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NEWCASTLE
REGIONAL OFFICE

Application for a

Section 91 Licence

To harm or pick a threatened species, population or ecological community*, or damage habitat under the *Threatened Species Conservation Act 1995*.

1. Applicant's Name: <i>(if additional persons require authorisation by this licence, please attach details of names and addresses)</i>	
2. Organisation name and position of Applicant: <i>(if applicable)</i>	
3. Postal address:	
4. Telephone:	
5. Location of the action: <i>(including grid reference and local government area and delineated on a map).</i>	Burdekin Park GDA94 Lat -32 33 54 Long 151 10 34 LGA: Singleton And the urban area of Singleton if required.
6. Full description of the action and its purpose <i>(eg. scientific research, environmental assessment, regeneration activities, development etc.).</i>	<p><u>Introduction</u></p> <p>The purpose of this Licence is to cull the Grey Headed Flying Fox from Burdekin Park to stop them from roosting, breeding and over wintering in the park. This action will stop the GHFF from killing the mature trees in the park and will enable the Singleton Community to use the park in the future. At present the Singleton human community is unable to use the park due to the presence of the GHFF roosting and the sheer numbers present which are urinating and defecating and defoliating the mature native and exotic heritage trees in the park.</p> <p>The methods used will be firearms (shot guns or similar or high power air rifles</p>

A threatened species, population or ecological community means a species, population or ecological community identified in either Schedule 1 or Schedule 2 of the *Threatened Species Conservation Act 1995*.

with live bullets. The licensed fire arms users will shoot the flying foxes while they are roosting in the trees or flying above the park.

A colony of Grey-headed Flying-fox (GHFF) has seasonally resided in Burdekin Park since Spring 2000. Over winter months the numbers reduce. During July, August and part of September 2005 there were no GHFF in the park. Since that time the grey headed flying fox have again taken up residence year round. In November 2007 there would be 2500 + during the day, with numbers increasing. Culling the Grey headed flying fox, will stop tree canopy damage occurring to existing mature heritage trees in the park.

Background

Burdekin Park is Singleton's premier park, and is located on the New England Hwy in the middle of the town. The presence of the GHFF colony is inflicting severe crown damage in mature native and Exotic planted trees, some of which are over 120 years old. The Park is listed as a Heritage Item of Local Significance in the Singleton Local Environment Plan 1996. The mature trees impart the majority of the heritage value to the Park. The Museum building situated within Burdekin Park is of state significance. The colony is also creating a nuisance amongst some sectors of the local community as detailed below:

- The Park hosts the town's war memorial. The RSL has made complaints to Council re: dawn memorial services being disrupted (participants being defecated upon by GHFF) and memorials damaged by the GHFF faeces.
- Hunter Valley Guides used to hold monthly markets in the Park however stall holders and visitors are being deterred by smell and faeces of the GHFF, particularly by spoiling of food and stock. The markets have moved to a less desirable site due to the flying foxes.
- Some sectors of the community believe the GHFF propose a health risk and are reducing visitor numbers to the park.
- Council has had to increase maintenance duties in the park to overcome slip hazards, lawn damage, tree defoliation and spoiling of fixtures
- Westpac Helicopter Rescue Service is concerned their aircraft are at risk of damage from bats.

Activities that currently occur in Burdekin Park include:-

- Garden weddings
- Bands in the Park (first weekend in November).
- Remembrance Day/Armistice Day/Anzac Day ceremonies.
- Carols by Candlelight (now moved due to Flying foxes).
- Launch of Christmas Lights in Burdekin Park Trees (now moved due to flying foxes).
- Town Band concerts.
- General maintenance eg mowing and petrol-powered whipper-snipping,

edging, yard vacuum cleaning and chainsaw maintenance of trees.

Burdekin Park has the only war memorial in Singleton for the Boer War, WWI and WWII. The Park also hosts the only outdoor band shell in the town.

In 2002/2003 in response to the GHFF issue, Singleton Council held a public meeting and subsequently formed a steering committee to discuss the issue and possible solutions. The steering committee comprised representatives from NPWS, Council, RSL Singleton Sub-Branch, Wildlife carer groups and concerned citizens. After the public meeting, the steering committee convened on a further two occasions, to review facts about the GHFF and case studies in their management. After much consideration, the committee resolved to 'relocate the flying-foxes by non-lethal means'.

