



Approval

Relocation of Grey-headed Flying-foxes (*Pteropus poliocephalus*) from the Royal Botanic Gardens, NSW (2008/4646)

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

Person to whom the approval is granted Prof David Mabberley, Executive Director, Botanic Gardens Trust

Proponent's ABN ABN 22 988 772 206

Proposed action Relocation of Grey-headed Flying-foxes (*Pteropus poliocephalus*) from the Royal Botanic Gardens, Sydney and follow up disturbance.

Approval decision

Controlling provision	Decision
Listed threatened species and communities (sections 18 & 18A)	Approved

Conditions of approval This approval is subject to the conditions specified below.

Expiry date of approval This approval has effect until 2039

Person authorised to make decision

name and position Richard McAllister
Assistant Secretary
Environment Assessment Branch

signature

date of decision

22 September 2011

Approval Conditions:

1. The person taking the action must undertake the action in accordance with the conditions of this approval and as described in the final Public Environment Report. Where the final Public Environment Report and these conditions are contradictory, these conditions shall prevail to the extent of the contradiction.

Prior to dispersal

2. To ensure the protection of the Grey-headed Flying-fox (GHFF) colony present in the Royal Botanic Gardens Sydney (the Botanic Gardens), prior to any dispersal activity commencing the person taking the action must:
 - a) Establish an independent observer group (the group). The group and all associated administration must be fully funded and resourced by the person taking the action, for the life of the action. The group must consist of at least 3 people, all of whom must have demonstrated expertise in scientific methodology, animal or conservation biology, preferably in relation to Australian Flying Foxes. The members of the group and any subsequent changes to the membership must be approved by the Minister. The group must be available as required and detailed in these conditions of approval.
 - b) Establish an independent expert panel (the panel). The panel must be fully funded and resourced by the person taking the action, for the life of the action. The members of the panel and any subsequent changes must be approved by the Minister. The panel must consist of at least 5 people, all of whom must have demonstrated, substantial experience in Australian Flying Fox biology and conservation. The members of the panel must be available for a period of at least 3 years and cannot also be appointed as a member of the group in condition 2(a). The independent expert panel must be available to oversee and advise on all components of the action as required in these conditions of approval. The panel must not advise on any course of action that is not in accordance with the requirements of these conditions of approval.
 - c) Two weeks prior to dispersal activity commencing, provide in writing to the panel, the estimated number of GHFF located in the Botanic Gardens. The person taking the action must also inform the panel if the estimated numbers change by more than 10% prior to the commencement of dispersal activity. A member of the independent observer group must oversee the counting process and verify the accuracy of these estimated values.
 - d) Ensure all appropriate and necessary animal ethics approvals are received. These must be submitted to the panel. All such approvals must be kept up-to-date and valid for the life of the action.
 - e) Ensure a minimum of 100 GHFF located at the Botanic Gardens are fitted with tags. In subsequent years ensure that 1% of the GHFF colony located at Botanic Gardens are fitted with tags. For all years, at least 50% of those fitted with tags must be female. In the event that the total colony estimate changes by more than 10% in the two weeks prior to commencement of the action, any associated changes to the number of GHFF to be tagged must be pre-approved by the panel. The panel may choose not to approve any such changes if it is for the better protection of the GHFF.
 - f) Ensure a minimum of 400 GHFF located at the Botanic Gardens are banded. In subsequent years ensure 400 GHFF or 10% of the GHFF colony (to be determined by the panel) located at the Botanic Gardens are banded. For all years, at least 60% of those banded must be female. Dominant males must also be included amongst those banded. In the event that the total colony estimate changes by more than 10% in the two weeks prior to commencement of the action, any associated changes to the number of GHFF to be banded must be pre-approved by the panel. The panel may choose not to approve any such changes if it is for the better protection of the GHFF.
 - g) Ensure all banding and tagging activity, as required by these conditions of approval, is overseen and verified by a member of the independent observer group.

- h) Ensure all GHFF that are banded for the purposes of conditions 2(e) and 2(f) are registered with the Australian Bird and Bat Banding Scheme.
- i) Conduct a public health risk analysis and prepare a management plan (the plan) covering all components of the action. The plan must include the identification of public health risks (such as Hendra Virus and Lyssavirus) associated with dispersal of the GHFF from the Botanic Gardens and any subsequent re-dispersal, management actions to reduce any risk, a monitoring program and thresholds for corrective actions. The person taking the action must implement the plan. The person taking the action must also ensure that all appropriate and necessary approvals under relevant health legislation are received and complied with prior to commencing the action.

