

# **Grey-Headed Flying-Fox – Monthly Monitoring**

December 2021 Monitoring

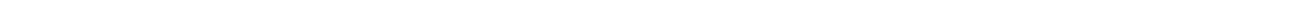
PLR-TFNSW-PJT-BI-RPT-000028

Parramatta Light Rail – Stage 1 (SSI-8285)

January 2021

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## Document control

Parramatta Light Rail – Stage 1

Grey-headed Flying-fox Monthly Reporting – December 2021

PLR-TFNSW-PJT-BI-RPT-000026

## Document history

Revision	Date of revision	Notes
A	24 January 21	Draft for review
0	28 January 21	Final for submission to stakeholders

# Glossary / Abbreviations

Abbreviation	Expanded text
BFF	Black Flying-fox
DPE	New South Wales Department of Planning and Environment
EES	Environment, Energy and Science (part of DPE)
GHFF	Grey-headed Flying-fox
Monitoring Program	Parramatta Light Rail Grey-headed Flying-fox Monitoring Program
OEH	(Former) New South Wales Office of Environment and Heritage (now part of DPE)
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 (DPE)

# 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 (PLR).

The reporting requirements are outlined in Section 6.3 of the Parramatta Light Rail Grey-headed Flying-fox Monitoring Program (Monitoring Program) (PLR-TFNSW-CBD-PE-PRG-000001) prepared in accordance with Condition C9(c) of the 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 and Environment – Environment, Energy and Science (DPE 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 22 December 2021 at Parramatta Park. Data was collected using the Proforma provided in Appendix 4 of the Grey-headed Flying-fox Monitoring Program.

### 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 the camp. A daytime static count was used to estimate abundance at the camp.

#### 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

Details of detectable impacts from the community's use of Parramatta Park, including for events, and nearby works were recorded to provide an understanding of the surrounding environment.

# 3 Results

## 3.1 Weather conditions

On the day of monitoring, the area recorded no rainfall at the closest meteorological station (Parramatta North, Masons Drive) -33.7917°S 151.0181°E 55m AMSL. Recorded weather conditions are provided in Table 3-1. GHFF monitoring was conducted between 08:10 AM and 9:30 AM.

Table 3-1 Weather conditions during monthly monitoring event (Masons Drive, Parramatta North):

Monitoring event	Max temp (°C)	Min temp (°C)	Rainfall (mm)	Wind Spd (km/h)	Wind Dir (9am)	Condition
22 December 2021	27.0	21.5	0	6 km/h at 9:00 am	SE	Overcast, Humid

## 3.2 Flying-fox demographics

Flying-fox demographics recorded at the Parramatta Camp are provided in Table 3-2. Parramatta camp contained 6,203 GHFF with around 1,860 dependent young flying with their parent over the GHFF camp. The approximate demographic population was 35:35:30 (males:females:juveniles). No black flying-foxes (BFF) were identified at the camp.

Table 3-2 Flying-fox demographics at Parramatta Camp

GHFF (Total)	BFF (Total)	Males	Females	Females visibly pregnant	Juveniles	Dependent young	Body condition	Morbidity/mortality
<b>6,203</b>	<b>0</b>	2,171	2,171	0	0	1,860	Fine	No

The number of GHFF has increased by 1,583 from the previous reporting period (refer Figure 3-1).