Previous Attempts and Methods to discourage GHFF

Council used an electronic deterrent in April 2003 in an attempt to deter the GHFF from returning to the park in Spring. Other methods including the use of hand held hoses and lighting were trailed in a relocation program but all methods proved to be unsuccessful.

Council resolved that an all out effort be made from the 4th August to 18th August 2003 to remove the flying foxes in Burdekin Park using sound equipment, water and lighting.

Five different methods were used:-

- Electronic and other mechanical noise
- Water Sprays
- Hire Hose
- Lighting
- Beacons, reflective objects etc hung in trees.

The only effective methods were loud mechanical noise and water sprays. The flying foxes left the park but deterrents had to cease due to bats roosting in undesirable sites eg. trees near residences and the hospital.

Work ceased on the 18th August 2003. Since this time bat numbers have varied up to about 3,000 flying foxes. Generally GHFF and some Little Red Flying Foxes (*Peropus scapulaus*).

There has been significant community debate in Singleton about the flying foxes in Burdekin Park during 2004 and 2005. On the 29th March 2005 Singleton Council considered and accepted an offer by Mr. Les Shilton to attempt to remove the flying foxes using noise generated by modified motor mowers. Mr Shilton and associates conducted this work on a volunteer basis

for one week from Monday the 18th to Saturday the 23 April 2005 in an attempt to remove the flying foxes for the Anzac Day ceremonies. Unfortunately the method was not entirely successful and there were still flying foxes present at the Anzac Day ceremonies causing considerable disturbance and discomfort to those present.

The methodology was to use modified motor mowers and whipper snippers to emit loud noise in an attempt to disturb the flying foxes and encourage them to move on. The procedure is detailed below:-

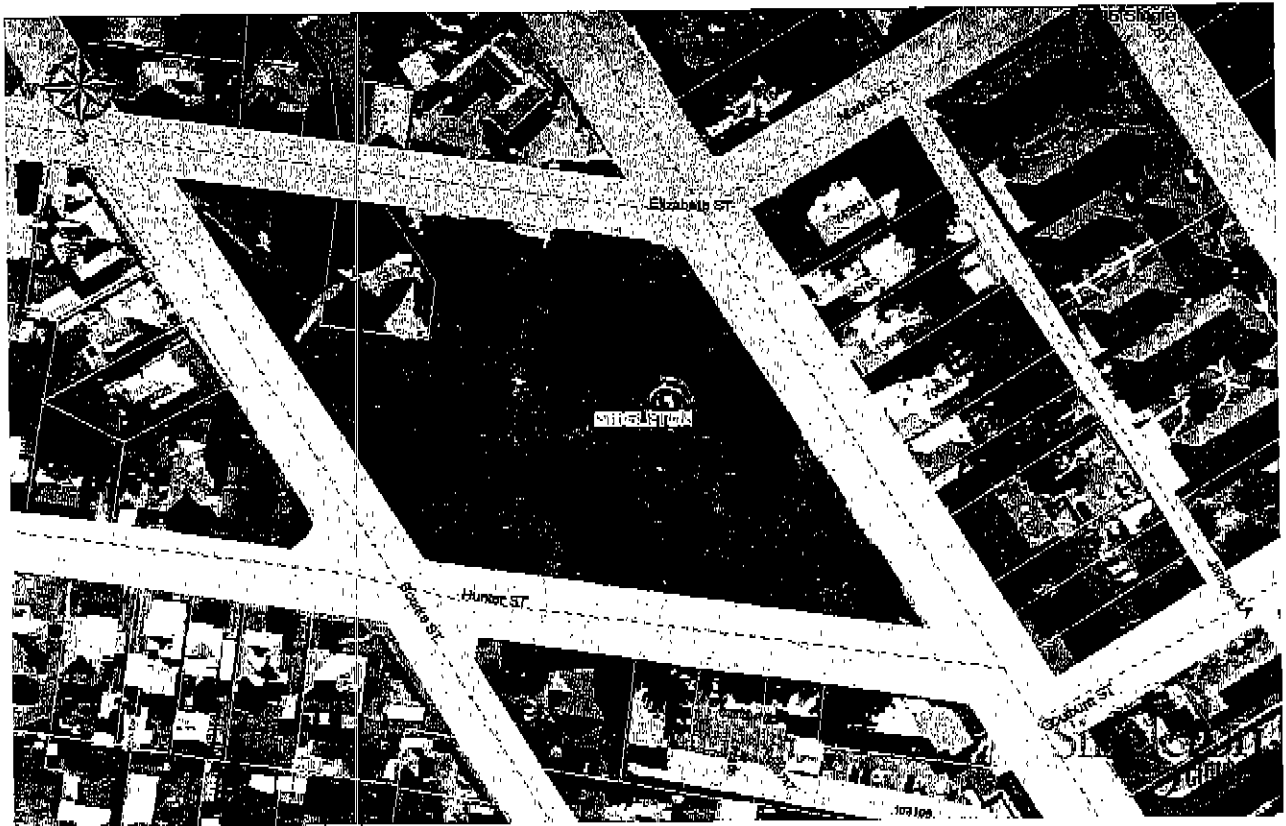
- The noise commenced early in the morning and continued for up to half an hour. This was repeated four to five times a day, after a half hour rest for the flying foxes, until dusk. Experience elsewhere, for example Melbourne Botanic Gardens, demonstrated a major work (longer hours) is required in the early days of the project with fewer hours as the project proceeds.
- Two or three cars monitored when the flying foxes left the park. When the flying foxes roosted in urban areas/homes a volunteer knocked at the home and the immediate neighbours to gain concurrence to use the modified mower noise to move the bats on.
- Sites that are potential bat camp sites were identified. The methodology was to try and move the bats in these directions whenever possible over the term of the project. The sites include the riparian zone of the Hunter River near Redbournberry Bridge including Clydesdale Reserve and Fern Gully Road gully area. All these areas have moderate to large trees and are due east of Singleton. All these areas are well away from residences and commercial areas.

