NSW National Parks and Wildlife Service

# Review of environmental factors: Cuttaburra National Park infrastructure establishment works

**Figure 1 Comeroo homestead precinct (photo: Joshua J Smith Photography)**

Environment and Heritage Group, Department of Climate Change, Energy, the Environment and Water; www.environment.nsw.gov.au; EHG 2024/0014; March 2024.

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**Document control**

| Version | Date | Author/ Modified by | Approved by |
|---|---|---|---|
| V1 | | Jessica Stokes | |

# 1. Introduction

## 1.1 Brief description of the proposal

| | |
|---|---|
| Proposal name and brief description | Modifications to the Comeroo operational area and campground within the proposed Cuttaburra National Park as part of establishing the reserve as a national park and providing suitable, safe, and compliant operational and visitor infrastructure.<br>The proposal aims to provide distinct operational and visitor precincts, separating the two functions and to provide safe and comfortable housing to attract and retain staff living on the property.<br>A detailed description is provided in Section 6 of this REF. |
| Location of activity | Comeroo precinct |
| Name of NPWS park or reserve | Cuttaburra National Park (formerly Comeroo Station) |
| Description of any unreserved land | N/A |
| NPWS Area | Northern Inland Branch - Bourke |
| Council | Bourke Shire Council |
| NSW State electorate | Barwon |
| Estimate capital cost of project* | 1,500,000 |

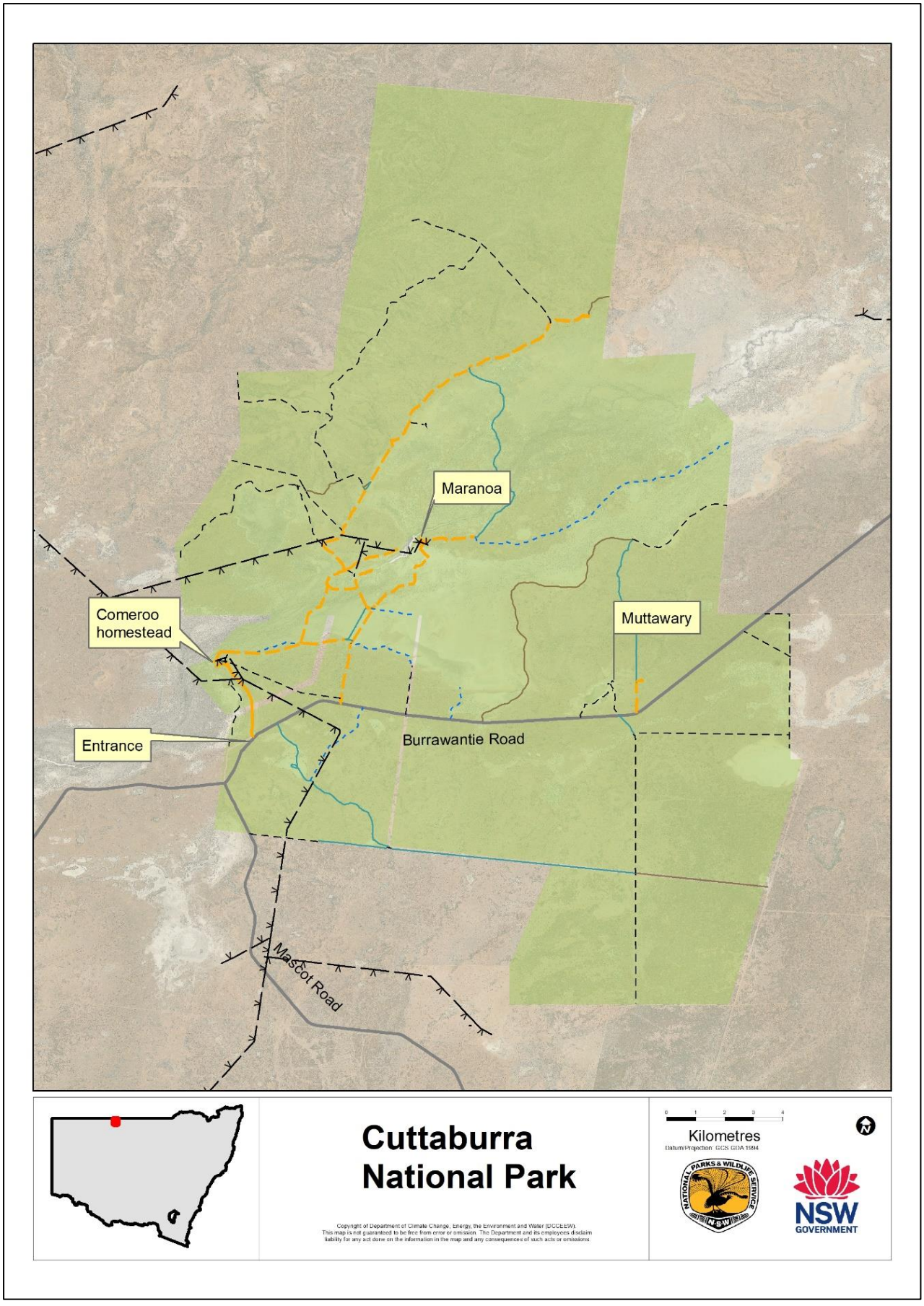


**Figure 2. Location of the activity**

## 1.2 Estimated development cost of proposal

The estimated cost of the activities is estimated to be $2 million, should all aspects be funded. This does not meet the trigger for public exhibition of the REF.

## 1.3 Estimated duration of proposal

Timing of the activity is dependent on funding and activities will be undertaken as funding becomes available and Aboriginal Community engagement is completed.

The activities relate to critical infrastructure to establish the national park and works will be undertaken as soon as possible and should be completed within 5 years of gazettal. This is predicted to be March 2025-June 2030.

Ongoing maintenance will be undertaken on the infrastructure.

# 2. Proponent's details

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# 3. Permissibility and assessment pathway

## 3.1 Permissibility under NSW legislation

The following sections outline how the activity is permissible under applicable NSW legislation.

### 3.1.1 National Parks and Wildlife Act 1974

#### On land reserved or acquired under the National Parks and Wildlife Act 1974

Works will be undertaken on land that is reserved as a national park under the *National Parks and Wildlife Act 1974* (NPW Act).

The care, control and management of the Park's natural, historic, Aboriginal cultural heritage and resources is governed by the associated legislative provisions of the Act.

The proposed activity is consistent with the objects, aims, objectives and provisions of the NPW Act. In line with the objectives of the Act, the proposed activity of upgrading operational and visitor infrastructure within the park will continue the fostering of public appreciation and understanding and allow for the safe enjoyment of natural and cultural heritage and the conservation of these features within the park. The activity will improve and promote the sustainable use of visitor areas within the Reserve.

The proposed activity will specifically enhance sustainable visitor use and enjoyment of the Park through the development of sustainable visitor infrastructure and facilities which are compatible with the conservation of the natural and cultural values of the Reserve as per s30E(2)(e) of the Act.

Realignment of the entrance will include egress from the Burrawantie Road edge. The road has been realigned and does not currently follow cadastral boundaries. NPWS has in principle support from Bourke Shire Council to rectify the current tenure errors and the park boundaries and road verge will be aligned to the existing road. A give-and-take agreement is in place for each agency to be able to maintain its infrastructure. The only works undertaken in this area are the grading of a road in already disturbed areas and the replacement of stock gates with a pre-manufactured stock-grid which is classified as exempt development.

**Plan of management**: The plan of management has not been commenced for the Reserve. A SMI has been published and includes this essential infrastructure works included in this REF (DCCEEW, 2024).

#### Assets of intergenerational significance

Not applicable

#### Leasing, licensing and easement provisions

Not applicable

#### Internal NPWS projects

The proposed activity is consistent with these management powers and responsibilities through:

- s8(3)(b) – The Secretary will arrange for the conduction of work necessary for the management and maintenance of the national park

- s12(a), s12(b), s12(d), s12(f), s12(g) - The Service is to carry out such works and activities as the Minister may direct, either generally or in a particular case, in relation to the conservation and protection of land reserved as a national park; to protect and conserve

wildlife; to identify, conserve, protect, and prevent damage to Aboriginal and non-Aboriginal objects, places and buildings; and to provide facilities and opportunities for sustainable visitor or tourist use and enjoyment in the reserve.

Infrastructure will be selected from the NPWS Facilities manual and sign manual, although bespoke facilities may be used to address localised issues not available in the facilities manual.

### 3.1.2 Wilderness Act 1987 (for activities in wilderness areas)

Not applicable

### 3.1.3 Biodiversity Conservation Act 2016

The purpose of the *Biodiversity Conservation Act 2016* (BC Act) is to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development.

The BC Act provides for the protection of all threatened flora and fauna native to NSW (excluding fish and marine vegetation) and assigns specific responsibility to proponents and consent authorities in regard to developmental controls and environmental planning, including recovery and abatement planning. A test of significance was undertaken for threatened species and ecological communities likely to occur in the area and due to the disturbed nature of the environment and minimal vegetation clearing no significant impacts were predicted.

The BC Act also provides the framework for the Biodiversity Offsets Scheme (BOS), which is triggered by developments, projects and activities that meet certain thresholds for significant impacts on biodiversity, or on an opt-in basis. Note that the BOS would not apply to the proposal as it is exempt from development consent (under the provisions of s 2.73(1)(a) of the Transport and Infrastructure SEPP).

### 3.1.4 NSW Reconstruction Authority Act 2022

Not applicable

### 3.1.5 Rural Fires Act 1997

Not applicable: The proposed activity is within the existing footprint and in a low-risk fire environment. No expansion of the asset protection zone is required, and the existing zone is identified and will continue to be maintained.

## 3.2 Environmental Planning and Assessment Act 1979

### 3.2.1 Assessment pathway

It is confirmed that a REF is the applicable assessment pathway because each of the following applies:

- The activity is not declared to be state significant infrastructure under s 2.13 of the Planning Systems SEPP.
- The activity may be undertaken without development consent under the provisions of s 2.73(1)(a) of the Transport and Infrastructure SEPP as it is:

  - on land reserved under the NPW Act or acquired under Part 11 of the NPW Act, **and**
  - for a purpose authorised under the NPW Act.
- The activity is **not** identified as requiring development consent under another environmental planning instrument that prevails over the Transport and Infrastructure SEPP. In particular:
  - The activity is not in a coastal wetland or littoral rainforest, or it does not otherwise meet the criteria for development requiring consent outlined in s 2.7(2) of the Resilience and Hazards SEPP.
  - The activity is not coastal protection works or, if coastal protection works, the activity is one of the types of coastal protection works that may be carried out by or on behalf of a public authority without development consent.
  - The activity is not a type of development requiring development consent under s 2.9 of the Resources and Energy SEPP.
- The activity is not declared to be exempt development under an environmental planning instrument or fails to fully meet the requirements for exempt development.

### 3.2.2 Strategic plans

The Far West Regional Plan 2036 (Department of Planning and Environment (DPE), 2017) is a 20-year blueprint for the future of the Far West, capturing the NSW Government's vision for the creation of a diverse economy, supported by suitable infrastructure, an exceptional natural environment forging resilient communities. The Plan has sought to develop various economic activities, including the promotion of tourism opportunities across the region. The importance of landscapes in leveraging opportunities for new economic ventures, including tourism, is identified. It is noted that significant opportunities exist for tourism, taking advantage of the unique 'outback' experiences, dynamic communities, as well as European and Aboriginal culture.

## 3.3 Other relevant NSW legislation

### 3.3.1 Coal Mine Subsidence Compensation Act 2017

Not applicable

### 3.3.2 Fisheries Management Act 1994

Not applicable – The proposed works will not impact any fish, fish habitat, fish passage or marine vegetation.

### 3.3.3 Heritage Act 1977

No items on the property are listed on the State Heritage Register (SHR).

A Heritage Assessment of Comeroo Station was undertaken by heritage specialist Caroline Lawrence (Team Leader Environment and Heritage Team) in 2023. While the conglomerate of buildings was found to have local significance as it contributes to the pastoral narrative of the area, no individual items were found to be of significance.

One recommendation of the report is that the piers of demolished buildings should be retained to mark the footprint of the building to help preserve the historic narrative of the

property. Geomorphology dictates that the dwellings are situated in the best location to minimise flooding and the buildings will be replaced in situ.

During further consultation with Caroline Lawrence regarding the practical constraints, she advised that while this was her recommendation, Northern Inland Branch could choose to adhere to it or not. Every effort will be made to acknowledge the location of the assemblage of buildings as pastoral property in other ways. The buildings have been catalogued in the heritage assessment, and external landscape features will be retained to mark their location. Interpretation in the Park will continue to acknowledge the pastoral heritage of the property and ensure the narrative is not lost.

### 3.3.4 Marine Estate Management Act 2014

Not applicable

## 3.4 Commonwealth legislation

### 3.4.1 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) applies as the activity is on land that contains the following, or the activity may affect nationally listed threatened species and ecological communities or listed migratory species. A Protected Matters Search Report is attached as Appendix 4. A test of significance shows there will be no significant impacts.

### 3.4.2 Native Title Act 1993

The park is not subject to a current Native Title claim or ILUA.

## 3.5 Consistency with national parks policy

| Policy name | How proposal is consistent |
|---|---|
| NSW Government staff housing policy 2014 | Chief Executives may approve the provision of employee housing:<br><br>*when such assistance is essential to the continuation of priority government services and the employee cannot obtain private accommodation which is of a reasonable standard, in a reasonable location and at a reasonable rent; or*<br>*when the special duties to be performed require the employee to live on-site or close to the work site.*<br><br>Remote locality 80% of full market rent may be charged in remote or isolated locations where agencies have difficulty attracting employees.<br>Maintenance of employee housing Government maintenance policy, as detailed in the Total Asset Management Manual (released by Premier's Memorandum No. 92-39), requires agencies to develop effective management policies for assets including |

| | |
|---|---|
| | employee housing. Specifically, under the guidelines, agencies are obliged to:<br>• Prepare an Asset Maintenance Strategic Plan to be submitted to the Cabinet Capital Works Committee annually.<br>• Obtain approval for the Asset Maintenance Strategic Plan by the agency's relevant Minister. |
| NPWS Staff Housing Policy 2022 | Providing staff housing is often essential to support the management of National Parks, such as in remote areas or when certain roles require an employee to live on or close to a park.<br>Staff housing can also assist in attracting and retaining staff, discouraging unauthorised activities and supporting visitor safety.<br>Where NPWS properties are made available for staff housing they must be of a reasonable standard, allocated according to a transparent and consistent process, and subject to clear, documented rental agreements.<br>NPWS housing will be safe and sanitary and to the best extent possible, energy efficient and cost-effective to maintain.<br>NPWS housing must comply with all applicable laws pertaining to health, safety, fire and accessibility (e.g. smoke alarms and locks must be installed).<br>Without limiting the circumstances in which residential premises are not fit for habitation, NPWS staff housing must be:<br>a. structurally sound (not subject to dampness, not subject to water penetration, not rotted and in a reasonable state of repair)<br>b. have adequate natural light or artificial lighting in each room (except for garages or storage rooms)<br>c. have adequate ventilation<br>d. be supplied with electricity or gas and have an adequate number of electricity outlet sockets or gas outlet sockets for the supply of lighting and heating to, and use of appliances in the premises<br>e. have adequate plumbing and drainage<br>f. connected to a water supply service or infrastructure that supplies water that can supply the premises with hot and cold water for drinking and ablution and cleaning activities<br>g. contain bathroom facilities, including toilet and washing facilities, that allow for privacy. |
| NSW NPWS Park Visitor Facilities Policy | The Policy states that Park facilities must maintain the natural and cultural values of the Park but be balanced by meeting the needs of the visitors. Facilities have been designed to be minimal and have the least impact on the remote Outback setting. Facilities have been chosen from the NPWS facilities manual, except where the facility design does not exist or is not suitable for the setting. Bespoke designs focus on protecting and complementing the natural and cultural values of the |

| | |
|---|---|
| | park, honouring the pastoral heritage, and minimising their footprint. |
| Construction Safety Policy and Procedures | All construction will adhere to the construction safety policy and Building Code requirements as part of project management. |
| **Vehicle Access Policy** | This Policy acts to ensure vehicle access to NPWS estate is managed accordingly to keep staff and visitors safe and limit impact on natural and cultural heritage and the environment. |

## 3.6 Summary of licences and approvals

### 3.6.1 Approval required from National Parks and Wildlife Service

Internal NPWS approval, including expenditure

### 3.6.2 Other approvals

Not applicable

### 3.6.3 Publication triggers

**Table 1. Triggers for publication of the review of environmental factors**

| Permit or approval | Applicable? |
|---|---|
| Fisheries Management Act, sections 144, 200, 205 or 219 | N |
| Heritage Act, section 57(1) (commonly known as a section 60 and **not** an Exemption under section 57(2)) | N |
| National Parks and Wildlife Act, section 90 (AHIP) | Y |
| *Protection of the Environment Operations Act 1997*, sections 47–49 or 122 | N |

The determined REF will be published on the Planning Portal due to the requirement for an AHIP.

# 4. Consultation – general

## 4.1 Statutory consultation

### 4.1.1 Transport and Infrastructure SEPP

The Transport and Infrastructure SEPP requires consultation with relevant authorities as identified in the following table.