During dispersal

3. The person taking the action can only undertake dispersal and re-dispersal of GHFF between 1 May and 31 July in any given year. Passive measures can be undertaken outside this period, as stipulated by condition 10 of this approval.
4. Within the limitations outlined in condition 3, the person taking the action must undertake dispersal and re-dispersal activity in accordance with the following requirements:
 - a) For the first three days, activity can be undertaken for a period of no longer than 10 minutes at the beginning of each hour between 12.00pm and 4.00pm AEST each day.
 - b) In the event that GHFF are still roosting at the site following 4(a), activity can be increased to include a period of no longer than 10 minutes at sunset each day. This activity may start earlier than sunset if necessary.
 - c) In the event that GHFF are still roosting at the site 5 days after the commencement of 4(b), activity can be increased to include a period of no longer than 10 minutes at the beginning of each hour between 7.00am and 4.00pm AEST each day.
 - d) In the event the GHFF are still roosting at the site 14 days after the commencement of 4(b), activity can be increased to include a period of three non-consecutive 10 minute pre-dawn dispersals at the beginning of each hour from 3am AEST to 1hour before sunrise each day.
 - e) If GHFF are present at the site 31 days after the commencement of 4(a), dispersal activity must cease immediately. The person taking the action must inform the panel within 7 days of the observation being made and provide a detailed report to the panel outlining proposed contingency plans or possible alternative measures that could be implemented. The activities outlined in this report must be in accordance with these conditions of approval and approved by the panel prior to any further dispersal activity continuing.
 - f) GHFF must not be subject to more than 3 re-dispersals during the 1 May and 31 July period and must have a minimum of 5 days break between each dispersal activity.
5. The person taking the action must ensure daily counts of the GHFF colony to be dispersed or re-dispersed are undertaken between 1 May and 31 July, every year for the life of the action. Once a week during this period the count must be overseen, and verified for accuracy, by a member of the independent observer group.
6. The person taking the action must ensure on all days of dispersal and re-dispersal activity between 1 May and 31 July, behavioural monitoring of the GHFF colony, as defined by the Public Environment Report, is undertaken. The behavioural monitoring must be overseen and verified by a member of the independent observer group.
7. Dispersal and re-dispersal activity must cease immediately if, within any calendar week:
 - a) there are GHFF deaths and or multiple injuries (thresholds to be determined in consultation with NSW animal ethics committee and agreed by the panel) found within 1 kilometre of the dispersal or re-dispersal sites. The cause of the deaths and or injuries must be determined by qualified vet and reported to the panel. The person taking the action must inform the panel within 7 days of the observation

being made and provide a detailed report to the panel outlining proposed contingency plans or possible alternative measures that could be implemented to avoid further injuries or deaths of GHFF. The activities outlined in this report must be in accordance with these conditions of approval and must be approved by the panel prior to any further dispersal activity continuing.

8. The person taking the action must ensure at least one qualified spotter is present during any dispersal or re-dispersal activity, to sight the direction taken by GHFF as they leave the site.
9. The person taking the action must ensure that:
 - a) Between 1 May and 31 July in any year when dispersal or re-dispersal activity is occurring, the tracking of tagged GHFF (required by these conditions of approval) occurs daily by qualified operators and observers, respectively. The location of 80% of tagged GHFF within the Sydney region (as described in Annexure 1, titled, Map of Sydney Region) must be recorded at least once a fortnight. The appropriate percentage level of tagged GHFF located, and recorded once a fortnight, outside of the Sydney Region, will be determined by the panel. The percentage level must ensure the measure of success as defined by condition 14. This must be overseen and results verified by a member of the independent observer group. From 1 May, results must be provided to the panel once every two weeks until 31 July.
 - b) Between 1 August and 30 April, in any year when dispersal and re-dispersal activity occurred, tracking of the tagged GHFF must occur at least once a fortnight. The appropriate percentage level for the success rate will be determined by the panel, but must ensure the measure of success as defined by condition 14. This must be overseen and results verified by a member of the independent observer group. From 1 August, results must be provided to the panel once a month unless required more frequently to meet other conditions. The monitoring of tagged GHFF is to take place for the life of the battery or until the colony has been successfully relocated in accordance with condition 14.
10. Once more than 90% of the Botanic Gardens GHFF colony have not returned to the Botanic Gardens for more than 5 consecutive days, then the person taking the action must implement passive measures to prevent the re-establishment of the colony at the Botanic Gardens. These measures must be pre-approved by the panel and must not be inconsistent with these conditions of approval.
11. The person taking the action must submit the following reports to the Minister:
 - a) On the first day of each month for the period 1 May 2010 (or after commencement of dispersal) to 1 April 2011, a progress report detailing activities undertaken during the previous month and the associated outcomes. Each report must include the status of the colony in the Botanic Gardens at that time, the status of the re-located colony or colonies, data collected (in accordance with these conditions of approval) and details of any activities that will occur in the following month;
 - b) The monthly report due in April 2011 must also include a summary of the last 12 months of the action and the associated outcomes. The report must specify the status of the colony in the Botanic Gardens at that time, the status of the re-located colony or colonies, data collected (in accordance with these conditions of approval) and details of any requirements for re-dispersal activity proposed between 1 May and 31 July 2011. This report must be submitted to the Minister no later than 10 April 2011. This report must be approved by the Minister prior to any re-dispersal activity being undertaken. If the Minister determines in writing that he is not satisfied with this report, and believes it is necessary for the better protection of GHFF, the Minister may request that re-dispersal cannot commence until the person taking the action makes specified revisions to the report or the action for the Ministers approval. The person taking the action must comply with any such request.

