale and finish, but occupying a prominent corner site.
Criterion E	The former bank building has aesthetic value for its contribution to the Central State School site, a large complex of timber buildings similar in form, scale and material to which the former bank building, sited prominently at the street intersection, forms a centrepiece.
Criterion G	As Mount Morgan's only bank for 21 years and one which served the community for the best part of the 20th century, and as the premises of the institution which acted as an agent of the Commonwealth during the war, the former bank building has an important connection with the Mount Morgan community.

4.4 Revised Statement of Significance

The information prepared for this CMP enables a reassessment of the QHR Statement of Significance for the Mount Morgan Commonwealth Bank. The following points provide additional information that can be used when revising the Statement of Significance:

Table 6: Recommended revision of the QHR Statement of Significance

Criteria	Significance Discussion
Criterion A	<p>Whilst the former Commonwealth Bank has a known history as a branch of the Queensland Government Savings Bank (1913-1920), and later as a Commonwealth Bank of Australia branch (1921-1998), this assessment finds that the place does not demonstrate 'regional development of the state' or 'that its presence is suggestive of the large number of workers present in the town because of the Mount Morgan Mine.' outlined by the QHR criterion.</p> <p>The place is therefore considered to be of local heritage significance rather than state heritage significance. Its association is linked to the development of the Mount Morgan Township in the twentieth Century, demonstrating the evolution or pattern of the local area's history.</p>
Criterion D	<p>This assessment accepts 'The building is characteristic of small timber banks in regional towns, modest in scale and finish, but occupying a prominent corner site'. It appears that whilst there is an unknown quantity of smaller regional examples of banks of this type, the place is not of State significance under this criteria, due particularly to the condition and integrity of the building.</p> <p>The place is considered to potentially threshold for entry at a local level rather than a state level.</p>



Criteria	Significance Discussion
Criterion G	<p>Whilst the place was Mount Morgan's only bank for 21 years (1929-1950) and 'served the community for the best part of the 20th century', the former bank building seems regarded for its function as a local bank, which in itself is not 'an important connection with the Mount Morgan community' at local or state heritage significance.</p> <p>All Commonwealth Banks acted as an agent of the Commonwealth during the war, not just Mount Morgan's branch.</p> <p>The place is not considered therefore to threshold for entry at a local or state level.</p>

A recommendation for update of the QHR listing is included in the policies section.

4.5 Hierarchy of Significant Elements

Table 7: Criteria for hierarchy of significance

Rating	Description
Primary	The element makes a primary contribution to the significance of the place.
Secondary	The element makes a secondary contribution to the significance of the place.
No Significance	The element does not contribute to or detract from the significance of the place.
Intrusive	The element intrudes upon or diminishes the significance of the place.



Table 8: Hierarchy of significant elements – Mount Morgan Commonwealth Bank (former)

Element	Grading	Comments
Setting with access to Morgan and Central Streets	Primary	Early design intention
Hipped roof (with skillion verandahs and gable entry)	Primary	Important design feature. Roof material replaced c.1990 removing original vented ridge detail and short sheet iron).
Main office building	Primary	Original bank structure, (however loss of integrity due to removal of main walls and enclosure of verandah(s).
Skillion extension (office / strong room)	Primary	Important design features, likely to date from early phase(s) and demonstrating expansion or competition of banking requirements during the 1920s.
Skillion toilet extension (c.1950-60s)	Secondary	Relevant to expanded use as a bank during post World War Two. No fabric of relevant significance (note door and fanlight from main office to toilets is original however).
Weatherboard cladding	Primary	Important design feature. Weatherboards on northern verandah may be early or even original (note 1922 photo) and therefore also potentially of primary significance. <u>Note:</u> Weatherboards on western verandah are from the later enclosure (c.1950?) and of secondary significance.
Sash windows and hoods	Primary	Important design feature for main office and skillion office.
VJ lining - main office and skillion office)	Primary	Important design feature.
VJ lining - enclosed verandah(s)	Secondary	Later development, note however that the northern verandah may have been enclosed from original or early times (certainly by 1922).
Louvres (to enclosed verandahs)	Secondary	Relevant to expanded use as a bank during post World War Two, but not of any relevant heritage value.
Entrance door and concrete steps (main)	Secondary	Evidence of early design of main entry, however no original fabric remains.
The National Trail Memorial (at entrance / footpath)	Secondary	Not an important heritage feature relating to the site, but should be noted.
Electrical / Mechanical installations (internally and externally)	No significance	No relevant early fabric noted. (1960s air-conditioning intrusive)
Fixtures / furniture, including counter and kitchenette	No Significance	No relevant early fabric noted.
Stumps and batten screening (under)	No Significance	Original height and location of structure relevant only
Landscape features, including fences and plantings	No Significance	No relevant fabric noted apart from The National Trail memorial
Signpost	No significance	Remains from later period as a bank (CBA c.1970s)
Fixtures and fittings (other than those outlined)	None/ Intrusive	Internal fixtures such as lighting, electricals, floor coverings, fittings.
Air-conditioning	Intrusive	Impacts on visual amenity and use of the building (1960s).
Entrance door and PWD access ramp	Intrusive	Impacts on visual amenity and use of the building.

4.6 Archaeological Potential

No relevant archaeological potential was noted on site during the inspection, relating to the existing history of the place as a bank, or other former uses that may have taken place prior to the construction of the building in 1913.

As such, archaeological potential is considered to be low.



5 Issues and Obligations

This chapter outlines issues and obligations associated with the place and is based upon the assessment completed in the previous sections of this report and its entry as a State heritage place on the QHR.

5.1 Obligations for Making Changes

Most changes proposed to heritage places are regarded as development and require approval before any work is undertaken. The Sustainable Planning Act 2009 (SPA) and the Queensland Heritage Act 1992 regulate development on State heritage places entered on the Queensland Heritage Register to protect their cultural heritage significance and ensure their values are not unduly or inadvertently reduced, damaged or destroyed. There are three different types of approvals required, (depending on the type of work proposed) on a State heritage place entered on the QHR:

1. **General Exemption Certificate:** Provides approval for certain work without the need for an application to EHP.
2. **Exemption Certificate:** Required for work that is not covered by the General Exemption Certificate, but will have a low impact on the significance of a place. Application is made directly to EHP.
3. **Development Approval:** Required for development activities that will impact the significance of the place. 'Development' is defined by the *Sustainable Planning Act 2009*, and each definition includes additional clauses that apply only to places on the QHR.

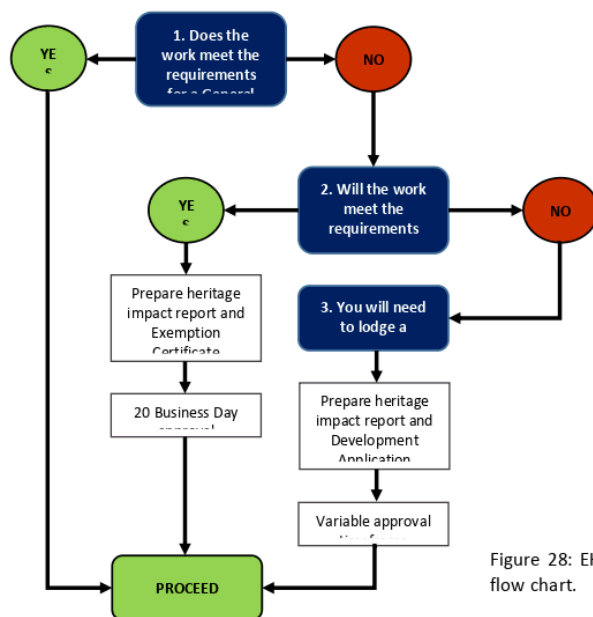


Figure 28: EHP assessment and approval process flow chart.

Should the place be removed from the Queensland Heritage Register, a local level of compliance under the provisions of the [Rockhampton Regional Plan - Heritage Place Overlay Code](#).



Table 9: EHP levels of assessment and approvals.

Level	Comments
General Exemption Certificate	<p>Approval, with conditions, for:</p> <ul style="list-style-type: none"> • Regular maintenance and cleaning of structures to preserve their condition, prevent deterioration and monitor maintenance issues. • Maintaining surface condition of painted finishes to extend the workable life of a paint system and protect building fabric from deterioration. • Minor repairs, following the Burra Charter principle of doing as little as possible and only as much as is necessary to retain and protect the element (e.g. roof guttering, roof sheeting). • Regular maintenance and ongoing care of parks, gardens and other landscape elements helps to preserve planting schemes, keep important specimens in good health and monitor arising maintenance issues. <p>Always read the General Exemption Certificate for particular actions in detail before undertaking work. Approved actions are supported by technical notes.</p>
Exemption Certificate	<p>Typical work may include (but not limited to):</p> <ul style="list-style-type: none"> • Minor work to built structures. • Removal of debris from former structures. • Removal of intrusive elements (must demonstrate first the element is intrusive). • Removal of healthy trees (and not a Class 1 declared pest). • Prune more than 20% of the canopy (height or width) of trees. <p>Always contact EHP to determine if the proposed work will be covered by an Exemption Certificate.</p>
Development Approval	<p><u>All</u> 'development' as defined in the <i>Sustainable Planning Act 2009</i> requires approval. Development to a QHR place includes:</p> <ul style="list-style-type: none"> • Building work, as well as: <ul style="list-style-type: none"> ❖ Altering, repairing, maintaining or moving a built, natural or landscape feature on the place. ❖ Excavating, filling or other disturbances to land that damage, expose or move archaeological artefacts, as defined under the QHA, on the place. ❖ Altering, repairing or removing artefacts that contribute to the place's cultural heritage significance, including, for example, furniture and fittings. ❖ Altering, repairing or removing building finishes that contribute to the place's cultural heritage significance, including, for example, paint, wallpaper and plaster. ❖ Building work in these circumstances does not include development for which an Exemption Certificate has been issued.¹ • Plumbing or drainage work. • Operational work. • Reconfiguring a lot. • Material change of use.

¹ EHP should indicate which application is required in the early planning stage of a project.



5.1.1 Essential Maintenance Work

EHP may give a notice to the owner of a Queensland heritage place that requires them to undertake [essential maintenance work](#). The work is generally of a 'minor nature' intended "to prevent serious or irreparable damage or deterioration". Examples of essential maintenance work provided by EHP include:

- Refixing loose roof or wallboards.
- Removing fire hazards.
- Maintaining existing fire management systems.
- Keeping a building secure.
- Shutting down electricity or gas services to an unoccupied building.
- Taking steps for managing or eradicating termites or other insects.

EHP will generally identify the need for essential maintenance during a review of places on the QHR. EHP will contact the owner and advise them of the required work. If the work is not carried out, then EHP will issue the notice requiring the work to be completed in a reasonable period of time.

5.1.2 Archaeological Potential

Archaeological potential is [protected](#) under the QHA. The relevant clauses of the QHA state:

Requirement to give notice about discovery of archaeological artefact:

- 1) A person who discovers a thing the person knows or ought reasonably to know is an archaeological artefact that is an important source of information about an aspect of Queensland's history must give the chief executive a notice under this section.
- 2) The notice must:
 - a) be given to the chief executive as soon as practicable after the person discovers the thing; and
 - b) state where the thing was discovered; and
 - c) Include a description or photographs of the thing.

Offence about interfering with discovery

- 1) This section applies to a thing for which a person has, under section 89, given the chief executive a notice.
- 2) A person who knows that the notice has been given must not, without the chief executive's written consent or unless the person has a reasonable excuse, interfere with the thing until at least 20 business days after the giving of the notice.

5.1.3 Emergency Work

[Emergency work](#) is sometimes required if a structure fails and/or becomes a safety hazard (typically following a severe storm or flooding). Immediate emergency work to stabilise the structure is permissible according to the following conditions:

Emergency work can be carried out at a Queensland Heritage Place and a local heritage place without first seeking a permit. Emergency work is work that is necessary because of an emergency endangering the life or health of a person or the structural safety of a building. If practicable before starting the work, the advice of a registered engineer or heritage professional should be obtained. In planning and carrying out the emergency work, the person undertaking the work must take all reasonable steps to ensure the work is reversible.



If it is not reversible, the person must be able to demonstrate that they have tried to keep the impact of the work on the cultural heritage significance of the place to a minimum. As soon as possible after starting the work, the person must:

- Give written notice to EHP that they are carrying out emergency work.
- Apply for any permits that would otherwise be required for the work.

If approval is subsequently refused, all emergency work must be removed as soon as practicable (EHP 2012).

5.2 Local Heritage Place Provisions

The obligations for a local heritage place are not as detailed or prescriptive as for the QHR entry and are mainly concerned with building exteriors and configurations. The key points are:

- Approval is not required by RRC for maintenance or minor work.
- The only time approval is required from the RRC is in the case of development, as defined by the *Sustainable Planning Act 2009*.
- 'Development' does not include the special clauses that apply to QHR places.
- If a development application is required, EHP approval is necessary before RRC can approve the development. If EHP approves the development, in theory RRC could still refuse the development (although in practice this is unlikely as EHP applies a more rigorous and stringent assessment process than local government).
- A development application requires a SOHI. However, as EHP approval will also be required, the SOHI for EHP will be suitable for the RRC.

The RRC will assess a development application using relevant local planning provisions and the Code for IDAS (contained within the *Queensland Heritage Regulation 2003*), which co-exists with the [Rockhampton Regional Plan - Heritage Place Overlay Code](#).

Should the former Mount Morgan Commonwealth Bank be removed from the QHR, as recommended by this report, then the abovementioned compliance measures for a place entered on the Queensland Heritage Register (Section 5.2) will lapse. Those measures outlined above for a local heritage place (Section 5.3) will continue.

5.3 Condition of the Place

A general description of the condition of the former Mount Morgan Commonwealth Bank building is provided in Chapter 3. Overall, the building is in poor condition, with major issues that require urgent attention. The most pressing condition issues for the heritage buildings relate to urgent maintenance tasks, such as:

- No current use for the building.
- Power is disconnected.
- Termite damage to several sections of the building.
- The building may be impacted structurally by the removal of verandah walls.
- Vegetation across the site is overgrown and causing further issues.

Other condition issues noted include:

- Internal fixtures and fittings require upgrade (many are intrusive to the place's significance).
- Ceiling boards in the skillion office require refixing.
- Internal and external painting is required.



- Groundwater is currently being discharged around and under the building. Downpipes have also failed.
- Options to reconstruct the verandahs and street entry should be considered.

All relevant issues are addressed in the conservation policies in the following chapter.

5.4 Opportunities

The following opportunities were identified during the preparation of this CMP.

5.4.1 Revision of the current status of heritage listing

This assessment has completed an up to date review of the significance of the former Mount Morgan Commonwealth Bank. This review has found that the place does not appear to threshold for entry on the Queensland Heritage Register, but does threshold at a local level (as a local heritage place).

In this instance, Section 36 of the *Queensland Heritage Act 1992*, permits a person or other entity to apply to the chief executive to have a State heritage place removed from the register. The application must be accompanied by a written statement about how the place does not satisfy each of the cultural heritage criteria relevant for the place.

In this case, it is recommended that a copy of this CMP be provided as evidence for the matters to be considered. Liaison with EHP Cultural Heritage officers is recommended prior to the application being lodged.

5.4.2 Heritage Options Study

Due to the lack of current use and the condition issues surrounding the building, there is an obvious opportunity for Rockhampton Regional Council to consider future re-use options for the site. As ownership of the building by Council is not linked to the significance of the place, a study should be prioritised to look practically at the options for retention or disposal of the site.

The options study should seek to find the best possible options to ensure a new use is found for the place, which is compatible with the heritage significance of the place.

Re-use of the building should consider the option to rectify the damaged (removed) sections of verandah walls, fixtures and fittings which have failed, as well as the front entry, which currently diminishes the cultural heritage significance of the place.

5.4.3 Interpretation Opportunities

A common misconception about heritage is that entry to a statutory register only ever implies obligations. Entry of a place to a register identifies that a place is significant to the community and therefore there are also other opportunities that may be explored and developed.

The former Mount Morgan Commonwealth Bank naturally presents an opportunity to interpret the space, in a simplistic manner. An important opportunity remains to ensure that the future re-use of the place capitalises with the heritage values of the place by emphasising significant elements and removing or reducing elements identified as intrusive in this report.



6 Conservation Policies

This management plan has developed the following conservation policies for Mount Morgan Commonwealth Bank (former) using best practice principles. It provides the framework for managing the place's heritage values. The policies have been developed to reflect and support the assessment presented in this CMP in order to retain the heritage significance of the place.

The policies refer to specific terms outlined the *Burra Charter*.

Conservation	Conservation means looking after a heritage place to ensure its cultural significance is maintained and conserved.
Fabric	Fabric refers to all physical materials of the place, including elements, fixtures, contents and objects.
Restoration	Restoration means restoring existing fabric to an earlier condition.
Preservation	Preservation is the maintenance of the place's existing fabric in its present condition.
Adaptation	Adaptation refers to additions or additions or changes for with compatible uses.

6.1 Conservation Approach

These policies underpin the management of the former Mount Morgan Commonwealth Bank's heritage values. All of the policies have been prepared in accordance with the *Burra Charter*, which states that places of cultural significance must be conserved for present and future generations.

The key conservation principals as outlined in the *Burra Charter* are:

- Places of cultural significance should be conserved.
- A place's significance should be retained.
- Conservation must form part of the place's management framework.
- Respect existing fabric, uses, associations and meanings.
- Uses qualified and experiences personnel.
- Do as much as necessary but as little as possible.

6.1.1 Conservation Overview

Policy 1: *The former Mount Morgan Commonwealth Bank should be managed in accordance with the statement of significance and the principles established in the Burra Charter.*

Policy 2: *People skilled and experienced in the conservation of historic places should assist with the planning, design and implementation of maintenance and re-use options for the place.*

Policy 3: *Activities that occur including re-use options, maintenance and new development, should not impact on the significance of the place as identified in the heritage citation and this CMP.*

Policy 4: *All work undertaken at the former Mount Morgan Commonwealth Bank should be in accordance with the Queensland Heritage Act 1992 (whilst entered) and the RRC planning scheme and the required policies and procedures.*

Policy 5: *Work undertaken to any significance element or feature of former Mount Morgan Commonwealth Bank, should be undertaken by suitably qualified professionals with experience working with heritage places.*



6.1.2 [Documentation and Review](#)

This conservation plan is an important document relating to the management of the former Mount Morgan Commonwealth Bank.

Policy 6: *The CMP should be formally endorsed by the RRC as the framework for managing the former Mount Morgan Commonwealth Bank's heritage values.*

6.1.3 [Updating the QHR Entry](#)

The current QHR entry for the place is out of date and requires update. Importantly, this CMP finds that the former Mount Morgan Commonwealth Bank does not threshold for entry on the Queensland Heritage Register, but does threshold at a local level (as a local heritage place).

Policy 7: *Liaison with EHP Cultural Heritage officers should be undertaken, to discuss the removal of the former Mount Morgan Commonwealth Bank from the QHR. A copy of this CMP should be forwarded to EHP staff to assist with these discussions.*

Policy 8: *The former Mount Morgan Commonwealth Bank should be maintained as a local heritage place on the [Rockhampton Regional Plan - Heritage Place Overlay Code](#).*

6.1.4 [Updating this CMP](#)

This CMP is based on current circumstances and available evidence. To ensure the continued conservation of cultural significance and care of the place the management policies will require review.

Policy 9: *This CMP should be reviewed within five years of endorsement and revisions and amendments undertaken as necessary to maintain a current and relevant guide for the place's heritage values.*

6.1.5 [Access to this document](#)

The *Burra Charter* outlines that all records associated with a place must be made publicly accessible (where appropriate).

Policy 10: *A copy of this CMP should be kept by RRC as a record of the site's conservation program.*

Policy 11: *All RRC staff responsible for the former Mount Morgan Commonwealth Bank should receive a copy of this CMP to ensure the significant values and conservation policies are understood and implemented by the relevant department when planning, maintenance or development is undertaken that may impact the place.*

Policy 12: *A copy of this CMP should be made available to the general public and users of the place, for example a copy should be lodged in RRC Council Libraries or made available on-line.*

Policy 13: *In order to guide decisions to undertake work on the former Mount Morgan Commonwealth Bank in the future, consideration should be given to:*

- *Provision of copies of historical documents in hard copy to the RRC and to enable each associated party to gain access to information.*
- *Inclusion of all documents for repairs and new works carried out at the site.*
- *Inclusion of all conservation reports and conservation plans, including this CMP and any future revisions of the CMP.*



6.1.6 Compliance and Training

Compliance and training measures should be implemented, so that people remain aware of the significance of the place and take appropriate steps to maintain the place's heritage values.