**Table 2. Consultation triggers under the Transport and Infrastructure State Environmental Planning Policy**

| Authority (TISEPP section) | Trigger | Applicable to proposal? |
|---|---|---|
| Consultation with local council (s 2.10) | Development with impacts on council infrastructure or services (such as stormwater, sewer, water, roads, and footpaths) | No |
| Consultation with local council (s 2.11) | Development with impacts on heritage items listed under the local environmental plan (LEP) | No |
| Consultation with local council (s 2.12) | Development that will change flood patterns on flood-liable land | No |
| Consultation with State Emergency Service (s 2.13) | Development on flood-liable land | Yes |
| Consultation with local council (s 2.14) | Development that is inconsistent with a certified coastal management program affecting land within the mapped coastal vulnerability area. | No |
| Consultation with NPWS (s 2.15(2)(a)) | Development adjacent to land reserved or acquired under the NPW Act | Yes |
| Consultation with NPWS (s 2.15(2)(b)) | Development on land in Zone C1 that is yet to be reserved under the NPW Act | No |
| Consultation with Transport for NSW (s 2.15(2)(c)) | Development comprising a fixed or floating structure in or over navigable waters | No |
| Consultation with the Director of the Siding Spring Observatory (s 2.15(2)(d)) | Development that may increase the amount of artificial light in the night sky and that is on land within the mapped dark sky region | No |
| Consultation with the Cth Department of Defence (s 2.15(2)(e)) | Development located within the buffer around the defence communications facility near Morundah as mapped under the Lockhart, Narrandera or Urana LEPs | No |
| Consultation with the Subsidence Advisory NSW (s 2.15(2)(f)) | Development on land in a mine subsidence district. | No |
| Consultation with the Willandra Lakes Region World Heritage Advisory Committee and Heritage NSW (s 2.15(2)(g)) | Development on, or reasonably likely to have an impact on, a part of the Willandra Lakes Region World Heritage Property | No |
| Consultation with the Western Parkland City Authority (s 2.15(2)(h)) | Development within a Western City operational area (Western Parkland City Authority Act 2018, Schedule 2) with a capital investment value of $30 million or more | No |
| Consultation with Transport for NSW (s 2.221) | Traffic-generating development listed in Schedule 3 | No |

**Emergency Service (s 2.13)** – The property previously contained housing, campgrounds and tourist accommodation. The proposed activities will not increase the existing risk.

As a remote outback property, it is understood that properties may be cut off and isolated and it is beyond the reach of emergency services. Aerial assistance will be provided by the agency if required.

Short-term road closures are common in the area and all tourism collateral advertises the possibility.

Prolonged flooding is caused by water in the catchment in Queensland and there is adequate prior warning to evacuate the park and for preventative measures to be undertaken with belongings and equipment.

Staff housing will be replaced in situ, on the advice of long-term landholders that this is the least flood-prone area. Housing is being designed with flooding in mind. There are times that housing may be cut off so suitable food storage facilities will be provided and staff will be advised of the threat.

## 4.2 Targeted consultation

### 4.2.1 Adjacent landowners

The closest neighbour's dwellings are at least 10km away. On the purchase of the land neighbours were contacted and informed that the property will be a national park and open to the public. This was reaffirmed in July 2024 once NPWS took vacant possession of the land.

### 4.2.2 Wider community consultation and/or notification of works

No wider community consultation has been undertaken.

### 4.2.3 Interest groups and/or notification

Plans have been discussed with the Regional Advisory Committee and approved.

# 5. Consultation – Aboriginal communities

## 5.1 Native title notification requirements

1. Is the land subject to an Indigenous land use agreement (ILUA)? **No**
2. Has native title been **extinguished**? **No or unclear**
3. Has there been a determination of native title applicable to the land or is there a native title claim pending? **No**
4. If native title is not confirmed as extinguished, **and** the activity is occurring on land reserved as park on or before 23 December 1996, is it an act in accordance with the purpose of reservation **and will it:**
   a. be a 'public work' as per subdivision 24J of the Native Title Act (e.g. a building or other structure that is fixed to the landscape, a road or bridge, a well or a bore, or involves major earthworks, carried out by a public authority)
   **or**
   b. involve the grant of a lease or easement?

   **No**
5. If native title is not confirmed as extinguished and the circumstances of Question 4 do not otherwise apply (e.g. the park was reserved after 23 December 1996), is the activity either:
   a. a facility for service to the public (as defined in subdivision 24K of the Native Title Act) **Yes**
   or
   b. a low-level activity (as defined in subdivision 24L of the Native Title Act)?

   **No**

Limited excavation will be required for the activity.

## 5.2 Parks under joint management arrangements other than an indigenous land use agreement

Is the park's management subject to another joint management arrangement such as a memorandum of understanding? **No**

## 5.3 Other parks

Several groups have been identified as having an association with Cuttaburra NP. Potential parties have been sent an outline of the proposed works and invited to register as RAPS. Registered RAPS have been sent a copy of the proposed methodology and included in the AHIP process.

# 6. Proposed activity (or activities)

## 6.1 Location of activity

**Table 3. Summary of activity location**

| | | | |
|---|---|---|---|
| **Description of location** | Comeroo homestead precinct. | | |
| **Site commonly known as** | | | |
| **Park name** | Cuttaburra National Park | | |
| **Other tenures** | Previous Crown roads and Burrawantie Road easement are gazetted as Part 11 roads until the cadastre lots can be aligned with the physical location of Burrawantie Road | | |
| **Lot/DP** | 6026/768883 | | |
| **Street address** | 8104 Burrawantie Road, Yantabulla NSW 2840 | | |
| **Site reference** | Easting:<br>319238 | Northing:<br>6763607 | MGA zone:<br>55 |

## 6.2 Description of the proposed activity

Modifications to the Comeroo operational area and campground within the proposed Cuttaburra National Park as part of reserve establishment activities.

All activities will be undertaken within disturbed and modified areas.

### 6.2.1 The proposed activity: pre-construction, construction, operation and remediation

Cuttaburra National Park (previously Comeroo Station) is a newly acquired National Park that was previously a pastoral station. The changes in land use and the condition of existing houses require alterations and replacement of essential operational infrastructure.

The NSW Government required that the reserves be gazetted as a national park and recreational opportunities be provided. Comprehensive plans are provided in the Cuttaburra National Park Establishment Plan (NPWSa, 2024) and Cuttaburra National Park Visitation Plan (NPWSb, 2024).

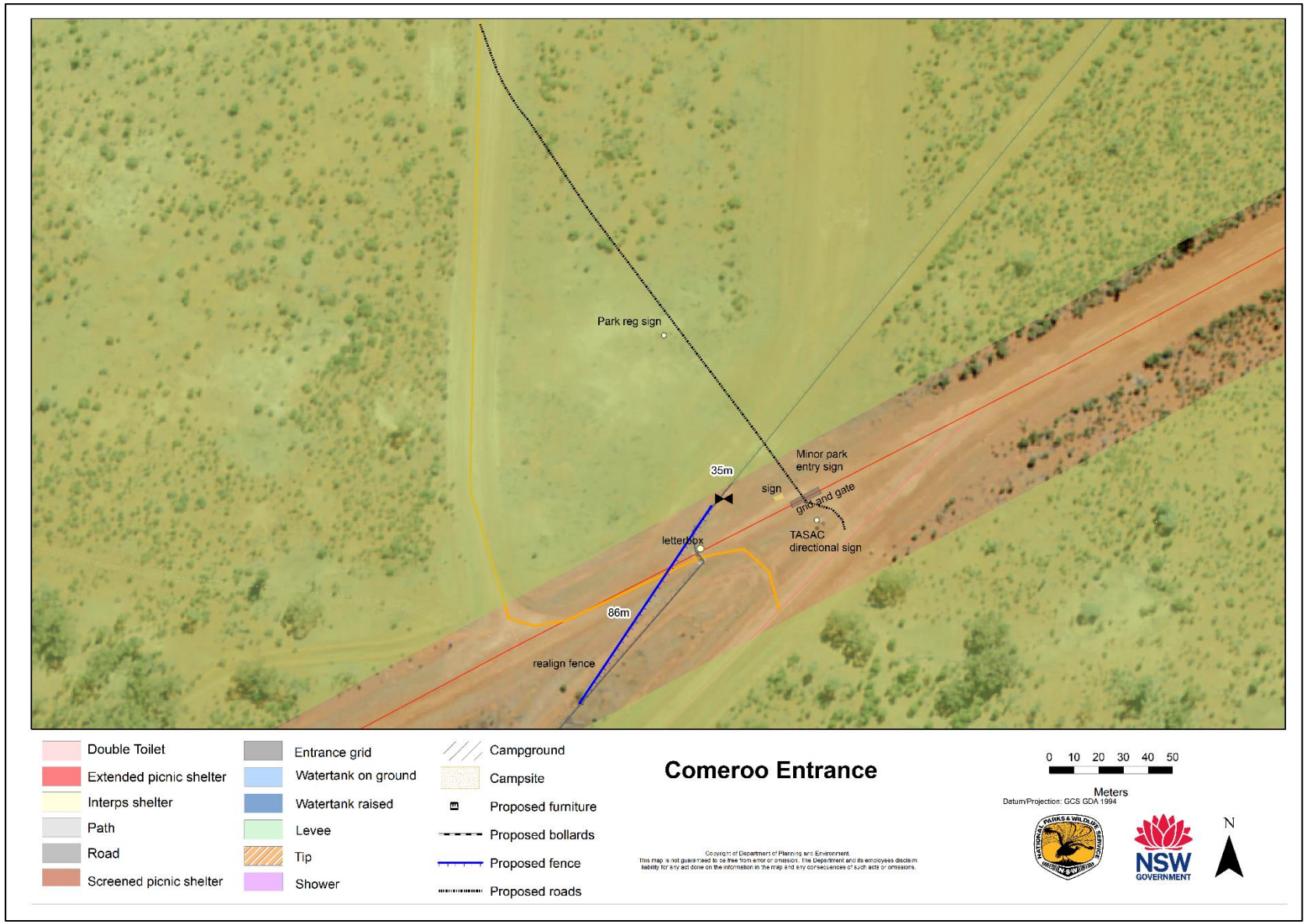


**Figure 3 Proposed realignment of the entrance**

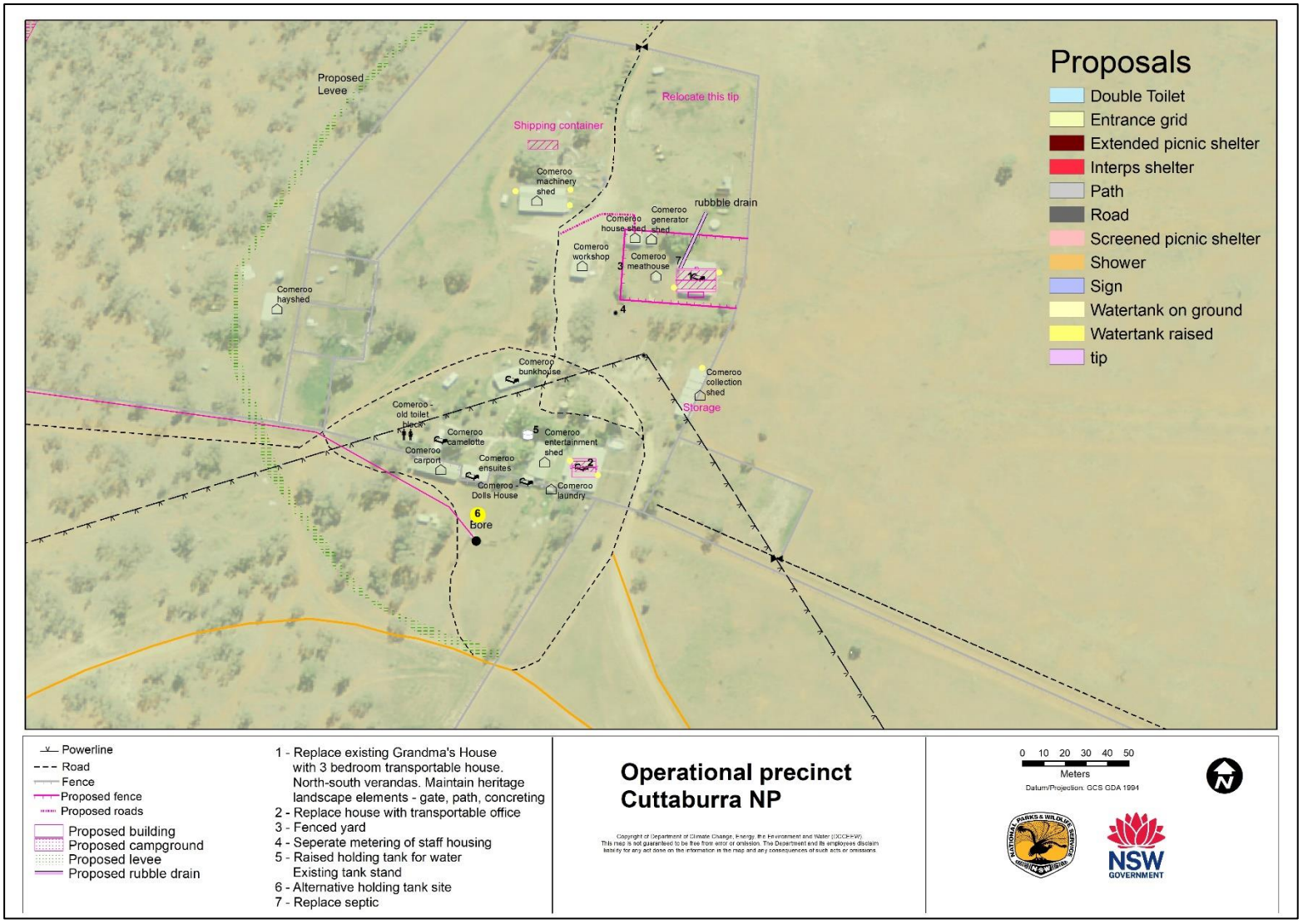


**Figure 4 Operational (housing) Precinct**

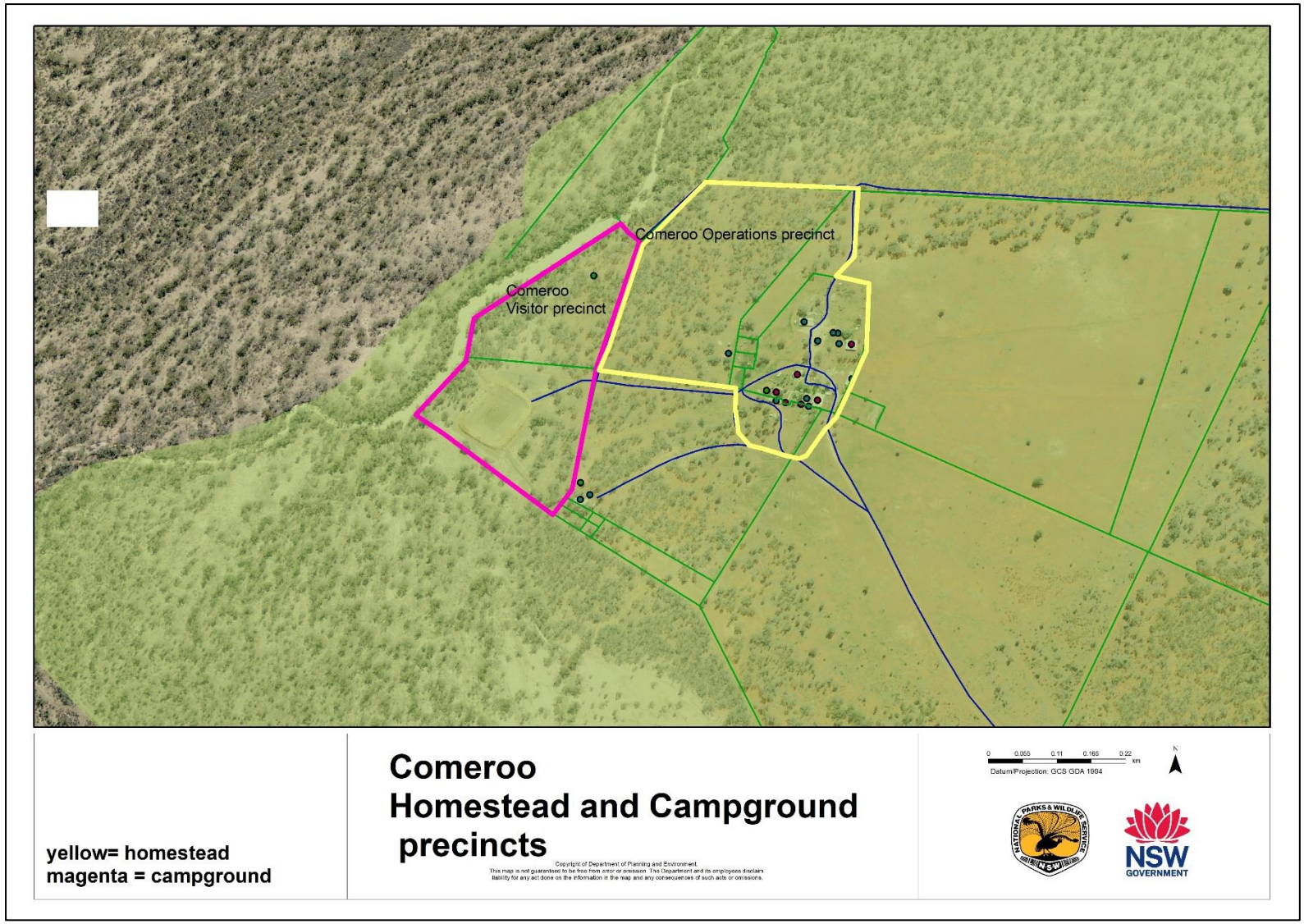


**Figure 5 Comeroo precincts**

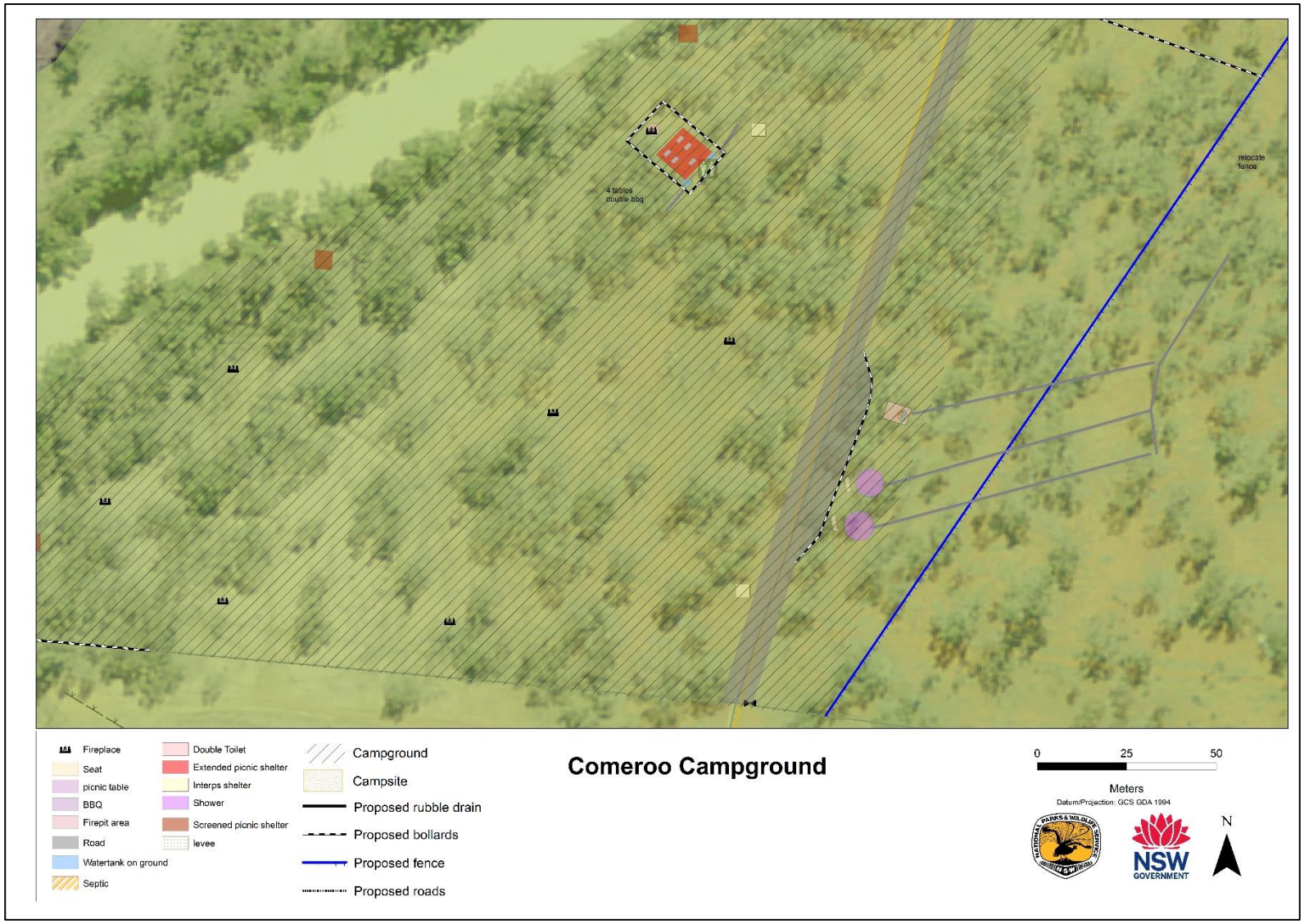


**Figure 6 Comeroo campground**

**Pre-construction:**

- All stockpiling will occur within the disturbed and modified areas of the existing homestead operational precinct and aircraft hanger area. Stockpiling will not require disturbance of vegetation or soil.

