

Grey-Headed Flying-Fox – Monthly Monitoring

October 2021 Monitoring

PLR-TFNSW-PJT-BI-RPT-000026

Parramatta Light Rail – Stage 1 (SSI-8285)

November 2021

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Contents

Glossary / Abbreviations	v
1 Purpose.....	1
2 Methods	2
2.1 Data.....	2
3 Results	3
3.1 Weather conditions	3
3.2 Flying-fox demographics.....	3
3.3 Flying-fox behaviour and camp extent	5
3.4 Management action and public use.....	7
3.5 Noise Monitoring Results	7

Document control

Parramatta Light Rail – Stage 1

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Document history

Revision	Date of revision	Notes
A	29 November 21	Draft for specialist review
0	14 December 21	Final for submission to stakeholders

Glossary / Abbreviations

Abbreviation	Expanded text
BFF	Black Flying-fox
DPIE	New South Wales Department of Planning, Industry and Environment
EES	Environment, Energy and Science (part of DPIE)
GHFF	Grey-headed Flying-fox
Monitoring Program	Grey-headed Flying-fox Monitoring Program (PLR-TFNSW-CBD-PE-PRG-000001)
OEH	(Former) New South Wales Office of Environment and Heritage (now part of DPIE)
PLR (or the CSSI)	Parramatta Light Rail – Stage 1 (Westmead to Carlingford)
TfNSW	Transport for New South Wales
Secretary, the	Secretary of Department of Planning, Industry and Environment (DPIE)

1 Purpose

The purpose of this document is to provide the results of the monthly monitoring of the Grey-headed Flying-fox (GHFF) camp located within Parramatta Park, Parramatta NSW, carried out as part of Parramatta Light Rail.

The reporting requirements are outlined in Section 6.3 of the Grey-headed Flying-fox Monitoring Program (PLR-TFNSW-CBD-PE-PRG-000001) prepared in accordance with Condition C9(c) of the Parramatta Light Rail (PLR) conditions of approval (Infrastructure Approval SSI-8285).

Every quarter, a suitably qualified and experienced fauna specialist (and supporting staff if required) are to monitor the GHFF camp and provide results within a monitoring report to be issued to the relevant TfNSW Project Manager(s). In addition, for the two months in between these monitoring events (i.e. the 'off-months'), trained TfNSW staff are to monitor the GHFF camp and provide a monitoring report for review by the suitably qualified and experienced fauna specialist.

In accordance with Condition E101, TfNSW are to submit these monthly monitoring reports to NSW Department of Planning, Industry and Environment – Environment, Energy and Science (DPIE EES) monthly and the Secretary quarterly.

The monthly monitoring reports include:

- Demographics and population data as per Appendix 4 of the GHFF Monitoring Program
- Map illustrating camp extent
- Sources and location(s) of potential disturbance
- Any supporting notes.

2 Methods

Monthly monitoring was undertaken by trained Transport for NSW team members on 28 October 2021 at Parramatta Park. Data was collected using the Proforma provided in the Grey-headed Flying-fox Monitoring Program (Appendix 4).

2.1 Data

2.1.1 Weather conditions

Ambient weather conditions including temperature, rainfall and wind were recorded (BOM 2021).

2.1.2 Flying-fox demographics

The number and species of flying-foxes present, approximate ratio of females to males, health condition, breeding activity or young present were recorded for each camp. A day time static count was used to estimate abundance at the camps.

2.1.3 Flying-fox behaviour

The following flying-fox behaviours were recorded if/when identified at camp:

- Resting
- Grooming
- Vocalising and interacting
- Mating or breeding activity
- Lifting in response to sudden noise
- Signs of stress
- Morbidity/mortality.

2.1.4 Camp extent

The camp's area of occupancy (spatial extent of the camp) was recorded.

2.1.5 Management and public use

The community's use of Parramatta Park for events and detectable impacts from nearby works were recorded to inform a complete understanding of the surrounding context.