Policy 14: *Awareness training should be developed for all personnel that use or lease the premises as well as personnel who are involved with any repairs or maintenance on the site.*

Policy 15: *The information provided by the awareness training should seek to outline the significance of the place and responsibilities arising for each party – based upon this CMP.*

Policy 16: *Suitable supervision of repairs and maintenance activities should be completed, particularly when extensive works at the former Mount Morgan Commonwealth Bank are proposed.*

6.2 **Conserving the Place**

6.2.1 General Principles

The following principles apply to the place generally:

Policy 17: *Elements identified in the Hierarchy of Significance should be retained and conserved unless these are identified as intrusive. Elements of secondary or no significance could be removed or altered if the overall conservation of the place is improved by this action.*

Policy 18: *Repair to significant fabric should use the same or similar materials to that used in the construction of the building. Expert advice should be sought for repairs to elements of primary significance.*

Policy 19: *A regular maintenance schedule, including termite protection, should be maintained for the building. (This should be based upon the recommended maintenance schedule).*

Policy 20: *Signs and other material (such as decals) should not be affixed directly to the building. The existing sign post at the entrance should remain as a sign post.*

Policy 21: *A paint scrape analysis could be undertaken to determine previous paint schemes if an alternative paint scheme is required.*

Policy 22: *General maintenance and condition issues presented in this CMP should be addressed (These are included in the action plan).*

6.2.2 Archival Recording

An Archival Recording is generally utilised when changes occur. The rigour of the details captured in the archival recording is generally dependent upon the level of work proposed and the significance of the fabric potentially affected.

Policy 23: *An archival recording to the Department of Environment and Heritage Protection (EHP) standards should be prepared prior to any significant changes to the place.*

Policy 24: *The archival recording should be prepared by a qualified heritage consultant and seek to ensure the current fabric and condition is recorded in detail and a record kept by RRC and the site manager for future reference.*



6.2.3 Interpretation

The *Burra Charter* outlines that if the significance of a place is not readily available it should be explained through interpretation.

Policy 25: *An interpretation strategy should be developed that specifically focuses on measures to interpret the history of the former Mount Morgan Commonwealth Bank, as well as in relation to the fabric and setting of the heritage place.*

Policy 26: *Interpretation of the place should enhance its associations with Mount Morgan and the Commonwealth Bank and be culturally appropriate.*

6.3 Priority Works

6.3.1 Urgent Repairs

Overall, the building is in a very poor condition, with major issues that require urgent attention.

Policy 27: *Urgent repairs to the building should be considered as a priority, particularly the reconnection or repairs to power and services and the maintenance of overgrown vegetation across the site.*

Policy 28: *The building should be assessed by a structural engineer with regards to the removed verandah walls and previous termite damage to provide a more qualified level of advice regarding the overall condition and structural issues.*

Policy 29: *The Action Plan (Section 7.3) should be implemented as the recommended program to maintain the former Mount Morgan Commonwealth Bank. Items of HIGH priority work ideally should be undertaken as part of a single, coordinated program if possible.*

6.3.2 Maintenance and other works

Other further works are required around the site, including downpipes, repainting of external elements and repairs to existing services.

Policy 30: *Address the other minor repair issues noted in the condition assessment presented in this CMP (These are included also in the action plan) -*

6.4 Managing Change

6.4.1 Re-Use

The former Mount Morgan Commonwealth Bank is currently unused and should be considered immediately for re-use. A heritage options study is recommended to resolve this matter.

Policy 31: *A heritage options study should be implemented to develop appropriate options for re-use of the former Mount Morgan Commonwealth Bank.*

Policy 32: *Ideally the re-use of the building should be of a commercial nature, however residential use may be possible, depending on other planning requirements.*

Policy 33: *Any change of use of the building should be carefully considered to minimise the impact it will have on the significance of the place, including original significant fabric.*



Policy 34: *Re-use of the building should also consider the possibility to rectify the damaged (removed) sections of verandah walls, as well as reconstruct a more suitable front entry, which currently diminishes the cultural heritage significance of the place.*

6.4.2 Changes to Existing Buildings

Policy 35: *Changes to significant elements of the building and its setting should be minimised and carried out in a reversible manner wherever possible.*

Policy 36: *Existing elements of intrusive heritage value should be removed as soon as opportunity arises.*

Policy 37: *Where significant changes are proposed to the former bank or its setting, it is recommended to seek advice from a qualified heritage consultant in the first instance to ensure that the proposed changes are suitably planned.*

6.4.3 New Development

Policy 38: *New development at the former Mount Morgan Commonwealth Bank should not impact upon the heritage significance of the place.*

Policy 39: *Where it is decided to introduce new structures or extensions to the site then the following general principles should apply:*

- *New work should not impact significant fabric, use or access of the existing heritage place.*
- *The form and scale of new work should be similar and compatible with existing structures and not dominate the setting.*
- *Any new building (or extension) should be designed as a secondary structure to the current building.*
- *The existing entrance for accessing the building and site should be retained.*
- *No period detailing or decorative elements should be applied to new buildings or extensions. Materials, finishes and colour schemes should not mimic historic themes but should be compatible.*
- *New infrastructure such as car parking and access ramps should be carefully designed to minimise impact on existing heritage values and where possible be reversible in nature.*

Policy 40: *Changes to the landscape and setting at the former Mount Morgan Commonwealth Bank are permissible, assuming that they do not alter the ability for the building to be interpreted as a former bank, or alter the access and use options for the place.*

6.4.4 Management of Archaeological Values

Policy 41: *Whilst a low potential, RRC should institute a stop work procedure in the event that archaeological material is identified to ensure Council conforms to the Queensland Heritage Act 1992. The procedure should be included in the training material for the place.*



7 Implementation Plan

7.1 Purpose of the Implementation Plan

The implementation plan consists of two 'plans': Action and Maintenance. The action plan applies to recommended actions identified in this document for particular elements of the former Mount Morgan Commonwealth Bank. The maintenance plan includes recommended maintenance tasks that should occur at regular intervals. A basic summary of planning requirements is provided for each task, but any proposal for work not covered by the General Exemption Certificate will generally require further planning prior to application to EHP or RRC.

7.2 Summary of CMP Findings

The following summary is provided to highlight the key points raised in the CMP.

- The former bank building was established in 1913. Further additions were added to the building in the interwar and post war periods respectfully.
- The building is entered on the Queensland Heritage Register, however there is a recommendation for it to be removed from the QHR, but remain as a local heritage place (subject to further action).
- The building is currently unused and in a poor condition generally.
- The significance of the place is encapsulated by a heritage boundary and all work undertaken within the boundary must currently conform to the standards and conditions applied by EHP and Council's planning scheme.
- The standards and conditions generally (as a rule of thumb) consist of the following 'levels' at the State level:

Work	Standard	Actions
Maintenance	General Exemption Certificate	See General Exemption Certificate and technical notes .
Minor work	Exemption Certificate	Requires application to EHP.
Major work	Development application	Requires application to local government/IDAS system

- Always consult the CMP for further information about the place and for more detailed information about obligations. It is also ideal to familiarise yourself with the [EHP website](#) and relevant [heritage publications](#).
- Work not covered by the General Exemption Certificate will generally require input from a qualified heritage professional.

7.3 Action Plan

Actions identified in this plan are organised according to priority. Each level of priority is identified by a colour system and a timeframe in which the action should ideally be completed.

The timeframe is based on a period of ten years, at which time a review should be completed.

- **HIGH** [within 1-2 years].
- **MEDIUM** [within 3-5 years]
- **LOW** [within 5-10 years].



Table 10: Action Plan.

Element	Action	Policy	Priority	Approval process	Planning
Endorsement of CMP	Endorsed this CMP (via appropriate delegates within RRC).	6	High	RRC	<ul style="list-style-type: none"> The CMP should be formally endorsed by the RRC as the framework for managing the former Mount Morgan Commonwealth Bank's heritage values.
Structural and Condition Issue	Investigate structural and condition issues of the building.	27	High	None	<ul style="list-style-type: none"> An engineer's assessment regarding the overall condition and structural issues should be prepared to inform the heritage options study and action plan. The report should look also at the previous white ant damage, as well as advice relating to any issues regarding the previously removed verandah walls. Subject to the engineer's advice, consider any additional factors that may be contributing to the overall conservation and re-use of the place within the action plan and heritage options study.
Heritage Options Study	Investigate the future use (re-use) options for the site.	30-33	High	None	<ul style="list-style-type: none"> Undertake a heritage options study to consider re-use option for the building. Consider options that are compatible with the significance of the place as a former bank and the adjacent commercial area within Mount Morgan. Consider whether the building should remain in Council ownership or whether it could be sold to another party.
Statutory listing	Liaise with EHP Officers regarding the removal of the place from the QHR	7-8	High	Correspondence to CEO EHP	<ul style="list-style-type: none"> Contact EHP and discuss the recommendation and format of the proposal to remove the place from the QHR. Submit correspondence to the CEO EHP – as directed.

Element	Action	Policy	Priority	Approval process	Planning
Training and Compliance	Develop a short induction or toolbox talk for all personnel that undertake maintenance, repairs and alterations to the place.	13-15	High	None	<ul style="list-style-type: none"> An Induction should be given prior to the involvement of personnel that undertake maintenance, repairs and alterations to the place, so that they understand the obligations necessary for their involvement. The information should be based upon this CMP.
Maintenance plan	Commence the maintenance plan.	18	High	None	<ul style="list-style-type: none"> Utilise maintenance plan to manage short, medium and long term condition issues. Update the maintenance plan to compensate for changes and condition issues as they arise.
Urgent Repairs	Address the urgent repair issues noted in the condition assessment (i.e.): <ul style="list-style-type: none"> Power is currently disconnected at the site. Vegetation in front of the access ramp has grown well out onto the footpath, which is a hazard. Other shrubs on the western and eastern sides are also promoting issues for building and pest management. Toilets are no longer functional and require repairs. 	26	High	To be determined	<ul style="list-style-type: none"> Commence a coordinated program to identify nature and extent of urgent repairs. Depending on the nature and extent of work, approval may be required from EHP / RRC.

Element	Action	Policy	Priority	Approval process	Planning
	<p>Address the remaining repair issues noted in the condition assessment:</p> <ul style="list-style-type: none"> • A number of downpipes have failed and/or are discharging water onto the footings and sub-floor areas. • Internal finishes, including paintwork, floor coverings, kitchenette, toilets, furniture and fittings are all in extremely poor condition. • The pine ceiling boards in the skillion office are loose in places; (however it does not appear to be from termite damage). • External elements require repainting generally. In some areas the substrate has completely failed, including the front door. 	29	Medium	To be determined	<ul style="list-style-type: none"> • Continue repairs to the remaining condition issues once the Heritage Options Study and Structural Condition assessment has been completed and a new use for the building has been confirmed. • Depending on the nature and extent of work, approval may be required from EHP / RRC.
Interpretation	Develop an interpretation strategy	24-25	Low	To be determined	<ul style="list-style-type: none"> • The strategy is required to address the overall significance of the bank as an individual place, and in relation to the commercial precinct of Mount Morgan. • The strategy should be developed in conjunction with the other heritage listed places in the vicinity. • Approval may be required for implementation of the strategy.

Element	Action	Policy	Priority	Approval process	Planning
General	Paint scrape analysis	20	Low	Not applicable	<ul style="list-style-type: none"> Exemption Certificate will be required to repaint the exterior of the building in a different paint scheme. Use a paint scrape to determine an appropriate paint scheme for the exterior and interior of the buildings if an alternate scheme is required from the current scheme. Until a new scheme is approved, repainting should match existing scheme. Once approved, the new paint scheme should be maintained. The paint scrape should be undertaken by a qualified heritage professional with relevant regional experience and conservation knowledge for buildings of this nature. The analysis should include all major elements of the place, including walls, ceilings, fascias and joinery. Submit scrape to an appropriate institution or organisation (e.g. Queensland Museum) for analysis. Update the CMP for the new paint scheme, once the results have been obtained.
Update CMP	Maintain the CMP in an up to date order.	9	Low	To be determined	<ul style="list-style-type: none"> Undertake revisions and amendments as necessary to maintain a current and relevant guide for the place's heritage values.

7.4 Maintenance Plan

Table 11: Maintenance plan (adapted from EHP *technical note: maintenance and cleaning*).

Frequency	Item	Inspection notes
Half yearly	Roof	<p><u>Look for:</u></p> <ul style="list-style-type: none"> Loose sheets or missing fixings. Metal sheets for rust (particularly at the laps). Missing or loose flashings near chimneys or parapets.
	Gutters and downpipes	<ul style="list-style-type: none"> Gutters and downpipes, including guards, sumps and rainwater heads are clear of leaves and other debris. Gutters and downpipes for cracks, rust, drips on the outside, loose and missing brackets, moss and stains near downpipes. Fall of gutters. Discharge of downpipes adjacent to the building.
	Ceiling spaces	<ul style="list-style-type: none"> For light visible through holes or water staining on framing elements. Water often travels a tortuous path from where it enters a building to where it exits. For vermin or wildlife. Signs of termite infestation (this may be reduced to an annual inspection if an effective termite management system is in place).
	Interior	<ul style="list-style-type: none"> Timber cladding and joinery for splits, cracking joints or failed fixings. Condition of furnishings, including carpets and floor coverings. Sills and bottom rails of windows and doors to ensure they are solid. Check for condition of toilets, sinks and kitchenette (functionality). Check security for windows and doors. Check power is connected and lights are working.
	Exterior	<ul style="list-style-type: none"> External timber cladding for splits, cracking or failed fixings. For fire hazards, such as rubbish, undergrowth, combustible materials. That doors and windows are secure. Paint failing or chalking. That water is not entering the building. For cracks, leaning or subsidence in external walls. Overhanging tree branches, trim if necessary.

Frequency	Item	Inspection notes
Annual	Termite and insect inspections	<ul style="list-style-type: none"> For termite infestations and other notable insect or vermin attack.
	Fabric (generally)	<ul style="list-style-type: none"> Grime, growth in mortar joints, bird excretion, graffiti, damp problem.
1-2 years	Roof flashings and capping	<ul style="list-style-type: none"> Loose or raised fixings to metal cappings. Cappings that have lifted, slipped or are deformed from wind damage.
	Steel gutters and downpipes	<p><u>Look for:</u></p> <ul style="list-style-type: none"> Rust stains around downpipe outlets, internal/external corners. Overhangs and downpipe offsets. Cracks in gutter and downpipe joints, incl. loose or missing brackets to gutters and downpipes. Organic growth, moss or stains surrounding downpipes—this can indicate blockages. Downpipes that are squashed or damaged and restrict water flow. Soundness of connection between downpipes and the stormwater system. Blockages of stormwater drains.
	Eaves	<ul style="list-style-type: none"> Holes from old service pipes where birds can nest. Surface stains to fascia and soffit that indicate roof or valley and gutter failure. Blocked ventilation holes and clear. Paint failure and/or decay to linings—this can indicate roof covering failure. Cobwebs and wasp or hornet nests and remove.
	Timber – fabric	<ul style="list-style-type: none"> Loose or missing cladding, corner stops, mouldings, soffits and fascias. For weathering and potential decay around window sills. Boarding in contact with the ground or plants. Termite activity.
5 years (structural condition audit by engineer)	Roof	<ul style="list-style-type: none"> Loose or raised fixings—loose fixings can indicate batten failure. Sheet edges and surfaces that are deformed from being walked on. Rust stains around fixings, where sheets are lapped around flashings.
	Building (timber, brickwork and stumps)	<ul style="list-style-type: none"> For cracks. Walls are straight and true. Loose, fretted, broken or missing mortar joints and bricks. Crumbling brickwork or timbers—this can indicate a moisture or termite problem. Air vents that are blocked or covered over with soil. Failed stumps or sub-floor members. Cracked or drummy render.



Frequency	Item	Inspection notes
	Timber – (framing)	<ul style="list-style-type: none"> Members are secure and true. For movement of vertical beams and posts. Members are not in direct contact with the ground. For termite activity.
As necessary	Broken glass	<ul style="list-style-type: none"> EHP advises using hardboard to cover broken glass as a temporary measure.
	Painting	<ul style="list-style-type: none"> Check internal and external paint condition (repaint every 7-10 years as required)
	Walls and structure	<ul style="list-style-type: none"> Record and monitor all cracks. Seek advice from a structural engineer for large cracks.
	Shrubs	<ul style="list-style-type: none"> Prune and maintain shrubs and plantings.
	Lawn	<ul style="list-style-type: none"> Mowing and brush cutting.

8 References

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Appendices

Appendix 1 – Best Practice Methodology – *The Australian ICOMOS Burra Charter 2013*

This CMP was prepared in accordance with the principles expressed in the *Australia ICOMOS Burra Charter, 2013 (Burra Charter)*. The *Burra Charter* underpins all cultural heritage management and statutory regulation in Australia. In particular, the charter “sets a standard of practice for those who provide advice, make decisions about, or undertake works to places of cultural significance, including owners, managers and custodians” (*Burra Charter: 1*). It defines conservation as “the processes of looking after a place so as to retain its cultural significance” (*Burra Charter: Article 1.4*). Most importantly,

The *Burra Charter* advocates a cautious approach to change: do as much as necessary to care for the place and to make it usable, but otherwise change it as little as possible so that its cultural significance is retained (*Burra Charter: 1*).

This approach represents the paramount philosophy guiding cultural heritage management and, along with the definition of conservation, provides the simplest explanation for managing a heritage place.

The *Burra Charter* also provides a clear and precise process that guides the conservation of a place, which is represented in the figure below. This CMP is the product of steps 1-5 and steps 6-7 are the responsibility of the manager(s) of the place, with the assistance of qualified heritage practitioners.

A full copy of *The Australian ICOMOS Burra Charter 2013* is attached.



THE BURRA CHARTER

The Australia ICOMOS Charter for
Places of Cultural Significance 2013



Australia ICOMOS Incorporated
International Council on Monuments and Sites

ICOMOS

ICOMOS (International Council on Monuments and Sites) is a non-governmental professional organisation formed in 1965, with headquarters in Paris. ICOMOS is primarily concerned with the philosophy, terminology, methodology and techniques of cultural heritage conservation. It is closely linked to UNESCO, particularly in its role under the World Heritage Convention 1972 as UNESCO's principal adviser on cultural matters related to World Heritage. The 11,000 members of ICOMOS include architects, town planners, demographers, archaeologists, geographers, historians, conservators, anthropologists, scientists, engineers and heritage administrators. Members in the 103 countries belonging to ICOMOS are formed into National Committees and participate in a range of conservation projects, research work, intercultural exchanges and cooperative activities. ICOMOS also has 27 International Scientific Committees that focus on particular aspects of the conservation field. ICOMOS members meet triennially in a General Assembly.

Australia ICOMOS

The Australian National Committee of ICOMOS (Australia ICOMOS) was formed in 1976. It elects an Executive Committee of 15 members, which is responsible for carrying out national programs and participating in decisions of ICOMOS as an international organisation. It provides expert advice as required by ICOMOS, especially in its relationship with the World Heritage Committee. Australia ICOMOS acts as a national and international link between public authorities, institutions and individuals involved in the study and conservation of all places of cultural significance. Australia ICOMOS members participate in a range of conservation activities including site visits, training, conferences and meetings.

Revision of the Burra Charter

The Burra Charter was first adopted in 1979 at the historic South Australian mining town of Burra. Minor revisions were made in 1981 and 1988, with more substantial changes in 1999.

Following a review this version was adopted by Australia ICOMOS in October 2013.

The review process included replacement of the 1988 Guidelines to the Burra Charter with Practice Notes which are available at: australia.icomos.org

Australia ICOMOS documents are periodically reviewed and we welcome any comments.

Citing the Burra Charter

The full reference is *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance, 2013*. Initial textual references should be in the form of the *Australia ICOMOS Burra Charter, 2013* and later references in the short form (*Burra Charter*).

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The Burra Charter consists of the Preamble, Articles, Explanatory Notes and the flow chart.

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The Burra Charter

(The Australia ICOMOS Charter for Places of Cultural Significance, 2013)

Preamble

Considering the International Charter for the Conservation and Restoration of Monuments and Sites (Venice 1964), and the Resolutions of the 5th General Assembly of the International Council on Monuments and Sites (ICOMOS) (Moscow 1978), the Burra Charter was adopted by Australia ICOMOS (the Australian National Committee of ICOMOS) on 19 August 1979 at Burra, South Australia. Revisions were adopted on 23 February 1981, 23 April 1988, 26 November 1999 and 31 October 2013.