This particular project was proposed as an ongoing procedure and if the flying foxes returned to the park the following procedure was followed:-

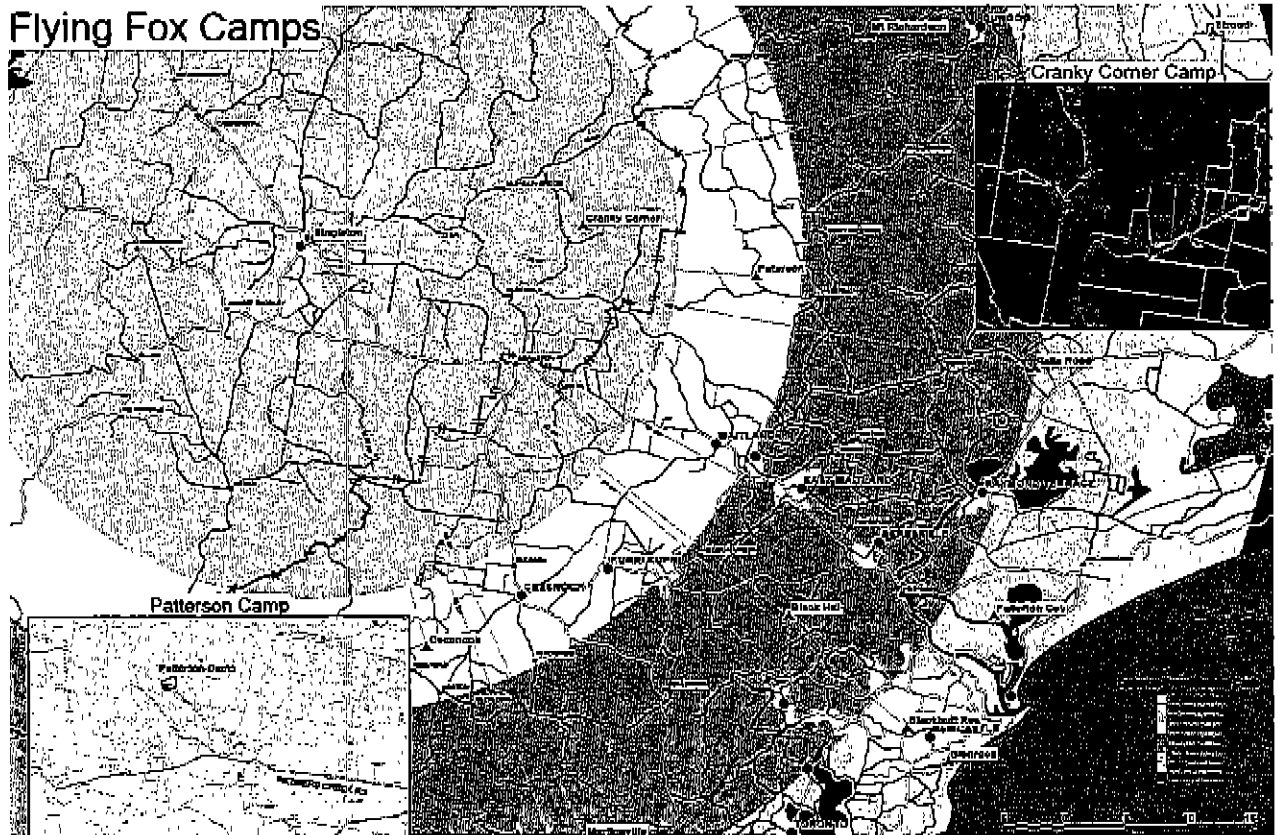
- Allow the bats to rest for approximately half an hour before recommencing the noise.
- A vineyard LPG gas noise gun will be used to make a single noise in the park approximately:-
 - 8 a.m. daily (9 a.m. Sunday)
 - 6 p.m. daily.