**Construction:**

Subject to funding the activity will include the following actions. Detailed construction drawings and designs are attached to this document, although minor variations may need to occur during the construction and design phases.

Entrance

- Realign the entrance road to improve the angle of visitor egress to/from Burrawantie Road to improve safety.
- Realign approximately 300m of unsealed road.
- Realign 300-500m of fence between existing strainer posts.
- Grade road and gravel sheet road and include required batters, camber and drainage features.
- Install a stock grid, excavation up to 0.8m deep.
- Installation of feature barriers to create a feature entrance, including holes for strainers.
- Installation of Park entrance signage and directional signage, including digging of holes.
- Maintenance of the existing airstrip to a 1km effective length.

Operational precinct

- Demolish and dispose of an old metal amenity block and septic and rehabilitate the site.
- Demolish two existing houses and dispose of asbestos.
- Clearing, levelling and reshaping of demolition site, retention of landscape features.
- Replace an estimated 3.5km of water polypipes across the precinct. New trenches will be created and waterpipes will be laid and existing poor condition piping will be disconnected and left in place. Where piping is easily accessible and will not create further disturbance, it may be removed.
- Replace Comeroo house with a transportable office block. New pier footings will be drilled below ground.
- Replace Comeroo house septic.
- Replace Grandma’s house with a transportable 3-bedroom home. New pier footings will be drilled below ground.
- Replace Grandma’s house septic and install a gravel rubble drain.
- Upgrades to power infrastructure.
- Reinstate fenced yard around the house (approximately 100m), retaining existing landscaping elements such as cement detailing.
- Establish gardens and landscaping.
- Reuse all sheds as storage and workshop areas.
- Installation of compliant bulk fuel and chemical storage facilities.
- Install rainwater tanks on all buildings.
- Recontour Homestead Dam banks to utilise earthen materials.

- Clean-up of operational areas and consolidation of waste materials.
- Construct an earthen levee around the operational area.
- Shade trees, non-native vegetable gardens, and fruit trees may be planted in yards. Native vegetation should be used to plant privacy vegetation around the precinct.
- Relocate the tip and provide bays for sorting and containing rubbish.

Campground

- Divert the public to a trail along the fence line to avoid the operational area. Approximately 1.5km will require an upgrade, including grading a 6m wide road adjacent to the existing disturbed fence line and installation of drainage features as required. Ongoing maintenance of the trail, including spraying of regrowth.
- Ensure access road and campground roads are 5m wide to allow for passing and turning with caravans.
- Form and build the road in low spots to divert water and try to reduce ponding and divert water from the track.
- Replace the underground polypipe to the campground and dam (estimated 500m) to supply showers, taps, and sprinklers. New trenches will be created and waterpipes will be laid and existing poor condition piping will be disconnected and left in place. Where piping is easily accessible and will not create further disturbance, it may be removed.
- Move stock fencing (approximately 350m) to expand the campground area and allow for toilet and septic installation further away from the main channel, including digging of holes for new strainers.
- Demolish the existing steel amenity block toilet and septic and rehabilitate the site.
- Install steel interpretation shelters with concrete footings.
- Install a steel, gable-roofed double toilet with a floating concrete slab.
- Install with pump-out septic and gravel rubble drain absorption trench.
- Install 2 outdoor bore-fed showers on concrete slabs and a rubble drain.
- Install a large picnic shed with a concrete slab and beam, gas barbeques, tables, chairs, water tanks, and rubble drain.
- Install a communal fire pit within a hardened apron.
- Digging of holes and installation of bollards around certain visitor infrastructure (i.e. standard skillion picnic shelters and toilet blocks) to protect visitors and reduce the likelihood of campers setting up immediately adjacent to these facilities. Bollards will be reused timber fence posts, where practical, if not steel I-beam may be installed.
- Install scattered fire pits with concrete footings and picnic tables.
- Established a marked walking route along the creek edge to enable visitors to walk along the creek edge at Cumeroo and Maranoa waterholes. This will require some modification of existing boundary fencing.

Reserve-wide

- Installation of park entry signage, including digging of holes.
- Installation of road directional signage at intersections, including digging holes
- Removal of wooden fenceposts for adaptive reuse as bollards.
- Removal of animal holding yards to avoid trapped animals around stock management features, such as woolsheds.

The establishment and upgrade of linear features such as boundary breaks, trails and crossings, and airstrip will be addressed in a separate appropriate environmental assessment.

**Post-construction:**

- The nearest tip is at Bourke. It is a 3 hour drive away and they are unable to take significant additional waste deposits. Transport to Bourke does risk littering along the roadside.
- Disposal of waste and decommissioned facilities is a significant issue.
- Where possible, practical and safe reusable materials will be stockpiled for future use.
- Uncontaminated organic materials will be burnt on-site to reduce litter on-site and on the way to the Bourke tip.
- Asbestos and demolition materials will be disposed of in accordance with guidelines.
- A scrap-metal merchant will be contacted to dispose of all metal waste as funds allow, including car bodies, etc.
- Non-organic materials, uncontaminated with asbestos, will be managed and disposed of lawfully.

**Figure 7 Comeroo campground**

**Figure 8 Top left: Comeroo house; Top right: Grandma's house; Bottom left: Old homestead amenities, Bottom right: Comeroo campground amenities**


**Figure 9 Concept plan of transportable housing**

**Figure 10 Concept plan of portable office**

**Figure 10 Example of proposed outdoor shower and toilet**

**Figure 9 Timber example of steel extended barbeque shelter**

### 6.2.2 The activity footprint (size of the area of impact)

See Figure 1 for the location of the Cuttaburra National Park and Figures 2-6 for the proposed activity areas.

The footprint of the proposed precincts is approximately 20 hectares (ha), although the actual works are considerably less at approximately 6.6 ha.

Approximate disturbance footprint

- Entrance – 0.12 ha
- Airstrip maintenance – 4 ha
- Campground access road realignment – 1.5 ha
- Campground structures and fence – 0.35 ha
- House, office and amenities - 0.15ha
- Waterpipes – 0.4ha
- Levee – 0.1ha

The activities are within modified precincts that have been disturbed for 150 years. Vegetation removal is negligible and is predominantly modified pasture grasses. No mature trees have been identified for removal during the planning phase and no dangerous trees have been identified by Principal Project Officer (PPO) Jessica Stokes. Mature trees will be utilised for shade and aesthetic reasons, although some limbs may be trimmed within the campground to facilitate shelters or if they are deemed dangerous. The environment is low fire risk and additional asset protection zones will not be required.

The greatest disturbance relates to ground disturbance and the excavation of soil. All works will be undertaken in previously disturbed and highly modified areas however, the entire park is known to have a high concentration of Aboriginal sites.

### 6.2.3 Proposed construction methods, materials and equipment

Construction methods and materials have been selected to minimise the impact on biodiversity, heritage, and the natural landscape, whilst ensuring safety requirements are met.

The roads, airstrip, and levee bank are natural surface, that may be augmented by gravel in low spots. Machinery may vary but is likely to use graders.

Excavation will be required for the stock grid, concrete slabs and footings, house and office piers, and septic tanks. Machinery will be chosen to reduce disturbance impacts but may include excavators, skidsteers, pile drivers, and augers.

Holes will be required for signage and fence strainers and are likely to use a tractor-mounted auger however, hand-held augers and manual labour may be used where required.

The majority of fabrication of structures is offsite and erected onsite. Heavy trucks will be required to deliver the items and machinery, such as cranes, excavators, and tractors used to unload and manoeuvre structures. This will reduce onsite disturbance and waste and minimise the time of staff and contractors on site.

Construction work will be undertaken in accordance with the NPWS (2010) Parks Facilities Manual, any relevant environmental work management plans and safe work management plans, and the relevant Australian Standards.

Where possible, materials from the pastoral elements on the property will be reused to pay homage to the park's agricultural heritage. For example, W-strap re-used from woolshed runs as entrance features, wooden fence posts, and bollards.

### 6.2.4 Environmental safeguards and mitigation measures

Before the commencement of work, a Safe Work Methods statement and the following environmental safeguards and mitigation measures will be put in place.

Vegetation clearing

- The activity is within disturbed areas and vegetation clearing will be kept to a minimum.
- No mature trees have been identified for removal during the planning phase. Any trees requiring removal must be approved by an NPWS representative onsite.
- All contractors and NPWS staff working within the activity areas are to make appropriate enquiries to *Dial Before You Dig* before the commencement of all earthworks.

Earthworks

- Earthworks include surface clearing, the digging of holes for signs and piers, and excavation for the installation of a stock grid and septic. Suitable machinery will be used to ensure the digging of holes and excavations are as efficient as possible and cause as little disturbance as possible.
- Excavation materials will be reused to rehabilitate areas or as fill elsewhere within the precinct.
- Where possible, earthworks will not be commenced when a flood is predicted. However, once commenced setup and implementation of sediment management devices, such as fencing, sandbags, catch drains, and outlet protection structures should flooding be predicted.

Plant and Machinery

- All vehicles and machinery accessing the activity areas are to be mechanically sound, and all plant and machinery used will be clean and free of soil, to prevent weed propagule spread within and nearby to the activity areas.
- All machinery work is to remain within the confines of the activity area.
- All machinery will have a spill kit, or at least a splash tray to contain all oil, fuels, and chemicals. In the event of spillage of oil, fuels, and chemicals contaminated soil will be removed and disposed of accordingly at a landfill site. Refuelling of machinery occurs 40m away from any waterways and associated drainage lines.

Soil and Erosion Controls

- Floodplain soils are subject to water-logging and bogging hazards. Works to cease operation when the ground is inundated. Work will not resume until the floodwater has passed, the ground has dried, and the access road to the activity area is accessible.

Air Pollution

To reduce overall carbon emissions from vehicles and machinery:

- Don’t leave vehicles and machinery running unnecessarily
- Only use vehicles and machinery when required.
- Dust suppression using water will be implemented when and if required during the pre-construction phase of the proposed activity.

Noise Pollution

To reduce overall noise produced by vehicles and machinery:

- Ensure that vehicles and machinery are not used unnecessarily.

- Ensure that appropriate Personal Protective Equipment is worn at all times during the operation of noisy equipment; and
- All vehicles and machinery are only to be operated by accredited, licenced contractors and appropriately trained and licenced staff.

Heritage

- Install ground-level markers to identify the footprint of the original houses.

- Mark the three known sites identified in the Due Diligence report to avoid accidental disturbance.

Waste disposal

Refer to section 6.2.1 post-construction activity description for waste disposal options.

### 6.2.5 Construction timetable and staging and hours of operation

The hours of operation will be determined by the contractor. However, there are no neighbours or visitors to impact with noise.

# 7. Reasons for the activity and consideration of alternatives

## 7.1 Objectives and reasons for the proposal

The proposal aims to provide safe and suitable staff housing and infrastructure, and to improve existing camping facilities to meet NPWS standards and ensure the facilities are identifiable as NPWS facilities while remaining sympathetic to the remote outback environment.

The proposal aims to separate operational and visitor infrastructure to improve safety, privacy, and security.

## 7.2 Consideration of alternatives

**Do nothing - housing**

Current housing does not meet tenancy requirements. The structural damage to the house means that only an outdoor communal kitchen is available and there is floor and ceiling damage throughout. Extensive works are needed to meet the minimum tenancy requirements. Given the difficulty attracting and retaining staff, comfortable housing is considered essential to attracting staff.

**Renovation of houses**

Renovation of the houses was considered. However, this would need to include major restumping and structural repairs due to significant slumping of the building, the general condition of the building, the poor layout of the floor plan, lack of pantries and storage, and the presence of asbestos. Due to the scale of works in such a remote location, the travel costs of builders, and the availability of suitable builders this option was deemed cost

prohibitive. A transportable home enables most of the work to be completed off-site and reduces the time tradespeople are accommodated remotely.

**Relocate housing**

The current location is on a slight rise, so the houses become islands, cut-off but not flooded. Although the Comeroo access road has patches of black soil and does get inundated, it is also dominated by red soil, so it dries more quickly.

Relocating the house and operational precinct was considered to enable the existing precinct to be used for visitors. Alternative locations considered:

- Immediately east of the existing houses is at a slightly lower altitude, and landholders advise that it is subject to backing water across the paddock.
- Muttawary is east of Back Creek, so subject to being isolated from the rest of the reserve more frequently.
- South of Burrawantie Road is a possibility, but it is on black soil so a new raised and sheeted access road would need to be constructed. The operational area requires more utilities than the visitor precinct and relocating the utilities to relocate the houses south of the road and building an access road was cost prohibitive.

**More visitor infrastructure**

More intensive visitor infrastructure, such as individual sites marked out by bollards, flush toilets and a camp kitchen were considered and dismissed as they were not suitable for an outback floodplain setting and were beyond the funding envelope. The preferred plans are for simpler, open facilities with minimal visual impact.

Initially, minimal bollards will be used around certain visitor infrastructure (i.e. standard skillion picnic shelters and toilet blocks) to protect visitors and reduce the likelihood of campers setting up immediately adjacent to these facilities. Individual campsites will not be defined by bollards, more the use of mowing and clearing of debris, to maintain the open plan feel and reduce visual impact. Additional bollards may be added if management issues arise.

**Do Nothing visitor facilities**

The funding agreement for the acquisition of the reserve dictates that recreational facilities must be provided. The current toilet/ shower located in a garden shed does not meet NPWS facilities standards.

## 7.3 Justification for preferred option

The existing house location was deemed the most suitable location due to geomorphology. The location is in the least flood-prone spots, within a flood-prone area. The previous landholders report that although the houses may get cut off, they become islands and do not flood themselves. Replacing the houses in situ has the added benefit of using existing utilities such as power.

Campground facilities will be simple, in keeping with the setting and due to limited funding.

The Comeroo campground precinct was selected as an appropriate location to install new visitor infrastructure due to the quality of the access road, its location adjacent to permanent water and consistency with its current use as a visitor area and campground. It is already disturbed due to such existing use.

Additional locations for campgrounds have been identified adjacent to Maranoa Waterhole. These will be subject to a separate REF.

Where practical, existing timber fence posts will be adaptively reused as bollards to honour the pastoral heritage of the property. Where this is resource-intensive and impractical steel I-beam will be used. The use of bollards will be limited to maintain the open, self-determined nature of the campsite and to reduce the visual impact.

## 7.4 Site suitability

| | |
|---|---|
| **Site character** | The proposed activity involves the replacement or upgrade of existing facilities within an area of existing disturbance. |
| **Landscape context** | The environmental landscape provides an opportunity to learn about and appreciate the diverse natural flora and fauna of the area.<br>Infrastructure design includes reusing pastoral elements where possible and minimising infrastructure to maintain sympathy with the remote outback setting of the campground. |
| **Application of site suitability matrix** | A sustainability assessment is not required for the proposal as per 'Sustainability assessment criteria for visitor use and tourism in New South Wales national parks' |
| **Strategic site assessment (if required by the matrix)** | Not applicable |

# 8. Description of the existing environment

## 8.1 Overview of the project area

The proposed works are within previously disturbed access road corridors, residential and camping precincts. The property has been a pastoral lease for over 150 years and the proposed location has been a focal point for infrastructure. The land is cleared, with large mature shade trees within the campground and highly modified lawn and gardens within the homestead precinct.

The property forms a conglomerate of 100,000 hectares of conservation lands with Naree and Yantabulla private conservation reserves and Brindingabba National Park to the west. East and south of the park remain grazing properties, although many have absentee landholders.

Two-thirds of the 37,422 hectare property is subject to flooding. The wetlands within Cuttaburra Basin are not listed in the Ramsar Convention of Important Wetlands, although this is being investigated.