The Burra Charter provides guidance for the conservation and management of places of cultural significance (cultural heritage places), and is based on the knowledge and experience of Australia ICOMOS members.

Conservation is an integral part of the management of places of cultural significance and is an ongoing responsibility.

Who is the Charter for?

The Charter sets a standard of practice for those who provide advice, make decisions about, or undertake works to places of cultural significance, including owners, managers and custodians.

Using the Charter

The Charter should be read as a whole. Many articles are interdependent.

The Charter consists of:

- Definitions Article 1
- Conservation Principles Articles 2–13
- Conservation Processes Articles 14–25
- Conservation Practices Articles 26–34
- The Burra Charter Process flow chart.

The key concepts are included in the Conservation Principles section and these are further developed in the Conservation Processes and Conservation Practice sections. The flow chart explains the Burra Charter Process (Article 6) and is an integral part of

The Burra Charter, 2013

the Charter. Explanatory Notes also form part of the Charter.

The Charter is self-contained, but aspects of its use and application are further explained, in a series of Australia ICOMOS Practice Notes, in *The Illustrated Burra Charter*, and in other guiding documents available from the Australia ICOMOS web site: australia.icomos.org.

What places does the Charter apply to?

The Charter can be applied to all types of places of cultural significance including natural, Indigenous and historic places with cultural values.

The standards of other organisations may also be relevant. These include the *Australian Natural Heritage Charter*, *Ask First: a guide to respecting Indigenous heritage places and values* and *Significance 2.0: a guide to assessing the significance of collections*.

National and international charters and other doctrine may be relevant. See australia.icomos.org.

Why conserve?

Places of cultural significance enrich people's lives, often providing a deep and inspirational sense of connection to community and landscape, to the past and to lived experiences. They are historical records, that are important expressions of Australian identity and experience. Places of cultural significance reflect the diversity of our communities, telling us about who we are and the past that has formed us and the Australian landscape. They are irreplaceable and precious.

These places of cultural significance must be conserved for present and future generations in accordance with the principle of inter-generational equity.

The Burra Charter advocates a cautious approach to change: do as much as necessary to care for the place and to make it useable, but otherwise change it as little as possible so that its cultural significance is retained.

Australia ICOMOS Incorporated — 1

Articles**Article 1. Definitions**

For the purposes of this Charter:

- 1.1 *Place* means a geographically defined area. It may include elements, objects, spaces and views. Place may have tangible and intangible dimensions.
- 1.2 *Cultural significance* means aesthetic, historic, scientific, social or spiritual value for past, present or future generations.
Cultural significance is embodied in the *place* itself, its *fabric*, *setting*, *use*, *associations*, *meanings*, records, *related places* and *related objects*.
Places may have a range of values for different individuals or groups.
- 1.3 *Fabric* means all the physical material of the *place* including elements, fixtures, contents and objects.
- 1.4 *Conservation* means all the processes of looking after a *place* so as to retain its *cultural significance*.
- 1.5 *Maintenance* means the continuous protective care of a *place*, and its *setting*.
Maintenance is to be distinguished from repair which involves *restoration* or *reconstruction*.
- 1.6 *Preservation* means maintaining a *place* in its existing state and retarding deterioration.
- 1.7 *Restoration* means returning a *place* to a known earlier state by removing accretions or by reassembling existing elements without the introduction of new material.
- 1.8 *Reconstruction* means returning a *place* to a known earlier state and is distinguished from *restoration* by the introduction of new material.
- 1.9 *Adaptation* means changing a *place* to suit the existing *use* or a proposed use.
- 1.10 *Use* means the functions of a *place*, including the activities and traditional and customary practices that may occur at the place or are dependent on the place.

2 — Australia ICOMOS Incorporated**Explanatory Notes**

Place has a broad scope and includes natural and cultural features. Place can be large or small: for example, a memorial, a tree, an individual building or group of buildings, the location of an historical event, an urban area or town, a cultural landscape, a garden, an industrial plant, a shipwreck, a site with in situ remains, a stone arrangement, a road or travel route, a community meeting place, a site with spiritual or religious connections.

The term cultural significance is synonymous with cultural heritage significance and cultural heritage value.

Cultural significance may change over time and with use.

Understanding of cultural significance may change as a result of new information.

Fabric includes building interiors and sub-surface remains, as well as excavated material.

Natural elements of a place may also constitute fabric. For example the rocks that signify a Dreaming place.

Fabric may define spaces and views and these may be part of the significance of the place.

See also Article 14.

Examples of protective care include:

- maintenance — regular inspection and cleaning of a place, e.g. mowing and pruning in a garden;
- repair involving restoration — returning dislodged or relocated fabric to its original location e.g. loose roof gutters on a building or displaced rocks in a stone bora ring;
- repair involving reconstruction — replacing decayed fabric with new fabric

It is recognised that all places and their elements change over time at varying rates.

New material may include recycled material salvaged from other places. This should not be to the detriment of any place of cultural significance.

Use includes for example cultural practices commonly associated with Indigenous peoples such as ceremonies, hunting and fishing, and fulfilment of traditional obligations. Exercising a right of access may be a use.

The Burra Charter, 2013

Articles

- 1.11 *Compatible use* means a *use* which respects the *cultural significance* of a *place*. Such a use involves no, or minimal, impact on cultural significance.
- 1.12 *Setting* means the immediate and extended environment of a *place* that is part of or contributes to its *cultural significance* and distinctive character.
- 1.13 *Related place* means a *place* that contributes to the *cultural significance* of another place.
- 1.14 *Related object* means an object that contributes to the *cultural significance* of a *place* but is not at the place.
- 1.15 *Associations* mean the connections that exist between people and a *place*.
- 1.16 *Meanings* denote what a *place* signifies, indicates, evokes or expresses to people.
- 1.17 *Interpretation* means all the ways of presenting the *cultural significance* of a *place*.

Conservation Principles**Article 2. Conservation and management**

- 2.1 *Places* of *cultural significance* should be conserved.
- 2.2 The aim of *conservation* is to retain the *cultural significance* of a *place*.
- 2.3 *Conservation* is an integral part of good management of *places* of *cultural significance*.
- 2.4 *Places* of *cultural significance* should be safeguarded and not put at risk or left in a vulnerable state.

Article 3. Cautious approach

- 3.1 *Conservation* is based on a respect for the existing *fabric*, *use*, *associations* and *meanings*. It requires a cautious approach of changing as much as necessary but as little as possible.
- 3.2 Changes to a *place* should not distort the physical or other evidence it provides, nor be based on conjecture.

Article 4. Knowledge, skills and techniques

- 4.1 *Conservation* should make use of all the knowledge, skills and disciplines which can contribute to the study and care of the *place*.

Explanatory Notes

Setting may include: structures, spaces, land, water and sky; the visual setting including views to and from the place, and along a cultural route; and other sensory aspects of the setting such as smells and sounds. Setting may also include historical and contemporary relationships, such as use and activities, social and spiritual practices, and relationships with other places, both tangible and intangible.

Objects at a place are encompassed by the definition of place, and may or may not contribute to its cultural significance.

Associations may include social or spiritual values and cultural responsibilities for a place.

Meanings generally relate to intangible dimensions such as symbolic qualities and memories.

Interpretation may be a combination of the treatment of the fabric (e.g. maintenance, restoration, reconstruction); the use of and activities at the place; and the use of introduced explanatory material.

The traces of additions, alterations and earlier treatments to the fabric of a place are evidence of its history and uses which may be part of its significance. Conservation action should assist and not impede their understanding.

Articles

4.2 Traditional techniques and materials are preferred for the *conservation* of significant *fabric*. In some circumstances modern techniques and materials which offer substantial conservation benefits may be appropriate.

Article 5. Values

5.1 *Conservation* of a *place* should identify and take into consideration all aspects of cultural and natural significance without unwarranted emphasis on any one value at the expense of others.

5.2 Relative degrees of *cultural significance* may lead to different *conservation* actions at a place.

Article 6. Burra Charter Process

6.1 The *cultural significance* of a *place* and other issues affecting its future are best understood by a sequence of collecting and analysing information before making decisions. Understanding cultural significance comes first, then development of policy and finally management of the place in accordance with the policy. This is the Burra Charter Process.

6.2 Policy for managing a *place* must be based on an understanding of its *cultural significance*.

6.3 Policy development should also include consideration of other factors affecting the future of a *place* such as the owner’s needs, resources, external constraints and its physical condition.

6.4 In developing an effective policy, different ways to retain *cultural significance* and address other factors may need to be explored.

6.5 Changes in circumstances, or new information or perspectives, may require reiteration of part or all of the Burra Charter Process.

Article 7. Use

7.1 Where the *use* of a *place* is of *cultural significance* it should be retained.

7.2 A *place* should have a *compatible use*.

Explanatory Notes

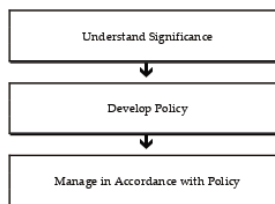
The use of modern materials and techniques must be supported by firm scientific evidence or by a body of experience.

Conservation of places with natural significance is explained in the Australian Natural Heritage Charter. This Charter defines natural significance to mean the importance of ecosystems, biodiversity and geodiversity for their existence value or for present or future generations, in terms of their scientific, social, aesthetic and life-support value.

In some cultures, natural and cultural values are indivisible.

A cautious approach is needed, as understanding of cultural significance may change. This article should not be used to justify actions which do not retain cultural significance.

The Burra Charter Process, or sequence of investigations, decisions and actions, is illustrated below and in more detail in the accompanying flow chart which forms part of the Charter.



Options considered may include a range of uses and changes (e.g. adaptation) to a place.

The policy should identify a use or combination of uses or constraints on uses that retain the cultural significance of the place. New use of a place should involve minimal change to significant fabric and use; should respect associations and meanings; and where appropriate should provide for continuation of activities and practices which contribute to the cultural significance of the place.

Articles**Article 8. Setting**

Conservation requires the retention of an appropriate *setting*. This includes retention of the visual and sensory setting, as well as the retention of spiritual and other cultural relationships that contribute to the *cultural significance* of the *place*.

New construction, demolition, intrusions or other changes which would adversely affect the setting or relationships are not appropriate.

Article 9. Location

9.1 The physical location of a *place* is part of its *cultural significance*. A building, work or other element of a place should remain in its historical location. Relocation is generally unacceptable unless this is the sole practical means of ensuring its survival.

9.2 Some buildings, works or other elements of *places* were designed to be readily removable or already have a history of relocation. Provided such buildings, works or other elements do not have significant links with their present location, removal may be appropriate.

9.3 If any building, work or other element is moved, it should be moved to an appropriate location and given an appropriate *use*. Such action should not be to the detriment of any *place* of *cultural significance*.

Article 10. Contents

Contents, fixtures and objects which contribute to the *cultural significance* of a *place* should be retained at that place. Their removal is unacceptable unless it is: the sole means of ensuring their security and *preservation*; on a temporary basis for treatment or exhibition; for cultural reasons; for health and safety; or to protect the place. Such contents, fixtures and objects should be returned where circumstances permit and it is culturally appropriate.

Article 11. Related places and objects

The contribution which *related places* and *related objects* make to the *cultural significance* of the *place* should be retained.

Article 12. Participation

Conservation, *interpretation* and management of a *place* should provide for the participation of people for whom the place has significant *associations* and *meanings*, or who have social, spiritual or other cultural responsibilities for the place.

Article 13. Co-existence of cultural values

Co-existence of cultural values should always be recognised, respected and encouraged. This is especially important in cases where they conflict.

The Burra Charter, 2013

Explanatory Notes

Setting is explained in Article 1.12.

For example, the repatriation (returning) of an object or element to a place may be important to Indigenous cultures, and may be essential to the retention of its cultural significance.

Article 28 covers the circumstances where significant fabric might be disturbed, for example, during archaeological excavation.

Article 33 deals with significant fabric that has been removed from a place.

For some places, conflicting cultural values may affect policy development and management decisions. In Article 13, the term cultural values refers to those beliefs which are important to a cultural group, including but not limited to political, religious, spiritual and moral beliefs. This is broader than values associated with cultural significance.

Australia ICOMOS Incorporated — 5

Articles

Conservation Processes**Article 14. Conservation processes**

Conservation may, according to circumstance, include the processes of: retention or reintroduction of a *use*; retention of *associations* and *meanings*; *maintenance*, *preservation*, *restoration*, *reconstruction*, *adaptation* and *interpretation*; and will commonly include a combination of more than one of these. Conservation may also include retention of the contribution that *related places* and *related objects* make to the *cultural significance* of a *place*.

Article 15. Change

15.1 Change may be necessary to retain *cultural significance*, but is undesirable where it reduces *cultural significance*. The amount of change to a *place* and its *use* should be guided by the *cultural significance* of the *place* and its appropriate *interpretation*.

15.2 Changes which reduce *cultural significance* should be reversible, and be reversed when circumstances permit.

15.3 Demolition of significant *fabric* of a *place* is generally not acceptable. However, in some cases minor demolition may be appropriate as part of *conservation*. Removed significant *fabric* should be reinstated when circumstances permit.

15.4 The contributions of all aspects of *cultural significance* of a *place* should be respected. If a *place* includes *fabric*, *uses*, *associations* or *meanings* of different periods, or different aspects of *cultural significance*, emphasising or interpreting one period or aspect at the expense of another can only be justified when what is left out, removed or diminished is of slight *cultural significance* and that which is emphasised or interpreted is of much greater *cultural significance*.

Article 16. Maintenance

Maintenance is fundamental to *conservation*. Maintenance should be undertaken where *fabric* is of *cultural significance* and its maintenance is necessary to retain that *cultural significance*.

Article 17. Preservation

Preservation is appropriate where the existing *fabric* or its condition constitutes evidence of *cultural significance*, or where insufficient evidence is available to allow other *conservation* processes to be carried out.

Explanatory Notes

Conservation normally seeks to slow deterioration unless the significance of the place dictates otherwise. There may be circumstances where no action is required to achieve conservation.

When change is being considered, including for a temporary use, a range of options should be explored to seek the option which minimises any reduction to its cultural significance.

It may be appropriate to change a place where this reflects a change in cultural meanings or practices at the place, but the significance of the place should always be respected.

Reversible changes should be considered temporary. Non-reversible change should only be used as a last resort and should not prevent future conservation action.

Maintaining a place may be important to the fulfilment of traditional laws and customs in some Indigenous communities and other cultural groups.

Preservation protects *fabric* without obscuring evidence of its construction and use. The process should always be applied:

- where the evidence of the *fabric* is of such significance that it should not be altered; or
- where insufficient investigation has been carried out to permit policy decisions to be taken in accord with Articles 26 to 28.

New work (e.g. stabilisation) may be carried out in association with preservation when its purpose is the physical protection of the *fabric* and when it is consistent with Article 22.

The Burra Charter, 2013

Articles**Article 18. Restoration and reconstruction**

Restoration and reconstruction should reveal culturally significant aspects of the *place*.

Article 19. Restoration

Restoration is appropriate only if there is sufficient evidence of an earlier state of the *fabric*.

Article 20. Reconstruction

20.1 *Reconstruction* is appropriate only where a *place* is incomplete through damage or alteration, and only where there is sufficient evidence to reproduce an earlier state of the *fabric*. In some cases, reconstruction may also be appropriate as part of a *use* or practice that retains the *cultural significance* of the place.

20.2 *Reconstruction* should be identifiable on close inspection or through additional *interpretation*.

Article 21. Adaptation

21.1 *Adaptation* is acceptable only where the adaptation has minimal impact on the *cultural significance* of the *place*.

21.2 *Adaptation* should involve minimal change to significant *fabric*, achieved only after considering alternatives.

Article 22. New work

22.1 New work such as additions or other changes to the *place* may be acceptable where it respects and does not distort or obscure the *cultural significance* of the place, or detract from its *interpretation* and appreciation.

22.2 New work should be readily identifiable as such, but must respect and have minimal impact on the *cultural significance* of the *place*.

Article 23. Retaining or reintroducing use

Retaining, modifying or reintroducing a significant *use* may be appropriate and preferred forms of *conservation*.

Article 24. Retaining associations and meanings

24.1 Significant *associations* between people and a *place* should be respected, retained and not obscured. Opportunities for the *interpretation*, commemoration and celebration of these associations should be investigated and implemented.

24.2 Significant *meanings*, including spiritual values, of a *place* should be respected. Opportunities for the continuation or revival of these meanings should be investigated and implemented.

Explanatory Notes

Places with social or spiritual value may warrant reconstruction, even though very little may remain (e.g. only building footings or tree stumps following fire, flood or storm). The requirement for sufficient evidence to reproduce an earlier state still applies.

Adaptation may involve additions to the place, the introduction of new services, or a new use, or changes to safeguard the place. Adaptation of a place for a new use is often referred to as 'adaptive re-use' and should be consistent with Article 7.2.

New work should respect the significance of a place through consideration of its siting, bulk, form, scale, character, colour, texture and material. Imitation should generally be avoided.

New work should be consistent with Articles 3, 5, 8, 15, 21 and 22.1.

These may require changes to significant fabric but they should be minimised. In some cases, continuing a significant use, activity or practice may involve substantial new work.

For many places associations will be linked to aspects of use, including activities and practices.

Some associations and meanings may not be apparent and will require research.

Articles**Article 25. Interpretation**

The *cultural significance* of many *places* is not readily apparent, and should be explained by *interpretation*. Interpretation should enhance understanding and engagement, and be culturally appropriate.

Conservation Practice**Article 26. Applying the Burra Charter Process**

26.1 Work on a *place* should be preceded by studies to understand the *place* which should include analysis of physical, documentary, oral and other evidence, drawing on appropriate knowledge, skills and disciplines.

26.2 Written statements of *cultural significance* and policy for the *place* should be prepared, justified and accompanied by supporting evidence. The statements of significance and policy should be incorporated into a management plan for the *place*.

26.3 Groups and individuals with *associations* with the *place* as well as those involved in its management should be provided with opportunities to contribute to and participate in identifying and understanding the *cultural significance* of the *place*. Where appropriate they should also have opportunities to participate in its *conservation* and management.

26.4 Statements of *cultural significance* and policy for the *place* should be periodically reviewed, and actions and their consequences monitored to ensure continuing appropriateness and effectiveness.

Article 27. Managing change

27.1 The impact of proposed changes, including incremental changes, on the *cultural significance* of a *place* should be assessed with reference to the statement of significance and the policy for managing the *place*. It may be necessary to modify proposed changes to better retain cultural significance.

27.2 Existing *fabric*, *use*, *associations* and *meanings* should be adequately recorded before and after any changes are made to the *place*.

Article 28. Disturbance of fabric

28.1 Disturbance of significant *fabric* for study, or to obtain evidence, should be minimised. Study of a *place* by any disturbance of the *fabric*, including archaeological excavation, should only be undertaken to provide data essential for decisions on the *conservation* of the *place*, or to obtain important evidence about to be lost or made inaccessible.

Explanatory Notes

In some circumstances any form of interpretation may be culturally inappropriate.

The results of studies should be kept up to date, regularly reviewed and revised as necessary.

Policy should address all relevant issues, e.g. use, interpretation, management and change.

A management plan is a useful document for recording the Burra Charter Process, i.e. the steps in planning for and managing a *place* of cultural significance (Article 6.1 and flow chart). Such plans are often called conservation management plans and sometimes have other names.

The management plan may deal with other matters related to the management of the *place*.

Monitor actions taken in case there are also unintended consequences.

Articles

28.2 Investigation of a *place* which requires disturbance of the *fabric*, apart from that necessary to make decisions, may be appropriate provided that it is consistent with the policy for the place. Such investigation should be based on important research questions which have potential to substantially add to knowledge, which cannot be answered in other ways and which minimises disturbance of significant fabric.

Article 29. Responsibility

The organisations and individuals responsible for management and decisions should be named and specific responsibility taken for each decision.

Article 30. Direction, supervision and implementation

Competent direction and supervision should be maintained at all stages, and any changes should be implemented by people with appropriate knowledge and skills.

Article 31. Keeping a log

New evidence may come to light while implementing policy or a plan for a *place*. Other factors may arise and require new decisions. A log of new evidence and additional decisions should be kept.

Article 32. Records

32.1 The records associated with the *conservation* of a *place* should be placed in a permanent archive and made publicly available, subject to requirements of security and privacy, and where this is culturally appropriate.