Although the effort did influence the flying foxes to leave the park they returned soon after. Efforts to remove the flying foxes ceased Saturday 23 April 2005.

	<p>2007 History</p> <p>In 2007 an application was made to the Department of Environment and Climate Change for a section 91 licence to use methods including D-ter, water sprays, smoke, lights, sound and other methods to persuade the Grey headed Flying fox to move from the park to roost at other suitable areas along the Hunter River.</p> <p>A draft licence was forwarded to Singleton Council outlining the conditions required to implement the licence. In order to meet the conditions the financial impact upon council was deemed to be too expensive for council to implement, especially as the work would be ongoing and would occur on an ongoing basis.</p> <p>Council resolved to seek a further Section 91 licence to cull the grey headed flying fox</p> <p><u>Proposed Culling Methodology</u></p> <p>To shoot the flying fox while they are roosting in the Parks trees, using firearms. The firearms would be used by licensed persons, and subject to approval from the Police Firearms registry. The guns would be fired, shooting the flying fox out of the trees as they are roosting, instantly killing the animal. The animals would be checked to ensure they are dead, collected and disposed of in a separate area of the Singleton Waste Depot. The time of shooting would be during daylight hours. The culling will commence in winter months when the GHFF numbers are low.</p> <p>The park will be monitored daily for the return of the bat colonies. It is considered that a bat carer is not required as the GHFF will be shot dead.</p> <p>Upon arrivals of more GHFF, Council's Manager Parks & Facilities will be immediately notified to arrange for the animals to be culled, in accordance to conditions outlined in a granted Section 91 licence. It is hoped that by initiating a response to the return of the GHFF as quickly as possible, the GHFF will move on soon after returning thereby discouraging them from roosting in Burdekin Park.</p>
7. Total area of site where action required.	<p>1.54 Ha</p> <p>See attached aerial photo of park.</p>



Identified Flying Fox Camps in the Lower Hunter Valley



<p>8. Duration and timing of the action (including staging, if any).</p>	<p>Culling will commence after the Section 91 Licence approval, and will be an ongoing process. The term of this licence is requested up until the 1 March 2010.</p> <p>Council and the community workers are requesting a Licence to cull for intermittent periods whenever flying foxes return to Burdekin Park. The aim is to persuade other mature adult flying foxes from returning to the park and to move on to a more suitable habitat so they will not be culled. It is widely understood that the process of removing and keeping the GHFF out of Burdekin Park will be a long term project.</p>				
<p>9. Is the action to occur on land declared as critical habitat? (please tick appropriate box)</p>	<p>No</p>				
<p>10. Threatened species, populations or ecological communities to be harmed or picked.</p>	<p><u>Scientific Name</u></p> <p><u><i>Pteropus poliocephalus</i></u></p> <p><u><i>Pteropus scapulatus</i></u></p>	<p><u>Common Name</u> (if known)</p> <p>Grey-Headed Flying-Fox</p> <p>Little Red Flying Fox</p>	<p><u>Conservation Status</u></p> <p>Vulnerable</p> <p>Protected (NP&W Act 1974)</p>	<p><u>Details of no. of individual animals, or proportion and type of plant material</u> (Eg. Fertile branchlets for herbarium specimens or whole plants or plant parts)</p> <p>3000+ Grey Headed Flying Fox</p>	
<p>11. Species impact: (please tick appropriate box)</p> <p>a) For action proposed on land declared as critical habitat; or</p> <p>b) For action proposed on land not</p>	<p>Items 12-25 have been addressed</p>				