**Figure 11 Cumeroo waterhole and campground**

## 8.2 Natural values

### 8.2.1 Geology, geomorphology and topography

The reserve is mulga tablelands and sand dunes dissected east-west by Cuttaburra Creek and associated floodplains

The park has relatively low relief, with an altitude difference of about 75m across the park. The lowest points are Cuttaburra Creek and associated channels at approximately 125m above sea level (ASL), which rise gently to the highest portions of the reserve, the rocky plateau tablelands in the north of the reserve at about 195m ASL.

Geology is clastic sedimentary rocks, rocks composed predominantly of broken pieces of older weathered and eroded rocks.

Geology is dominated by newer Quaternary sediments, with some exposed Tertiary silcretes on high rises.

### 8.2.2 Soil types and properties (including contamination)

The floodplains within the activity area are characterised by heavy grey/black soils, silt and sand of recent geological origin (quaternary). The clay soils are classified as vertosols. The soils are subject to significant expansion and contraction and waterlogging.

The sand plains located away from the floodplain to the south of Cuttaburra Creek are dominated by wind-blown red sands classified as calcarosol (calcareous throughout the profile and often increasing in clay content with depth) or kandosol soils (red and grey massive earths) lacking strong texture contrasts, defined horizons and organic matter so have low fertility. The red sands have poor water holding capacity, and dry quicker than the floodplain clay soils.

There is little topography in the activity area so little erodibility issues, although massive gullies can form with water movement during floods. The water holding properties of the clay soils are a greater issue, causing bogging hazards and roads become untrafficable when wet. The pier designs for the buildings are based on geotechnical surveys and accommodate highly active clay soils.

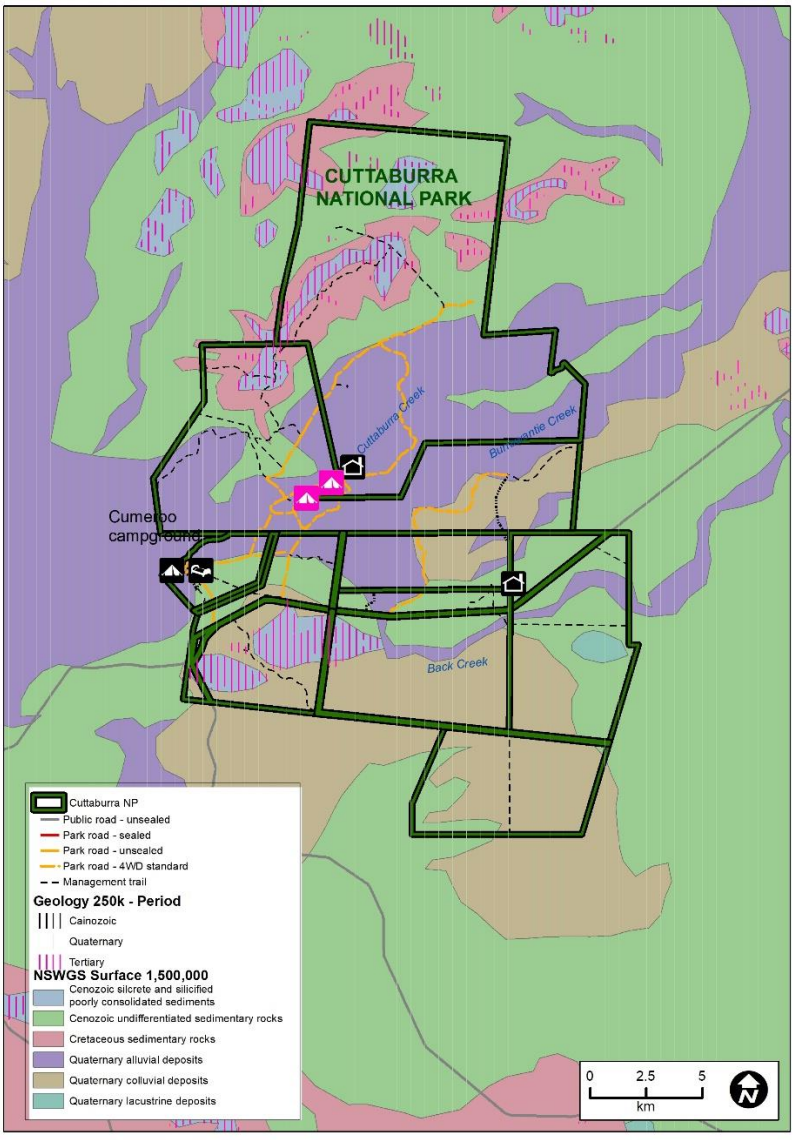


**Figure 12. Geology (Geology 250K and NSWGS Surface 1,500,00)**

### 8.2.3 Watercourses, waterbodies and their catchments

The activity area is in the Cuttaburra Creek floodplain area. The Park is within the Cuttaburra-Paroo, West Warrego and Warrego Sands subregions of the Mulga Lands Bioregion. The bioregion is characterised by a persistently dry, semi-arid climate. Rainfall is sporadic and unreliable but is generally summer dominated and the average annual rainfall is approximately 300mm. Rainfall is sporadic, characterised by boom-and-bust cycles of flooding and drying.

Cuttaburra Creek provides an important connection between the Warrego River at Cunnamulla and the Paroo River south of Wanaaring during periods of high flow. The activity will not impact these catchment properties. While local rain may result in roads being cut-off significant flooding is caused by water falling with the catchments extending into central Queensland, enabling plenty of warning as water travels through the system.

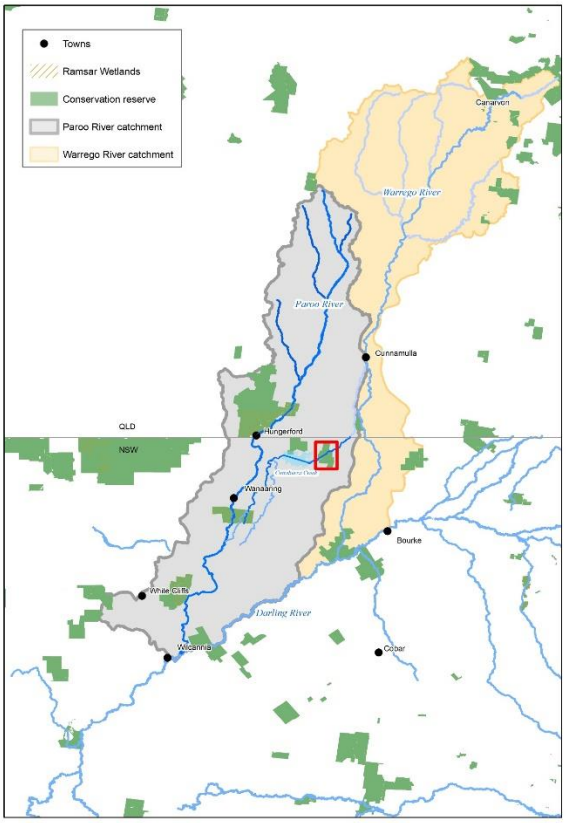


**Figure 13 Map of the Paroo and Warrego catchments**

The park has 20-23km of creek frontage. In periods of high flow this is continuous. However, as the river dries out this retracts to a chain of individual waterholes and billabongs. A portion of Maranoa and Cumeroo waterholes persists, providing about 6km of permanent waterhole. These permanent waterholes are the primary attraction for visitors. A portion of Maranoa Waterhole remains Crown Land.

The proposed relocation of the fence in the campground will increase the distance septics and toilet infrastructure will be located from the main channel. Visitor facilities have been designed to allow water to pass through the facilities and then hosed off.

Once the Cuttaburra Creek contains water there is no access to the northern two-thirds of the reserve. Operational and visitor infrastructure will predominantly be located south of the creek.

## 8.2.4 Biodiversity

### Overview of terrestrial and aquatic biodiversity

No records exist in Bionet for Cuttaburra National Park prior to gazettal, although neighbouring Naree has had extensive surveys undertaken.

A fauna survey of Cuttaburra National Park was undertaken in March 2024 by DCCEEW staff and a vegetation survey and vegetation community mapping was undertaken by Scout Ecology in April 2024.

Vegetation was found to be highly diversified. The survey identified 30 distinct vegetation communities with 62 variants, covering the entirety of the study area. These communities were assigned to 28 plant community types PCTs. The most abundant PCTs include heather bush-mulga shrubland, coolabah open woodland, and yapunyah woodland, together covering a significant portion of the property. The activity area contains coolabah open woodland and modified pasture grass.

The activity area predominantly falls within tree-lined creeks with open woodlands. The access roads, although cleared, traverse mulga-emubush shrubland (Scout Ecology 2024). The proposed activities are with previously disturbed areas and will not result in further habitat loss. Three threatened species were recorded, not within the activity area.

Fauna surveys recorded 158 species within the park: 109 birds, 22 reptiles, 13 frogs and 14 native mammals (NPWS, 2024). All habitats supported a variety of bird and reptile species, though the stoney mulga appeared to have a higher number of animals not found associated with other vegetation communities. Mulga habitats will not be disturbed by the proposed activities.

Amphibian, bird species and reptile species were recorded within the activity areas. Native and non-native trees within the operational precinct were being used by birds, geckos and carpet pythons for habitat. After rain pooling water contained healthy populations of frogs.

### Areas of outstanding biodiversity value or critical habitat

Not applicable

### Environmental assets of intergenerational significance (AIS)

Not applicable.

### Threatened ecological communities

Vegetation surveys and mapping conducted in 2024 identified two Threatened Ecological Communities on the reserve. Artesian mound spring communities and Coolibah-black box communities.

No artesian mound springs are present in the activity area.

The proposed campground contains disturbed coolibah-black box community. The proposed activity is within disturbed areas and no further significant disturbance will occur as no mature coolibah or black-box trees will be removed and there is no existing shrub-layer.

### Threatened species and populations

The 2023 vegetation survey recorded three threatened species, *Ipomoea diamantinensis, Phyllanthus maderaspatensis,* and *Goodenia nocoleche* were identified. These species, although common in northern Australia, are rare in New South Wales, making their presence at Cuttaburra National Park significant for regional biodiversity. The species are short-lived forbs found in inter-drying zones and conditions must be suitable for the plants to be found. Conditions were suitable for detection during the 2023 vegetation survey. The plants were not recorded in the activity area during the vegetation surveys during site inspections by NPWS Principal Project in August 2023, March and July 2024. The activity area does not have

suitable inter-drying areas. *Dentella minutissima* has not been recorded at Cuttaburra NP but has been recorded in Naree, Nocoleche NR and Toorale NP.

Fauna surveys of the reserve were undertaken in March 2023 using nine survey methods. Twelve threatened fauna species were recorded within the reserve: black-breasted buzzard, brolga, southern whiteface, pied honeyeater, hooded robin (south-eastern subspecies), Hall's babbler, grey-crowned babbler (eastern subspecies), pink cockatoo, stripe-faced dunnart, little pied bat, yellow-bellied sheath-tailed bat, and eastern fat-tailed gecko. Ringed brown snake, little eagle and sandy inland mouse were not recorded at Cuttaburra NP but have been recorded in Naree and/or Brindingabba NP.

Pink cockatoos and grey-crowned babblers were the most widespread, recorded multiple times across a variety of habitats. Pink cockatoos, little pied bat and yellow-bellied sheath-tailed bat were recorded within the activity area. Other species such as the eastern fat-tailed gecko, hooded robin and Hall's babbler were only seen once within mulga habitats. Mulga habitats will not be disturbed by the proposed activities.

## 8.3 Cultural values

### 8.3.1 Aboriginal cultural heritage

Cuttaburra National Park is part of a rich Aboriginal cultural landscape. The park and surrounding lands are likely to have extremely high Aboriginal heritage conservation values. Aboriginal occupation and use of what is now the park is likely to have been widespread and a range of items of potential Aboriginal heritage value have been observed. Permanent water is an attraction for Aboriginal occupation.

Aboriginal people who have claimed cultural association to Country at Cuttaburra include Budjiti, Parunti, Kurnu-Baakandji, Muruwari, Kooma and Kunja peoples. Many Aboriginal people today have links to the former stations where their families lived and worked.

No Aboriginal sites are currently in AHIMS however, NPWS staff have found stone artefacts during site visits. Ozark and RAPs undertook a comprehensive survey of the operational precinct, three proposed campgrounds and access roads on 3-8 February 2025.

Numerous artefacts were found, typically stone cores, flakes, and tools such as scrapers, and hearths (damaged).

Within the activity area of the REF:

- Most artefacts were found in Comeroo campground and the access roads closest to water. An approved AHIP will be required before salvage can be conducted.
- Three artefact sites were identified within the operational area. These sites are avoidable, and a due diligence report is attached. No artefacts were found within the house construction zone in the operational precinct. The only artefacts were found north of the machinery fence near the fence and can be avoided and adjacent to the proposed pipeline along the fence line to the campground.
- No artefacts were found within the entrance realignment.

A due diligence report has been prepared for works within the operational precinct and the pipeline.

The RAPs agreed with the proposed project and an AHIP is being pursued for the whole survey area. The AHIP asks to allow salvage of known artefacts prior to works and for trained NPWS staff to be able to move any unanticipated finds that are exposed during works out of the disturbance area. The consultants have advised a determined REF is required to be attached to the AHIP for consideration by Heritage NSW. The conditions specified in the AHIP will be followed once it is approved.

The rocky hills in the north of the park hold a series of wells. The public will not be permitted into this area due to the fragile nature of wells.

### 8.3.2 Historic heritage values

A heritage assessment was undertaken by Caroline Lawrence and Raphael Gracia in February 2024 (NPWS, 2024).

The historic value of the property is the representative significance of the pastoral station and the significant built fabric that remains and explain the pastoral activities of the station, especially remaining buildings and structures that were present prior to 1973.

No individual building has heritage significance, and many come from other properties. The original homestead at Comeroo may date back to the 1920s but has been altered so extensively that it does not meet heritage criteria. The assemblage has value in that it contributes to the story of the pastoral property. The buildings have been catalogued as a photo archive by the heritage team in the heritage assessment and where they are structurally sound the ancillary buildings will be retained.

The heritage assessment lists a priority of treatments for Comeroo house and Grandma's house

- Retention of the building, removal of modern elements, costly refurbishment and renovation
- Removal of the house and mark out footprint to show its location (ie retain stumps or outline). Photographic archive of the house before removal.
- Any new structures should be located away from the footprint to preserve the location of the original house.
- Preservation of landscapes elements at Grandma's house.

Renovations are economically and practically prohibitive and the buildings will need to be replaced in situ. A photographic archive has been taken. Piers will need to be cleared to allow for the replacement buildings, ground level markers can be installed. Landscape elements will be retained where possible.

## 8.4 Social values

### 8.4.1 Recreation values

Although not operational for two years, as a private property Comeroo Station offered camping and hard-roofed accommodation along with hunting opportunities and camel tours. Tourism was highly seasonal and low volume.

While some activities are incompatible with NPW Act and Regulations camping can continue to be offered. Visitor experiences will include camping, birdwatching, fishing and canoeing.

The experience can be linked with nearby Brindingabba National Park and Currawinya National Park in Queensland.

### 8.4.2 Scenic and visually significant areas

The scenic values of the reserve are particularly associated with the floodplain woodlands and sand dunes. The activity will not impact either.

### 8.4.3 Education and scientific values

Cuttaburra National Park has scientific value as a diverse habitat. Operational and visitor infrastructure will not negatively impact these values and will allow for the accommodation of visiting researchers and for visitors to experience and appreciate these natural values.

### 8.4.4 Interests of external stakeholders

Not applicable

## 8.5 Matters of national environmental significance

An EPBC Protected Matters Report was conducted 15 January 2025.

Four Ramsar wetlands of international importance have been identified in the report, one threatened ecological community, 18 threatened species and seven migratory species (Appendix A). The activity is outside these wetland areas. Paroo River wetlands are 50-100km downstream. The activity will not impact these wetlands.

Yantabulla Swamp (Cuttaburra Basin) is listed as a nationally important wetland. This wetland is present on the reserve. The proposed activity will not impact the wetland.

The threatened community is the community of native species dependent on the natural discharge of groundwater from the Great Artesian Basin. There are no known permanent wetlands from artesian discharge on the reserve and none of 11 threatened species identified in the community description are present in the reserve. The community is not present. The community is best described by the NSW Artesian mound spring community description and is present on the reserve. The community is not present in the activity area and will not be impacted by the activity area.

Migratory birds will not be impacted by the proposal as wetlands are not present within the activity area.

Individual threatened species are addressed in Appendices 1-3. There will be no significant impacts.