32.2 Records about the history of a *place* should be protected and made publicly available, subject to requirements of security and privacy, and where this is culturally appropriate.

Article 33. Removed fabric

Significant *fabric* which has been removed from a *place* including contents, fixtures and objects, should be catalogued, and protected in accordance with its *cultural significance*.

Where possible and culturally appropriate, removed significant fabric including contents, fixtures and objects, should be kept at the place.

Article 34. Resources

Adequate resources should be provided for *conservation*.

Words in italics are defined in Article 1.

Explanatory Notes

New decisions should respect and have minimal impact on the cultural significance of the place.

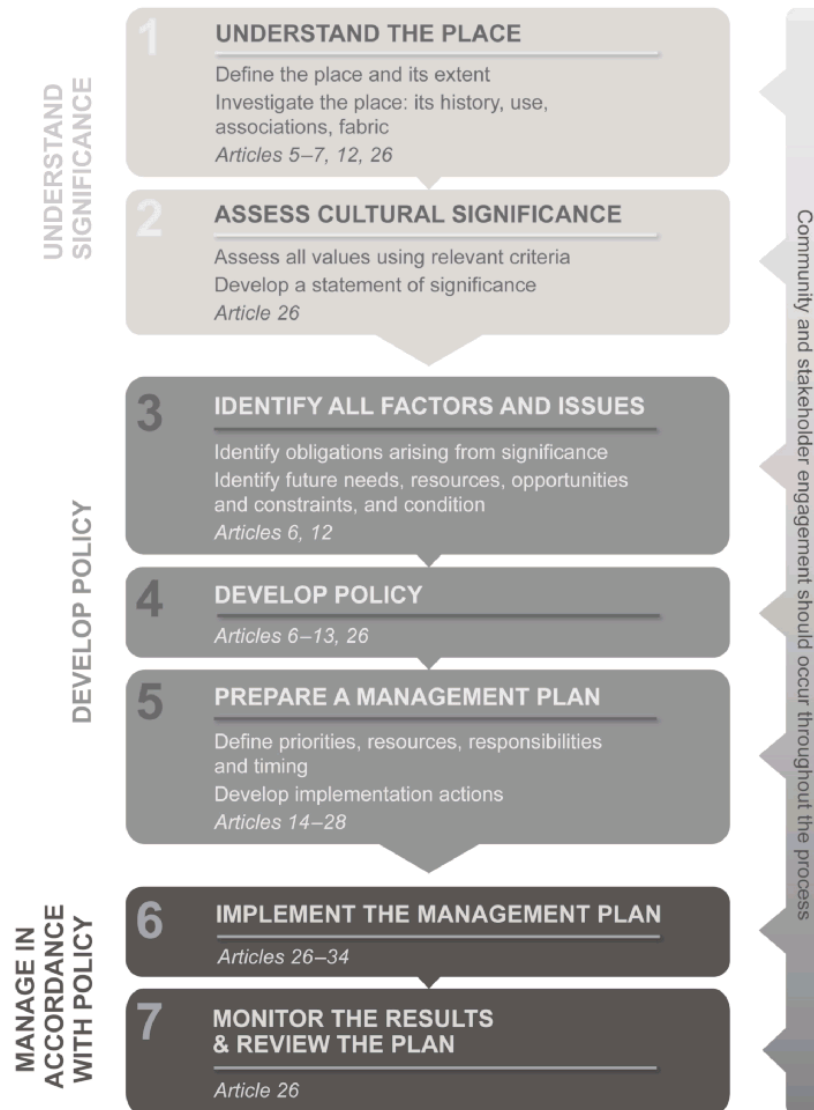
The best conservation often involves the least work and can be inexpensive.

The Burra Charter Process

Steps in planning for and managing a place of cultural significance

The Burra Charter should be read as a whole.

Key articles relevant to each step are shown in the boxes. Article 6 summarises the Burra Charter Process.



Appendix 2 – QHR Heritage Register Entry (EPA 1992)



CMP – Mount Morgan Commonwealth Bank Building

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QUEENSLAND HERITAGE ACT 1992

Entry in the Heritage Register

State Heritage Place



Place ID	600746
Name	Commonwealth Bank (former)
Former name(s) / other	Queensland Savings Bank
Location	38 Morgan Street MOUNT MORGAN 4714
RPD	Lot 18 RN1545
Local authority	ROCKHAMPTON REGIONAL COUNCIL
Map Sheet	MOUNT MORGAN
Map Projection	56
Grid	Easting: 233509 Northing: 7382561
Boundary Description	
Other Listings	National Trust of Queensland - MTM 2/11 Register of the National Estate - 008847

Heritage Significance

Commonwealth Bank (former) is a place that satisfies one or more of the criteria specified in s.35(1) of the Queensland Heritage Act 1992 as evidenced by, but not exclusive to, the following statement of cultural heritage significance, based on criteria A, D, E and G.

Criterion A	The former Commonwealth Bank as a branch of the Queensland Government Savings Bank demonstrates the regional development of the state and its presence is suggestive of the large number of workers present in the town because of the Mount Morgan Mine.
Criterion D	The building is characteristic of small timber banks in regional towns, modest in scale and finish, but occupying a prominent corner site.
Criterion E	The former bank building has aesthetic value for its contribution to the Central State School site, a large complex of timber buildings similar in form, scale and material to which the former bank building, sited prominently at the street intersection, forms a centrepiece.
Criterion G	As Mount Morgan's only bank for 21 years and one which served the community for the best part of the 20th century, and as the premises of the institution which acted as an agent of the Commonwealth during the war, the former bank building has an important connection with the Mount Morgan community.

QUEENSLAND HERITAGE ACT 1992

Entry in the Heritage Register
State Heritage Place

**History**

The former Commonwealth Bank at Mount Morgan was constructed in 1913 as the Queensland Government Savings Bank, and became a branch of the Commonwealth Bank of Australia in 1921.

The Queensland Government Savings Bank was established by one of the earliest pieces of legislation enacted by the government of the new colony of Queensland in 1861. Intended to encourage small deposit saving by working people, savings banks could be established by the gazettal of an application by ten or more house or landholders in any community of more than 500 people. In 1864, the Government Savings Bank Bill provided a government guarantee to protect trustees and deposits and to allow depositors to easily transfer accounts from one town to another. It was a great success and on 9 May 1887, the Savings Bank opened an agency at the Mount Morgan Post Office.

The township of Mount Morgan grew with the establishment of what was to become the richest gold mine in the world. Although small mining claims occurred before 1882, the three Morgan Brothers pegged claims which encompassed most of the mountain top in that year. In July they formed a partnership with three Rockhampton businessmen before selling out to them 1886 when the Mount Morgan Gold Mining Company Limited was formed. The township quickly developed, establishing an infrastructure for the rapidly increasing population. The Queensland National Bank also opened in Mount Morgan in 1887, although this was a trading, rather than a savings bank, these activities at the time being kept separate.

The Commonwealth Bank of Australia was founded under the Commonwealth Bank Act of 1911. This empowered the Bank to transact both savings and trading business under the security of a guarantee from the Federal government. It opened its first branch for business on 15 July 1912 in Melbourne and soon opened agencies in post offices throughout Victoria. The Queensland branch was opened on 16 September 1912. Post offices were used as agencies throughout the country as they had been transferred to Commonwealth control after Federation. The Commonwealth Bank of Australia merged with the state banks of Tasmania in 1912, Queensland in 1920 and Western Australia and New South Wales in 1931.

In 1913 the Queensland Government Savings Bank opened its own branch on the corner of Morgan and Central Streets on an area that was designated a reserve for the purpose. It was a modest timber building with timber dowel balustrades along both streets. The site was adjacent to the Central State School which had constructed its first building nearby in 1887. Subsequent building at the school eventually wrapped around the corner site on which the bank was built.

The business and assets of the Queensland Government Savings Bank were transferred to the Commonwealth Bank on 8 December 1920 and this bank operated from the premises from 3 January 1921. In the 1920s, there were three banks operating in Mount Morgan; the Queensland National Bank, the Bank of New South Wales and the Commonwealth Bank. Following the closure of the Bank of NSW in 1928 and the QN in 1929, the Commonwealth remained the only bank in Mount Morgan until 1950 when the ANZ bank opened a branch there. During the Second World War the Commonwealth Bank, its branches and agencies, acted as an agent for the government. As part of the growth in Australia following the war, home loans were offered from 1946.

By the late 1970s the original verandahs of the bank were enclosed and the exterior walls on these sides were removed to enlarge the interior space available. A set of concrete steps was added around 1980.

In 1990 the Mount Morgan mine closed, leading to a reduction of population and business in the town. The Commonwealth Bank ceased trading from this site in 1998. The building is currently being used as

QUEENSLAND HERITAGE ACT 1992
Entry in the Heritage Register
State Heritage Place



the offices of Learning Network Queensland.

Description

The former Commonwealth Bank building is situated on the corner of Morgan and Central Streets, Mount Morgan, in the north east corner of the Central State School site. It is a single storey, timber framed structure, clad with horizontal weatherboards and set on low stumps. The building has a rectangular plan, truncated at the corner facing the intersection of the two streets to allow for a principal corner entrance. This is below an entrance gable and is accessed by concrete steps and shaded by a small cantilevered awning. The vented hipped roof is clad with corrugated iron sheeting which extends over the former verandahs. To the south is a skillion roof extension which houses the strong room and offices. There is also a fibrous cement clad extension on the south east corner which accommodates toilets. Banks of glass louvres under the eaves line the north and west sides of the building, which address the streets. The eastern side has a pair of sash windows shaded by a single sunhood.

The interior is now largely open plan, although a change in ceiling height demonstrates the position of former verandahs. The walls and ceiling are lined with tongue and groove boards. To the south are offices and a strong room with a heavy metal door inserted into a brick section between the timber office and toilets extension.

QUEENSLAND HERITAGE ACT 1992
Entry in the Heritage Register
State Heritage Place



Images

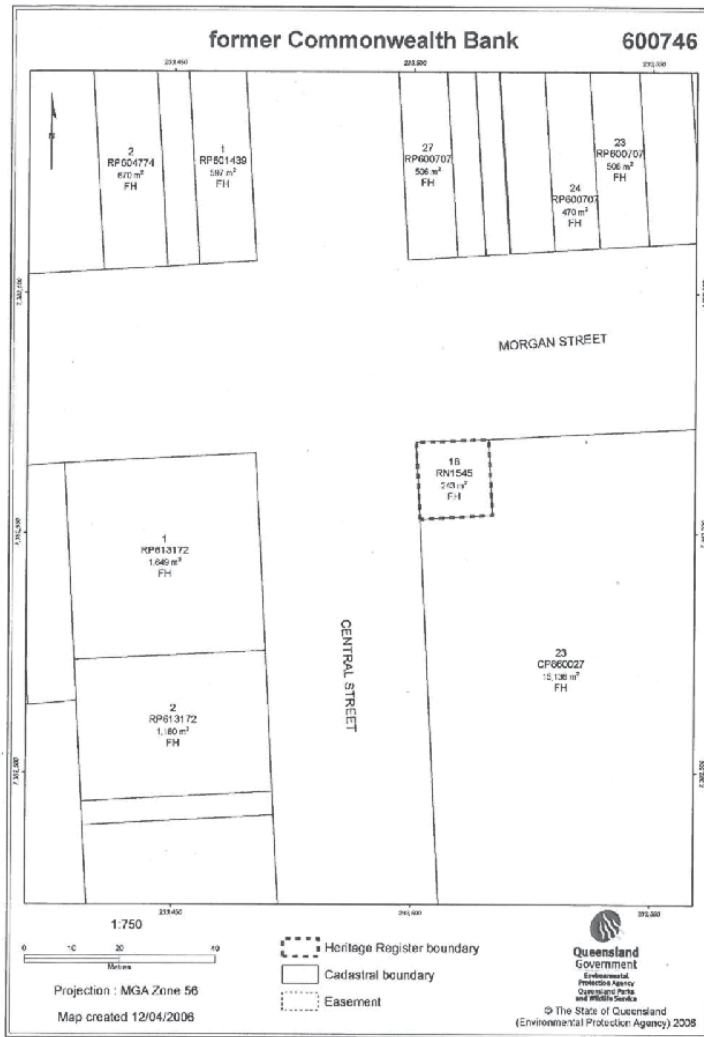


Former Commonwealth Bank (1994)

QUEENSLAND HERITAGE ACT 1992
Entry in the Heritage Register
State Heritage Place



Heritage Register Boundary



QUEENSLAND HERITAGE ACT 1992

Entry in the Heritage Register

State Heritage Place



Process Statement: Pursuant to the transitional provisions of the Queensland Heritage Act 1992, all buildings listed in the Schedule to the Heritage Buildings Protection Act 1990 are to be taken to be places provisionally entered in the Heritage Register. This place has been transferred as a provisional entry to the Heritage Register on the basis that it was listed in the schedule to the Heritage Buildings Protection Act 1990. This decision was effective as from 21 August 1992, the date of proclamation of the Queensland Heritage Act 1992.

Further to the transitional provisions of the Queensland Heritage Act 1992, this place is entered permanently in the Heritage Register as of 21 October 1992.

Note: This document has been prepared on the basis of current information, and assessed under the criteria in the Queensland Heritage Act. This document may be reassessed if further evidence becomes available. The statement of significance specifies the most important heritage values of the place. The purpose of this document is to provide an informed evaluation for heritage registration. This does not negate the need for a thorough conservation study by a qualified practitioner, or Cultural Heritage Branch consultation, before any action is taken which may affect the significance of the place.

Appendix 3 – Asset Services Building Inspection (RRC 2011)





Asset Services
Building Inspection

Ex Commonwealth Bank Building



Address: 38 Morgan Street Mt Morgan.

Asset ID: 564821.
Inspected by: Dave Barnett
Inspection Date: 15 /9/11

Purpose: To provide a general assessment of the buildings current condition and an indicative repair cost.

1 Superstructure

Scrub obstructing footpath. (Photo 1)



Eastern side of the building overgrown. (Photo 2)



Scrubs against western side of the building. (Photo 3)



1.1 Staircases / Ramps

The disabled access ramp on the northern side of the building has two floor boards missing. Refer Photo 4.

Floor boards missing off the access ramp. (Photo 4)



Power supply disconnected to the building. (Photo 5)



Unsecured electrical cable. (Photo 6)



Power board and meters inside the building. (Photo 7)



Fascia board rotten. (Photo 8)



External paintwork flaking off. (Photo 9)



Weather board termite damaged. (Photo 10)



Paint flaking off asbestos wall. (Photo 11)



1.2 Internal Walls

The internal walls on the northern and western side of the building have had termite damage. Refer Photo 12 and 13.

Termite damaged internal walls. (Photo 12)



Termite damaged walls. (Photo 13)



1.3 Ceilings

The pine ceiling in the office is falling down in a couple of places. Refer Photo 14.

Ceiling boards falling down in office. (Photo 14)



Floor coverings are in poor condition. (Photo 15)



Ant cap not fitted properly will allow termites access. (Photo 16)



2 Finishes

2.1 Paint work

The external paintwork is in very poor condition with paint flaking off the weather boards and the asbestos sheeting. Refer Photo 9 and 11.

2.2 Floor Coverings

The floor coverings to the complete building are worn and in poor condition. Refer Photo 15.

3 Services

3.1 External Power

The aerial power service to the building has been disconnected. Refer Photo 5.

4 Site

4.1 Scrubs

There is a scrub growing out from under the access ramp on the northern side of the building blocking some of the foot path and the eastern side of the building is overgrown with vegetation. Refer Photo 1, 2 and 3.

5 Conclusions

The building is very old and has been altered over the years, the roof appears to have been replaced at some stage, except for the roof over the amenities building which is detached from the main building, the roof line appears to be sagged on the northern side this could be due to the excessive span in the main reception area where walls could have been removed at some stage.

There has been termite damage to the internal walls on the northern and western sides of the building, it appears to be only the pine wall sheeting that has been damaged, however it is hard to determine without removing the damaged sections to further investigate. The pine ceiling boards in the office are loose in places; however it does not appear to be from termite damage.

The overhead aerial power services to the building has been disconnected, this will be a major issue to get reconnected, firstly a new point of entry to the building may be required as the old service went over the roof of a bus shelter, and all of the existing electrical installations will have to comply with the current electrical code .

The building allotment is overgrown with scrubs and dead vegetation and the building could not be inspected on the external eastern side due to this, and

on the northern side in front of the access ramp a scrub has grown well out onto the foot path which is a hazard for pedestrians.

The substructure of the building is very low to the ground and has limited access and it appears that there are areas where water could pond under the building and one ant cap is not fitted properly which could allow termites to gain entry into the building.

6 Recommendations

Issues requiring attention

1. Provide termite treatment and inspection of the building.
2. Fire management systems. (extinguishers out of test date)
3. Replace missing floor boards on disabled ramp. (work order issued)
4. Remove scrub obstructing foot path.

An indicative price to repair the building to a reasonable standard is:

1. Rewire and reconnect electricity to current codes.	\$15,000
2. Replace all worn floor coverings (133m ² x \$80 P/M)	\$10,640
3. Repaint exterior and interior.	\$14,000
4. Repair the termite damaged walls and general repairs.	\$ 8,000
Total Price	\$47,640

No allowance has been made for lead paint, asbestos materials or any latent damages.

Further issues that may require attention and are not in the above allowances are.

1. Disabled amenities and access to them if required.
2. Any listings place on the building.
3. The condition of the air condition unit.

Appendix 4 – Asbestos Management Plan (Australian Asbestos Management, 2011)





ASBESTOS MANAGEMENT PLAN

Prepared for Rockhampton Regional Council

COMMONWEALTH BANK SITE- MEDICARE
38 MORGAN STREET, MT MORGAN QLD

AUSTRALIAN ASBESTOS
MANAGEMENT PTY LTD
PO BOX 5156
MAROOCHYDORE QLD 4558

P: 07 5450 1241
F: 07 5476 5604
E: aamoffice@bigpond.com

8 February 2011

AMP 210-22

8 February 2011

ATTN; Sharon McNair
Rockhampton Regional Council
Po Box 1860
Rockhampton QLD 4700

Dear Sharon

We are pleased to **enclose** our Asbestos Management Plan (AMP) in relation to the premises situated at 38 Morgan Street, Mt Morgan QLD.

The AMP contains an Asbestos Materials Register (AMR) for the premises. Your attention is drawn to the recommendations contained in the AMP.

You are required to nominate a person whose responsibility will be:

- Advise any persons prior to carrying out maintenance or work on the premises of the existence of the AMP;
- Provide access to the AMP; and
- Updating the AMR where any asbestos removal or changes in the premises has occurred.

Please do not hesitate to contact us should you require any further information or assistance with the report or the recommendations.

Yours Sincerely

Michael Shaw
Senior Technician
Ph: 0457 057 288
Australian Asbestos
Management Services

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1. Asbestos Materials Register
2. Details of Re-inspection and Removal Status
3. Restricted Work Areas
4. Access Permit
5. Work Procedures for Access to and Working in a Restricted Area
6. Photographs
7. Sample Analysis Reports
8. Acknowledgments & References

Introduction

Workplace Asbestos Laws

The *Workplace Health and Safety Act 1995* prescribes mandatory requirements for managing and removing asbestos containing materials in the workplace by way of:-

- Workplace Health & Safety Regulation 1997
- National Code of Practice for the Management and Control of Asbestos in Workplaces (NOHSC: 2018 (2005))
- National Code of Practice for the Safe Removal of Asbestos 2nd Edition (NOHSC: 2002 (2005))

From 1 July 2006:

- An "A" class licence, also known as an Asbestos Removal Business Certificate, is required to remove 'friable' or loose asbestos in any quantity.
- A "B" class licence will be introduced, meaning only competent, licensed people can remove 'non-friable' asbestos (bonded materials such as cement sheeting) in quantities greater than 10m².

Part 11 of the *Workplace Health & Safety Regulation 1997* requires compliance with the national Asbestos Management and Asbestos Removal Codes of Practice.

Part 11 Division 3 of the *Workplace Health & Safety Regulation 1997* states that all building owners must comply with the National Asbestos Management Code by 1 January 2008.

Building Owners' Obligations

Building owners must engage an appropriately qualified person to find out whether there are any asbestos materials installed in the building.

The person must possess the qualification and experience necessary to find asbestos materials in a building. This person could be a builder, building surveyor, occupational hygienist, architect, or asbestos specialist.