* Critical habitat means habitat declared as critical habitat under Part 3 of the Threatened Species Conservation Act 1995

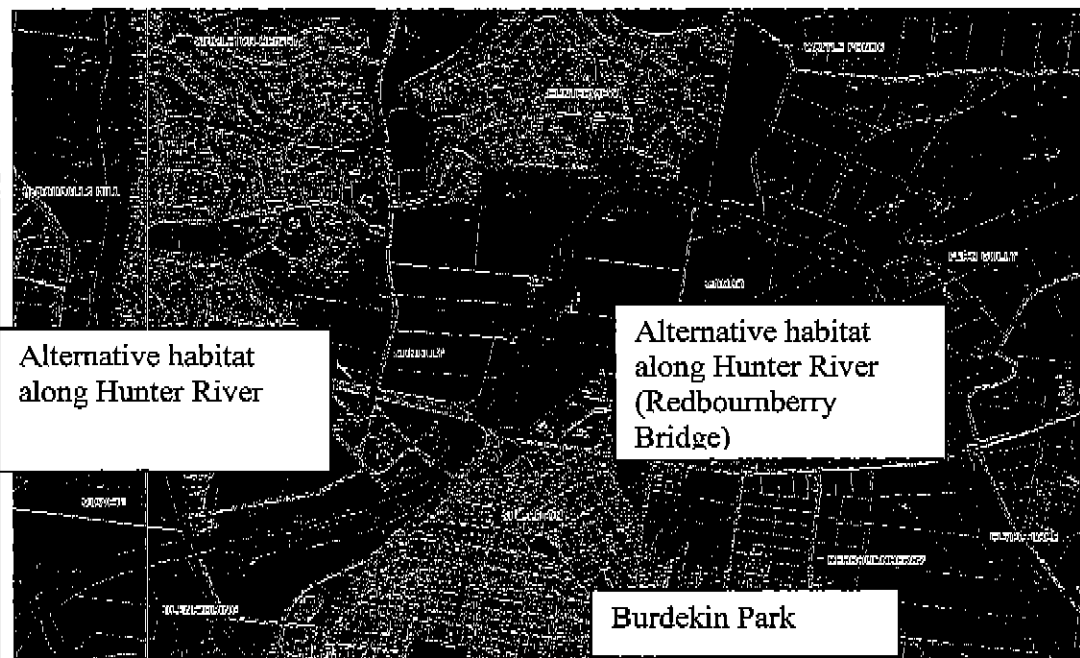
declared as critical habitat.				
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N.B: Provision of a species impact statement is a statutory requirement of a licence application, if the action is proposed on critical habitat. The provision of information addressing items 12 to 17 is a statutory requirement of a licence application if the action proposed is not on land that is critical habitat. Information addressing any of the questions below must be attached to the application.

12. Describe the type and condition of habitats in and adjacent to the land to be affected by the action.	<p>The camp is located in Burdekin Park, an urban park surrounded by residential and commercial areas, and immediately adjacent to the New England Highway.</p> <p>Burdekin Park comprises 1.19Ha of lawn, rose gardens and mature trees, both native (eucalypts, Bunya Pine, Norfolk Island Pine, Hoop Pine, Macadamia etc) and introduced species (African Olive, Jacaranda, <i>Pinus spp.</i>). All trees in the park are mature, with many planted in the late 1800's.</p>
13. Provide details of any known records of a threatened species in the same or similar known habitats in the locality (include reference sources).	There are no known records of threatened species in the same or similar known local habitat.
14. Provide details of any known or potential habitat for a threatened species on the land to be affected by the action (include reference sources).	<p>Because of the urban nature of the site and the highly modified environment of the Park, there is no known or potential habitat for a threatened species on the site.</p> <p>The NSW NP&WS flying fox camps data base shows camps at Cranky Corner (About 23km from Burdekin Park) and at Paterson (about 37 km from Burdekin Park). Both sites were investigated:-</p> <p>Cranky Corner camp. The site was visited by the applicants and the land owner Mr Alan Thomas. No flying foxes were found camped at the site. The site is a large gully on the south east side of a ridge. The upper part of the gully vegetation is typified by spotted gum/iron bark plant community. Some of these trees were in flower at the time of the visit on the 8 April 2005. Many of the trees are very large. Lower down the valley there are other bat food trees e.g. Port Jackson fig. Lower down the gully eventually opens up to cleared grazing land and a track (Cranky Corner Road). The clearing was carried out many years ago.</p>

