

Offsets Assessment Guide

For use in determining offsets under the Environment Protection and Biodiversity Conservation Act 1999  
2 October 2012

| Matter of National Environmental Significance                         |                        |
|-----------------------------------------------------------------------|------------------------|
| Name                                                                  | Grey-headed Flying-fox |
| EPBC Act status                                                       | Vulnerable             |
| Annual probability of extinction<br>Based on IUCN category definition | 0.2%                   |

| Impact calculator                                                            |                             |             |                                                |       |                    |
|------------------------------------------------------------------------------|-----------------------------|-------------|------------------------------------------------|-------|--------------------|
| Ecological communities                                                       |                             |             |                                                |       |                    |
| Protected matter attributes                                                  | Attribute relevant to case? | Description | Quantum of impact                              |       | Information source |
| Area of community                                                            | Yes                         |             | Area<br>(Hectares)                             |       |                    |
|                                                                              |                             |             | Quality<br>(Scale 0-10)                        |       |                    |
|                                                                              |                             |             | Total quantum of impact<br>(Adjusted Hectares) |       |                    |
| Threatened species habitat                                                   |                             |             |                                                |       |                    |
| Protected matter attributes                                                  | Attribute relevant to case? | Description | Quantum of impact                              |       | Information source |
| Area of habitat                                                              | Yes                         |             | Area<br>(Hectares)                             | 64.15 |                    |
|                                                                              |                             |             | Quality<br>(Scale 0-10)                        | 4     |                    |
|                                                                              |                             |             | Total quantum of impact<br>(Adjusted Hectares) |       |                    |
| Protected matter attributes                                                  | Attribute relevant to case? | Description | Quantum of impact                              |       | Information source |
| Number of features<br>e.g. Nest hollows, habitat trees                       | No                          |             |                                                |       |                    |
| Condition of habitat<br>Change in habitat condition, but no change in extent | No                          |             |                                                |       |                    |
| Threatened species                                                           |                             |             |                                                |       |                    |
| Protected matter attributes                                                  | Attribute relevant to case? | Description | Quantum of impact                              |       | Information source |
| Birth rate<br>e.g. Change in nest success                                    | No                          |             |                                                |       |                    |
| Mortality rate<br>e.g. Change in number of road kills per year               | No                          |             |                                                |       |                    |
| Number of individuals<br>e.g. Individual plants/animals                      | No                          |             |                                                |       |                    |