The appropriately qualified person must give the owner an AMP that states:

- Where the asbestos materials were found in the building;
- The type of asbestos materials;
- The form of the asbestos materials;



- Whether the asbestos materials is friable or poorly bonded or in an unstable condition and; and
- Any potential health risks to building occupants because of the presence to the asbestos materials.

If any asbestos material is found, the building owner must also establish and maintain an Asbestos Materials Register (AMR). The register must:

- Contain the information in the Asbestos Management Plan;
- Be made available to each occupant and anyone entering the building to perform work (a copy must be given to any employer, self-employed person or principal contractor who proposes to demolish or dismantle any part of the building); and
- Be given to the new owner when a building is sold.
- The owner must also display a notice in a prominent place in the building, stating:
 - That there is an asbestos materials register in the building; and
 - When and where a person can inspect it.

Controlling Exposure

If a building contains asbestos materials, the building owner must ensure that policies and procedures are in place to prevent people being exposed to asbestos materials. These policies must cover:

- The steps that can be taken to restrict access to prevent disturbance of the asbestos materials;
- Work practices undertaken in the same area as the asbestos materials; and
- Requirements for reassessment of the asbestos materials at regular intervals of at least one year and earlier if the nature or location of work in the same area as the asbestos material changes.

Asbestos materials that are friable, poorly bonded or unstable must be enclosed, sealed or removed. Removal must only be performed by an asbestos removalist who is certified by the Division of Workplace Health and Safety in the Queensland Department of Industrial Relations.

Executive Summary

The existence of asbestos in many buildings has created a need for management procedures to be developed. These procedures are designed to minimise health risks to building users and maintenance personnel, arising from the presence of asbestos.

The Asbestos Management Plan (AMP) outlines various types of identified Asbestos Containing Materials (ACM) and their known locations on site. Management procedures and strategies for the ongoing monitoring of ACM present in the workplace are also contained within this document.

An officer designated as the "Nominated Officer" must be selected immediately to have authority and responsibility to control and ensure that any procedures implemented at the workplace for the management of any identified ACM are completed with by both workers and other persons that may be entering or working in restricted areas.

The Nominated Officer will also be responsible for updating the Register should any changes occur with regard to ACM removal.

The areas in which were examined are as follows:

Location	Type	Condition	Health risks
Core to vault door (Chubb)	Presumed	Good	Low
Sheeting to walls and ceilings of Male & Female toilets (Stamped)	Presumed	Good	Low
Sheeting within heat exchange of air-conditioning unit (No access)	Presumed	Good	Low
Sheeting to walls of toilets (Stamped)	Presumed	Good	Low

In the event of any maintenance work, or other works to be performed, a Nominated Officer and the Asbestos Register must be consulted by maintenance personnel/contractors prior to proceeding with the work.

All work involving ACM must comply with relevant State and Federal Legislation.

Warning labels (**available on request**) are required to be placed in the areas where asbestos is present.

Note: Friable ACM was not identified or detected during this survey inspection. The identification, collection of samples and asbestos analysis procedures were conducted in accordance with Legislative requirements including the relevant National Occupational Health and Safety Commission (NOHSC) Codes of Practice.

Purpose of the Asbestos Management Plan (AMP)

The purpose of the plan is to minimise the potential hazard associated with asbestos to all building users. This includes occupants, visitors, operators, maintenance personnel and construction workers.

The National Code of Practice for the Management and Control of Asbestos in Workplaces (NOHSC: 2018(2005)) stipulates "an asbestos management program, which identifies, evaluates and controls asbestos hazards, in conformity with this Guide, should be part of an organisation's overall approach to the identification, evaluation and control of all workplace hazards".

It also states that although the ultimate goal is for all Australian workplaces to be free of asbestos, the immediate removal of all asbestos is unnecessary if a suitable management plan is adopted.

Health Risks and Types of Asbestos

Asbestosis, mesothelioma and lung cancer, are the most prominent disease associated with asbestos are the result of excessive inhalation and exposure to respirable airborne asbestos fibres.

Airborne asbestos fibres must be respirable and generated either through severe deterioration or interference and disturbance (damage or work practices) for ACM to pose a potential health risk.

The degree of asbestos fibre release and inhalation exposure is in part dependent upon the matrix material binding the asbestos and its general condition.

The highest health risk is associated with exposure to amphibole asbestos (amosite, crocidolite) with crocidolite being cited as the material of greatest concern. Chrysotile is considered to be of lesser but still poses significant health risks.

The types of Asbestos are:

Chrysotile:	commonly known as white asbestos
Amosite:	commonly known as grey or brown asbestos
Crocidolite:	commonly known as blue asbestos

Principles of the Asbestos Management Plan (AMP)

General Principles

The principles of asbestos management have been adapted from general principles published by the National Occupational Health and Safety Commission. These principles are summarised below:

- The ultimate goal is for all workplaces to be free of asbestos.
- Asbestos removal may not be immediately necessary, but must be completed before a structure, or part of a structure, is demolished.
- Removal of asbestos should be subject to priority setting, determined by the condition, location of the asbestos as well as scheduled refurbishment works.
- Asbestos presents a risk only when it is airborne. The risk to health increases as the number of fibres inhaled increases.
- Wherever practicable, substitutes shall be found for asbestos products. Such substitutes shall be thoroughly evaluated before use, to ensure that they do not constitute a health hazard. Ultimately, all asbestos products should be eliminated.
- Asbestos which has been incorporated into a stable matrix can be found in many working environments. Provided the matrix remains stable and no airborne dust is produced, it presents a negligible health risk.
- The presence of asbestos should be identified.
- No person shall be exposed to the risk of inhalation of asbestos in the course of employment without being provided with full information of the occupational health and safety consequences of exposure and appropriate control strategies.
- At present it is not possible to assess whether there is a level of exposure to asbestos in humans below which an increased risk of cancer would not occur. Accordingly, exposure to asbestos should always be kept to a minimum.
- Asbestos removalists and maintenance workers in an asbestos environment must be suitably protected.
- The recognised occupational exposure standard for asbestos is that adopted by the National Occupational Health and Safety Commission. The method used to measure exposure to asbestos is the Membrane Filter Method as endorsed by the National Commission.

- Where appropriate, products containing asbestos shall be labelled accordingly.
- The spraying of asbestos shall be prohibited. All future use of asbestos for insulation purposes shall be prohibited.
- Construction jobs including refurbishments impacting asbestos are to have the asbestos removed as part of the job.

The general principles of asbestos management are broadly covered by four separate phases and follow the risk assessment process. These are:

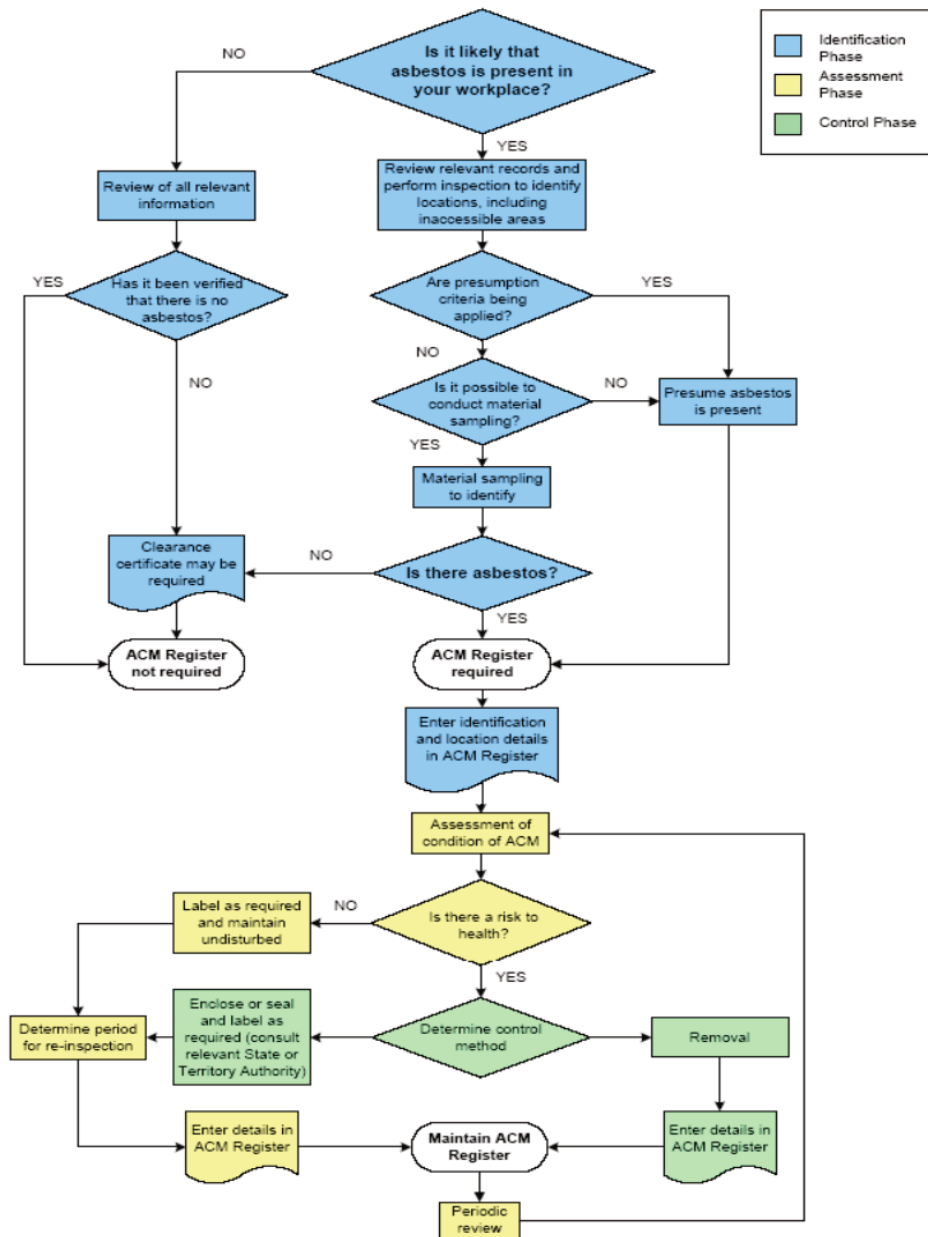
- Identification phase;
- Evaluation phase;
- Control phase; and
- On-going monitoring/re-assessment

These phases are best illustrated by the flow chart in Figure 1.

Procedures need to be designed and implemented to appropriately control any asbestos hazard, to ensure that personnel are not exposed to asbestos to an extent likely to cause danger to health. The procedures required may include:

- removal;
- substitution;
- engineering controls;
- safe working procedures;
- personal protective equipment;
- cleaning, decontamination and waste disposal;
- education;
- environmental monitoring; and
- medical surveillance.

Figure 1. General principles of an asbestos management plan



Risk Assessment

The asbestos risk assessment process entails identifying, analysing, evaluating, controlling and monitoring sources of asbestos within buildings or other structures.

Asbestos within a building represents a health risk to people only when the asbestos fibres have become airborne, and are subsequently inhaled. The risk to health increases as the number of fibres inhaled increases, that is, the health risk is related to the dose, or level of exposure. Dose is a function of the amount, or concentration, of airborne asbestos fibres, and the duration of exposure. Asbestos that is in a stable matrix, or effectively encapsulated or sealed, and remains in a sound condition while left undisturbed, represents a negligible asbestos-related health risk.

It is necessary to differentiate between 'asbestos hazard' and 'asbestos risk'. 'Hazard' indicates a potential harm, while 'risk' refers to the probability of that harm becoming actual. For example, the presence of asbestos in a building is a hazard, but while that asbestos remains in sound condition and does not release fibres into the air, the risk is negligible.

A qualitative asbestos risk assessment is undertaken each time an asbestos survey is conducted. Each asbestos situation is allocated either a 'High', 'Medium' or 'Low' risk rating. These ratings are defined as follows:

High Risk:	Friable (un-bonded) asbestos material that has deteriorated significantly. The material is readily accessible and prone to further disturbance, or Unsealed friable asbestos material located in air conditioning systems.
Medium Risk:	Minor deterioration of the asbestos material is evident and/or the asbestos material is prone to mechanical disturbance due to routine building activity and/or maintenance.
Low Risk:	Asbestos material shows no or very minor signs of damage/deterioration. Regular access to the asbestos material is unlikely to cause significant deterioration, or the material is adequately sealed.



Should materials of unknown composition, or materials suspected of containing asbestos, be encountered on site, and are not documented in the existing asbestos survey report, such materials should be sampled and treated as if they were asbestos until sample analysis confirms otherwise. In the event that additional asbestos is identified, a risk assessment shall then be conducted by an appropriately qualified and competent person. For example, in the event that demolition or refurbishment works are to be carried out in areas previously not inspected for the presence of asbestos, such as inaccessible wall cavities or beneath floors, an inspection and risk assessment should be performed by an appropriately qualified person prior to the commencement of the planned demolition/refurbishment works.

Report of Asbestos Testing

Introduction

The Asbestos Management Plan is developed as a result of a comprehensive inspection of the premises to identify the existence (if any) of Asbestos Containing Materials (ACM).

The Plan outlines the areas inspected and where sample materials suspected to contain asbestos were collected for analysis. The inspection was undertaken in such a manner that access was sought to all areas within the confines of the premises that were relevant to this inspection.

Analysis was undertaken in accordance with the methodology outlined in the Australian Standards (AS 4964-2004) Method for Qualitative Identification of Asbestos in Bulk Samples.

Recommended management strategies for identified ACMs are included in this plan (Section 6.1).

The AMP is site specific and to be utilised by the Nominated Officer (and other authorised personnel) for use on these premises only. It is a requirement of law that the AMP is continually updated and reviewed at a minimum interval of twelve (12) months unless any work is carried out which may disturb the ACM.

Survey Inspection Limitations

The inspection was undertaken in a non-destructive manner and as such there may be areas where unidentified ACM may still exist. Examples of such areas are wall cavities, beneath floors/slabs/floor coverings, hidden pipe work, inside of plant etc.

Areas that were not accessed during the inspection must be considered in the event of future refurbishment or demolition. It should be noted that a non-destructive inspection cannot be regarded as absolute, and all due care and caution must be included in the planning stages of any future building or demolition work.

Other areas that were not accessed during the course of this inspection are listed in Section 5.5 of the report.

Glossary of Terminology

Asbestos	Defined as the fibrous form of mineral silicates belonging to the serpentine and amphibole groups of rock-forming minerals, including actinolite, amosite (brown or grey asbestos), crocidolite (blue asbestos), chrysotile (white asbestos), tremolite, or any mixture containing one or more of these.
Risk	The probability that a potential harm may become actual.
Friable	Non-bonded asbestos fabric or material that is easily crumbled, pulverized or reduced to powder by hand pressure.
Non-Friable	Material, not in its natural state, that is bonded by a cement matrix, vinyl, resin, or other binding material.
Condition	The physical state of the material in question.
Authorised personnel	Persons who have been given clearance by the Nominated Officer.

Friable ACM

Good	The material is in a stable condition and is unlikely to present a significant risk if left in situ.
Poor	The material has deteriorated or been damaged or disturbed and should be considered for removal.

Asbestos-cement products

Good	The material is in stable condition with little or no deterioration evident and is unlikely to present any risk if left in situ.
Poor	The material has deteriorated to such an extent that peeling, cracking and structural instability has resulted and should be considered for removal.

Abbreviations

NAD	No asbestos detected
CH	The material has deteriorated to such an extent that peeling, cracking and structural instability has resulted and should be considered for removal.
C	Chrysotile
A	Amosite
CF	Compressed fibre
CA	Castable asbestos material
AC	Asbestos cement sheeting

Pb	Polymer bound i.e. vinyl tiles, electrical switchboards
MB	Compressed millboard sheeting
TX	Textile woven sheet & rope
GB	Galbestos galvanized sheet/asbestos compound fixed to one side
MA	Machinery

Results of the Inspection

Locations and samples taken from identified materials within the premises that had the potential for containing asbestos fibres are as follows:

Asbestos was confirmed or presumed in products at the following locations.

Sample	Location
Presumed	Core to vault door (Chubb)
Presumed	Sheeting to walls and ceilings of Male & Female toilets (Stamped)
Presumed	Sheeting within heat exchange of air-conditioning unit (No access)
Presumed	Sheeting to walls of toilets (Stamped)

Areas not accessed

The inspection was undertaken in a non-destructive manner and as such there may be areas where unidentified ACM may still exist. Examples of such areas are wall cavities, beneath floors/slabs/floor coverings, hidden pipe work, inside of plant etc.

Areas that were not accessed during the inspection must be considered in the event of future refurbishment or demolition. It should be noted that a non-destructive inspection cannot be regarded as absolute, and all due care and caution must be included in the planning stages of any future building or demolition work.

Control of Asbestos Hazards

The control of asbestos hazards should utilise the most appropriate method applicable to the particular circumstances. Based upon the assessment of the condition of the asbestos, its potential to suffer damage or mechanically degrade, and the likelihood of exposing people to airborne asbestos, the following control strategies are relevant:

- Leave in situ (defer action);
- Encapsulation;
- Enclosure; and
- Removal.

These control strategies are discussed below:

Leave in Situ (defer action)

The identification of asbestos in a building does not automatically necessitate its immediate removal. Asbestos in a stable condition and not prone to mechanical damage can generally remain in situ. The asbestos will need to be inspected on a regular basis (every year, depending on risk) to ensure its integrity is maintained, should be labelled with an appropriate warning, and must be removed under controlled conditions prior to demolition or refurbishment works that may disturb the asbestos.

Encapsulation or Sealing

Encapsulation refers to the coating of the outer surface of the asbestos material by the application of some form of sealant compound that usually penetrates to the substrate and hardens the material. Sealing is the process of covering the surface of the material with a protective coating impermeable to asbestos. Encapsulation or sealing helps protect the asbestos from mechanical damage, and is designed to reduce the risk of exposure by inhibiting the release of asbestos fibres into the airborne environment, and increase the length of serviceability of the product.

The use of encapsulation or sealing may be of limited application. It is not considered to be an acceptable alternative to repairing or removing severely damaged asbestos materials.

Enclosure

Enclosure involves installing a barrier between the asbestos material and adjacent areas. This is effective in inhibiting further mechanical damage to the asbestos, and friable products such as calcium silicate pipe lagging or sprayed limpet asbestos may be targeted for enclosure where removal is not an option. The type of barrier installed may include plywood or sheet metal products, constructed as a boxing around the asbestos.

Removal

Removal of asbestos must be performed under certain controlled conditions, depending on the type of asbestos product to be removed. Removal is considered preferable to the other abatement options such as enclosure or encapsulation, as it eliminates the hazard from the work place. The removal process, however, does pose an increased risk to personnel engaged in the removal, and may result in increased airborne fibre levels in adjacent occupied areas if the removal program is not strictly controlled. Asbestos removal is generally an expensive exercise, and can cause major disruptions to building occupants.

The removal of asbestos is considered appropriate when the asbestos product is deteriorated, has reached an unserviceable condition, or is at risk of being disturbed, and the other control options are not feasible. Where demolition or refurbishment works are to occur, and this work is likely to impact on asbestos must be removed under controlled conditions prior to the commencement of any site works.

Table 1 provides a summary of the relative advantages and disadvantages of each control method, as well as situations in which each may be considered appropriate.