	<p>The site is located on Mr Thomas's property which is over 1000 acres. Mr Thomas has owned the land for many years and his father before him. Mr Thomas advised he intends to continue operating the land as a cattle grazing property.</p> <p>Paterson camp. The camp is located on Cabbage Tree Creek near Webber Creek Road approximately 4 km west of Paterson. Because of the difficulty obtaining owners consent the site was not visited.</p>
15. Provide details of the amount of such habitat to be affected by the action proposed in relation to the known distribution of the species and its habitat in the locality.	<p>In the Hunter, colonies of GHFF are known to exist in Burdekin Park, Cranky Corner (via Stanhope) and Wingham Brush. According to the NSW NPWS Atlas of NSW Wildlife, GHFF have been recorded around Putty (bordering Wollemi NP), Singleton, Ravensworth, Lochinvar and west of Muswellbrook on the edge of Barrington Tops NP. Colonies also exist in the Sydney and Melbourne Botanic Gardens, Fitzroy Gardens, MacLean, Grafton and Bellingen. Other colonies probably occur in lower profile areas.</p> <p>The aim is remove the colony from Burdekin Park and to encourage them to use an alternative local site where their presence will not conflict with Burdekin Park. An example of an alternative site is the riparian vegetation zone along the Hunter River.</p>
16. Provide an assessment of the likely nature and intensity of the effect of the action on the lifecycle and habitat of the species.	<p>The assessment of the culling process will decrease the numbers of mature flying fox. This will decrease the numbers and will reduce the population.</p> <p>Repeated culling over several months each year should discourage any returning GHFF to relocate to an alternative roost. The system will be implemented until all flying foxes have left Burdekin Park and the Singleton urban area.</p> <p>As part of the project, Singleton Council intends to improve the habitat value of the alternative site previously used by the GHFF, by planting suitable habitat trees where possible. This work has already commenced in Clydesdale Reserve to the east of Singleton.</p>
17. Provide details of possible measures to avoid or ameliorate the effect of the action.	<p>In April 2007 Xstrata Coal provided \$200,000 from Xstrata coal to improve the riparian zone of the Hunter River from Rose Point Park to Redbournberry bridge, a length of over 5.8 km of river banks. Much of the river bank land is reserve, and unsuitable for residential development.</p> <p>The grant money from will be partly used to create fauna and flora habitats, specifically for grey headed flying fox. The new habitats are between 2-5km away from Burdekin Park, and are on the river flight path for flying fox. Over the past few years riparian enhancement vegetation has been planted at Rose Point Park and Redbournberry Reserve, the trees being suitable habitat for flying fox. The GHFF do have alternative roost sites, other than Burdekin Park or other urban exotic trees in Singleton CBD should they return.</p> <p>The deterrent methods are aimed to eradicate the flying fox colony, by repeated culls over time.</p>

Map showing existing roosting site at Burdekin Park, and alternative sites, where intensive habitat creation projects have been created and are continuing



N.B: The Director-General must determine whether the action proposed is likely to significantly affect threatened species, populations or ecological communities, or their habitats. To enable this assessment the Applicant is required to address items 18 to 25. Information addressing any of the questions below must be attached to the application.

18. In the case of a threatened species, whether action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.

The timing of the cull will be determined so the GHFF will not roost in Burdekin Park.

The life cycle of the GHFF will be considered when planning culling.