- c) On 31 August 2011 and on the same date every subsequent year in which re-dispersal activity has occurred, a report must be submitted to the Minister. The report must detail the re-dispersal activities undertaken that year; data collected (in accordance with these conditions of approval); the status of the colony in the Botanic Gardens and of the re-located colony or colonies as at 31 July that year and details of any requirements for re-dispersal activity which will occur in the following year. This report must be approved by the Minister prior to re-dispersal being undertaken (the following year). If the Minister determines in writing that he is not satisfied with this report, and believes it is necessary for the better protection of GHFF, the Minister may request that re-dispersal the following year cannot commence until the person taking the action makes specified revisions to the report or the action for the Ministers approval. The person taking the action must comply with any such request.
- d) Each of the reports detailed above in 11(a)-(c) must attach a written and signed confirmation by the independent observer group and independent expert panel verifying the accuracy of the data, information, analysis and conclusions contained within that report.
- e) Raw data must be made available to the Minister or Department upon request.

During re-dispersal

12. Until such time that condition 14 is met, the new colony or colonies of GHFF formed as a result of the dispersal from the Botanic Gardens, may need to be subject to re-dispersal activity. The person taking the action must fully fund and resource any such re-dispersal activity.

Re-dispersal activity can only be undertaken between 1 May and 31 July (passive measures may be used between 1 August and 30 April) in any given year, in accordance with the methodology in condition 4, and the person taking the action must also meet the following requirements:

- a) Two days prior to commencement of any re-dispersal activity, the panel must be notified in writing of the total estimated number of GHFF at that site, including any GHFF that were already occupying that site. A member of the independent observer group must oversee the counting process and be able to verify the accuracy of these estimated values.
 - b) During re-dispersal, additional tags will be fitted, as required (at a level, determined by the panel, to ensure the measure of success as defined in the outcome for condition 14).
 - c) The level of effort for monitoring of dispersed and re-dispersed GHFF must be the same, or intensified (to a level determined by the panel) to ensure the measure of success as defined in the outcome for condition 14 between 1 August and 30 April.
 - d) On any day when re-dispersal activity occurs, the requirements of conditions 5, 6, 7, 8 and 9 must be met.
 - e) GHFF must not be subject to more than 3 re-dispersal activities during the 1 May and 31 July period and must have a minimum of 5 days break between any dispersal or re-dispersal activities.
13. In the event that GHFF disperse from the Botanic Gardens to a site from which they need to be re-dispersed, the person taking the action must:
 - a) ensure that on days when temperatures are predicted to reach 40°C or more, at sites where adequate vegetation cover is not present, as determined by the panel, and GHFF may consequently be exposed to heat-stress and/or death, water tankers and operators must be present to mist spray the GHFF; and
 - b) in that local council area where GHFF have established, the person taking the action must undertake a public awareness campaign which must include information on:
 - (i) the action and where the GHFF originated;
 - (ii) the status of the GHFF as a nationally threatened species and the associated protection afforded under the *Environment Protection and Biodiversity Conservation Act 1999*;

- (iii) information on what should be done if members of the public come across GHFF, including injured and dead GHFF; and
- (iv) identifying the associated potential human health issues and risks to people, including Hendra Virus and Lyssavirus and appropriate preventative measures.