TABLE 1

Appropriate When	Not Appropriate When	Advantages	Disadvantages
<p>DEFER</p> <ul style="list-style-type: none"> ▪ Negligible risk of exposure; and ▪ Asbestos inaccessible and fully contained; or ▪ Asbestos stable and not liable to damage 	<ul style="list-style-type: none"> ▪ Possibility of deterioration or damage ▪ Airborne asbestos dust exceeds recommended exposure standard 	<ul style="list-style-type: none"> ▪ No initial cost ▪ Cost of removal deferred 	<ul style="list-style-type: none"> ▪ Hazard remains ▪ Need for continuing assessment ▪ Asbestos management program required
<p>ENCAPSULATE OR SEAL</p> <ul style="list-style-type: none"> ▪ Removal difficult or not feasible ▪ Firm bond to substrate ▪ Damage unlikely ▪ Short life of structure ▪ Readily visible for regular assessment 	<ul style="list-style-type: none"> ▪ Asbestos deteriorating ▪ Application of sealant may cause damage to material ▪ Water damage likely ▪ Large areas of damaged asbestos 	<ul style="list-style-type: none"> ▪ Quick and economical for repairs to damaged areas ▪ May be an adequate technique to control release of asbestos dust 	<ul style="list-style-type: none"> ▪ Hazard remains ▪ Cost for large areas may be near removal cost ▪ Asbestos management system required ▪ Eventual removal may be more difficult and costly
<p>ENCLOSURE</p> <ul style="list-style-type: none"> ▪ Removal extremely difficult ▪ Fibres can be completely contained within enclosure ▪ Most of surface already inaccessible ▪ Disturbance to, or entry into, enclosure area not likely 	<ul style="list-style-type: none"> ▪ Enclosure itself liable to damage ▪ Water damage likely ▪ Asbestos material cannot be fully enclosed 	<ul style="list-style-type: none"> ▪ May minimise disturbance to occupants ▪ Provides an adequate method of control for some situations 	<ul style="list-style-type: none"> ▪ Hazard remains ▪ Continuing maintenance of enclosure ▪ Asbestos management program required ▪ Need to remove enclosure before eventual removal of asbestos ▪ Precautions necessary for entry into enclosure
<p>REMOVAL</p> <ul style="list-style-type: none"> ▪ Surface friable or asbestos poorly bonded to substrate ▪ Asbestos is severely water damaged or liable to further damage or deterioration ▪ Located in A/C duct ▪ Airborne asbestos exceeds recommended exposure standard ▪ Other control techniques inappropriate 	<ul style="list-style-type: none"> ▪ Located on complex and inaccessible surfaces ▪ Removal extremely difficult and other techniques offer satisfactory alternative 	<ul style="list-style-type: none"> ▪ Hazard removed ▪ No further action required 	<ul style="list-style-type: none"> ▪ Increases immediate risk of exposure especially to removal workers ▪ Creates major disturbance in building ▪ Often highest cost, most complex and time consuming method ▪ Removal may increase fire risk within building; substitute required ▪ Possible contamination of whole building if removal done poorly



Name of Building

All asbestos containing materials identified in this report were in a good and stable condition at the time of the inspection. Left undisturbed these areas pose very little health risks to personnel on the site.

In all locations where asbestos fibres were located:

- Avoid damage and abrasion of product;
- All areas should be kept well painted;
- Monitor condition of product and should significant damage or deterioration occur, then the product is to be removed in accordance with the relevant codes of practice and guidelines. A non-asbestos product is to be used as replacement material;
- Cutting, drilling and any other dust generating work should be avoided.
- Where it is necessary, dust suppression devices, measures to isolate the product and working area and personal protective equipment must be used.
- You must comply with all relevant State and Federal Legislation when working with asbestos.
- Asbestos Cement products that require extensive maintenance work should be removed and replaced with a non-asbestos product.
- A warning sign or label (**enclosed** for your convenience) should be displayed

Note: All respirable dust, of any type can be harmful to health. All precautions should be taken to minimise dust generation and appropriate respiratory protection should be worn at all times.



Name of Building

Re-Inspections

Re-Inspections of asbestos materials remaining on site are to be conducted by an appropriately qualified person. Such re-inspections will comprise a visual assessment of the condition of the materials to determine whether the material remains in a satisfactory condition, or if deterioration has occurred since the previous inspection. Such re-inspections will determine if any remedial action, such as encapsulation, isolation or removal of the asbestos materials, is required. Re-inspections will be performed on a regular basis every year.

Normally, re-sampling of materials would not be required during re-inspections. If, however, previously unidentified or undocumented asbestos, or materials suspected of containing asbestos, are encountered during the re-inspection process, sampling and analysis will need to be performed. The asbestos register, where necessary, will be updated and re-issued at the completion of the re-inspection work.



17

Name of Building

Co-ordination, Responsibilities and Restricted Work Areas

Coordination

The planning, control and monitoring measures outlined below are to be managed by the Nominated Officer who will be responsible for regularly reviewing these management strategies to ensure that they comply with current State and Federal legislation. The Register will continue to be maintained by the Nominated Officer and is to be amended following any building work or interference with the ACM, or in conjunction with any scheduled follow-up inspections.

Australian Asbestos Management will have the AMP on file and the Nominated Officer should contact us to make any amendments or discuss any issues relation to the AMP.

The Nominated Officer is responsible to all building occupants to ensure they are fully aware of the AMP.

Australian Asbestos Management will hold a copy of the AMP.

Responsibilities

Personnel carrying out work in the premises should be responsible for complying with the procedures stated in his document and any other procedures stipulated or specified in contract documents.

For maintenance and/or construction activities that may affect the current condition of identified ACM, the Nominated Officer should advise workers of their responsibility. For refurbishment work, contract documents should specify that the contractor is to advise his employees of their responsibility and obligations.

The transfer of responsibility to maintenance/construction workers could be formalised by the issue of an access permit. (see Annexure 4)

The Nominated Officer may make this document available, for perusal, to any interested persons upon request.

All work must be carried out to comply with the Workplace Health and Safety Act (1995), the Workplace Health and Safety Regulation (1997), and the National Code of Practices for the Management (NOHSC: 2018 (2005)) and Removal of Asbestos (NOHSC: 2002 (2005)).



Name of Building

Restricted Work Areas

Restricted work areas for maintenance and construction activities are listed in Annexure 3.

Access

All maintenance and construction activities in the restricted work area(s) should be carried out in accordance with Annexures 4 and 5.

Access to any restricted work area for maintenance and construction activities should be prohibited unless an Access Permit has been issued. The Nominated Officer will be responsible for issuing permits to personnel who are required to carry out work within restricted work areas.

The permit will authorise only the signatories listed to access the restricted work areas. It will detail the task to be performed and the condition to be complied with during the access period.

On completion of work, the authorised personnel will relinquish the permit (by signature) and return it to the Nominated Officer who will cancel it. It is recommended that used permits be returned and stored in Annexure 3.

The Nominated Officer will be responsible for supervision, enforcement and records of the permit system.



Name of Building

Annexure 1
Asbestos Material Register

ASBESTOS MATERIALS REGISTER

Premises: Medicare

38 Morgan Street, Mt Morgan QLD

Date of Inspection: 31 January 2011

Technician: Michael Shaw

Number of Samples: Nil

Samples Analysed by: Noel Arnold and Associates

Methodology: Samples are examined in accordance with the methodology outlined in Australian Standards (AS4964/2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.

Location	Sample Number	Type	Friable Bonded	Condition	Priority
Core to vault door (Chubb)	-	Presumed	Bonded	Good	Low
Sheeting to walls and ceilings of Male & Female toilets (Stamped)	-	Presumed	Bonded	Good	Low
Sheeting within heat exchange of air-conditioning unit (No access)	-	Presumed	Bonded	Good	Low
Sheeting to walls of toilets (Stamped)	-	Presumed	Bonded	Good	Low

The inspection was undertaken in a non-destructive manner and as such there may be areas where unidentified ACM may still exist. Examples of such areas are wall cavities, beneath floors/slabs/floor coverings, hidden pipe work, inside of plant etc.

Areas that were not accessed during the inspection must be considered in the event of future refurbishment or demolition. It should be noted that a non-destructive inspection cannot be regarded as absolute, and all due care and caution must be included in the planning stages of any future building or demolition work.

Annexure 2

Details of Re-Inspection and Removal Status

Details of Re-inspection and Removal Status

AREA	LOCATION	DATE OF RE-INSPECTION	NAME OF INSPECTOR	CONDITION	PRIORITY	REMOVED BY	DATE
1	Core to vault door (Chubb)	31/01/2011					
		31/01/2012					
		31/01/2013					
		31/01/2014					
2	Sheeting to walls and ceilings of Male & Female toilets (Stamped)	31/01/2011					
		31/01/2012					
		31/01/2013					
		31/01/2014					
3	Sheeting within heat exchange of air-conditioning unit (No access)	31/01/2011					
		31/01/2012					
		31/01/2013					
		31/01/2014					
4	Sheeting to walls of toilets (Stamped)	31/01/2011					
		31/01/2012					
		31/01/2013					
		31/01/2014					

Annexure 3
Restricted Work Areas



Restricted Work Areas

The Asbestos Management Plan defines the situations on the premises where ACM has been identified.

The Restricted work areas comprise the following:-

Location
Core to vault door (Chubb)
Sheeting to walls and ceilings of Male & Female toilets (Stamped)
Sheeting within heat exchange of air-conditioning unit (No access)
Sheeting to walls of toilets (Stamped)

Any maintenance and construction activities that may affect the current condition of the identified ACM must comply with State and Federal legislation.

Access to carry out works that may in anyway disturb, damage or interfere with any ACM in any restricted work area, should be not allowed unless authorised by the Nominated Officer (or their authorised representatives) and an Access Permit has been issued.

All work in restricted work areas should be carried out in compliance with the conditions laid down within the Access Permit system.



Annexure 4
Access Permit



Access Permit

Access for maintenance and construction activities that may damage or interfere with the condition of the ACM in any area designated by the Nominated Officer should be prohibited unless an Access Permit has been issued to the personnel involved.

This Access Permit is issued to a nominated party for the specific instance indicated on the permit. The permit must be produced on request or prominently displayed at the premises.

The nominated party must ensure that all workers involved sign both parts of the form at Section 1 and return the access permit to the Nominated Officer at the completion of the work.



Access Permit

LOCATION OF PREMISES: Medicare

38 Morgan Street, Mount Morgan QLD

RESTRICTED WORK AREAS

VALID FROM TO DATE

REASON FOR ACCESS

ASBESTOS CONTAINING MATERIAL (TYPE)

WARNING SIGNS/BARRIERS REQUIRED YES/NO

Special Conditions

Health and Safety Officer advised

Name: Date: / /

Work Place Representative advised

Name: Date / /

ACKNOWLEDGEMENT

I understand the above instructions and undertake to carry out all work in accordance with the requirements of the Workplace Health and Safety Act 1995 and Workplace Health and Safety Regulations 1997 and the relevant Codes of Practice. I have received instruction on Fire evacuation and Safety procedures.

Contractor/Supervisor Name: Signature:
Time: Date: / /

AUTHORISATION

Access to the Restricted Work Area is authorised according to the conditions of this permit. Nominated Officer

Time: Date: / /

CANCELLATION

Satisfactory Completion of work is acknowledged. The Workplace has been left in a clean and tidy condition. Nominated Officer

Time: Date: / /

Asbestos Management Report upgraded YES/NO Signature:

Time: Date: / /



Annexure 5
**Working in a
Restricted Area**



Procedures for Working in a Restricted Area

The Workplace Health and Safety Act (1995), the Workplace Health and Safety Regulation (1997), and the National Code of Practices for the Management (NOHSC: 2018 (2005)) and Removal of Asbestos (NOHSC: 2002 (2005)) must be complied with.

If maintenance is required, you must contact the nominated officer who will ascertain from the AMP the relevant matters that need to be addressed.

Should the maintenance and construction activities damage or interfere with any ACM the nominated officer must issue an Access Permit to authorise the work.

The person in charge of the workplace must submit a plan to the nominated officer outlining the work to be carried out, the timing and acknowledge any procedures or requirements which are to be followed.

Those procedures should include:

1. Preparation of site including the erection of barriers and posting of signage to restrict access to the work area.
2. Selections of appropriate Personal Protective Equipment (PPE).
3. The use of plastic drop sheets.
4. The control of dust and residues resulting from the work. **NB** Under no circumstances is a standard vacuum cleaner to be used! The **MINIMUM** requirement necessitates use of a spray bottle and/or HEPA Filter Equipped Vacuum.
5. Decontamination of personnel, tools and equipment.
6. The preparation and disposal of waste.



Annexure 6
Photographs



Identified as containing asbestos fibres.
Consider ongoing monitoring of condition.

Location 1: Core to vault door (Chubb)

Photograph 1



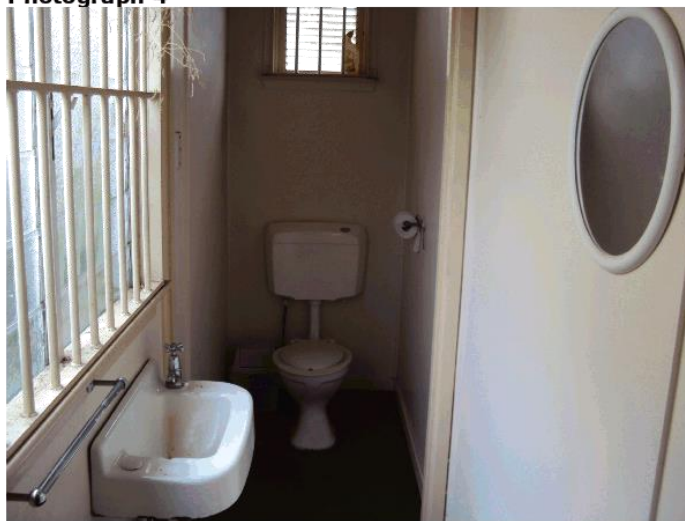
Photograph 2



Location 2: Sheeting to walls and ceilings of Male & Female toilets (Stamped)
Photograph 3



Photograph 4



Photograph 5





Location 3: Sheeting within heat exchange of air-conditioning unit (No access)
Photograph 5



Location 4: Sheeting to walls of toilets (Stamped)



Photograph 7



Annexure 7

Sample Analysis Reports

**ASBESTOS WAS PRESUMED IN THE
BUILDING**



Annexure 8
Acknowledgements and
References



Acknowledgment and References

1.	National Occupational Health and Safety Commission, Code of Practice for the Management and Control of Asbestos in Workplaces (NOHSC: 2018 (2005))
2.	Queensland Government, Workplace Health and Safety Act 1995 (amended) Government Printer.
3.	Queensland Government, Workplace Health and Safety Regulation 1997, Government Printer.



CMP UPDATES - HERITAGE MANAGEMENT STRATEGY

AHS Capability Statement

Meeting Date: 21 June 2022

Attachment No: 2



AUSTRALIAN HERITAGE SPECIALISTS

CAPABILITY STATEMENT

2022



Local Buy
Register of Pre-Qualified
Suppliers (RPQS)
Planning, Design and
Architecture
Contact: 015 245-0914

**AUSTRALIAN
HERITAGE
SPECIALISTS**

A leading provider in heritage solutions. Providing effective and successful outcomes for a wide range of projects...



Your heritage partners

Australian Heritage Specialists Pty Ltd is a privately-owned business with its headquarters in Brisbane and regional offices in Cairns and Mackay. Our directors and senior management team are highly qualified heritage consultants comprising historians, archaeologists, landscape architects, and project managers - with offices in Brisbane, Mackay and Cairns.

As a leading provider of heritage solutions in the disciplines of planning, infrastructure, design, engineering, particularly in government sectors, AHS staff have played a key role in some of Australia's most significant projects for more than 20 years.

Our business also enjoys strong commercial links with a range of other skilled professionals, including heritage engineers, architects, and environmental scientists, who enable AHS to provide clients with a well-rounded pool of specialist expert advisers.

Our core team provides effective solutions for a wide range of heritage projects and issues, including Aboriginal heritage, and European built heritage and heritage landscapes and open space design. Our services include assessment, reporting, advice, design and management services, community consultation and facilitation and managing heritage compliance.

The AHS team of experienced consultants has worked on local, State, National and World heritage status sites. Our experts include:

- Heritage planners.
- Built heritage specialists.
- Historians.
- Interpretation – heritage sites and places.
- Conservation design advice.
- Adaptive reuse of heritage buildings.
- Master-planning & strategic heritage advice.
- Archaeologists.
- Anthropologists.
- Community consultation experts.
- Technical advisers.
- Human resource managers.
- Expert legal witnesses.
- Project Managers.
- Aboriginal cultural heritage.

AHS staff has been previously recognised by clients, industry, government and peers for the provision of best practice cultural heritage management and outcomes throughout Australasia.

The AHS group also work with Aboriginal Native Title Claimant and Traditional Owner groups to assist the groups with their management of Country.

We would be pleased to talk with you further regarding opportunities to assist your organisation's capability at any time on 07-3221 0000 or admin@ahspecialists.com.au.

Brisbane: Level 8, 231 North Quay, BRISBANE QLD 4000
Cairns: M4, 'The Pier', 1 Pierpoint Road, CAIRNS QLD 4870
Mackay: 11/16 Transport Avenue, PAGET QLD 4740

Capabilities

AHS staff have a strong record providing local, state and federal government agencies and departments with cultural heritage services.

Strategic / Expert Advice

We provide strategic expert advice on cultural heritage to a diverse range of organizations in both public and private enterprise.

- Concept and strategy advice for the development and delivery of heritage projects.
- Expert advice at Planning and Environment Court and tribunal hearings in Australia & New Zealand.
- Supervision and approvals of works in heritage listed areas and precincts.
- Independent assessments and peer reviews.

Government Services

AHS has a strong record providing local, State, and Federal government agencies and departments with cultural heritage services.

- Cultural heritage projects for Federal, State, and local government.
- Historical research, heritage studies.
- EIS, EIA, EPBC referrals and associated heritage impact assessments.
- Character and heritage overlays for planning schemes.
- Deference Estate initiatives, including HMPs and development control planning.
- Development Control, Precinct, and Archaeological Zoning Plans.
- Historical archaeology, including large-scale urban excavation.
- Site analysis and recording of natural and built environments.
- Archival and photographic recording.
- Assessment of sites for nomination onto local, State and National heritage registers.
- Preparation and review of Conservation Management Plans for sites and complexes.
- Preparation and review of Heritage Management Plans for Commonwealth Heritage places and National Heritage Places.
- Undertaking Moveable Heritage assessments and preparing Moveable Heritage policies and procedures.
- Museum planning and services.
- Sophisticated interpretive signage.
- Development of heritage in partnership with tourism.
- Preparing Heritage Awareness Training packages.
- Development and facilitation of Local Government Indigenous Land Use Agreements.



Infrastructure Services

AHS has experience working with a diverse range of clients in the infrastructure industry, including mining, transport, pipelines, gas, electricity, and water.

- Field surveys, heritage assessment, impact advice, and mitigation strategies for Technical Reports and Environmental Impact Statements.
- Indigenous cultural heritage assessment and survey in consultation with Traditional Owners.
- Due Diligence reports.
- Preparing Heritage Awareness Training packages.
- Site analysis and recording of natural and built environments.
- Preparing and renewing Conservation Management Plans for sites and complexes.
- Archival and photographic recording.
- Works supervision for heritage sites.

Indigenous Consultation and Native Title

AHS works extensively on issues relating to Indigenous cultural heritage and Native Title

- Indigenous cultural heritage management projects for local, State and National governments, major companies, and private business.
- Development and implementation of cultural heritage compliance procedures, strategic advice, and assessment obligations.
- Consultation and facilitation with Aboriginal parties, including development and facilitation of Indigenous Land Use Agreements (ILUAs).
- Preparation and presentation of specific cultural heritage inductions and awareness training packages.
- Environmental review and EIS assessment and reporting for Indigenous heritage.

Conservation Management

Our conservation management capabilities encompass all aspects of planning, assessment, interpretation, and adaptive re-use of historic buildings.

- Physical site assessments of historic and cultural places (including natural, historic and Indigenous heritage) – for local, State, National and World Heritage sites and places.
- Conservation Management Plans (CMPs) for heritage and historic places consistent with the policies and guidelines in the Burra Charter 1999 (Aust ICOMOS).
- Heritage Management Plans (HMPs) for holistic heritage management.
- Conservation and adaptive re-use of historic buildings and site interpretation.
- Specification, supervision and project management of detailed conservation works (local, State, National, and World Heritage).
- Artefact analysis and conservation, including museum collection and exhibition programs.



Compliance / Approvals

We have a broad ranging experience in all Compliance and Approvals relating to cultural and Indigenous heritage.

- Indigenous and non-Indigenous (historic) Cultural Heritage Compliance Manuals (for government and corporate sectors).
- Cultural Awareness Training and Inductions.
- Archaeological field surveys and zone plans to identify levels of significance and sensitivity for infrastructure and mining projects.
- Initial Advice and Due Diligence Assessments for infrastructure and development projects.
- Heritage Impact Statement reports and other heritage development approvals.
- Consultation programs with Indigenous groups for compliance with Cultural Heritage legislation.
- Indigenous Land Use Agreement (ILUA) developed under Native Title Act 1993.
- Cultural Heritage Management Plans (CHMP) & Cultural Heritage Agreements (CHA) include 'Whole of Country' Agreements.
- Environmental Impact Statements (EIS) and other broad scale projects.

Heritage Planning and Design

AHS provides a wide range of heritage planning and design consulting services.

- Heritage master planning, revitalisation, and adaptive re-use initiatives.
- Built heritage, landscape heritage and gardens.
- Local and Regional Heritage Studies.
- Development of Local Planning Schemes and Conservation Areas.
- Strategic frameworks, codes, and policies for heritage and character.
- Design archaeological zone planning and management for proposed developments.
- Museum and gallery planning services.