# 9. Impact assessment during all stages of the activity

## 9.1 Physical and chemical impacts

| Is the proposed activity likely to… | Applicable? | Impact level (negligible; or low, medium or high adverse; or positive; or NA) | Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact) | Safeguards/mitigation measures |
|---|---|---|---|---|
| 1. impact on soil quality or land stability? | Yes | Negligible | The precinct has a footprint of approximately 20 hectares, although ground disturbance will be less than a quarter of this. Topography within the project area is flat and soils is held in place by grasses.<br>During construction of the proposal there is a limited potential for loss of structural integrity of soil through removal of groundcover and compaction by machinery. However, the greatest risk is if the site is flooded once disturbed.<br>Construction of the proposal will involve rehabilitation works including reestablishment of disturbed lawns following completion of construction to reduce dust. | Earth works include surface clearing, the digging of holes for signs and piers, and excavation to for the installation of a stock grids, septics and concrete slabs. Suitable machinery will be used to ensure the digging of holes and excavations are as efficient as possible and causing the least amount of disturbance as possible.<br>Ground disturbance and vegetation clearing will be limited to the minimum extent required to undertake the proposal.<br>Where possible earthworks will not be commenced when a flood is predicted. However, once commenced set up and implementation of sediment management devices, such as fencing, sandbags, catch drains and outlet protection structures should flooding be predicted. |
| 2. affect a waterbody, watercourse, wetland or natural drainage system – either physically or chemically (e.g. due to runoff or pollution)? | Yes | Negligible | The works will be undertaken in a floodplain environment.<br>Clay floodplain soils are prone to waterlogging and are extremely active and are subject to significant expansion and contraction and waterlogging. However red sand rises have poor water holding capacity and will dry quicker than the floodplain clay soils. | Floodplain soils are subject to water-logging and bogging hazards. Works to cease operation when ground is inundated. Red rises will be utilised to store machinery. Work will not resume until the floodwater has passed, the ground has dries and the access road to the activity area is accessible |

| Is the proposed activity likely to… | Applicable? | Impact level (negligible; or low, medium or high adverse; or positive; or NA) | Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact) | Safeguards/mitigation measures |
|---|---|---|---|---|
| | | | The proposed relocation of the fence in the campground will increase the distance septics and toilet infrastructure will be located from the main channel. Visitor facilities have been designed to allow water to pass through the facilities and then hosed off. | |
| 3. change flood or tidal regimes, or be affected by flooding? | No | | | |
| 4. affect or be affected by coastal processes and coastal hazards, including those under climate change projections (e.g. sea level rise)? | No | | | |
| 5. involve the use, storage or transport of hazardous substances, or use or generate chemicals which may build up residues in the environment? | Yes | Negligible | | Refuelling would be undertaken at least 40m from waterways.<br>All machinery work is to remain within the confines of the activity area.<br><br>All machinery will have a spill kit, or at least a splash tray to contain all oil, fuels and chemical. In the event of spillage of oil, fuels and chemical, contaminated soil will be removed and disposed of accordingly at a landfill site. |
| 6. involve the generation or disposal of gaseous, liquid or solid wastes or emissions? | Yes | Negligible | Disposal of waste is an issue for the project given the remote location. Transport of waste will increase the likelihood of spreading the waste and litter. The nearest licenced waste facility is at Bourke. | All vehicles and machinery accessing the activity areas are to be mechanically sound.<br><br>Machinery will be turned off when not in active use. Only use vehicles and machinery when required. |

| Is the proposed activity likely to… | Applicable? | Impact level (negligible; or low, medium or high adverse; or positive; or NA) | Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact) | Safeguards/mitigation measures |
|---|---|---|---|---|
| | | | | Refer to section 6.2.1 post-construction activity description for waste disposal options |
| 7. involve the emission of dust, odours, noise, vibration or radiation? | Yes | Negligible | | Dust suppression using water will be implemented when and if required during the pre-construction phase of the proposed activity. |

## 9.2 Biodiversity impacts

| Is the proposed activity likely to… | Applicable? | Impact level (negligible; or low, medium or high adverse; or positive; or NA) | Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact) | Safeguards/mitigation measures |
|---|---|---|---|---|
| 1. affect a declared area of outstanding biodiversity value, critical habitat or environmental asset of intergenerational significance? | No | | | |
| 2. result in the clearing or modification of vegetation, including ecological communities and | Yes | Negligible | The proposed campground contains disturbed coolibah-black box community. The works will not change the land-use of the area and are unlikely to increase the existing disturbance. | The proposed activity is within disturbed areas and no further significant disturbance will as no mature trees have been identified for removal. Any trees requiring removal must be approved by an NPWS representative onsite. |

| Is the proposed activity likely to… | Applicable? | Impact level (negligible; or low, medium or high adverse; or positive; or NA) | Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact) | Safeguards/mitigation measures |
|---|---|---|---|---|
| plant community types of conservation significance? ^ | | | | |
| 3. endanger, displace or disturb terrestrial or aquatic fauna, including fauna of conservation significance, or create a barrier to their movement? ^ | Yes | Negligible | 11 threatened fauna species have been recorded in the park.<br><br>Pink cockatoos and grey-crowned babblers were the most widespread, recorded multiple times across a variety of habitats. Pink cockatoos, little pied bat and yellow-bellied sheath-tailed bat were recorded within the activity area. They are mobile species and can temporarily avoid the activity area. Other species such as the eastern fat-tailed gecko, hooded robin and Hall's babbler were only seen once within mulga habitats. Mulga habitats will not be disturbed by the proposed activities. | No significant habitat elements will be disturbed. |
| 4. result in the removal of protected flora or plants or fungi of conservation significance? ^ | No | | The 2023 vegetation survey recorded three endangered species, *Ipomoea diamantinensis, Goodenia nocoleche* and *Phyllanthus maderaspatensis* were identified. These species, although common in northern Australia, are rare in New South Wales, making their presence at Comeroo Station significant for regional biodiversity. The species are short-lived forbs found in inter-drying zones and conditions must be suitable for the plants to be found. Conditions were suitable during the 2023 vegetation survey. | |
| 5. contribute to a key threatening process to biodiversity or ecological integrity? | No | | | |

| Is the proposed activity likely to… | Applicable? | Impact level (negligible; or low, medium or high adverse; or positive; or NA) | Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact) | Safeguards/mitigation measures |
|---|---|---|---|---|
| 6. introduce weeds, pathogens, pest animals or genetically modified organisms into an area? | Yes | Low | The activity area is highly disturbed with introduced grasses such as buffel grass. | All plant and machinery used will be clean and free of soil, to prevent weed propagule spread within and nearby to the activity areas.<br>Machinery will need to be cleaned on leaving to prevent the spread of buffel grass. |

## 9.3 Community impacts

| Is the proposed activity likely to… | Applicable? | Impact level (negligible; or low, medium or high adverse; or positive; or NA) | Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact) | Safeguards/mitigation measures |
|---|---|---|---|---|
| 1. affect community services or infrastructure? | No | | | |
| 2. affect sites important to the local or broader community for their recreational or other values or access to these sites? | Yes | Positive | The proposed campground will enable public access to the reserve and enjoyment of the national park. | |
| 3. affect economic factors, including employment, industry and property value? | Yes | | The proposed campground will enable public access to the reserve and enjoyment of the national park, contributing to the regional tourism economy. | |

| | | |
|---|---|---|
| 4. have an impact on the safety of the community? | No | |
| 5. cause a bushfire risk? | No | |
| 6. affect the visual or scenic landscape? ^ | No | |

## 9.4 Natural resource impacts

| Is the proposed activity likely to… | Applicable? | Impact level (negligible; or low, medium or high adverse; or positive; or NA) | Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact) | Safeguards/mitigation measures |
|---|---|---|---|---|
| 1. result in the degradation of the park or any other area reserved for conservation purposes? | No | Negligible | The proposed works are in already disturbed areas. The activities replace old and degraded assets. | Mitigation measures as per section 6 |
| 2. affect the use of, or the community's ability to use, natural resources? | Yes | Positive | The reserve is a national park and provision of public facilities will enable public access and appreciation of the natural resources | |
| 3. involve the use, wastage, destruction or depletion of natural resources including water, fuels, timber or extractive materials? ^ | No | Negligible | This project includes demolition of assets beyond their life span and construction new assets so resources will need to be consumed. | The scale of the project is limited and where possible manufacture will be off-site to increase efficiencies. |

| Is the proposed activity likely to… | Applicable? | Impact level (negligible; or low, medium or high adverse; or positive; or NA) | Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact) | Safeguards/mitigation measures |
|---|---|---|---|---|
| 4. provide for the sustainable and efficient use of water and energy? † | Yes | Negligible | The proposal will maximise the harvesting of rainwater and use efficient fittings where funding allows. | The activity is in a remote area and the scale of the project is limited. Utilities, materials and fittings will consider transport costs, ease of maintenance and repair, replacement cost and availability, sustainability and energy use. The most sustainable technological solution is not always appropriate for such a as remote location. |

## 9.5 Aboriginal cultural heritage impacts

| Is the proposed activity likely to… | Applicable? | Impact level (negligible; or low, medium or high adverse; or positive; or NA) | Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact) | Safeguards/mitigation measures |
|---|---|---|---|---|
| 1. disturb the ground surface or any vegetation likely to contain culturally modified trees? | Yes | Low | The activity is in previously disturbed areas and the footprint will be kept to a minimal.<br>There will be ground disturbance.<br>Although recorded during the survey no modified trees were recorded within the activity area. | No Aboriginal sites are currently in AHIMS however, NPWS staff have found stone artefacts during site visits. Ozark and RAPs undertook a comprehensive survey of the operational precinct, three proposed campgrounds and access roads on 3-8 February 2025.<br>Numerous artefacts were found, typically stone cores, flakes and tools such as scrapers, and hearths (damaged).<br>Within the activity area of the REF:<br>• The most artefacts were found in Comeroo campground and the access roads closest to water. An approved AHIP will be required before salvage can be conducted.<br>• Three avoidable artefacts were found within the construction zone in the operational precinct. The only artefacts were found north of the machinery fence near the fence and can be avoided.<br>• No artefacts were found within the area of the entrance realignment.<br>• No artefacts were found along the proposed pipeline along the fenceline to the campground.<br>A due diligence report has been prepared for works within the operational precinct and the pipeline.<br>The RAPs were in agreement with the proposed project and an AHIP is being pursued for the whole survey |

| Is the proposed activity likely to… | Applicable? | Impact level<br>(negligible; or low, medium or high adverse; or positive; or NA) | Reasons<br>(describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact) | Safeguards/mitigation measures |
|---|---|---|---|---|
| | | | | area. The AHIP asks to allow salvage of known artefacts prior to works and for trained NPWS staff to be able to move any unanticipated finds that are exposed during works out of the disturbance area. The consultants have advised a determined REF is required to be attached to the AHIP for consideration by Heritage NSW. The conditions specified in the AHIP will be followed once it is approved.<br>The rocky hills in the north of the park holds a series of wells. The public will not be permitted into this area due to the fragile nature of wells. |
| 2. affect or occur near known Aboriginal objects, Aboriginal places or an Aboriginal cultural asset of intergenerational significance?<br>If so, can impacts be avoided? How? | Yes | Low | The activity is within 200m of water. | NPWS will apply for an AHIP and undertake site salvage prior to works. See above |
| 3. affect areas:<br>a. within 200 m of waters<br>b. within a sand dune system<br>c. on a ridge top, ridge line or headland | Yes | Low | The activity is within 200m of water. | NPWS will apply for an AHIP and undertake site salvage prior to works. See above |

| Is the proposed activity likely to… | Applicable? | Impact level (negligible; or low, medium or high adverse; or positive; or NA) | Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact) | Safeguards/mitigation measures |
|---|---|---|---|---|
| d. within 200 m below or above a cliff face<br>e. in or within 20 m of a cave, rock shelter or a cave mouth?<br>If so, can impacts be avoided? How? | | | | |
| 4. affect wild resources which are used or valued by the Aboriginal community or affect access to these resources? | No | | | |
| 5. affect access to culturally important locations? | No | | | |

## 9.6 Other cultural heritage impacts

| Is the proposed activity likely to… | Applicable? | Impact level (negligible; or low, medium or high adverse; or positive; or NA) | Reasons (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact) | Safeguards/mitigation measures |
|---|---|---|---|---|
| 1. affect or occur near places, buildings or | Yes | Low | No particular building was of significance, but the conglomerate was deemed to contribute to | Renovations are economically and practically prohibitive and the buildings will need to be replaced in |

| Is the proposed activity likely to… | Applicable? | Impact level<br>(negligible; or low, medium or high adverse; or positive; or NA) | Reasons<br>(describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact) | Safeguards/mitigation measures |
|---|---|---|---|---|
| landscapes of heritage significance? ^ | | | the story of the pastoral heritage of the region. The assessment recommended keeping the buildings or retaining the piers to mark the original footprint of the buildings. However, Grandma's cottage and Comeroo homestead will be replaced on site, so retention is not possible. Landscape elements will be retained where possible. | situ. A photographic archive has been taken. While piers may need to be cleared to allow for the replacement buildings, ground level markers can be installed. Landscape elements will be retained. |
| 2. impact on relics or moveable heritage items, or an area with a high likelihood of containing relics? ^ | Yes | Negligible | There is significant rubbish accumulated around the homestead precinct that will be cleaned up for safety and aesthetic reasons. No items of significance were found during the Heritage Assessment (NPWSd). | |
| 3. impact on vegetation of cultural landscape value (e.g. gardens and settings, introduced exotic species, or evidence of broader remnant land uses)? | Yes | Medium | The activity is within previous disturbed operational areas with introduced plants and grasses. Plantings such as vegetable patches, fruit trees and screening plants will be encouraged to improve the amenity of living areas, improve the health and diet of staff living on park and provide privacy screening for the operational area. | Where possible native plants will be used however, non-natives will be assessed prior to planting to ensure they are not invasive.<br>Non-native plantings will be restricted to the homestead precinct. |

## 9.7 Impacts on matters of national environmental significance

| **Is the proposal likely to affect MNES, including:** | **Applicable?** | **Likely impact** (negligible, low, medium or high adverse; or positive; or N/A) | **Reasons** (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact) | Safeguards/mitigation measures |
|---|---|---|---|---|
| 1. listed threatened species or ecological communities)? | Yes | Negligible | An assessment of significance found no significant impacts on threatened species or communities. | The activity is within disturbed areas and will not result in significant habitat modification. Habitat elements such as large trees will be retained. |
| 2. listed migratory species? | Yes | Negligible | Migratory species have been identified in the Protected Matters Report | Although present on the reserve wetland habitat will not be impacted and there will no impacts on migratory bird species or potential nesting sites. |
| 3. the ecology of Ramsar wetlands? | No | NA | | |
| 4. world heritage values of World Heritage properties? | No | NA | | |
| 5. the national heritage values of national heritage places? | No | NA | | |

# 10. Cumulative impacts

| **When considered with other projects, is the proposed activity likely to affect…** | **Applicable?** | **Impact level** (negligible; or low, medium or high adverse; or positive; or NA) | **Reasons** (describe the type, nature and extent of impact, taking into account the receiving environment and proposed safeguards which will limit the impact) | Safeguards/mitigation measures |
|---|---|---|---|---|
| 1. natural landscape or biodiversity values through cumulative impacts? | Yes | Negligible | Additional visitor facilities are recommended for the reserve. These will be basic facilities that will result in minimal disturbance and seek to be sympathetic to the landscape eg no tree removal. | Environmental assessment of future facilities |
| 2. cultural (Aboriginal, shared and historic heritage) values through cumulative impacts? | Yes | Unknown | Additional visitor facilities are recommended for the reserve. However, these are likely to require an AHIP and will be addressed following further consultation with communities | Consultation with Aboriginal Communities is required |
| 3. social (amenity, recreation, education) values through cumulative impacts? | Yes | Positive | Additional visitor facilities are recommended for the reserve. However, these are likely to require an AHIP and will be addressed following further consultation with communities | |
| 4. the community through cumulative impacts on any other part of environment (e.g. due to traffic, or waste generation)? | Yes | Negligible | The activity is on a remote property and is unlikely to impact any third parties. | |

# 11. Summary of impacts and conclusions

**Table 4. Consideration of significance of impacts for each environmental factor**

| Environmental factor | Consideration | Significance of impact* |
|---|---|---|
| 1. the environmental impact on the community | Social, economic and cultural impacts as described in sections 9.3, 9.5 and 9.6 | Not significant |
| 2. the transformation of the locality | Human and non-human environment as described in sections 9.1, 9.2 and 9.4 | Not significant |
| 3. the environmental impact on the ecosystems of the locality | Amount of clearing, loss of ecological integrity, habitat connectivity/fragmentation and changes to hydrology (both surface and groundwater) as described in sections 9.1, 9.2 and 9.4 and, for nationally listed threatened ecological communities, in section 9.7. | Not significant |
| 4. reduction of the aesthetic, recreational, scientific or other environmental quality or value of the locality | Visual, recreational, scientific and other impacts as described in section 9.3. | Not significant |
| 5. the effects on any locality, place or building that has—<br>a. aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance, or<br>b. other special value for present or future generations | Impacts to Aboriginal and historic heritage associated with a locality (including intangible cultural significance), architectural heritage, social/community values and identity, scenic values and others, as described in sections 9.3, 9.5 and 9.6 and (for MNES heritage places) section 9.7. | Not significant |
| 6. the impact on the habitat of protected animals, within the meaning of the Biodiversity Conservation Act | Impacts to all native terrestrial species, including but not limited to threatened species, and their habitat requirements, as described in section 9.2. | Not significant |
| 7. the endangering of a species of animal, plant or other form of life, whether living on land, in water or in the air | Impacts to all listed terrestrial and aquatic species, and whether the proposal increases the impact of key threatening processes, as described in section 9.2 | Not significant |
| 8. long-term effects on the environment | Long-term residual impacts to ecological, social and economic values as described in all parts of section 9. | Not significant |
| 9. degradation of the quality of the environment | Ongoing residual impacts to ecological, social and economic as described in section 9.4. | Not significant |
| 10. risk to the safety of the environment | Impacts to public and work health and safety, from contamination, bushfires, sea level rise, flood, storm surge, wind speeds, | Not significant |

| Environmental factor | Consideration | Significance of impact* |
|---|---|---|
| | extreme heat, rockfall and landslip, and other risks likely to increase due to climate change as described in sections 9.1, 9.3 and 9.4. | |
| 11. reduction in the range of beneficial uses of the environment | Impacts to natural resources, community resources and existing uses as described in sections 9.3 and 9.4. | Not significant |
| 12. pollution of the environment | Impacts due to air pollution (including odours and greenhouse gases); water pollution (water quality health); soil contamination; noise and vibration (including consideration of sensitive receptors); or light pollution, as described in sections 9.1 and 9.3. | Not significant |
| 13. environmental problems associated with the disposal of waste | Transportation, disposal and contamination impacts as described in section 9.3. | Not significant |
| 14. increased demands on natural or other resources that are, or are likely to become, in short supply | Impacts to land, soil, water, gravel, minerals and energy supply as described in section 9.4. | Not significant |
| 15. the cumulative environmental effect with other existing or likely future activities | The negative synergisms with existing development or future activities as considered in section 9.8. | Not significant |
| 16. the impact on coastal processes and coastal hazards, including those under projected climate change conditions | Impacts arising from the proposed activity on coastal processes and impacts on the proposed activity from those coastal processes and hazards, both current and future, as considered in section 9.1. | Not significant |
| 17. applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1 | Inconsistency with the objectives, policies and actions identified in local, district and regional plans, as considered in section 3.2.2. | Not significant |
| 18. other relevant environmental factors. | Any other factors relevant in assessing impacts on the environment to the fullest extent, such as native title. | Not significant |

**In conclusion**:

- There **is not** likely to be a significant effect on the environment and an environmental impact statement **is not** required

Reason(s): Provide a brief justification on the conclusion that there will or will not be a significant effect – e.g. short term, limited extent, site already disturbed.