3 Results

3.1 Weather conditions

On the day of monitoring, the area recorded no rainfall at the closest meteorological Station (Parramatta North (MASON'S DRIVE) 33.7917°S 151.0181°E 55m AMSL. The weather conditions are summarised in Table 3-1. Monitoring was conducted between 09:00 AM and 9:50 AM.

Table 3-1 Weather conditions during monthly monitoring event according to the Station mentioned above:

Monitoring event	Max temp (°C)	Min temp (°C)	Rainfall (mm)	Wind Spd (km/h)	Wind Dir (9am)	Condition
28 October 2021	32.3	13	0	4 km/h at 9:00 am	NW	Hot, Dry, Humid

3.2 Flying-fox demographics

Parramatta camp contained 5,335 GHFF with approximate demographic population of 50:50:0 (males:females:juveniles) and with 0% dependent young flying with their parent over the GHFF camp. There were zero black flying-foxes identified in the camp (Table 3-2).

Table 3-2 Flying-fox demographics

Camp	GHFF	BFF	Males	Females	Females visibly pregnant	Juveniles	Dependent young	Body condition	Morbidity / mortality
Parramatta	5335	0	2,667	2,668	No	0	No	Fine	No

The number of GHFF has decreased by 2,825 from the previous reporting period (see Figure 3-1).