Community Consultation and Facilitation

AHS understands that heritage is about community. We have the skills and experience work with communities at all levels to achieve positive cultural heritage outcomes.

- Community consultation and facilitation for major projects.
- Development of heritage in partnership with tourism and urban development.
- Facilitation with Traditional Owner groups.
- Cultural heritage management plans and agreement making under relevant provisions and Aboriginal cultural heritage legislation.
- Indigenous cultural mapping.



Archaeology and Anthropology

AHS is one of Australia's most experienced providers of Indigenous and historical archaeology services.

- Field and site surveys for broad scale developments and infrastructure programs.
- Archaeological Management Plans (AMPs).
- Artefact analysis.
- Due Diligence and planning assessments.
- Mapp of Indigenous cultural heritage sites and landscapes.
- Consultation with Indigenous groups.
- Urban archaeological excavation.
- Connection Reports to assist with Native Title Claims.

Heritage Assessment

Heritage assessment and interpretation skills are fundamental to AHS's core services and capabilities.

- Historical and archival research.
- Physical site assessments of historic and cultural places (including natural, historic and Indigenous heritage) – for local, State, National and World Heritage sites and places.
- Heritage Interpretation Strategies and Interpretative Centres.
- Local and Regional Heritage Studies, including assessment of sites for nomination onto local, state, and national heritage registers.
- Character and Heritage assessments and review.
- Heritage Impact Statement reports and other heritage development approvals.
- EPBC Referrals.
- Photographic and archival recording.
- Moveable Heritage Assessments including preparation of Moveable Heritage Policies and Procedures.



Previous Performance

The following are some of the many case studies exemplifying the variety of heritage services AHS have provided to various councils across Queensland in the last three years.



Rockhampton Regional Council (2017-Present)

AHS have been a pre-qualified supplier for RRC for the last three years (2017-2020) and in that time have completed a variety of Conservation Management Plans (CMPs), Heritage Impact Statements (HIS), Exemption Certificate (EC) Approval applications, Scope of Works specifications (SoW Spec), Interpretation Plans, Archaeological Management, and more.

The projects undertaken by AHS in Rockhampton include:

- Archer Park Railway Station (CMP, HIS, EC, SoW Spec).
- Mount Morgan Railway Station (CMP, SoW Spec, HIS, Interpretation Plan).
- Rockhampton City Hall (CMP, HIS).
- Rockhampton Customs House (CMP).
- South Rockhampton Cemetery (CMP, HIS, Archaeological Management).
- Rockhampton Botanic Gardens and Zoo (various HIS reports).
- Scholia Place (HIS, SoW Spec).
- North Rockhampton Borough Chambers (CMP).
- Mount Morgan Cemetery (CMP).
- Rockhampton School of Arts Building (CMP).
- Walter Reid Building (CMP).
- Mount Morgan Commonwealth Bank (CMP).
- Mount Morgan Coronation Lamp (CMP)
- Mount Morgan School of Arts Building and Library (CMP).

Many of these reports included detailed site assessments, consultation, and a review of each site's history, physical fabric, assessment of significance, the identification (and rectification) of key management and condition issues, and the development of strategic opportunities.

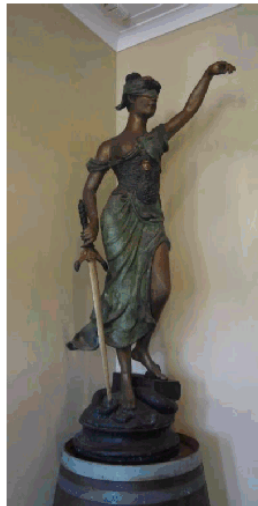
RRC Representatives:

- Darren Toohey (Community Projects Manager - Darren.Toohy@rrc.qld.gov.au | 07 4936 8692).
- Michael Elgey (Curator of Rockhampton Botanic Gardens - Michael.Elgey@rrc.qld.gov.au | 07 4936 8064)
- Sophia Czarkowski (Coordinator Community Facilities - Sophia.Czarkowski@rrc.qld.gov.au | 07 4936 8825).



AHS – CAPABILITY STATEMENT

6



Cairns Regional Council (2018-Present)

AHS have been commissioned by Cairns Regional Council (CRC) for the last two years (2018-2020) to provide all heritage services for their Cairns Court House revitalisation project. The refurbishment of the Court House is the first stage in what Council hopes will be the development of a large Cairns gallery precinct.

In 2018, AHS developed a CMP for the Court House which has been the primary guiding document for the masterplanning and construction of the site and outlined a list of policies and directions for the restoration and adaptive re-use works.

Not only did AHS complete a CMP for the project, but has developed Heritage Impact Statements (HIS), assisted in development and exemption certificate applications to DES, created a Historic Paint Scrape Report which utilised microscopic analysis to inform a new colour scheme, and has now developed an Interpretation Plan which outlines all the historic and Indigenous interpretive opportunities for the place. The Interpretation Plan process involved a day of consultation with the various Traditional Owner groups of Cairns.

AHS have also been the lead archaeologist on-call for the site and have assisted with numerous archaeological finds (such as shackles).

Through careful restoration, original fabric has been conserved and urgent repairs undertaken which will allow the site to have a continued use and presence in the Cairns community for many years to come.

CRC Representatives

- John Menzies (Senior Project Engineer Construction | j.menzies2@cairns.qld.gov.au | 07 – 4044 3421).
- Stephen Foster (Manager Cultural Services | S.Foster@cairns.qld.gov.au | 07 – 4032 6612).



Redland City Council (2017 – 4 months)

AHS were commissioned by Redland City Council to review and revitalise its current approach to local heritage protection, update existing Redland heritage citations, and provide a priority ranking for listing sites on the Council's heritage overlay.

The project required an extensive regional study to be undertaken in a short timeframe (4 months), so that RCC could re-evaluate its current approach to local heritage protection in the City. The scope of the project was to prepare a prioritised list of all places in the City identified as being of local heritage significance, including the potential for privately owned places.





AHS was able to meet all project objectives outlined in the commissioned scope and increased the outcomes in several areas where opportunities were identified. This was further enabled by positive communication and collaboration with the RCC Project Manager at all stages.

Close liaison with the Mayor, Councillors and Senior Executive at RCC was initiated at key intervals in the project to ensure very clear and expert advice for these matters was available from the project.

The project promotes an innovative approach to the identification and protection of heritage places within the Redlands Region, including the promotion of local and State heritage values of prominence within the region at a tourism and economic development perspective.

RCC Representative

- Isabel Lockwood (Strategic Planning Officer | Isabel.lockwood@redland.qld.gov.au | 07 - 3829 8439).



Moreton Bay Regional Council (2018-2020)

AHS were commissioned by Moreton Bay Regional Council (MBRC) to undertake a suite of studies for Wyllie Park, a Queensland State Heritage-listed road rest area located within the Petrie Mill Priority Development Area, in the suburb of Petrie.

As part of the redevelopment of the Petrie Mill university, a major upgrade was proposed for the adjacent Wyllie Park rest area, which had fallen into disrepair and a number of trees required attention. AHS were commissioned to prepare a Conservation Management Plan (CMP) for the park in order to protect and manage the heritage values of the place.

Based on the findings of the CMP, AHS worked in collaboration with MBRC and DES to refine a Heritage Landscape Master Plan, which conserved the heritage fabric of the rest area whilst ensuring its continued use as a rest stop offering shade and amenity. As required for PDA, the Master Plan was presented to and approved by the Heritage Council and is currently under construction.

AHS also undertook an Archival Recording and Site Induction as part of pre-start works. The Heritage Master Plan was one of the AILA 2020 QLD Winners under the category of 'Cultural Heritage'.

MBRC Representative

- Kirsten Gittins (MBRC Project Manager | Kirsten.Gittens@moretonbay.qld.gov.au | 0408 451 203).





Gold Coast City Council / John Gaskell Planning Consultants for Department of State Development (2018).

Australian Heritage Specialists (AHS), in collaboration with the Danggan Balun (Five Rivers) People, the Department of State Development, Manufacturing, Infrastructure and Planning, Gold Coast City Council and the Gold Coast Waterways Authority, were commissioned to undertake a Cultural Heritage Assessment (CHA) which is guiding the development of a Master Plan for the Southport Spit (The Spit). The aim of the Master Plan is to revitalise The Spit and increase its benefit to the Gold Coast community, while also improving connections to the surrounding marine environment and ensuring that environmental values are protected.

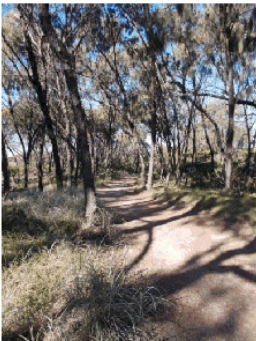


AHS's role was to facilitate communication and collaboration with the Danggan Balun (Five Rivers) People to assess the cultural heritage requirements for the preparation of the Master Plan.



A Cultural Heritage Survey (CHS) was undertaken within the Study Area, and the results of this survey were then compiled into a Cultural Heritage Assessment (CHA).

The CHA outlined engagement strategies and protocols, assessed tangible and intangible aspects of Aboriginal cultural heritage, adopted specific management outcomes relating to any objects or areas determined to hold Aboriginal cultural heritage significance and then outlined recommendations and compliance strategies for the short, medium and long term.



AHS also recorded oral histories within the CHS with permission from the Aboriginal Party which were utilised for interpretation strategies and outcomes for the Master Plan, through expert consultations with Traditional Custodians.

The project was completed in parallel to the overall Master Planning Study, which was an extremely short timeframe for such activities. The works were completed on time and on budget, utilising existing relationships held with the Traditional Owners, including Uncle Graeme Dillon.

Project Representatives

- Joanna Blyth (John Gaskell Planning Lead Consultant | joanna@jgplan.com.au | 07 3392 1911).
- Anthony Dillon (Five Rivers Coordinator | a.dillon@fiverivers.net.au | 0401 922 955).





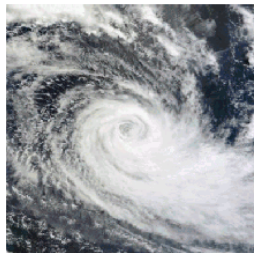
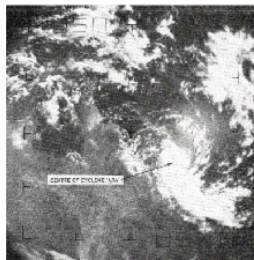
Southern Downs Regional Council (2019 – 4months).

Southern Downs Regional Council (SDRC) is making a range of amendments to the Southern Downs Planning Scheme, which was adopted in 2012. As part of the amendment process, a review of local historic and Indigenous heritage is required to inform the preparation of new planning measures, which will support key heritage legislation obligations.

Australian Heritage Specialists (AHS) were commissioned by the SDRC to prepare a review of local historic and Indigenous heritage matters for the Southern Downs Region. The purpose of the review was to provide information that will enable SDRC to re-evaluate its current approach to cultural heritage protection and recognition, including recommendations for the incorporation of planning measures in the new scheme to support the legislative requirements of the Queensland Heritage Act 1992 (QHA), Aboriginal Cultural Heritage Act 2003 (ACHA), the Planning Act 2016 and the State Planning Policy 2017 (SPP).

SDRC Representative

- Angela O’Mara (Manager Strategic Planning & Prosperity – Angela.OMara@sdrc.qld.gov.au | 1300 697 372).



Whitsunday Regional Council (2017 – 3months).

Focussing predominantly on coastal areas in the Whitsunday region, Australian Heritage Specialists (AHS) were commissioned by the Whitsunday Regional Council to prepare a historical report of weather events. AHS was to identify significant weather events and outline the impacts and effects of extreme weather on the Whitsunday communities.

Analysing both historical climate data and historic weather events, Australian Heritage Specialists provided the Whitsunday Regional Council with a complete outline of notable weather events for the Whitsunday region. The aim of the project to match historical weather data with a timeline of extreme weather events for coastal regions (Bowen and Proserpine), including relevant islands, from the earliest records available. The project was compiled as part of the QCoast 2100 Coastal Hazards Adaptation Strategy program.

The report included numerous recommendations for further reviews of other natural events, as well as community consultation advice.

WRC Representative

- Adam Folkers (Manager, Environment & Climate – Adam.Folkers@qhitsundayrc.qld.gov.au | 07- 4945 0289).



Key Personnel



Benjamin Gall (Managing Director and Principal) [M.ICOMOS & M.PIA]

Ben is Managing Director of AHS and has substantial experience delivering strategic outcomes for a wide variety of heritage places across Australasia, including many local heritage studies and reviews, CMPs and adaptive re-use of buildings. Ben has provided key advice to multiple government agencies and Councils since 1999, including advice to Qld Government, Defence and a large range of CMPs, restorations, adaptive re-use programs and studies and assessments across Australia and New Zealand. Ben has also worked closely with multiple government and private sector clients and stakeholders for numerous years and maintains a good working relationship with many Traditional Owner groups across Queensland



Ann Wallin (Principal Consultant)

Ann is respected for her twenty-five plus years' experience in cultural heritage projects. Ann's wide range of skills embrace all facets of built, archaeological and Aboriginal heritage, management plans, excavations, and community consultation.

Ann has worked as a specialist consultant on heritage issues with a range of organisations, including work in the Far North area previously and is a trusted adviser to a significant number of Councils due to her experience working with a diverse range of clients and community groups in Queensland and New South Wales.

Australian Heritage Specialists have assembled a highly regarded team who have the capability and expertise to provide various services. Key personnel hold many decades of experience working across Australia and have received multiple awards and industry recognition for cultural heritage projects.

Our consultants have a proven track record of delivering efficient and effective results that save clients time and money and protect and enhance their reputations. They have played major roles in many of Queensland's most recognised cultural heritage projects received numerous awards for the practical outcomes they have achieved across many industries.

Ann and Ben are supported by the following team (at minimum):

- Linda Gall (Director – Business Services).
- Fiona Calladine (Senior Cultural Heritage Consultant FNQ)).
- Amy Aitken (Senior Cultural Heritage Consultant | Archaeologist).
- Julia Piagno (Senior Cultural Heritage Consultant | Built Heritage).
- Tania Metcher (Senior Heritage Landscape Architect [M.ICOMOS]).
- Owen Budd (Archaeologist / Cultural Heritage Consultant).
- Damien Wood (Archaeologist / Cultural Heritage Consultant).
- Theresa Maloney (Administration).

CVs for Key staff and personnel are attached to this Capability Statement.



All staff have relevant memberships of Professional Cultural Heritage Associations or body including ICOMOS and/or Queensland National Trust, and are qualified in relation to the European heritage environment, including:

- Built Environment.
- Planning.
- Project Management.
- Archaeology.
- Conservation.
- Professional Historians.
- Design and structural advice.

Please see attached CVs for individual members qualifications and experience.



8.4 CEMETERIES RELATED ACTIVITIES POLICY

File No:	11979
Attachments:	1. Draft Cemetery Related Activities Policy ↓
Authorising Officer:	Damon Richardson - Acting Coordinator Community Facilities Emma-Jane Dwyer - Manager Community Assets & Facilities Alicia Cutler - General Manager Community Services
Author:	Joanne Stratford - Supervisor Cemeteries

SUMMARY

This matter was referred to a workshop at the Parks, Recreation and Sport Committee meeting on 12 February 2020 with the following resolution:

“that Officers prepare a scenario that would see Council assuming control of burial rights as a last resort.”

A workshop was held with Councillors on 17 August 2020.

OFFICER’S RECOMMENDATION

THAT the Cemetery Related Activities Policy be adopted.

COMMENTARY

This report was presented to the Parks, Recreation and Sport Committee on 29 May 2019 and was laid on the table until the following committee meeting. At the Parks, Recreation and Sport Committee on 26 June 2019 the report was resubmitted for consideration and it was laid on the table pending a workshop. A workshop was held on 25 September 2019.

This report was again presented to the Parks, Recreation and Sport Committee on 12 February 2020 where it was referred to a workshop for Council Officers to provide a scenario that would see Council assuming control of burial rights as a last report. A workshop was held on 17 August 2020.

Council’s Cemetery Related Activities Policy provides a framework for the operation and management of Council’s cemeteries. The policy covers:

- Management and administration of Council cemeteries;
- Hours of operation;
- Burial rights and holder of burial rights provisions;
- Interment and burials in Council cemeteries and burials outside of Council cemeteries;
- Disturbance of human remains; and
- Vases, mementos and adornments.

BACKGROUND

Gaps have been identified in the current policy and Council’s burial rights’ processes, with regards to assigning burial rights and carrying out those rights. Changes to family dynamics, such as divorce or de-facto relationships, have further complicated the situation.

Council Officers have often been put in a position where it is difficult, and in some instances impossible, to identify the holder of burial rights or Next of Kin and claims have been made against Council for incorrectly administering burial rights.

Below are scenarios to show the difficulty for Council Officers where the holder of burial rights or Next of Kin is not easily determined.

Scenario 1

A family member applies to Council to replace a gravestone.

The application for Burial Form identifies the deceased Next of Kin and Council has records to show this person as the purchaser of the grave and the person who arranged the installation of the gravestone following the burial service.

The family member applying to Council would not be the burial rights holder and not able to replace the gravestone.

However if the family member disputes the burial rights holder, under Council's existing Cemeteries Policy Council would need to consider both the burial records and any evidence of payment to determine the holder of burial right. Section 5.4.2 of the existing Cemeteries Policy states that "*Burial rights are assigned by Council based upon historical records and other available information*". This could become complicated especially in circumstances where the deceased estate has in fact paid for the burial raising issues of who really is the burial rights holder.

The proposed policy provides further clarity in this situation under section 5.4 which states: "*A person other than the holder of burial rights may not exercise the burial rights for the site, for example, if a person other than the holder of burial rights paid the prescribed fee for the grant of the burial rights, but the person is not nominated as the holder of burial rights, the person may not exercise the burial rights for the site.*"

Under the proposed policy, the original listed Next of Kin will be issued an Authorisation for Exercise of Burial Rights at the time of burial, denying all others the exercise of burial rights without the Next of Kin's written consent.

Scenario 2

Council is contacted requesting the exhumation of their family member to relocate them closer to their family home. The deceased is buried in a grave that was purchased and arranged by the deceased prior to passing. Upon the deceased death the burial rights have now reverted back to Council.

From the information provided as part of the exhumation request, Council officers can determine that the deceased had a de facto partner, was married (but separated at time of death) and children from both relationships.

Council can identify risk of a family dispute given the unique family structure. The existing Cemeteries Policy has no strategy in place to address this issue should it arise.

Section 5.6.1 of the proposed policy mitigates the risk of family disputes by requiring the applicant to provide legal documentation or to demonstrate they have consulted all living next of kin of the deceased by producing a document of authorisation signed by all parties.

Scenario 3

A family of five had been involved in a car accident in which all occupants died. The father was the burial rights holder of a reserved family plot. On the documentation, the father had nominated himself, his wife and two of their children to be interred in the site. The third child was born later in the marriage and the father had not yet updated the burial rights.

Despite the third child not being listed on the burial rights, *Council (alone) may, in its absolute discretion, and provided it has no reason to believe that the holder of burial rights for the site would have objected, permit a person to be interred in the site if the person is:*

- (a) A relative of the holder of burial rights; or*
- (b) A member of the family of the holder of burial rights; or*
- (c) Another person who has a proper association with the holder of burial rights.*

On this occasion, with the death of the holder of burials rights and the Next of Kin, Council is able to use its power to allow the interment of the third child in the family plot and assist the extended family through the death process.

PREVIOUS DECISIONS

The current Cemeteries Policy was adopted by Council at the 25 October 2016 Parks, Recreation and Sport Committee meeting.

BUDGET IMPLICATIONS

No budget implications.

LEGISLATIVE CONTEXT

The proposed policy was prepared in consultation with Legal and Governance and Local Laws and is sympathetic to Subordinate Local Law No. 1.13 and Subordinate Local Law No. 4.

LEGAL IMPLICATIONS

The proposed policy was prepared in consultation with Legal and Governance, Local Laws and King and Co lawyers.

STAFFING IMPLICATIONS

The proposed policy will assist staff in managing the operations of Council's cemeteries.

RISK ASSESSMENT

The proposed policy will mitigate the risk of incorrectly administering burial rights.