Successful re-location of the Botanic Gardens GHFF colony

14. The person taking the action must act in accordance with these conditions of approval, until such time as the successful re-location of the Botanic Gardens GHFF colony can be demonstrated in a report. The report must be accompanied by written and signed support from the panel, submitted to and approved by the Minister.

Successful re-location can be demonstrated if, for each year that dispersal or re-dispersal activity is undertaken in the Botanic Gardens:

- a) 80% of the colony present at the commencement of dispersal or re-dispersal activity in that year, as determined by the monitoring of GHFF as per conditions of this approval, are residing in habitat:
 - (i) of a sufficient area, nature and quality to support the permanent occupation by the GHFF colony present; and
 - (ii) that is located within 50km of foraging habitat of a sufficient area, nature and quality to support the foraging requirements of the GHFF colony present; and
 - (iii) with canopy, mid- and under-storey vegetation sufficient to ensure that minimal GHFF will die from heat stress during days of air temperatures above 40°C; and
 - (iv) that is located in an area where the (human) community will not require the new GHFF colony or colonies to be re-dispersed as determined by the panel; and
 - (v) where more than 70% of adult GHFF females in each new colony are breeding each year for a minimum of 3 consecutive years – a member of the independent observer group must oversee and verify the collection of this data; and
 - b) the person taking the action has prepared and committed funding for the implementation of a vegetation rehabilitation plan for the necessary sites (as determined by the panel) of the new GHFF colony or colonies from the Botanic Gardens within the Sydney region. The vegetation management plan must detail commitments as to the provision of expert advice in seed collection, horticulture and ecology at the sites. The person taking the action must provide for up to \$10,000 per year (including in kind contributions) for a period of 5 years to fund activities implemented under the vegetation rehabilitation plan.
15. Within 10 days of the commencement of works, the person taking the action must advise the Department in writing of the actual date of commencement.
16. Within three months of every 12 month anniversary of the commencement of the action, the person taking the action must submit to the Department a report addressing compliance with the conditions of this approval. Annual reports must be provided until the Minister is satisfied that the proponent has complied with all conditions of the approval.
17. Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.
18. If the person taking the action wishes to carry out any activity otherwise than in accordance with the plans, reports or strategies referred to in these conditions of approval the person taking the action must submit for the Minister's approval a revised version of

any such plan, report or strategy. The varied activity should not commence until the Minister has approved the varied plan, report or strategy. If the Minister approves such a revised plan, report or strategy, that plan, report or strategy must be implemented in place of the plan, report or strategy originally approved.

19. If the Minister believes that it is necessary or desirable for the better protection of listed threatened species and communities, to do so, the Minister may request that the person taking the action make specified revisions to the plans, reports or strategies approved pursuant to these conditions of approval and submit the revised plan, report or strategy for the Minister's approval. The person taking the action must comply with any such request. The revised approved plan, report or strategy must be implemented. Unless the Minister has approved the revised approved plan, report or strategy, then the person taking the action must continue to implement the plan, report or strategy originally approved referred to in these conditions of approval.
20. If at any time after 12 months from the date of this approval, the Minister notifies the person taking the action in writing that the Minister is not satisfied that there has been substantial commencement of the action, the action must not thereafter be commenced without the written agreement of the Minister.
21. The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the above conditions of approval, including measures taken to implement the management plans required by this approval and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Departments website. The results of audits may also be publicised through the general media.

Definitions:

Department: The Australian Government Department responsible for the *Environment Protection and Biodiversity Conservation Act 1999*.

Minister: The Minister responsible for the *Environment Protection and Biodiversity Conservation Act 1999*.

Royal Botanic Gardens: The Royal Botanic Gardens in Sydney, Australia.

Commencement of works: Day of commencement of dispersal.

Dispersal: Refers to actions taken to disperse GHFF from the Botanic Gardens during 1 May – 31 July 2010 using the noise disturbance measures as described in the final PER.

Re-dispersal: Refers to actions taken to disperse GHFF (a) from the Botanic Gardens in years after 2010 and/or (b) at sites outside of the Botanic Gardens, in a new colony or colonies of GHFF formed as a result of dispersal or re-dispersal activity from the Botanic Gardens.

Status: Refers to the number of flying foxes present, their health, reproductive rates (including survival of young) and any relevant behavioural observations.