- There **is not** likely to be a significant effect on threatened species, populations, ecological communities or their habitats and a species impact statement **is not*** required

  Reason(s): The activity is limited to pre-disturbed areas and will not create significant further disturbance:

- The activity **is not** likely to have a significant impact on matters of national environmental significance listed under the Cwth Environment Protection and Biodiversity Conservation Act and so **will not** require referral to the Australian Government.

  Reason(s): The activity is within a limited, previously disturbed areas and will not result in significant habitat modification.

- The activity **will** require certification to the Building Code of Australia, Disability (Access to Premises – Buildings) Standards 2010 or Australian Standards in accordance with the NPWS Construction Assessment Procedures

# 12. Supporting documentation

**Table 5. Documents that accompany the review of environmental factors**

| Document title | Author | Date |
|---|---|---|
| Protected Matters Report | Australian Government Department of Climate Change, Energy, the Environment and Water | 13/01/2025 |
| Atlas of NSW Wildlife report | BioNet | 13/01/2025 |
| Due Diligence Report | Ozark | 28/02/2025 |
| Asbestos report | Clifton and Assoc | 24/02/2025 |
| Decision Statement | Jessica Stokes | |

# 13. Fees for external proponents

Not relevant – internal proponent.

# 14. Declarations

As the person responsible for the **preparation** of the REF, I certify that, to the best of my knowledge, this REF is in accordance with the EP&A Act, the EP&A Regs and the Guidelines approved under section 170 of the EP&A Regs, and the information it contains is neither false nor misleading.

| | |
|---|---|
| **Signature** |  |
| **Name (printed)** | Jessica Stokes |
| **Position** | Principal Project Officer |
| **Date** | 09/01/25 |

**By endorsing the REF, the proponent confirms that the information in the REF is accurate and adequate to ensure that all potential impacts of the activity can be identified.**

| | |
|---|---|
| **Signature** | (In CM10) |
| **Name (printed)** | Melissa Hams |
| **Position** | Area Manager |
| **Date** | |

Seal (if signing under seal):

# 15. References

DCCEEW (2024) *Cuttaburra National Park Statement of Management Intent*.

https://www.environment.nsw.gov.au/research-and-publications/publications-search/cuttaburra-national-park-statement-of-management-intent

NPWSa (2024) *Cuttaburra NP Establishment Plan*. Unpublished

NPWSb (2024) *Cuttaburra National Park Visitation Plan*. Unpublished

NPWSc (2024) *Comeroo Fauna Survey 2024 Summary*. Unpublished

NPWSd (2024) Comeroo National Park – Heritage Assessment Unpublished. Caroline Lawrence and Raphael Gracia

Scout Ecology (2024) *Comeroo Station Vegetation Survey and Mapping*. Unpublished

# Appendix 1: Threatened species lists

## Species and communities listed in BioNet or recorded

A Bionet threatened entities report was run 13 January 2025.

Fauna and flora survey have been undertaken in the reserve in 2024.

| Scientific name | Common name | NSW status | EPBC status | Present in Reserve | Habitat in activity area |
|---|---|---|---|---|---|
| *Hamirostra melanosternon* | Black-breasted buzzard | Vulnerable | | Yes | |
| *Lophoictinia isura* | Square-tailed kite | Vulnerable | | Yes | |
| *Grus rubicunda* | Brolga | Vulnerable | | Yes | |
| *Aphelocephala leucopsis* | Southern whiteface | Vulnerable | Vulnerable | Yes | |
| *Certhionyx variegatus* | Pied honeyeater | Vulnerable | | Yes | |
| *Melanodryas cucullata* | Hooded robin (south-eastern subspecies) | Endangered | Endangered | Yes | |
| *Pomatostomus halli* | Hall's babbler | Vulnerable | | Yes | |
| *Pomatostomus temporalis* | Grey-crowned babbler (eastern subspecies) | Vulnerable | | Yes | |
| *Climacteris picumnus victoriae* | Brown treecreeper (eastern subspecies) | Vulnerable | Vulnerable | Yes | |
| *Lophochroa leadbeateri* | Pink cockatoo | Vulnerable | Endangered (eastern subspecies) | Yes | |
| *Sminthopsis macroura* | Stripe-faced dunnart | Vulnerable | | Yes | |
| *Pseudomys hermannsburgensis* | Sandy inland mouse | Vulnerable | | Possible | |
| *Chalinolobus picatus* | Little pied bat | Vulnerable | | Yes | |
| *Saccolaimus flaviventris* | Yellow-bellied sheath-tailed bat | Vulnerable | | Yes | |

| | | | | |
|---|---|---|---|---|
| *Pseudonaja modesta* | Ringed brown snake | Endangered | No | |
| *Diplodactylus conspicillatus* | Eastern fat-tailed gecko | Endangered | Yes | No |
| *Ipomoea diamantinensis* | Desert cow-vine | Endangered | Yes | No |
| *Phyllanthus maderaspatensis* | Spurge | Endangered | Yes | No |
| *Dentella minutissima* | | Endangered | Possible | No |
| *Goodenia nocholeche* | Nocoleche goodenia | Vulnerable | Yes | No |

## Species and communities listed in the National Matters Report

**Threatened species listed under the EPBC Act**

| Common name | Scientific Name | Category | Present |
|---|---|---|---|
| Southern whiteface | *Aphelocephala leucopsis* | Vulnerable | Yes |
| Sharp-tailed sandpiper | *Calidris acuminata* | Vulnerable | No |
| Curlew sandpiper | *Calidris ferruginea* | Critically endangered | No |
| Grey falcon | *Falco hypoleucos* | Vulnerable | Maybe |
| Latham's snipe | *Gallinago hardwickii* | Vulnerable | No |
| Painted honeyeater | *Grantiells picta* | Vulnerable | Maybe |
| Pink cockatoo | *Lophochroa leadbeateri leadbeateri* | Endangered | Yes |
| Hooded robin (south-eastern) | *Melanodryas cucullata cucullata* | Endangered | Yes |
| Blue-winged parrot | *Neophema chrysostoma* | Vulnerable | Yes |
| Plains-wanderer | *Pedionomus torquatus* | Critically endangered | No |
| Australian painted snipe | *Rostratula australis* | Endangered | No |
| Corben's long-eared bat | *Nyctophilus corbeni* | Vulnerable | No |
| Winged pepper-cress | *Lepidium monoplocoides* | Endangered | No |
| Chariot wheels | *Marieana cheelii* | Vulnerable | No |
| Green algae | *Nitella parooensis* | Critically endangered | No |

| | | | |
|---|---|---|---|
| | *Xerothamnella parviflora* | Vulnerable | No |

**Migratory species**

| Common name | Scientific Name | |
|---|---|---|
| Fork-tailed swift | *Apus pacificus* | Yes |
| Yellow wagtail | *Motocilla flava* | No |
| Common sandpiper | *Actitis hypoleucos* | No |
| Sharp-tailed sandpiper | *Calidris acuminata* | No |
| Curlew sandpiper | *Calidris ferruginea* | No |
| Pectoral sandpiper | *Calidris melanotos* | No |
| Latham's snipe | *Gallinago hardwickii* | No |
| Cattle Egret | *Bulbulcus ibis* | Yes |
| Black-eared cuckoo | *Chalcites osculans* | No |
| White-bellied sea eagle | *Haliaeetus leucogaster* | No |
| Rainbow bee-eater | *Merops ornatus* | Yes |

**Threatened communities**

| Common name | |
|---|---|
| Coolibah-Black Box Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain and Mulga Lands Bioregions | Endangered |

## Appendix 2: Threatened species habitat assessment

| Scientific name | NSW status | EPBC status | Known Distribution & Habitat Description | Likelihood of Occurrence in activity area | NSW Test of Significance Required? | C'wealth Test of Significance Required? | Justification where no test / assessment required |
|---|---|---|---|---|---|---|---|
| **FLORA** | | | | | | | |
| ***Ipomoea diamantinensis*** Desert cow-vine | E | NA | Common across northern Australia but rare in NSW. Previously only recorded east of Goodooga it was found. Found in numerous locations in Cuttaburra NP in the floodplain of Cuttaburra Creek. Highly ephemeral growing on clay soils on floodplains, often in shallow water and mud on cracking grey clay. | **Unlikely – recorded on park but not in the activity area** | **No** | **No** | The species is highly ephemeral. The species was not recorded during the field survey when found elsewhere in the reserve. Although there is habitat adjacent to the activity area, there is none within the activity area. |
| ***Phyllanthus maderaspatensis*** | E | NA | Grows in floodplain areas on heavy soils and may rely on appropriate and intermittent rainfall and flooding events for its survival. The species is a summer-growing annual and is thus dependent on seasonal conditions. Often associated with open grasslands and eucalypt woodlands in or near creek beds, and grassy flats and levees near watercourses. | **Unlikely – recorded on park but not in the activity area** | **No** | **No** | The species is highly ephemeral. The species was not recorded during the field survey when found elsewhere in the reserve. Although there is habitat adjacent to the activity area, there is none within the activity area. |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ***Goodenia nocoleche*** | V | | It is an ephemeral amphibious herb with floating, lance-shaped leaves. The seeds germinate in shallow temporary wetlands, with partial drying stimulating flowering. | **Unlikely – recorded on park but not in the activity area** | **No** | **No** | The species is highly ephemeral. The species was not recorded during the field survey when found elsewhere in the reserve.<br>Although there is habitat adjacent to the activity area, there is none within the activity area. |
| ***Dentella minutissima*** | E | NA | Highly ephemeral. Found on dry, flat sections of mudflat exposed to full sunlight. It does not grow under shade or in locations with significant amounts of leaf litter.<br><br>While the activity area is within the floodplain and adjacent to suitable habitat areas these habitats will not be impacted by the activity area. The plants have not been found during site inspections however, they are short lived ephemerals that are hard to identify. Should they present in the current activity areas they have survived disturbance and the proposed activities will not increase disturbance beyond the current levels. | **Low** | **No** | **No** | The species is highly ephemeral. The species was not recorded during the field survey or found within the reserve.<br>Although there is potential habitat adjacent to the activity area, there is none within the activity area. |
| ***Lepidium monoplocoides***<br>Winged Peppercress | E | E | Widespread in the semi-arid western plains regions of NSW. Collected from widely scattered localities, with large numbers of historical records but few recent collections. Occurs on seasonally moist to waterlogged sites, on heavy fertile soils, with a mean annual rainfall of around 300-500 mm. Predominant vegetation is usually an open woodland dominated by *Allocasuarina luehmannii* (bulloak) and/or eucalypts, particularly<br>*E. largiflorens (*black box) or *E. populnea* (poplar box). | **Low** | **No** | **No** | The species was not recorded during the field survey.<br>The species is highly ephemeral. The species is not known but predicted to occur within the areas. |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ***Maireana cheelii*** Chariot Wheels | V | V | Restricted to the southern Riverina region of NSW, mainly in the area between Deniliquin and Hay. Usually found on heavier, grey clay soils with *Atriplex vesicaria* (bladder saltbush). Recorded on the Hay Plain in *Atriplex vesicaria*, *Maireana aphylla* and *Acacia homalophylla* shrublands. Soils include heavy brown to red-brown clay-loams, hard cracking red clay, other heavy texture-contrast soils. Tends to grow in shallow depressions, often on eroded or scalded surfaces, and does not extend to the higher soils in the habitat. It has been found on the edges of bare, windswept claypans, in shallow depressions of eroded surfaces where rainwater collects and on a "shelf" in the crabhole complex of heavy grey soils. | **Low** | **No** | **No** | The species was not recorded during the field survey. Presence has been ruled out. |
| ***Nitella parooensis*** a green alga | CE | CE | *N.parooensis* is Endemic to NSW, existing in a very small range (~8 km2) in the claypan wetlands of Nocoleche NR in three small temporary freshwater wetlands. *N. parooensis* is very uncommon at the three sites where it is currently known, with only scattered individuals seen. Known to occur in a temporary lignum swamp on the edge of a floodplain that fills either after minor flooding of the river or from local runoff. It occurs on heavy grey cracking clay and is fringed by *Eucalyptus ochrophloia* (yapunyah) and *E. largiflorens* (black box) with an understorey of *Duma florulenta (*lignum) and *Acacia stenophylla* (river coobah). | **None** | **No** | **No** | The species was not recorded during the field survey. Presence has been ruled out. |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Xerothamnella parvifolia** | E | V | Grows in skeletal, fine sandy clays along ridge tops. It is very rare in NSW, being recorded only from Mt Poole north-west of Milparinka in the far north-western plains. Further searches of rocky hill-tops north from Broken Hill to the Queensland border have not yielded new records of the species. More widely distributed interstate with some very large populations in SW Queensland and localised in South Australia. | **None** | **No** | **No** | The species was not recorded during the field survey.<br>Presence has been ruled out. |
| **AVES** | | | | | | | |
| ***Actitis hypoleucos***<br>Common Sandpiper | | M | Found along all coastlines of Australia and in many areas inland, the Common sandpiper is widespread in small numbers. The population when in Australia is concentrated in northern and western Australia.<br>The wader species utilises a wide range of coastal wetlands and some inland wetlands, with varying levels of salinity, and are mostly found around muddy margins or rocky shores and rarely on mudflats. The Common Sandpiper has been recorded in estuaries and deltas of streams, as well as on banks farther upstream; around lakes, pools, billabongs, reservoirs, dams and claypans, and occasionally piers and jetties. The muddy margins utilised by the species are often narrow and may be steep. | **Low** | **n/a** | **No** | Utilize the proposed activity area to any notable degree |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Aphelocephala leucopsis**<br>Southern Whiteface | V | V | The southern whiteface is a small passerine found in arid regions across most of the southern half of the Australian continent, excluding Tasmania. It typically inhabits arid open woodlands with a shrubby or grassy understory, as well as grass plains throughout much of the continents south<br>Southern whitefaces live in a wide range of sparsely treed woodlands and shrublands where there is an understorey of grasses or shrubs or both, usually in habitats dominated by acacias or eucalypts on ranges, foothills and lowlands and plains. They feed on insects and seeds, largely gleaned from the bare ground or leaf litter. | **Possible** | **n/a** | **Yes** | **n/a** |
| ***Apus pacificus***<br>Fork-tailed Swift | | M | The Fork-tailed Swift is distributed throughout all regions of NSW, with most records occurring east of the Great Divide. However, several populations have also been documented west of this divide, albeit in a dispersed and widespread manner, particularly beyond the Bourke-Dareton line. This species lives its life in the air and is commonly observed in flight at altitudes ranging from less than one meter to potentially exceeding 300 meters above ground and is often found in a variety of habitats, including riparian woodlands, tea-tree swamps, heathlands, low scrub, and saltmarshes. Additionally, they have been noted in treeless grasslands and sandplains covered with spinifex, as well as in open farmland and coastal and inland sand dunes. | **Moderate**<br>The proposed activity area contains potential habitat to support the species. | **n/a** | **Yes** | **n/a** |

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| ***Calidris acuminata*** Sharp-tailed Sandpiper | N/A | V, M | Highly migratory wader. The sharp-tailed sandpiper spends the non-breeding season in Australia with small numbers occurring regularly in New Zealand. It is widespread in both inland and coastal locations and in both freshwater and saline habitats. Sharp-tailed sandpipers prefer muddy edges of shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh or other low vegetation. This includes swamps, dams, waterholes, soaks, bore drains and bore swamps, saltpans and hypersaline salt lakes inland.<br>While they may use adjacent inundated paddocks the species is unlikely to utilise the proposed activity area to any notable degree. | **Low** | **n/a** | **No** | The species is unlikely to utilise the proposed activity area to any notable degree |
| ***Calidris ferruginea*** Curlew Sandpiper | CE | CE, M | The curlew sandpiper is a highly migratory wader distributed around most of the Australian coastline. The Curlew Sandpiper is a common summer migrant from north-eastern Siberia and Alaska, found in many Australian coastal sites and may also be seen inland in suitable habitats. It is most common in the far south-east and north-west of Australia. The Curlew sandpiper is found on intertidal mudflats of estuaries, lagoons, mangroves, as well as beaches, rocky shores and around lakes, dams and floodwaters. Likely to visit only during floodwater. Inland records are probably mainly of birds pausing for a few days during migration. It generally occupies littoral and estuarine habitats. | **Low** | **n/a** | **No** | The species is unlikely to utilise the proposed activity area. |
| ***Calidris melanotos*** Pectoral Sandpiper | N/A | M | The pectoral sandpiper is a non-breeding visitor, found in Australia from September to June. The species is usually found in coastal or near coastal habitats but occasionally found further inland. It prefers wetlands that have open fringing mudflats and low, emergent or<br>fringing vegetation, such as grass or samphire. The | **Low** | **n/a** | **No** | The species is unlikely to utilise the proposed activity area to |

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| | | | species is found at coastal lagoons, estuaries, bays, swamps, lakes, inundated grasslands, saltmarshes, river pools, creeks, floodplains and artificial wetlands.<br>While they may use adjacent inundated paddocks the species is unlikely to utilise the proposed activity area. | | | | any notable degree |
| ***Certhionyx variegatus***<br>Pied Honeyeater | V | N/A | Widespread throughout acacia, mallee and spinifex scrubs of arid and semi-arid Australia. Occasionally occurs further east, on the slopes and plains and the Hunter Valley, typically during periods of drought.<br><br>Inhabits wattle shrub, primarily mulga (*Acacia aneura*), mallee, spinifex and eucalypt woodlands, usually when shrubs are flowering; feeds on nectar, predominantly from various species of emu-bushes (*Eremophila* spp.); also, from mistletoes and various other shrubs (e.g. *Grevillea* spp.); also eats saltbush fruit, berries, seed, flowers and insects.<br><br>The habitat is available in the reserve but not within the activity area. | **Low** | **No** | **n/a** | The species is unlikely to utilise the proposed activity area to any notable degree |
| ***Falco hypoleucos***<br>Grey Falcon | V | V | The grey falcon is sparsely distributed in NSW, chiefly throughout the Murray-Darling Basin, with the occasional vagrant east of the Great Dividing Range. The breeding range has contracted since the 1950s with most breeding now confined to arid parts of the range. Usually restricted to shrubland, grassland and wooded watercourses of arid and semi-arid regions, although it is occasionally found in open woodlands near the coast. Also occurs near wetlands where surface water attracts prey. | **Moderate**<br>The proposed activity area contains habitat to support the species. | **Yes** | **Yes** | **n/a** |