<p>19. In the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction</p>	<p>The local population will be threatened by the GHFF being culled from Burdekin Park.</p>
<p>20. In the case of an endangered ecological community or critically endangered ecological community, whether the action proposed:</p> <p>(i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or</p> <p>(ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction</p>	<p>The ongoing cull will effectively remove the suitability of Burdekin Park as a GHFF camp. However the culling will be contained within a small area (~1.19Ha) so as not to impact upon local foraging sites.</p> <p>The disturbance will adversely modify the ecological community. The cull will remove GHFF from roosting within trees at Burdekin park. Other potential foraging and roosting sites along the Hunter River will not be impacted, but will become more attractive as roosting sites,</p>

<p>21. In relation to the habitat of a threatened species, population or ecological community:</p> <p>(i) the extent to which habitat is likely to be removed or modified as a result of the action proposed, and</p> <p>(ii) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action, and</p> <p>(iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long term survival of the species, population or ecological community in the locality</p>	<p>Existing habitat within Burdekin park will not be damaged by implementing a cull of the GHFF. The general health of the trees will improve once the bats have left Burdekin Park.</p> <p>The area known as Burdekin park is highly modified park environment. It is a stand alone man made urban environment comprising of mature exotic and native trees. It is not a naturally occurring habitat for flying foxes.</p> <p>The cull will not modify the parks existing environment. However the GHFF will be eliminated from the park by ongoing culling.</p>
<p>22. Whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly).</p>	<p>Critical habitat will not be affected by this operation.</p>
<p>23. Whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement</p>	<p>The actions proposed are not consistent with the objectives of a recovery plan, as the GHFF would be eliminated from Burdekin Park. Singleton LGA is bounded by Mt Royal National Park and the Yengo/Wollemi complex. Suitable GHFF habitat does exist in these areas but the presence of GHFF is unknown. The Atlas of NSW Wildlife records GHFF on the perimeter of Wollemi and Barrington Tops NP and at other</p>

plan.	locations around Singleton as listed in Q15.
24. Whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.	The culling action will increase the impact of a threatening process by the GHFF being culled.

Important Information for the Applicant

Processing times and fees

The *Threatened Species Conservation Act 1995* provides that the Director-General must make a decision on the licence application within 120 days where a species impact statement (SIS) has been received. No timeframes have been set for those applications which do not require a SIS. The Director-General will assess your application as soon as possible. You can assist this process by providing clear and concise information in your application.

Applicants may be charged a processing fee. The Director-General is required to advise prospective applicants of the maximum fee payable before the licence application is lodged. Therefore, prospective applicants should contact the NPWS prior to submitting a licence application.

A \$30 licence application fee must accompany a licence application.

Protected fauna and protected native plants*

Licensing provisions for protected fauna and protected native plants are contained within the *National Parks and Wildlife Act 1974*. However, a Section 91 Licence may be extended to include protected fauna and protected native plants when these will be affected by the action.

If you are applying for a licence to cover both threatened and protected species please provide the information requested in Item 10 and a list of protected species and details of the number of individuals animals or proportion and type of plant material which are likely to be harmed or picked.

Request for additional information

The Director-General may, after receiving the application, request additional information necessary for the determination of the licence application.

Species impact statement

Where the application is not accompanied by a SIS, the Director-General may decide, following an initial assessment of your application, that the action proposed is likely to have a significant effect on threatened species, populations or ecological communities, or their habitats. In such cases, the *Threatened Species Conservation Act 1995* requires that the applicant submit a SIS. Following initial review of the application, the Director-General will advise the applicant of the need to prepare a SIS.

Director-General's requirements for a SIS

Prior to the preparation of a SIS, a request for Director-General's requirements must be forwarded to the relevant NPWS Zone Office. The SIS must be prepared in accordance with section 109 and 110 of the TSC Act and must comply with any requirements notified by the Director-General of National Parks and Wildlife.

Protected fauna means fauna of a species not named in Schedule 11 of the *National Parks and Wildlife Act 1974*. Protected native plant means a native plant of a species named in Schedule 13 of the *National Parks and Wildlife Service 1974*.

Certificates

If the Director-General decides, following an assessment of your application, that the proposed action is not likely to significantly affect threatened species, populations or ecological communities, or their habitats, a Section 91 Licence is not required and the Director-General must, as soon as practicable after making the determination, issue the applicant with a certificate to that effect.

N.B: An action that is not required to be licensed under the Threatened Species Conservation Act 1995 may require licensing under the National Parks and Wildlife Act 1974, if it is likely to affect protected fauna or protected native plants.

I confirm that the information contained in this application is correct. I hereby apply for a licence under the provisions of Section 91 of the *Threatened Species Conservation Act 1995*.

Steve McGrath
General Manager
Singleton Council

Applicant's Signature:

Date: 3rd December, 2007