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

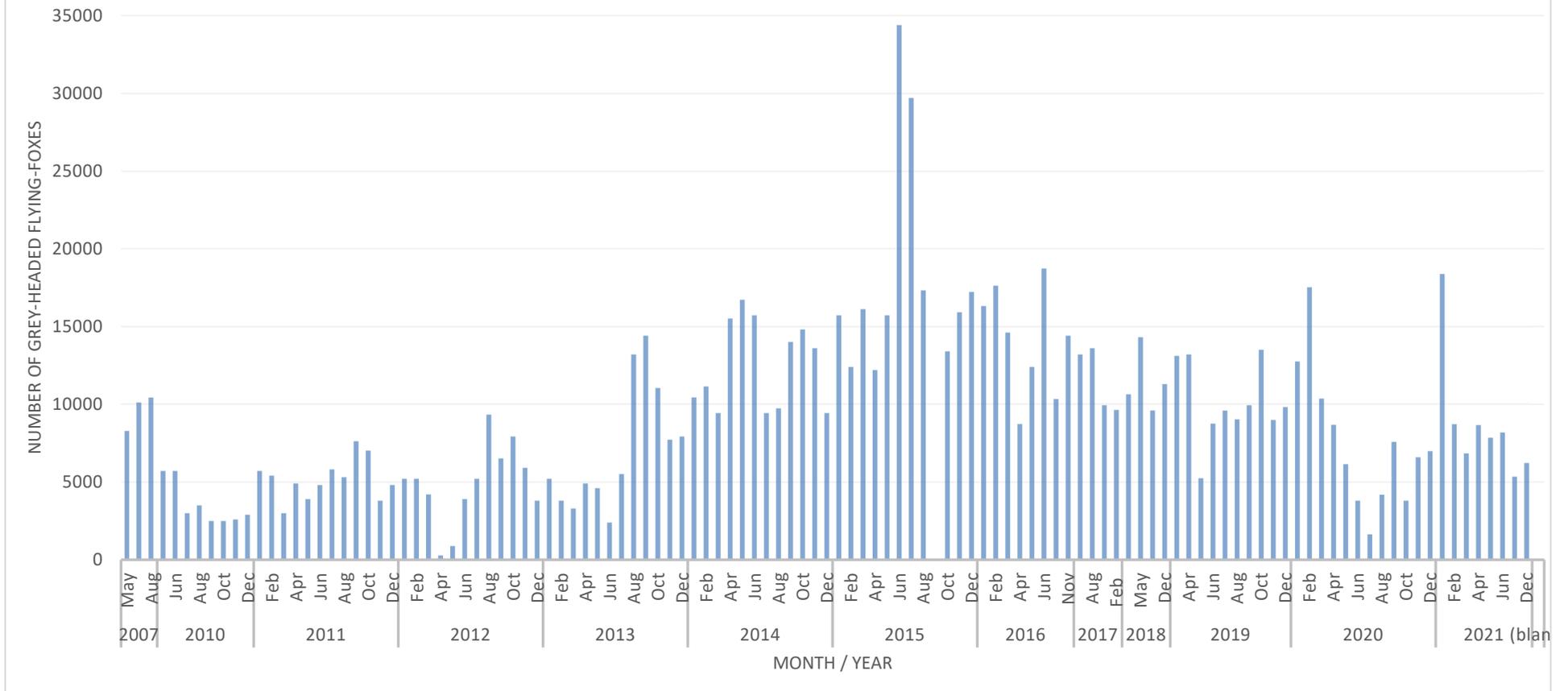


Figure 3-1 GHFF counts against baseline data (Source: Royal Botanical Gardens Martin J 2018 & Smith A 2018; NFFMP; TfNSW and Ecosure 2019, 2020, 2021)

### 3.3 Flying-fox behaviour and camp extent

The flying-foxes were observed demonstrating normal daytime behaviours. The GHFF were mainly resting due to the time of the survey, however a limited number of GHFF were observed flying within the camp extents. Overall the flying-foxes did not demonstrate any signs of stress. Behaviours observed included vocalisation and resting (see Table 3-3 for more details). At around 09:00AM, a low frequency intermittent banging noise could be heard - possibly due to truck and dog breaking at nearby a PLR work site.

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	Lifting 20-50 at a time, vocalisations	chatting and chittering	65	35	Some stripped branches but foliage otherwise okay