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| ***Gallinago hardwickii*** Latham's Snipe | V | V,M | Latham's snipe is a non-breeding visitor to south-eastern Australia. The shorebird species is occasionally recorded at sites located to the west of the core range (e.g. in north- western and south-western Queensland, north-western New South Wales, mid-northern South Australia, the Northern Territory and Western Australia). Occurs in permanent and ephemeral wetlands up to 2000 m above sea level. They usually inhabit open, freshwater wetlands with low, dense vegetation (e.g. swamps, vegetation, from damp meadows, marshes, waterside pastures, sewage farms and bogs to damp steppe and grassy tundra.), flooded grasslands or heathlands, around bogs and other water bodies) with saline or brackish water, in modified or artificial habitats, and in habitats located close to humans or human activity.<br>The species is only occasionally recorded to the west of its core range. While the species may visit the reserve there is no suitable habitat within the activity area. | **Low** | **n/a** | **No** | The species is unlikely to utilize the proposed activity area to any notable degree |
| ***Rostratula australis*** Australian Painted Snipe | E | E, M | The Australian Painted Snipe is a snipe-like shorebird found in the wetlands and is endemic to Australia. The Australian Painted Snipe inhabits many different types of shallow, brackish or freshwater terrestrial wetlands, especially temporary ones which have muddy margins and small, low-lying islands. Suitable wetlands usually support a mosaic of low, patchy vegetation, as well as lignum and canegrass. The movements of the Painted Snipe are poorly known, and it may be a migratory species. Sightings of individuals are erratic, and it is thought the species is likely to be nomadic in response to suitable conditions, such as floods.<br>Suitable habitat is found on the reserve but not the activity area. | **Low** | **n/a** | **No** | The species is unlikely to utilize the proposed activity area to any notable degree |

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| ***Grantiella picta***<br>Painted Honeyeater | V | V | The Painted Honeyeater is nomadic and occurs at low densities throughout its range. The painted honeyeater is endemic to mainland Australia, being found in Queensland and New South Wales west of the Great Dividing Range, through to northern Victoria. The greatest concentrations of the bird and almost all breeding occurs on the inland slopes of the Great Dividing Range in NSW, Victoria and southern Queensland. Inhabits Boree/ Weeping Myall (*Acacia pendula*), Brigalow (A. *harpophylla*) and Box-Gum Woodlands and Box-Ironbark Forests. A specialist feeder on the fruits of mistletoes growing on woodland eucalypts and acacias. Prefers mistletoes of the genus Amyema. | **Low**<br>. | **Yes** | **Yes** | N/A |
| **Certhionyx variegatus**<br>Pied Honeyeater | V | N/A | The Pied Honeyeater is nomadic, moving in response to rainfall and flowering of food-plants. It is found in the arid and semi-arid zones, in shrublands dominated by emu-bush, eremophila, and grevilleas, as well as woodlands, sandhills, inland ranges and granite outcrops. It is sometimes found in coastal areas of north-western Western Australia. Shrubland, woodlands and sandhill habitats are not present in the activity area.<br>While habitat is plentiful in the reserve and they have been recorded in the park, minimal sub-optimal open woodland habitat would be available within the campground. | **Unlikely**<br>**Known in the park** | **n/a** | **No** | The species is unlikely to utilize the proposed activity area to any notable degree |
| ***Grus rubicunda***<br>Brolga | V | N/A | The brolga was formerly found across Australia, except for the south-east corner, Tasmania and the south-western third of the country. It is still abundant in the northern tropics, but very sparse across the southern part of its range. Often feed in dry grassland or ploughed paddocks or even desert claypans, however, they are dependent on wetlands, especially shallow swamps, where they will forage with their head entirely submerged. | **Possible**<br>**Known in the park** | **Yes** | **Yes** | **n/a** |

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| ***Lophochroa leadbeateri*** Pink Cockatoo | V | E | Found across the arid and semi-arid inland. In NSW the Pink cockatoo is found regularly as far east as about Bourke and Griffith, and sporadically further east than that. Inhabits a wide range of treed and treeless inland habitats, always within easy reach of water. Feeds mostly on the ground, especially on the seeds of native and exotic melons and on the seeds of species of saltbush, wattles and cypress pines. Species was observed during field survey. | **Possible**<br>**Known in the park** | **Yes** | **Yes** | **n/a** |
| ***Motacilla flava*** Western Yellow Wagtail | | M | Although *Motacilla flava* is listed in the PMR the eastern yellow wagtail *Motacilla tschutschensis* is more likely in Australia. Highly mobile migratory species and breeds in the northern hemisphere.<br>The Yellow Wagtail is a nonbreeding passerine visitor to Australia and is widespread across the continent. Typically occupies a range of damp or wet habitats in coastal areas. | **Low** | **n/a** | **No** | The species is unlikely to utilise the proposed activity area to any notable degree |
| ***Melanodryas cucullata cucullata*** South-eastern Hooded Robin | E | E | There are two subspecies of hooded robin. The south-eastern form (subspecies *cucullata*) is found from Brisbane to Adelaide and throughout much of inland NSW, including the activity area. The sub-species is at the edge of its range and except for the extreme north-west, where it is replaced by subspecies *picata*.<br>Prefers lightly wooded country, usually open eucalypt woodland, acacia scrub and mallee, often in or near clearings or open areas. Requires structurally diverse habitats featuring mature eucalypts, saplings, some small shrubs and a ground layer of moderately tall native grasses.<br>Often perches on low dead stumps and fallen timber or on low-hanging branches, using a perch-and-pounce method of hunting insect prey. | **Known in the park** | **Yes** | **Yes** | **n/a** |

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| ***Neophema chrysostoma*** Blue- winged Parrot | V | V | Blue-winged parrots breed on mainland Australia south of the Great Dividing Range in southern Victoria from Port Albert in Gippsland west to Nelson, and sometimes in the far south-east of South Australia, and the north-western, central and eastern parts of Tasmania. During the non-breeding period, from autumn to early spring, birds are recorded from northern Victoria, eastern South Australia, south-western Queensland and western New South Wales, with some birds reaching south-eastern New South Wales and eastern Victoria, particularly on the southern migration. Blue-winged parrots inhabit a range of habitats from coastal, sub-coastal and inland areas, through to semi-arid zones. They tend to favour grasslands and grassy woodlands and are often found near wetlands both near the coast and in semi-arid zones. | **Possible** | **Yes** | **Yes** | **n/a** |
| ***Pedionomus torquatus*** Plains-wanderer | E | CE | The vast majority (>99%) of records of plains-wanderers in NSW over the past 30 years come from an area of the western Riverina bounded by Hay and Narrandera on the Murrumbidgee River in the north, the Cobb Highway in the west, the Billabong Creek in the south, and Urana in the east. Even within its western Riverina stronghold, the Plains-wanderer has a very patchy distribution.<br>Their preference is for semi-arid, native grasslands with a diversity of plant species, which usually occur on red-brown soils. | **Unlikely** | **No** | **No** | The species is unlikely to utilise the proposed activity area. |

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| | | | sheltered coastal habitats of varying salinity. It occurs in sheltered coastal habitats, typically with large mudflats and saltmarsh, mangroves or seagrass. Habitats include embayments, harbours, river estuaries, deltas and lagoons and are recorded less often in round tidal pools, rock-flats and rock platforms. The species uses both permanent and ephemeral terrestrial wetlands, including swamps, lakes, dams, rivers, creeks, billabongs, waterholes and inundated floodplains, claypans and salt flats. | | | | |
| ***Hamirostra melanosternon*** Black-breasted Buzzard | V | N/A | The black-breasted buzzard is widely but sparsely distributed throughout northern and inland Australia in areas with less than 500 mm annual rainfall. The buzzard's range stretches from north-eastern South Australia, north-western New South Wales, northern Queensland, the Northern Territory and the north-western exterior of Western Australia. This large raptor is found to occur in wooded and open habitats, the black-breasted buzzard is most commonly observed in riparian forests and tall-open woodlands surrounded by mid-dense shrublands. The black-breasted buzzard hunts a variety of reptiles, small mammals and birds, and raids bird nests to steal eggs and nestlings, including those of other raptor species. Suitable habitat is available in the reserve and the bird has been recorded in the park. There is limited habitat in the activity area and the activity area is surrounded by open grassland, not shrubland. | **Unlikely**<br>**Known in the park** | **Yes** | **No** | n/a |

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| ***Lophoictinia isura*** Square-tailed Kite | V | N/A | The square-tailed kite ranges along coastal and subcoastal areas from south-western to northern Australia, Queensland, NSW and Victoria. In NSW, scattered records of the species throughout the state indicate that the species is a regular resident in the north, north-east and along the major west-flowing river systems. It is a summer breeding migrant to the south-east, including the NSW south coast, arriving in September and leaving by March. Found in a variety of timbered habitats including dry woodlands and open forests. Shows a particular preference for timbered watercourses. Is a specialist hunter of passerines, especially honeyeaters, and most particularly nestlings, and insects in the tree canopy, picking most prey items from the outer foliage.<br>In arid north-western NSW, has been observed in stony country with a ground cover of chenopods and grasses, open acacia scrub and patches of low open eucalypt woodland. While suitable habitats are available in the park and the species has been recorded, there is limited low-open eucalypt woodland is located within the activity area. | **Unlikely**<br>**Known in the park** | **No** | **No** | The species is unlikely to utilise the proposed activity area. |
| ***Pomatostomus halli*** Hall's Babbler | V | N/A | The Hall's babbler is confined to northwestern New South Wales and central and western Queensland. It occurs as far north as Winton and Boulia, west to McGregor and Grey Ranges, south to about Mootwingee and Brewarrina and the eastern boundary is Longreach-Idalia National Park-Cunnamulla.<br>Tall acacia shrublands, usually mulga, appears to be the preferred habitat of the Hall's babbler, but it is occasionally seen in other arid woodlands and shrublands. While suitable habitats are available in the park and the species has been recorded limited there is no acacia shrubland located within the activity area. | **Possible**<br>**Known in the park** | **No** | **No** | The species is unlikely to utilise the proposed activity area. |

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| ***Pomatostomus temporalis*** Grey-crowned Babbler (eastern subspecies) | V | N/A | The grey-crowned babbler is widespread throughout north-western, northern, central and eastern Australia, and Papua New Guinea. The Grey-crowned Babbler is found in open forests and woodlands, favouring inland plains with an open shrub layer, little ground cover and plenty of fallen timber and leaf litter. May be seen along roadsides and around farms. | **Possible Known in the park** | **Yes** | **No** | **n/a** |
| **MAMMALS** | | | | | | | |
| ***Nyctophilus corbeni*** Corben's Long-eared Bat | V | V | Corben's gong-eared bat is distributed within the Murray Darling Basin with the Pilliga region being the distinct stronghold for this species. Inhabits a variety of vegetation types, including mallee, bulloke *Allocasuarina leuhmanni* and box eucalypt dominated communities, but it is distinctly more common in box/ironbark/cypress-pine vegetation that occurs in a north-south belt along the western slopes and plains of NSW and southern Queensland. Roosts in tree hollows, crevices, and under loose bark. Anabat recordings during the survey have identified that the species may be present, however identification can not be verified from anabat recordings alone. | **Possible** | **Yes** | **Yes** | **n/ a** |

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| ***Chalinolobus picatus*** Little Pied Bat | V | N/A | The little-pied bat is found in inland Queensland and NSW (including Western Plains and slopes) extending slightly into South Australia and Victoria.<br>The insectivorous microbat occurs in dry open forest, open woodland, mulga woodlands, chenopod shrublands, cypress pine forest and mallee and bimbil box woodlands. The bats roosts in caves, rock outcrops, mine shafts, tunnels, tree hollows and buildings. It can tolerate high temperatures and dryness but needs access to nearby open water. | **Possible**<br>**Known in the park** | **Yes** | **n/a** | **n/a** |
| ***Saccolaimus flaviventris*** Yellow-bellied Sheath-tailed bat | V | N/A | The yellow-bellied sheathtailed-bat is a wide-ranging species found across northern and eastern Australia. In the most southerly part of its range - most of Victoria, south-western NSW and adjacent South Australia - it is a rare visitor in late summer and autumn. There are scattered records of this species across the New England Tablelands and Northwest Slopes. Forages in most habitats across its very wide range, with and without trees; appears to defend an aerial territory.<br>Breeding has been recorded from December to mid-March, when a single young is born. | **Possible**<br>**Known in the park** | **Yes** | **n/a** | **n/a** |

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| ***Sminthopsis macroura*** Stripe-faced Dunnart | V | N/A | The stripe-faced dunnart is distributed throughout much of inland central and northern Australia, extending into central and northern NSW, western Queensland, Northern Territory, South Australia and Western Australia. They are rare on the NSW Central West Slopes and Northwest Slopes with the most easterly records of recent times located around Dubbo, Coonabarabran, Warialda and Ashford. Native dry grasslands and low dry shrublands, often along drainage lines where food and shelter resources tend to be better.<br>They shelter in cracks in the soil, in grass tussocks or under rocks and logs.<br>While suitable habitats are available in the park and the species has been recorded, there is no suitable habitat located within the activity area. | **Unlikely**<br>**Known in the park** | **No** | **n/a** | The species is unlikely to utilise the proposed activity area. |
| **Pseudomys hermannsburgensis**<br>Sandy Inland Mouse | V | N/A | The sandy inland mouse is an endemic rodent found widely yet sparsely through arid and semi-arid areas in Australia. Sandy inland mouse habitat is generally characterised by open vegetation, with a preference for friable soils such as sand and sandy loams on arid plains and dunes. Examples include, hummock grasslands, mulga flats, alluvial flats and gibber plains, with coolibah and acacia woodlands having been observed as popular habitat. With a diet heavy in spinifex seed the sandy inland mouse is known to forage under heavy spinifex cover, with a preference for burnt over unburnt habitat.<br><br>Suitable habitats are available in the park, although the species has not been recorded. There is no suitable habitat in the activity area | **Unlikely** | **No** | **n/a** | The species is unlikely to utilise the proposed activity area. |
| **REPTILES** | | | | | | | |

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| **Diplodactylus platyurus** Eastern Fat-tailed Gecko | E | | The fat-tailed Gecko is distributed from the north coast of Western Australia, through the Northern Territory and the interior of South Australia and Queensland, to north-western New South Wales. Habitat constraints are unknown, although the species' rarity suggests that it is highly specialised in its use of habitat. In Cuttaburra NP it was found on sand ridges adjacent to claypans and open claypans in cracking clay soils. The habitat does not exist in the activity area | **Possible**<br>**Known in the park** | **No** | **n/a** | The species is unlikely to utilise the proposed activity area. |
| **Pseudonaja modesta** Ringed brown snake | E | | The ringed brown snake occurs in the arid and semi-arid regions of all mainland states except Victoria, although very sparsely distributed across the range.<br><br>The ringed brown snake occurs in a variety of habitats including arid shrublands, hummock grasslands, low rocky outcrops and dry watercourses. The specific habitat requirements of the species are largely unknown; however, the species is known to be terrestrial and to shelter under surface debris or in spinifex, Triodia species. There is no spinifex and little surface debris within the activity area. | **Unlikely** | **No** | **n/a** | The species is unlikely to utilise the proposed activity area. |

**Notes: V=Vulnerable, E- endangered, CR= Critically Endangered, M= Migratory**

# Appendix 3: Threatened species tests of significance

In accordance with the requirements of section 7.3 of the BC Act, the following assessment is made:

a) In the case of a threatened species, whether the proposed development or activity 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

b) In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity
    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
    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.

c) In relation to the habitat of a threatened species, population or ecological community:
    i. The extent to which habitat is likely to be removed or modified as a result of the action proposed.
    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.
    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.

d) Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly)

e) 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.

## Coolibah-Black Box Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain and Mulga Lands Bioregions

a) In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity

iii. 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

iv. 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.

c) In relation to the habitat of a threatened species, population or ecological community:

iv. The extent to which habitat is likely to be removed or modified as a result of the action proposed.

v. Whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action.

vi. 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.

a) The coolibah-black box woodland community present within the activity area is highly modified and represents only a small fraction of the habitat available in the park. As the area is already substantially modified the activity will result in negligible further modifications and no large coolibah or black box trees have been identified for removal. Structures are being placed in existing open areas and the intention is to retain existing trees for shade. The extent or composition of the community is unlikely to be altered.

c) The habitat available in the activity area will not be substantially changed. The area is already highly disturbed and modified. The activity looks to replace existing structures and upgrade existing campground facilties.

a) In the case of a threatened species, whether the proposed development or activity 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

c) In relation to the habitat of a threatened species, population or ecological community:

vii. The extent to which habitat is likely to be removed or modified as a result of the action proposed.

viii. Whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action.

ix. 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.

## Black-breasted buzzard,

The black-breasted buzzard is widely but sparsely distributed throughout northern and inland Australia in areas with less than 500 mm annual rainfall. The buzzard's range stretches from north-eastern South Australia, north-western New South Wales, northern Queensland, the Northern Territory and the north-western exterior of Western Australia. This large raptor is found to occur in wooded and open habitats, the black-breasted buzzard is most commonly observed in riparian forests and tall-open woodlands surrounded by mid-dense shrublands. The black-breasted buzzard

hunts a variety of reptiles, small mammals and birds, and raids bird nests to steal eggs and nestlings, including those of other raptor species. They utilise habitat nesting trees along tree-lined creeks and waterways.

**a)** The activity is unlikely to impact the lifecycle of the species. The black-breasted buzzard is an agile canopy dweller that spend little or no time on the ground. The proposed activity will not impact individuals directly. While no nests have been found in the activity area during inspections by Jessica Stokes there is the possibility of future nests.

**c)** There is limited riparian fringing forest within the campground in the activity area. The forest is highly modified with little understory or shrublayer. The proposed activity does not remove any of the habitat elements and the intention is to retain existing trees hat may be used for nesting as shade trees. The surrounding habitat in Cuttaburra NP is disturbed and modified pasture grass with no shrublands, although shrublands exist across the creek in Narree.