Grey-Headed Flying Fox Baseline and New Data for Parramatta Park

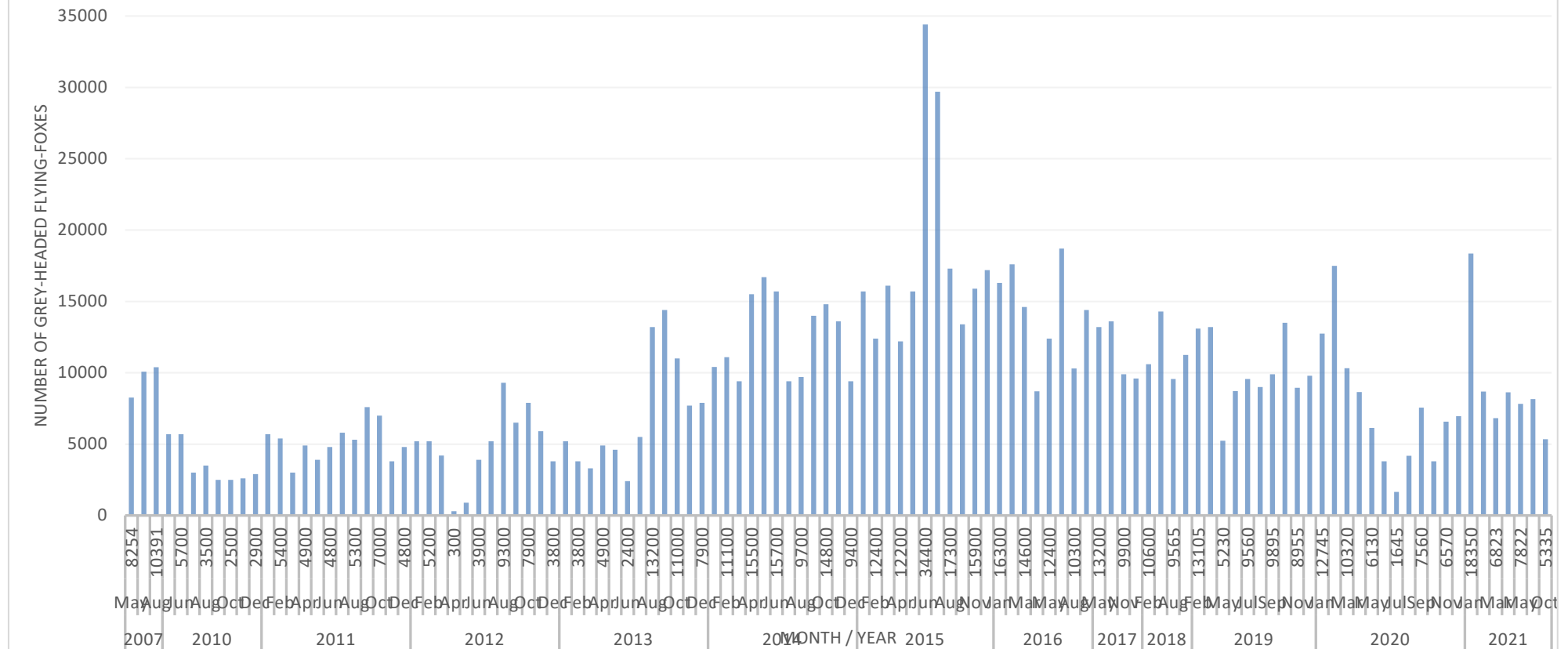


Figure 3-1 GHFF counts against baseline data (Source: Royal Botanical Gardens Martin J 2018 & Smith A 2018; NFFMP; TfNSW and Ecosure 2019, 2020, 2021)

3.3 Flying-fox behaviour and camp extent

The flying-foxes were demonstrating normal daytime behaviours, they were mainly resting due to time of survey. Some GHFF were observed flying within the camp extents. Overall GHFF demonstrated low signs of stress. The behaviour observed including vocalisation and resting (Table 3-3). Some hammering was audible in the distance, likely from nearby PLR work site in Cumberland hospital precinct. The Parramatta Park Trust were also testing a new sprinkler system to manage heat stress at the colony.

The area occupied by the flying-foxes at Parramatta camp is shown in Figure 3-2.

Table 3-3 Flying-fox behaviour

Camp	Stress Indicators	Behavioural observations	% camp occupied	% available habitat	Vegetation condition
Parramatta	None observed	Fanning and vocalisation	75	25	Good condition



Figure 3-2 Extent of GHFF camp at Parramatta Park (October 2021)

3.4 Management action and public use

The public were using the park for recreational activities at the time of the monitoring, including walking and jogging. Refer to Table 3-4.

Table 3-4 Management actions required

Camp	Public use	Impacts to camp	Project works	Non-project related disturbance	Actions required
Parramatta	Recreation	Nil	Project works occurring at Cumberland, including some hammering in distance.	The Parramatta Park Trust were also testing a new sprinkler system to manage heat stress at the colony.	Nil

3.5 Noise Monitoring Results

Noise monitoring is undertaken by Parramatta Light Rail contractors for their project works. Refer to noise and vibration monitoring reports for the period for specific monitoring data.

Infrastructure works noise monitoring results are published on their website monthly at:

<<https://www.cpbcon.com.au/en/our-priorities/environment>>.

Attached Proforma

The attached form filled out during the inspection on (24-June-2021) 09:00 am – 09:50 am

Appendix 4 Flying-fox monitoring data proforma

Below is an extract from Ecosure's electronic data form that can be used as a data sheet if required.

Camp (camp name, and extent drawn on map provided)	Parramatta Park
Date	28 - Oct.
Time	8 - 9:50
Assessors	Megan H. Richard F.
Weather conditions	Hot, dry, humid
Grey-headed flying-fox	
Count	See over
Females visibly pregnant	
Dependent young	
Body condition	
Morbidity/ mortality	
Stress indicators	
Behavioural observations	
Black flying-fox	
Count	Nil
Females visibly pregnant	
Dependent young	
Body condition	
Morbidity/ mortality	
Stress indicators	
Behavioural observations	
Roost extent	
Add boundary points	See map
% currently occupied	See map
% available suitable habitat	See map
Vegetation condition	
Management	
Public use	
Impacts to camp	
Project works	Some hammering in distance.
Non-project related disturbance	Parra Bldg testing sprinkler system for Bot heat stress
Actions required	Nil.
Photos	See provided
Notes	Some chattering

PR3691 Parramatta Light Rail GHFF Monitoring Program

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Photos









BACK PAGE