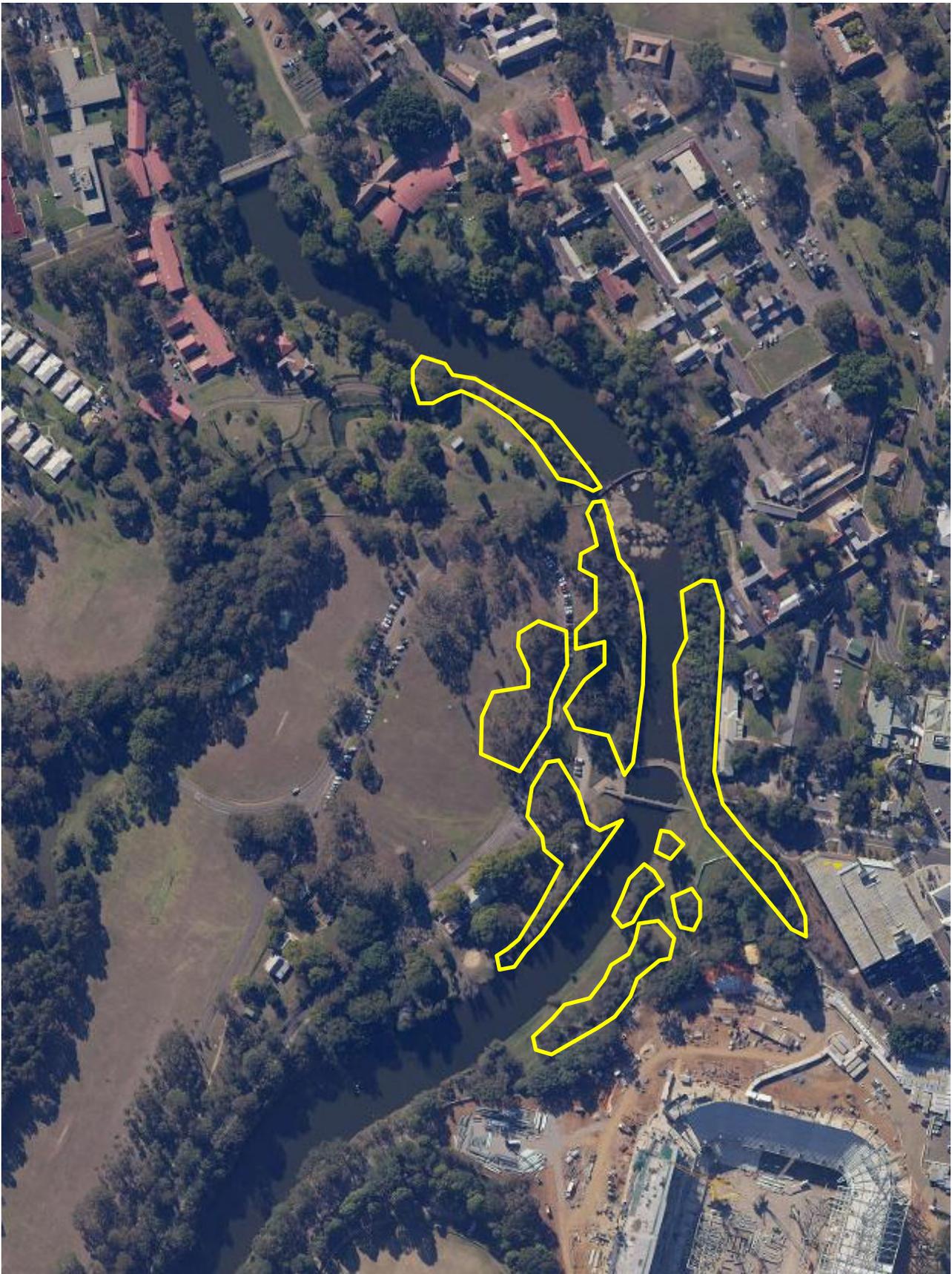


Figure 3-2 Extent of GHFF camp at Parramatta Park (December 2021)

### 3.4 Public use, disturbances and management actions

Observations of public use, project and non-project relates disturbance and any identified management actions at the Parramatta Park camp are provided in Table 3-4.

Table 3-4 Public use, disturbances and management actions required at Parramatta Park.

Public use	Impacts to camp	Project related disturbance	Non-project related disturbance	Management actions required
Walking and cyclist	Nil	Nil	Two (2) helicopters at 08:28 and 08:57 Arborist inspection to check irrigation system 08:00 to 09:45	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-projects/2018/building-parramatta-light-rail>>.

# Attached Proforma

The attached form filled out during the inspection on (22-December-2021) 08:10 am – 09:30 am

ecosure

## 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.

<b>Camp</b> (camp name, and extent drawn on map provided)	PP
Date	22 Dec '21
Time	8:10
Assessors	NK MH
Weather conditions	Overcast, humid
<b>Grey-headed flying-fox</b>	
Count	6,203
Females visibly pregnant	Nil
Dependent young	30% = 1860
Body condition	Good
Morbidity/ mortality	Nil
Stress indicators	
Behavioural observations	
<b>Black flying-fox</b>	
Count	
Females visibly pregnant	
Dependent young	<del>10-20%</del> Nil
Body condition	
Morbidity/ mortality	
Stress indicators	Lifting 20-50 at a time, chatting
Behavioural observations	Chattering
<b>Roost extent</b>	
Add boundary points	on Map
% currently occupied	65%
% available suitable habitat	35%
Vegetation condition	Some stripped branches, but foliage otherwise okay
<b>Management</b>	
Public use	Walking & Cyclists
Impacts to camp	Nil
Project works	Nil
Non-project related disturbance	Helicopter 8:28, Arborist inspection 8am - 9:45 → check irrigation system.
Actions required	Nil
Photos	→
Notes	

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# Photos