The drainage lines and associated vegetation along Cuttaburra Creek and Back Creek also contain suitable nesting trees and alternative habitat. Suitable riparian habitat is present along approximately 22km of Cuttaburra Creek and black-breasted buzzards have been recorded in the park This habitat will not be disturbed or fragmented by the activity.

While campers may slightly decrease the nest materials available this will be negligible and within a very limited area, with plenty of materials available immediately adjacent to the activity area.

Therefore, it is unlikely actions under this proposal will lead to long-term decreases in the size of important but sparsely distributed populations or in available habitat.

## Grey falcon

The grey falcon is sparsely distributed in NSW, chiefly throughout the Murray-Darling Basin, with the occasional vagrant east of the Great Dividing Range. The breeding range has contracted since the 1950s with most breeding now confined to arid parts of the range. There are possibly less than 5000 individuals left. Population trends are unclear, though it is believed to be extinct in areas with more than 500mm rainfall in NSW.

Usually restricted to shrubland, grassland and wooded watercourses of arid and semi-arid regions, although it is occasionally found in open woodlands near the coast. Also occurs near wetlands where surface water attracts prey.

Preys primarily on birds, especially parrots and pigeons, using high-speed chases and stoops; reptiles and mammals are also taken.

Like other falcons it utilises old nests of other birds of prey and ravens, usually high in a living eucalypt near water or a watercourse; peak laying season is in late winter and early spring; two or three eggs are laid.

**a)** The activity is unlikely to impact the lifecycle of the species. The grey falcon is an agile canopy dweller that spends little or no time on the ground. The proposed activity will not impact individuals directly. While no nests have been found in the activity area during inspections by Jessica Stokes there is the possibility of future nests.

**c)** There is limited riparian fringing forest within the campground in the activity area. The forest is highly modified with little understory or shrublayer. The proposed activity does not remove any of the habitat elements and the intention is to retain existing trees that may be used for nesting as shade trees. The surrounding habitat in Cuttaburra NP is disturbed and modified pasture grass. There is substantially more riparian open woodland in the reserve, closer to wetlands and less modified habitat for feeding.

The drainage lines and associated vegetation along Cuttaburra Creek and Back Creek also contain suitable nesting trees and alternative habitat. Suitable riparian habitat is present along approximately 22km of Cuttaburra Creek, although grey falcons have not been recorded in the park This habitat will not be disturbed or fragmented by the activity.

While campers may slightly decrease the nest materials available this will be negligible and within a very limited area, with plenty of materials available immediately adjacent to the activity area.

Therefore, it is unlikely actions under this proposal will lead to long-term decreases in the size of important but sparsely distributed populations or in available habitat.

## Southern whiteface

The southern whiteface is a small passerine found in arid regions across most of the southern half of the Australian continent, excluding Tasmania. It typically inhabits arid open woodlands with a shrubby or grassy understory, as well as grass plains throughout much of the continents south.

Southern whitefaces live in a wide range of sparsely treed woodlands and shrublands where there is an understorey of grasses or shrubs or both, usually in habitats dominated by acacias or eucalypts on ranges, foothills and lowlands and plains. They prefer dry open forests and woodland and inland scrubs of mallee, mulga and saltbush, especially areas with fallen timber or dead trees and stumps.

They are ground foragers, feeding in large groups of 10-15 foraging on insects and seeds, largely gleaned from the bare ground or leaf litter.

In breeding season (June to December, but inland breeding time is influenced by rainfall), the Southern Whiteface builds an untidy domed nest of grass, rootlets and bark. Nests are built in a hollow limb, stump or fence post or in the foliage of shrubs and small trees, in sheds or in nest- boxes. The clutch size is 2-5 eggs, usually 3-4. The incubation period is 20 days.

**a)** The activity is unlikely to impact the lifecycle of the species. Although a ground feeder, the southern whiteface is agile enough to avoid the activity. The proposed activity will not impact individuals directly.

**c)** The activity area includes arid open woodlands with a grassy understory, although highly modified with little understory or shrublayer, modified pasture grasses and little fallen timber and dead trees as they are likely used for firewood.

The proposed activity does not remove any of the habitat elements and the intention is to retain existing trees that may be used for nesting as shade trees. The surrounding habitat in Cuttaburra NP is disturbed and modified pasture grass. There is substantially more riparian open woodland in the reserve, with more fallen timber and less modified habitat for feeding.

The drainage lines and associated vegetation along Cuttaburra Creek and Back Creek also contain suitable nesting trees and alternative habitat. Suitable riparian habitat is present along approximately 22km of Cuttaburra Creek, although grey falcons have not been recorded in the park This habitat will not be disturbed or fragmented by the activity.

## Grey-crowned babbler (eastern subspecies)

The grey-crowned babbler is widespread throughout north-western, northern, central and eastern Australia, and Papua New Guinea.

The grey-crowned babbler is found in open forests and woodlands, favouring inland plains with an open shrub layer, little ground cover and plenty of fallen timber and leaf litter. They may be seen along roadsides and around farms.

Grey-crowned babblers feed on insects and other invertebrates and sometimes eat seeds. They forage in groups of two to fifteen birds on the ground among leaf litter, around fallen trees and from the bark of shrubs and trees (they tend to use trees more than other babblers).

Two types of nests are built: roost-nests (usually larger and used by the whole group) and brood-nests (for the breeding females), and often old nest sites are renovated and re-used from year to year. The large domed nests are placed in a tree fork 4 m - 7 m high and are made of thick sticks with projections that make a hood and landing platform for the entrance tunnel.

**a)** The activity is unlikely to impact the lifecycle of the species. Although a ground feeder, the grey-crowned babbler is agile enough to avoid the activity. The proposed activity will not impact individuals directly.

**c)** The activity area includes arid open woodlands with a grassy understory, although highly modified with little understory or shrublayer, modified pasture grasses and little fallen timber and dead trees as they are likely used for firewood.

The proposed activity does not remove any of the habitat elements and the intention is to retain existing trees that may be used for nesting as shade trees. The surrounding habitat in Cuttaburra NP is disturbed and modified pasture grass. There is substantially more open woodland in the reserve, with more fallen timber and less modified habitat for feeding and more structural diversity. Grey-crowned babblers have been recorded in this alternative woodland and shrubland habitat within the park, they have not been recorded within the activity area.

## Hooded Robin (south-eastern),

There are the subspecies of hooded robin. The south-eastern form (subspecies *cucullata*) is found from Brisbane to Adelaide and throughout much of inland NSW, including the activity area. The sub-species is at the edge of its range and with the exception of the extreme north-west, where it is replaced by subspecies *picata*.

Prefers lightly wooded country, usually open eucalypt woodland, acacia scrub and mallee, often in or near clearings or open areas. Requires structurally diverse habitats featuring mature eucalypts, saplings, some small shrubs and a ground layer of moderately tall native grasses.

Often perches on low dead stumps and fallen timber or on low-hanging branches, using a perch-and-pounce method of hunting insect prey.

**a)** The activity is unlikely to impact the lifecycle of the species. Although a ground feeder, the hooded robin is agile enough to avoid the activity. The proposed activity will not impact individuals directly.

**c)** The activity area includes arid open woodlands with a grassy understory, although highly modified with little understory or shrublayer, modified pasture grasses and little fallen timber and dead trees as they are likely used for firewood.

The proposed activity does not remove any of the habitat elements and the intention is to retain existing trees that may be used for nesting as shade trees. The surrounding habitat in Cuttaburra NP is disturbed and modified pasture grass. There is substantially more riparian open woodland in the reserve, with more fallen timber and less modified and complex habitat for feeding.

The drainage lines and associated vegetation along Cuttaburra Creek and Back Creek also contain suitable nesting trees and alternative habitat. Suitable riparian habitat is present along approximately 22km of Cuttaburra Creek, although hooded robin has been recorded in the park, they have not been recorded within the activity area. This habitat will not be disturbed or fragmented by the activity.

## Painted Honeyeater

The Painted Honeyeater is nomadic and occurs at low densities throughout its range. The painted honeyeater is endemic to mainland Australia, being found in Queensland and New South Wales west of the Great Dividing Range, through to northern Victoria. The greatest concentrations of the bird and almost all breeding occurs on the inland slopes of the Great Dividing Range in NSW, Victoria and southern Queensland. Inhabits boree/ weeping myall (Acacia pendula), brigalow (A. harpophylla) and box-gum woodlands and box-ironbark forests. It may also be found along rivers, on plains with scattered trees and on farmland with remnant vegetation. It has been seen in urban parks and gardens where large eucalypts are available.

A specialist feeder on the fruits of mistletoes growing on woodland eucalypts and acacias. Prefers mistletoes of the genus amyema, but will also feed on nectar and invertebrates, usually in eucalypts.

The painted honeyeater breed in loose colonies, forming pair bonds for the duration of the breeding season. In some areas, the same nest or tree may be re-used over several years. Breeding males vigorously defend a breeding territory from other males and occasionally other species such as the

mistletoebird. Both sexes build the thin, cup-shaped nest from grass and fine roots bound with spiderweb.

**a)** The activity is unlikely to impact the lifecycle of the species. The painted honeyeater is agile enough to avoid the activity. The proposed activity will not impact individuals directly.

**c)** The activity area includes arid open woodlands with mistletoes, although habitat is marginal and highly modified with little shrublayer, modified pasture grasses and little fallen timber and dead trees as they are likely used for firewood.

The proposed activity does not remove any of the habitat elements and the intention is to retain existing trees that may be used for nesting as shade trees. The surrounding habitat in Cuttaburra NP is disturbed and modified pasture grass. There is substantially more riparian open woodland in the reserve, with more fallen timber and less modified and complex habitat for feeding.

The drainage lines and associated vegetation along Cuttaburra Creek and Back Creek also contain suitable nesting trees and alternative habitat. Suitable riparian habitat is present along approximately 22km of Cuttaburra Creek, although painted honeyeaters have not been recorded in the park. This habitat will not be disturbed or fragmented by the activity.

## Blue-winged parrot

Blue-winged parrots are semi-nomadic, breeding in Tasmania and some migrating to the mainland, as far north as western NSW and into south-western Queensland, although more sporadic.

Blue-winged parrots inhabit a range of habitats from coastal, sub-coastal and inland areas, through to semi-arid zones. They tend to favour grasslands and grassy woodlands and are often found near wetlands both near the coast and in semi-arid zones. Pairs or small parties of blue-winged parrots forage mainly on the ground for seeds of grasses and herbaceous plants. Flock size ranges from pairs in breeding season to up to 2,000 birds just before autumn migration.

It lives in savannah woodland, grasslands, orchards, farmlands, marshes, heath, dunes, and other open habitats up to 1,200 m.

Breeding takes place from September to January, with one to two broods attempted each season. Blue-winged parrots use hollows of live and dead trees, generally eucalypts, as nesting sites up to 20 m above the ground.

**a)** The activity is unlikely to impact the lifecycle of the species. Although a ground feeder, blue-winged parrot is agile enough to avoid the activity. The proposed activity will not impact individuals directly.

**c)** The activity area includes grassy woodland, although habitat is highly modified with little shrublayer, modified pasture grasses and little fallen timber and dead trees as they are likely used for firewood.

The proposed activity does not remove any of the habitat elements and the intention is to retain existing trees that may be used for nesting as shade trees. The surrounding habitat in Cuttaburra NP is disturbed and modified pasture grass. There is substantially more grassy woodland adjacent to wetlands and claypans in the reserve, with more hollow and dead trees and habitat for feeding.

## Brolga

Brolgas can be found across tropical northern Australia, throughout Queensland and in parts of western Victoria, central NSW and south-east South Australia. They feed and breed in open wetlands, coastal mudflats and irrigated croplands, occasionally visiting estuaries and mangrove creeks. It is still abundant in the northern tropics, but very sparse across the southern part of its range. While not considered migratory, they’re partially nomadic, flying to different areas following seasonal rainfall.

Brolgas often feed in dry grassland or ploughed paddocks or even desert claypans, however, they are dependent on wetlands, especially shallow swamps, where they will forage with their head entirely submerged. Brolgas are omnivorous – they eat tubers dug up with their bills, but also feast on insects, frogs and molluscs. Brolgas have been recorded by the previous landholders foraging in the artificial watering ponds immediately adjacent to the house.

During the breeding season a pair will return to their breeding site and create a nest in the middle of a wetland. The nest is an island mound made with sticks and grasses.

a) The proposed activity may create short term disturbance for the brolgas but will not result in long term as they are a highly mobile species that can move away from disturbance.

b) The activity will not result in significant clearing as it is within a previously disturbed area and further modification will be limited. The activity area and the paddocks adjacent to the activity area are not used for breeding.

## Pink cockatoo

Found across the arid and semi-arid inland. In NSW the Pink cockatoo is found regularly as far east as about Bourke and Griffith, and sporadically further east than that. Large flocks are present in Cuttaburra NP.

They inhabit a wide range of treed and treeless inland habitats, always within easy reach of water. Pink Cockatoos live mostly in semi-arid and arid areas, in dry woodlands, particularly mallee. They are also found in stands of river red gum, *Eucalyptus camaldulensis*, or black box, *E. largiflorens*, and on sand plains and dunes. Sometimes they are found in other areas such as acacia shrubland with a spinifex ground cover, or banksia heath.

They can be partly nomadic in arid areas, moving in response to the availability of food and water. They will remain in one place if there is sufficient water.

Pink Cockatoos live on a range of foods, seeds of grasses and herbaceous plants, fruit, roots, bulbs, and insect larvae. They feed mostly on the ground, especially on the seeds of native and exotic melons and on the seeds of species of saltbush, wattles and cypress pines.

Pink Cockatoos nest in large hollows in trees.

**a)** The activity is unlikely to impact the lifecycle of the species. The pink cockatoo is an agile and can avoid the activity. The proposed activity will not impact individuals directly.

**c)** Pink cockatoos may fly into the activity area, but the habitat represents only a small portion of available habitat in the reserve and is highly modified. The proposed activity does not remove any of the habitat elements and the intention is to retain existing trees that may be used for nesting as shade trees. The surrounding habitat in Cuttaburra NP is disturbed and modified pasture grass. There is substantially more riparian open woodland in the reserve, closer to wetlands and less modified habitat for feeding.

This habitat will not be disturbed or fragmented by the activity.

## Little Pied Bat

The little-pied bat is found in inland Queensland and NSW (including Western Plains and slopes) extending slightly into South Australia and Victoria.

The insectivorous microbat occurs in dry open forest, open woodland, mulga woodlands, chenopod shrublands, cypress pine forest and mallee and bimbil box woodlands. The bats roosts in caves, rock outcrops, mine shafts, tunnels, tree hollows and buildings. Can tolerate high temperatures and dryness but need access to nearby open water.

**a)** The activity is unlikely to impact the lifecycle of the species. The little pied bat is an agile and can avoid the activity. The proposed activity will not impact individuals directly.

**c)** Little-pied bats may fly into the activity area, but the habitat represents only a small portion of available habitat in the reserve and is highly modified. The proposed activity does not remove any of the habitat elements and the intention is to retain existing trees that may be used for nesting as shade trees. Microbats use areas such as the outdoor kitchen. There is substantially more riparian open woodland in the reserve, closer to wetlands and less modified habitat for feeding. Microbats currently utilise the outdoor kitchen area as flyways but are not known to roost in the kitchen. This structure is within the activity area but will remain.

This habitat will not be disturbed or fragmented by the activity.

## Yellow-bellied Sheath-tailed Bat

The yellow-bellied sheathtailed-bat is a large insectivorous bat that is found across northern and eastern Australia. In the most southerly part of its range - most of Victoria, south-western NSW and adjacent South Australia - it is a rare visitor in late summer and autumn. There are scattered records of this species across the New England Tablelands and North West Slopes.

It forages in most habitats across its very wide range, with and without trees; it appears to defend an aerial territory. When foraging for insects, flies high and fast over the forest canopy, but lower in more open country.
Roosts singly or in groups of up to six, in tree hollows and buildings; in treeless areas they are known to utilise mammal burrows.

Breeding has been recorded from December to mid-March, when a single young is born.

**a)** The activity is unlikely to impact the lifecycle of the species. The yellow-bellied sheathtailed-bat is an agile and can avoid the activity. The proposed activity will not impact individuals directly.

**c)** Yellow-bellied sheathtailed-bat may fly into the activity area but the habitat represents only a small portion of available habitat in the reserve and is highly modified. The proposed activity does not remove any of the habitat elements and the intention is to retain existing trees that may be used for nesting as shade trees. There is substantially more riparian open woodland in the reserve, closer to wetlands and less modified habitat for feeding. Microbats currently utilise the outdoor kitchen area as flyways but are not known to roost in the kitchen. This structure is within the activity area but will remain.

This habitat will not be disturbed or fragmented by the activity.

## Corben’s Long-eared Bat

Corben's long-eared bat, formally the south-eastern form of the greater long-eared bat, is distributed within the Murray Darling Basin with the Pilliga region being the distinct stronghold for this species. Inhabits a variety of vegetation types, including mallee, bulloke *Allocasuarina leuhmanni* and box eucalypt dominated communities, but it is distinctly more common in box/ironbark/cypress-pine vegetation with that occurs in a north-south belt along the western slopes and plains of NSW and southern Queensland. It is more commonly found in larger forest stands with a dense understorey.

It roosts in tree hollows, crevices, and under loose bark. Slow flying agile bat, utilising the understorey to hunt non-flying prey - especially caterpillars and beetles - and will even hunt on the ground.

Anabat recordings during the survey have identified that the species may be present on the reserve, however identification can not be verified from anabat recordings alone. Presence at Cuttaburra NP would represent an extension of known distribution but is possible.

**a)** The activity is unlikely to impact the lifecycle of the species. The Corben's long-eared bat is an agile and can avoid the activity. The proposed activity will not impact individuals directly.

**c)** Corben's long-eared bat may fly into the activity area, but the habitat represents only a small portion of available marginal habitat in the reserve and is highly modified. The activity area does not contain an understorey. The proposed activity does not further remove any of the habitat elements and the intention is to retain existing trees that may be used for nesting as shade trees. There is substantially more riparian open woodland in the reserve, closer to wetlands and less modified habitat for feeding. Microbats currently utilise the outdoor kitchen area as flyways but are not known to roost in the kitchen. This structure is within the activity area but will remain.

This habitat will not be disturbed or fragmented by the activity.