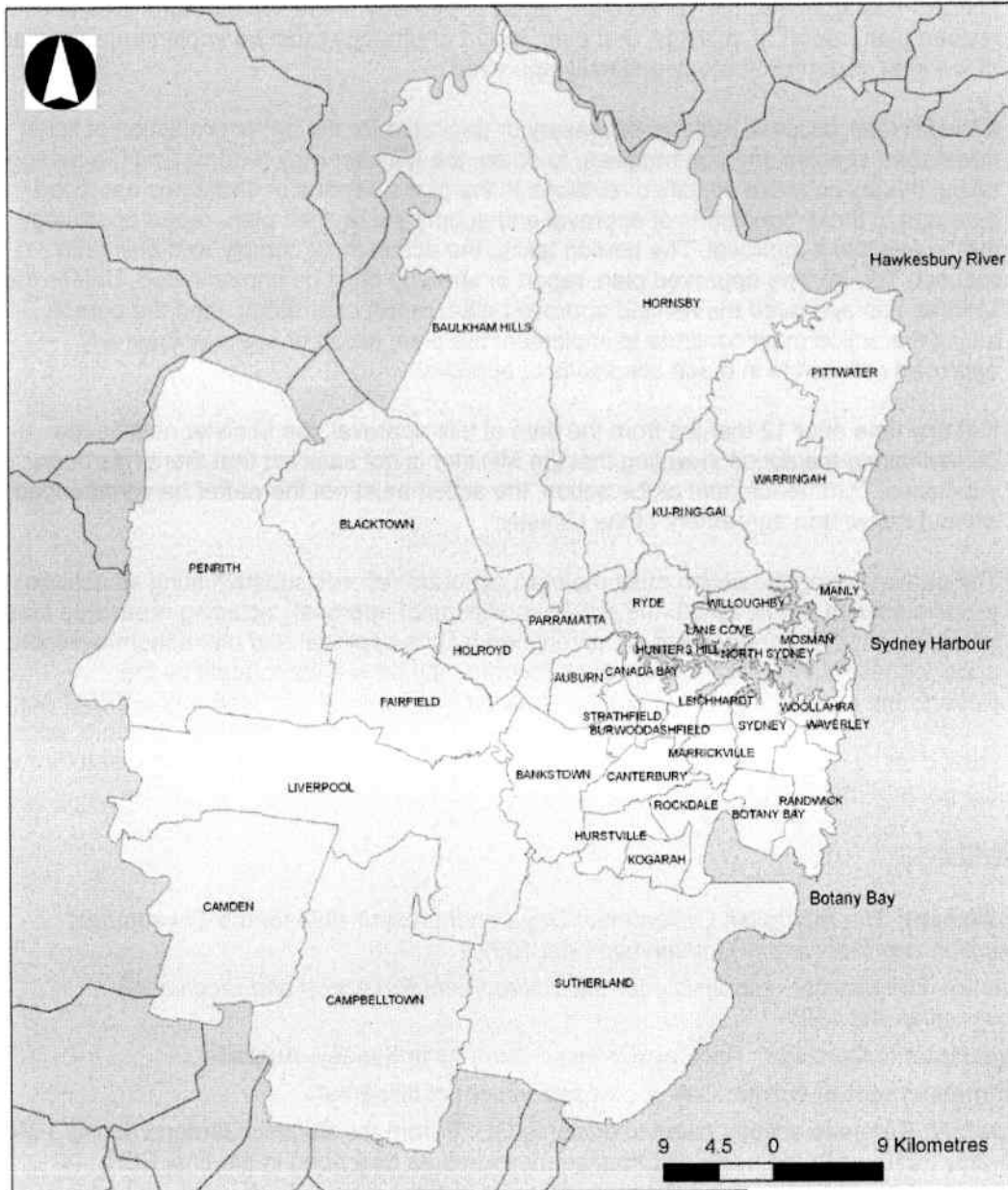
Life of the action: Until condition 14 is met or on the expiry date of this approval.

Passive measures: Measures that do not involve active physical harassment of GHFF and are approved by the independent expert panel.

Banded: Colour thumb bands.

New colony or colonies: Any colony or colonies required to be re-dispersed - that is, the colony does not meet the requirements of a successful re-location as defined by the conditions of approval. This definition may include existing colonies, however, the panel will determine the appropriate thresholds (eg. % or portion of Botanic Gardens GHFF within existing colony or colonies) to be included in this definition.

Annexure 1: Map of Sydney Region



Sydney Region