| Offset calculator                                                            |                             |                                                |                 |                                              |  |                                  |                                  |                                                               |     |                                                            |                                               |          |                                               |               |                                          |                           |                                              |                                              |                    |                           |         |  |  |
|------------------------------------------------------------------------------|-----------------------------|------------------------------------------------|-----------------|----------------------------------------------|--|----------------------------------|----------------------------------|---------------------------------------------------------------|-----|------------------------------------------------------------|-----------------------------------------------|----------|-----------------------------------------------|---------------|------------------------------------------|---------------------------|----------------------------------------------|----------------------------------------------|--------------------|---------------------------|---------|--|--|
| Ecological Communities                                                       |                             |                                                |                 |                                              |  |                                  |                                  |                                                               |     |                                                            |                                               |          |                                               |               |                                          |                           |                                              |                                              |                    |                           |         |  |  |
| Protected matter attributes                                                  | Attribute relevant to case? | Total quantum of impact<br>(Adjusted Hectares) | Proposed offset | Time Horizon<br>(Years)                      |  | Start area and quality           |                                  | Future area and quality without offset<br>(adjusted hectares) |     | Future area and quality with offset<br>(adjusted hectares) |                                               | Raw gain | Confidence in result (%)                      | Adjusted gain | Net present value<br>(adjusted hectares) | Offset Result             |                                              | Cost<br>(\$ total)                           | Information source |                           |         |  |  |
| Area of community                                                            | Yes                         | 0.00                                           |                 | Risk-related time horizon<br>(max. 20 years) |  | Start area<br>(hectares)         |                                  | Risk of loss without offset<br>(%)                            |     | Risk of loss with offset<br>(%)                            |                                               | 0.00     |                                               | 0.00          | 0.00                                     | Overall net present value | 0.00                                         |                                              |                    |                           |         |  |  |
|                                                                              |                             |                                                |                 | Time until ecological benefit                |  | Start quality<br>(scale of 0-10) |                                  | Future quality without offset<br>(scale of 0-10)              |     | 0                                                          | Future quality with offset<br>(scale of 0-10) |          | 0.00                                          |               | 0.00                                     | 0.00                      | % of impact offset                           | 0.00%                                        |                    |                           |         |  |  |
|                                                                              |                             |                                                |                 |                                              |  |                                  |                                  | Future area without offset                                    |     | 0.0                                                        | Future area with offset                       |          | 0.0                                           |               |                                          |                           |                                              | Minimum (90%) direct offset requirement met? | FALSE              |                           |         |  |  |
| Threatened species habitat                                                   |                             |                                                |                 |                                              |  |                                  |                                  |                                                               |     |                                                            |                                               |          |                                               |               |                                          |                           |                                              |                                              |                    |                           |         |  |  |
| Protected matter attributes                                                  | Attribute relevant to case? | Total quantum of impact<br>(Adjusted Hectares) | Proposed offset | Time Horizon<br>(Years)                      |  | Start area and quality           |                                  | Future area and quality without offset<br>(adjusted hectares) |     | Future area and quality with offset<br>(adjusted hectares) |                                               | Raw gain | Confidence in result (%)                      | Adjusted gain | Net present value<br>(adjusted hectares) | Offset Result             |                                              | Cost<br>(\$ total)                           | Information source |                           |         |  |  |
| Area of habitat                                                              | Yes                         | 25.66                                          |                 | Risk-related time horizon<br>(max. 20 years) |  | 20                               | Start area<br>(hectares)         |                                                               | 200 | Risk of loss without offset<br>(%)                         |                                               | 2%       | Risk of loss with offset<br>(%)               |               | 0%                                       | 4.40                      | 100%                                         | 4.40                                         | 4.23               | Overall net present value | 37.47   |  |  |
|                                                                              |                             |                                                |                 | Time until ecological benefit                |  | 10                               | Start quality<br>(scale of 0-10) |                                                               | 6   | Future quality without offset<br>(scale of 0-10)           |                                               | 5        | Future quality with offset<br>(scale of 0-10) |               | 7                                        | 2.00                      | 90%                                          | 1.80                                         | 1.76               | % of impact offset        | 146.03% |  |  |
|                                                                              |                             |                                                |                 |                                              |  |                                  |                                  | Future area without offset                                    |     | 195.6                                                      | Future area with offset                       |          | 200.0                                         |               |                                          |                           |                                              | Minimum (90%) direct offset requirement met? |                    | TRUE                      |         |  |  |
| Protected matter attributes                                                  | Attribute relevant to case? | Quantum of impact                              | Proposed offset | Time horizon<br>(years)                      |  | Start Value                      |                                  | Future value without offset                                   |     | Future value with offset                                   |                                               | Raw gain | Confidence in result (%)                      | Adjusted gain | Net present value                        | % of impact offset        | Minimum (90%) direct offset requirement met? | Cost<br>(\$ total)                           | Information source |                           |         |  |  |
| Number of features<br>e.g. Nest hollows, habitat trees                       | No                          |                                                |                 |                                              |  |                                  |                                  |                                                               |     |                                                            |                                               | 0.00     |                                               | 0.00          | 0.00                                     | 0.00%                     | FALSE                                        |                                              |                    |                           |         |  |  |
| Condition of habitat<br>Change in habitat condition, but no change in extent | No                          |                                                |                 |                                              |  |                                  |                                  |                                                               |     |                                                            |                                               | 0.00     |                                               | 0.00          | 0.00                                     | 0.00%                     | FALSE                                        |                                              |                    |                           |         |  |  |
| Threatened species                                                           |                             |                                                |                 |                                              |  |                                  |                                  |                                                               |     |                                                            |                                               |          |                                               |               |                                          |                           |                                              |                                              |                    |                           |         |  |  |
| Protected matter attributes                                                  | Attribute relevant to case? | Quantum of impact                              | Proposed offset | Time horizon<br>(years)                      |  | Start Value                      |                                  | Future value without offset                                   |     | Future value with offset                                   |                                               | Raw gain | Confidence in result (%)                      | Adjusted gain | Net present value                        | % of impact offset        | Minimum (90%) direct offset requirement met? | Cost<br>(\$ total)                           | Information source |                           |         |  |  |
| Birth rate<br>e.g. Change in nest success                                    | No                          |                                                |                 |                                              |  |                                  |                                  |                                                               |     |                                                            |                                               | 0.00     |                                               | 0.00          | 0.00                                     | 0.00%                     | FALSE                                        |                                              |                    |                           |         |  |  |
| Mortality rate<br>e.g. Change in number of road kills per year               | No                          |                                                |                 |                                              |  |                                  |                                  |                                                               |     |                                                            |                                               | 0.00     |                                               | 0.00          | 0.00                                     | 0.00%                     | FALSE                                        |                                              |                    |                           |         |  |  |
| Number of individuals<br>e.g. Individual plants/animals                      | No                          |                                                |                 |                                              |  |                                  |                                  |                                                               |     |                                                            |                                               | 0.00     |                                               | 0.00          | 0.00                                     | 0.00%                     | FALSE                                        |                                              |                    |                           |         |  |  |

| Summary                     |                   |                   |                    |                         |               |                             |        |
|-----------------------------|-------------------|-------------------|--------------------|-------------------------|---------------|-----------------------------|--------|
|                             |                   |                   |                    |                         | Cost (\$)     |                             |        |
| Protected matter attributes | Quantum of impact | Net present value | % of impact offset | Direct offset adequate? | Direct offset | Other compensatory measures | Total  |
| Birth rate                  | 0.00              | 0.00              | 0.00               | FALSE                   | 0.00          | N/A                         | 0.00   |
| Mortality rate              | 0.00              | 0.00              | 0.00               | FALSE                   | 0.00          | N/A                         | 0.00   |
| Number of individuals       | 0.00              | 0.00              | 0.00               | FALSE                   | 0.00          | N/A                         | 0.00   |
| Number of features          | 0.00              | 0.00              | 0.00               | FALSE                   | 0.00          | N/A                         | 0.00   |
| Condition of habitat        | 0.00              | 0.00              | 0.00               | FALSE                   | 0.00          | N/A                         | 0.00   |
| Area of habitat             | 25.66             | 37.47             | 1.46               | TRUE                    | 0.00          | N/A                         | 0.00   |
| Area of community           | 0.00              | 0.00              | 0.00               | FALSE                   | 0.00          | N/A                         | 0.00   |
|                             |                   |                   |                    |                         | \$0.00        | \$0.00                      | \$0.00 |