CORPORATE/OPERATIONAL PLANCorporate Plan 2017 – 2022

1.2 Regional public places that meet our community's needs.

1.6 Our sense of place, diverse culture, history and creativity are valued and embraced.

CONCLUSION

It is recommended that the updated Cemeteries Related Activities Policy be approved.

CEMETERIES RELATED ACTIVITIES POLICY

Draft Cemetery Related Activities Policy

Meeting Date: 21 June 2022

Attachment No: 1



1 Scope

This policy supports Council's local laws relating to the undertaking of regulated and restricted activities regarding human remains on private land and in Cemeteries operated by Council. This policy does not apply for privately operated Cemeteries regulated under *Subordinate Local Law No. 1.9 (Operation of Cemeteries) 2011*.

2 Purpose

The purpose of this policy is to:

- (a) Assist staff in guiding the community through burial rights processes;
- (b) Provide a framework for the management and operation of Council's Cemeteries;
- (c) Provide a framework for the management of cemetery related activities outside a cemetery; and
- (d) Ensure a safe and respectful environment.

3 Related Documents

3.1 Primary

Subordinate Local Law No. 1.13 (Undertaking Regulated Activities Regarding Human Remains) 2011

Subordinate Local Law No. 4 (Local Government Controlled Areas, Facilities and Roads) 2019

3.2 Secondary

Births, Deaths and Marriages Registration Act 2003

Coroners Act 2003

Information Privacy Act 2009

Land Act 1994

Local Government Act 2009

Local Law No. 1 (Administration) 2011

Local Law No. 4 (Local Government Controlled Areas, Facilities and Roads) 2011

Public Health Act 2005

Queensland Heritage Act 1992

Work Health and Safety Act 2011

Application for Burial/Disturbance of Human Remains on Private Property Form

Authorisation for Exercise of Burial Rights

Cemetery Memorial Guide Fact Sheet

Cemetery Related Activities Procedure
 Cemetery Service Exhumation Request Form
 Cemetery Service Request Form

4 Definitions

To assist in interpretation, the following definitions apply:

Ashes	Processed remains recovered from the cremation of human remains.
Authorised Person	A person who is appointed under a Local Government Act to ensure members of the public comply with the relevant Local Government acts in relation to the local government and the Region.
Burial	The act or practice of burying human remains.
Burial Rights	The right to use a site for the interment of human remains or ashes.
Cemetery	An area containing one or more sites each of which may be used for the exercise of a burial right including a lone site, a family site or a larger collection of sites each of which is to be used for the exercise of burial rights.
CEO	Chief Executive Officer A person who holds an appointment under section 194 of the <i>Local Government Act 2009</i> . This includes a person acting in this position.
Columbarium	Area or wall established for the placement of ashes and/or memorialisation.
Council	Rockhampton Regional Council.
Delegated Officer	An employee appointed to a position with the relevant sub-delegation under <i>Local Law No. 1 (Administration) 2011</i> , <i>Subordinate Local Law No. 1.13 (Undertaking Regulated Activities regarding Human Remains) 2011</i> and <i>Subordinate Local Law 4 (Local Government Controlled Areas, Facilities and Roads) 2019</i> .
Disturbance of Human Remains	As defined in <i>Local Law No. 1 (Administration) 2011</i> , includes interfering with remains, removal of remains and opening of a site of burial.
Employee	Local government employee: (a) The CEO; or (b) A person holding an appointment under section 196 of the <i>Local Government Act 2009</i> .
Exhumation	The act of digging something out of the ground (especially human remains) where it has been buried. To remove from a site; disinter.
Funeral Service	Any burial, ashes interment, exhumation, chapel or garden services or refreshments/wake event conducted in one of Council's cemeteries.
Grave	A hole dug in the ground to receive a coffin or human remains.
Grave Cover	A conforming structure as detailed in the Cemetery Related Activities Procedure.
Holder of Burial Rights	For a site, means the lawful holder of the right to inter Human Remains or Ashes, install or repair a memorial, exhume human remains or disinter ashes within a Council cemetery.
Human Remains	The body or part of the body of a deceased person.

Interment	The placement or burial of human remains or ashes on or into a site.
Memorial	Includes: (a) A headstone; (b) An inscribed plaque or commemorative plate; (c) Monumental, ornamental or other structure/s erected on a grave site; (d) Anything else erected or placed to mark the site where human remains have been buried or placed, or to commemorate a deceased person.
Niche	Space in a columbarium to place ashes.
Non-conforming Grave Cover	A structure placed on or over the boundaries of the grave or site that is inconsistent with the standard dimensions.
Ownership	The right of possessing something.
Pre-purchase	The purchase of burial rights for a site in advance of actual need for use for interment.
Qualified Undertaker	A person who carries on the business of disposing of human remains.
Region	Rockhampton Regional Area defined by the Local Government Areas of Queensland.
Re-open	A burial subsequent to the first Interment.
Reservation	See pre-purchase.
Site	A place set aside for the interment of human remains or ashes, including a grave, niche, plot or memorial.
Stonemason	A tradesman mason or person possessing the skills to competently and professionally carry out monumental masonry work to a tradesman-like standard.

5 Policy Statement

5.1 Management of Council Cemeteries

Council is committed to:

- (a) The provision of interment and memorialisation services to the community;
- (b) Servicing the deceased and their families with dignity and respect;
- (c) Preserving the history of the Council's cemeteries and maintaining records for genealogy research;
- (d) Maintaining Council's cemetery grounds to meet community needs and expectations;
and
- (e) Planning for the future burial needs of the Region's communities.

5.2 Administration of Council Cemeteries

Burial rights do not commence until payment has been received and an Authorisation for Exercise of Burial Rights given by the CEO or authorised person.

Council maintains records and plans (electronic, printed or hand-written) about each interment and reservation (except where historically this information was not retained).

Existing pre-paid burials and/or sites registered with Council will be honoured.

Individuals or groups are not able to reserve or set aside a site/s. Existing reservations will be honoured at all cemeteries.

Instances where historic administration practices conflict with this policy will be dealt with on a case by case basis.

5.3 Hours of Operation

Burials, ashes interments and exhumations take place during the hours approved by Council:

- (a) Between 9.00am and 4.00pm Monday to Friday
- (b) Approval is required outside of these times and additional fees will be incurred as per Council's Fees and Charges

Council controlled cemeteries are open to the public daily from sunrise to sunset or as Council may determine. To preserve the history and nature of a site, the following Cemeteries will be closed between the hours of 9pm – 5am daily:

1. Memorial Gardens
2. South Rockhampton Cemetery
3. North Rockhampton Cemetery

Access to the above sites between 9pm – 5am will require approval by a delegated officer.

5.4 Council Cemeteries Burial Rights and Holder of Burial Rights

If a holder of burial rights holds the burial rights for a site in a Council Cemetery, the holder of burial rights has:

- (a) The right to be interred in the site; and
- (b) The right to authorise the interment of others (each of whom must be specified in writing by the holder of burial rights) in the site (up to the maximum number permitted for the site as determined by Council from time to time).

Burial rights are assigned by Council based on historical records and other available information.

The holder of burial rights may not transfer the burial rights without Council's written consent.

Burial rights are not transmissible on the death of the holder of burial rights.

A holder of burial rights for an unused site may surrender those rights to Council. Any refund of any purchase price paid for the burial rights will be at the sole discretion of Council upon receipt of a written application for refund.

The exercise of burial rights, including an interment, and the installation, maintenance or modification of a memorial at a site must not be undertaken without the written consent of:

- (a) The holder of burial rights for the site; or
- (b) If the holder of burial rights is deceased and the burial right to be exercised is the maintenance or modification of a memorial at the site—a member of the family of the holder of burial rights, or another person who has a proper interest in the maintenance or modification of the memorial.

Each of the following persons are responsible for the costs of the acquisition, installation, repair, maintenance and modification of any memorial associated with a site:

- (a) The holder of burial rights for the site;

- (b) If the holder of burial rights is deceased — a member of the family of the holder of burial rights;
- (c) Another person who has a proper interest in the maintenance and modification of the memorial.

A holder of burial rights must comply with the rules and regulations of Council which apply to the operation of the Council cemetery from time to time.

The holder of burial rights acknowledges that Council reserves the right to vary the rules and regulations which apply to the operation of a Council cemetery at any time, and from time to time, in any manner deemed appropriate by Council.

If Council grants an approval to exercise burial rights for a site:

- (a) The holder of burial rights for the site is the person nominated as the holder of burial rights in the approval; and
- (b) The holder of burial rights may exercise the burial rights for the site; and
- (c) A person other than the holder of burial rights may not exercise the burial rights for the site, for example, if a person other than the holder of burial rights paid the prescribed fee for the grant of the burial rights, but the person is not nominated as the holder of burial rights, the person may not exercise the burial rights for the site.

Council reserves the right to cancel the right of the holder of burial rights to exercise burial rights in respect of a site in the following circumstances:

- (a) Non-compliance with the rules and regulations for the time being of the Council cemetery in which the site is situated;
- (b) If a maximum number of persons may be interred in the site from time to time — the maximum number of persons have been interred in the site;
- (c) Non-compliance with a relevant statutory requirement;
- (d) Permitting one or more persons to be interred in the site would have a detrimental impact on public health and safety.

The right of a holder of burial rights to exercise burial rights in respect of a site comes to an end on the occurrence of the last of the following:

- (a) The death of the holder of burial rights unless the holder of burial rights has not nominated themselves to be interred into the site or;
- (b) If the holder of burial rights nominates, in writing, one or more persons who may be interred in the site, the earlier of:
 - (i) The date on which the last of the nominated persons are interred in the site; or
 - (ii) One year after Council becomes aware there are no surviving nominated persons; or
 - (iii) The date on which the last of the nominated persons give notice to Council that they wish to surrender their rights to be interred in the site.

For a site in respect of which burial rights have been granted to a holder of burial rights, Council (alone) may, in its absolute discretion, and provided Council has no reason to believe that the holder of burial rights for the site would have objected, permit a person to be interred in the site if the person is:

- (a) A relative of the holder of burial rights; or
- (b) A member of the family of the holder of burial rights; or
- (c) Another person who has a proper association with the holder of burial rights.

On the death of the holder of burial rights, the right of the holder of burial rights to authorise the interment of persons other than the holder of burial rights in the site comes to an end.

If the right of a burial rights holder to exercise burial rights at a site comes to an end, ownership rights of the site will revert back to Council.

Council acts in good faith when it relies on information and advice provided by an applicant for burial rights. If the relevant activity later becomes the subject of a dispute between relatives or family members of a person whose human remains are interred at the Council Cemetery, Council does not accept any responsibility for, as the case may be:

- (a) Allowing an interment;
- (b) Allowing the erection of a memorial;
- (c) Permitting a memorial to be maintained; or
- (d) Allowing human remains interred within a Council cemetery to be disturbed.

5.5 Interment/Burial

No interment or burial is permitted in or outside a Council Cemetery until Council approval has been granted.

Burials must be arranged and conducted by a qualified undertaker.

5.5.1 Interment/Burial in Council Cemeteries

For all interments/burials in all Council's Cemeteries:

- Ashes interment may be arranged through a qualified undertaker or directly with Council.
- New burial sites will be allocated by Council in its discretion.
- Digging of burial sites will be undertaken by Council.
- Where required, Council take all due care to remove grave tops and memorials to carry out the interment.
- Where required, Council may engage the services of a stonemason to remove, reinstate and/or repair grave tops and memorials at the Burial Right Holder or applicant's expense.

5.5.2 Burials Outside a Cemetery

Applications for burials outside a cemetery must be submitted at least 10 working days prior to the proposed service and must include details and evidence as detailed in *Subordinate Local Law No. 1.13 (Undertaking Regulated Activities Regarding Human Remains) 2011* including but not limited to the following:

- (a) Confirmation the burial will be undertaken by a qualified undertaker;
- (b) Proposed burial information and burial site details including proximity to buildings of any nature, water courses and adjoining properties; and
- (c) Details of how ongoing access to the site at which the deceased is to be buried will be secured should the owner dispose of their interest in the land.

Burials must be carried out in accordance with the Cemetery Related Activities Procedure.

5.6 Disturbance of Human Remains

Approval of the disturbance of human remains may be granted if the disturbance is within six working days of a burial or after six months of a burial. A request to disturb human remains will be considered at Council's discretion in accordance with Council's Local Law and the provisions within this policy.

5.6.1 Exhumation in a Council Cemetery

A Cemetery Service Exhumation Request Form must be completed for exhumation of human remains in a Council Cemetery and will only be accepted when accompanied by payment of the application fee and the written consent of:

- (d) The holder of burial rights for the site; or
- (e) If a holder of burial rights is deceased—a member of the family of the deceased person; or
- (f) Another person who has a proper interest in the human remains.

Council acts in good faith when it relies on information and advice provided by an applicant and does not accept any responsibility for exhumation of human remains.

Unless legal documentation exists, the applicant must demonstrate that they have consulted all living next of kin of the deceased and produce a document of authorisation signed by all parties.

Exhumations of human remains are carried out, once approved by a delegated officer, in conjunction with a qualified undertaker.

Council discourages the exhumation of human remains after 60 years from the date of burial due to a number of factors including rate of decay, inconsistent burial practices and natural ground movement.

The disinterment of ashes may be conducted by Council.

Ashes cannot be exhumed and transferred to another site in a Council cemetery unless the site is surrendered and a new site purchased in a Council cemetery.

5.6.2 Reopen of a Grave in a Council Cemetery

Reopening of a grave for a further burial requires approval from Council's authorised person.

5.6.3 Disturbance of Human Remains Outside a Cemetery

Applications and approvals for the disturbance of human remains outside a Cemetery must be in accordance with *Subordinate Local Law No. 1.13 (Undertaking Regulated Activities Regarding Human Remains) 2011*. The site must be prepared in accordance with paragraph 5.6.2 of the Cemetery Related Activities Procedure.

5.7 Vases, Mementos and Adornments

Visitors may place mementos in commemoration as listed in the Cemetery Related Activities Procedure.

Items must not interfere with other mementos or pose a safety or injury risk to other persons.

Items must be securely placed.

6 Review Timelines

This policy is reviewed when any of the following occur:

- 6.1 The related information is amended or replaced; or
- 6.2 Other circumstances as determined from time to time by Council.

7 Document Management

Sponsor	Chief Executive Officer
Business Owner	General Manager Community Services
Policy Owner	Manager Community Assets and Facilities
Policy Quality Control	Legal and Governance



8.5 PROPERTY MATTER

File No: 374
Attachments: 1. Proposal (Confidential)
Authorising Officer: Alicia Cutler - General Manager Community Services
Author: Emma-Jane Dwyer - Manager Community Assets & Facilities
Kellie Roberts - Coordinator Property and Insurance

SUMMARY

Manager Community Assets and Facilities reporting on a proposal for property acquisition in Mount Morgan.

OFFICER'S RECOMMENDATION

THAT Council authorise the Chief Executive Officer (Manager Community Assets and Facilities) to proceed with Option A as outlined in the report.

COMMENTARY

Council acquired the nominated properties on 21 October 2019 for \$75,000. The property, with the exception of the large church, is vacant, derelict, non-compliant or condemned and boarded up to prevent further vandalism and squatting.

The large church still maintains its structural integrity and holds a lot of original décor and fittings therefore is still of value to Council and the Community.

The small church and dwelling have deteriorated to a point where maintenance and renewal are not financially viable due to issues such as black mold infestation, compliance issues, and general deterioration of building fabric and interior. In addition, the small church and dwelling have been deemed hazardous and unsafe for occupation. Council has previously resolved to demolish the small church and the dwelling on 23 March 2021.

A proposal submitted by the Mount Morgan Citizens Club has prompted a review of the resolution from 23 March 2021 to dispose of the small church and dwelling at 78 East Street, Mount Morgan.

The submission proposes that the dwelling will be tenanted to a groundskeeper at no cost in exchange for services, the small church and larger church be used to house a gallery and bicycle museum and the grounds to be used to host markets.

The total cost estimate from the Mount Morgan Citizens Club to complete the repairs is \$197,590 with an initial \$20,600 required to get the project started. However, the \$20,600 would only cover reinstating power and water to the three buildings and repairs to the front landing stairs of the smaller church, which does not adequately address the immediate safety issues including mold treatment and restumping.

The Mount Morgan Citizens Club have no long-term financial plan to support the project and have requested that Council reallocate the funds from the disposal of assets budget and provide a grant to the Club to kick start the project.

The estimated cost of demolition is less than \$40,000.

In forming a recommendation, consideration has been given to the following:

*There are a number of more important and significant buildings that require Councils investment.

*Disposing of the site "as is" will encumber another organisation with the repairs and asbestos removal.

*An unencumbered site should have more appeal for an organisation wanting to add to Mount Morgan's central business district.

*Whilst Council retains ownership, any maintenance to buildings also triggers building compliance upgrades which makes the buildings unviable without a future designated use.

*The ability of the club to finance the short term and long term repairs and fund the ongoing maintenance costs.

Option A

That Council continue with the asset disposal as per Council Resolution dated 23 March 2021.

By proceeding with the demolition, the risk to Council from the derelict buildings is eliminated. It will leave the large church and its contents remaining on site, which is in sound condition.

Council Officers will then explore the best use of the site, which may include a tender for the sale or lease of the site.

Option B

That Council transfer the ownership of the entire property with a financial donation of \$20,600 to Mount Morgan Citizens Club.

The property would be transferred to the Club in an 'as is' condition.

There is significant risk that the Club would not have the capacity to raise funds for the further repairs and upgrades, therefore the buildings would continue to deteriorate and remain derelict. It is noted in the proposal that the main focus of the Club is the Soldiers Rooms on another site; therefore funding applications would likely not be for this site.

There is a risk of community perception around not using ratepayer funds wisely. Council purchased the land and buildings without a purpose to then be gifted to the Club with a cash incentive.

There is a risk of injury or illness to occupants of the small church and dwelling from the immediate safety issues that are not funded with the \$20,600, specifically the failure to address the black mold to an acceptable standard, which is likely to result in harmful health effects.

Option C

Transfer the ownership of the entire property with no financial donation

In addition to the risks outlined in Option B there are then additional risks.

There would be ongoing costs such as rates and insurance for the Club and without funds there is a risk of rates default.

Option D

That Council lease the site to the Mount Morgan Citizens Club for an initial term of 1 year, with an extension of a further year at Council's discretion. The Club would still be responsible for the payment of rates.

There is significant risk that the Club would not have the capacity to raise funds for the necessary repairs and upgrades, therefore the Club would become in breach of the lease. This would result in termination of the lease and the site being handed back to Council in a further deteriorated state. However, given the short-term lease of 1 year, the risk is lower than that of a longer-term lease.

Council would still carry significant risk allowing the occupation of an unsafe site. If an incident were to occur, Council may be held liable given its knowledge that the Club does not have the financial capacity to carry out the necessary repairs, and the knowledge that the proposed repairs are not to an adequate standard.

PREVIOUS DECISIONS

Council resolved on 19 March 2019 to seek to negotiate the purchase of the property for \$75,000.

Council further resolved on 23 March 2021 to dispose of the nominated properties and associated structures as detailed in the report which included the small church and dwelling at 78 East Street, Mount Morgan.

BUDGET IMPLICATIONS

The cost of disposing of the nominated assets is captured within the 2022/2023 Capital Budget.

The estimated for the demolition of the small church and dwelling is \$40,000.

LEGAL IMPLICATIONS

Options B, C & D would require the appropriate legal agreements to be put in place. Whilst agreements can be conditioned to protect Council, this does not eliminate the risk to Council for being held liable for an incident relating to the unsafe condition of the site.

STAFFING IMPLICATIONS

Existing resources within Community Assets and Facilities will manage the execution of the demolition project.

RISK ASSESSMENT

A review of the vacant properties has been performed and the buildings are considered a hazard to both members of the community and Council workers. Ageing infrastructure at the site has the potential to cause harm without warning.

There is a risk that the assets will be returned back to Council due to the capacity of the club to finance the associated costs, which in the end will force a demolition decision and costs at a future date.

CORPORATE/OPERATIONAL PLAN

1.1.18 – Develop and implement three year forward community assets and facilities works program (renewals).

CONCLUSION

It is recommended that Council proceed with the building disposal as outlined in Option A.

9 NOTICES OF MOTION

Nil

10 QUESTIONS ON NOTICE

Nil

11 URGENT BUSINESS/QUESTIONS

Urgent Business is a provision in the Agenda for members to raise questions or matters of a genuinely urgent or emergent nature, that are not a change to Council Policy and can not be delayed until the next scheduled Council or Committee Meeting

12 CLOSURE OF MEETING