23.9  Masked lapwing

23.9.1  EPBC Act legal status

Migratory (Bonn)

23.9.2  Biology and ecology

Characteristics

Masked lapwings (*Vanellus miles*) are large, ground-dwelling birds (30 to 37 cm in length, wingspan of 75 to 85 cm and weigh 230 to 400 g) that are closely related to the waders. The Masked lapwing is mainly white below, with brown wings and back, and a black crown. Birds have large yellow wattles covering the face, and are equipped with a thorny spur that projects from the wrist on each wing. The spur is yellow with a black tip. The Masked lapwing has two subspecies resident in Australia. The southern subspecies has black on the hind neck and sides of breast, and has smaller facial wattles. Northern birds are smaller, without the partial black collar, but have a much larger wattle, which covers most of the side of the face. The sexes are similar in both subspecies, although the male tends to have a larger spur. Young Masked lapwings are similar to the adult birds, but may have a darker back. The wing spur and facial wattles are either absent or smaller in size (ATSB 2009, Birds Australia 2012b).

Masked lapwing (Source: Harrison 2009)

Known distribution

Masked lapwings can be found throughout eastern states, most of the Northern Territory, the northern part of Western Australia and the eastern half of South Australia (ATSB 2009).
Known species populations and their relationship with the GTP footprint

Suitable habitat for this species is contained within KP312 to KP408.81 and KP408.81 to KP409.04 of the GTP and ancillary areas. In addition, these areas may be used for reproductive purposes.

Biology and reproduction

Masked lapwings feed on worms, millipedes, centipedes, crustaceans and a variety of insects. They are also known to eat leaves, seeds and occasionally frogs (ATSB 2009).

Both sexes share the building of the nest, which is a simple scrape in the ground away from ground cover. This nest is often placed in inappropriate locations, such as school playing fields or the roofs of buildings. Three to four eggs are laid throughout June to October in southern regions and November to May in the north. Both sexes also incubate the eggs and care for the young birds. The young birds are born with a full covering of down and are able to leave the nest and feed themselves a few hours after hatching (ATSB 2009, Birds Australia 2012b).

23.9.3 Habitat

The Masked lapwing inhabits marshes, mudflats, beaches and grasslands. It is often seen in urban areas (Birds Australia 2012b).

Masked lapwings utilise a wide variety of natural and human-made open habitats, often adjacent to wetlands. Due to their preference for short-grassed and barren, rocky areas, Masked lapwings are commonly observed in farmlands, pastures, grasslands, playing fields, lawns, median strips, golf courses, airports and parks (ATSB 2009).

The species prefer barren, rocky ground or short grass to build nests. These surfaces are also ideal for feeding on insects and other invertebrates in the soil (ATSB 2009).
23.9.4 Habitat assessment

Information obtained from expert advice and site based species records has been used to define a set of assumptions that have been used to identify areas of habitat that are consistent with the definitions of ‘core habitat’, ‘essential habitat’ and ‘general habitat’ that have been presented in Part 1 of this SSMP. These assumptions are presented in this section.

General assumptions

The following general habitat assumptions have been made based on current scientific knowledge of this species that include, but are not necessarily limited to:

- Species is associated with swamp margins, flooded ground, paddocks with dams, beaches, airfields, orchards, gardens, factory grounds and pebbled flat roofs (Pizzey & Knight 2007)
- Species breeds utilising a nest located on dry ground (Pizzey & Knight 2007)
- Accordingly, all ‘non-remnant’ areas above LAT, within close proximity of a permanent water source (ie stream order 3 or greater), are considered ‘essential habitat’ as they are suitable for breeding

Core habitat

‘Core habitat’ consists of ‘essential habitat’ in which the species is known and the habitat is recognised under relevant recovery plans or other relevant plans/policies/regulations. Also included within this category are populations that are limited geographically within the region.

As the Masked lapwing is a ubiquitous species with an extensive distribution within Australia, it is not considered that ‘core habitat’ exists for this species within the proposed alignment.

Essential habitat

‘Essential habitat’ is an area containing resources that are considered essential for the maintenance of populations of the species (eg potential habitat for breeding, roosting, foraging, shelter, for either migratory or non-migratory species). ‘Essential habitat’ is defined from known records and/or expert advice (including the findings of pre-clearance surveys).

KP0 to KP30

Pre-clearance surveys identified no species records or ‘essential habitat’ for this species, therefore no ‘essential habitat’ for this species is considered to exist within this section of the GTP.

KP30 to KP40

Pre-clearance surveys identified no species records or ‘essential habitat’ for this species, therefore no ‘essential habitat’ for this species is considered to exist within this section of the GTP.

KP40 to KP130

Pre-clearance surveys identified no species records or ‘essential habitat’ for this species, therefore no ‘essential habitat’ for this species is considered to exist within this section of the GTP.
KP130 to KP312

Pre-clearance surveys identified no species records or ‘essential habitat’ for this species, therefore no ‘essential habitat’ for this species is considered to exist within this section of the GTP.

KP312 to KP408.81

As the Masked lapwing nests on dry ground in ‘non-remnant’ areas, in the vicinity of a water source, ‘essential habitat’ exists for this species within the KP312 to KP408.81 section of the GTP, particularly within the non-remnant pasture and cropland areas (Santos GLNG 2013).

Figure 23.17a and Figure 23.17b shows the location of the ‘essential habitat’ for the Masked lapwing.

KP408.81 to KP409.04

As the Masked lapwing nests on dry ground in ‘non-remnant’ areas, in the vicinity of a water source, ‘essential habitat’ exists for this species within the proposed early works footprint.

Figure 23.17c shows the location of the ‘essential habitat’ for the Masked lapwing.

KP413.57 to KP419.69

Pre-clearance surveys identified no species records or ‘essential habitat’ for this species, therefore no ‘essential habitat’ for this species is considered to exist within this section of the GTP.

General habitat

‘General habitat’ consists of areas or locations that are used by transient individuals or where species may have been recorded but where there is insufficient information to assess the area as essential/core habitat. ‘General habitat’ also includes but is not necessarily limited to areas defined from known records or habitat that is considered to potentially support a species according to expert knowledge of habitat relationships, despite the absence of specimen backed records. ‘General habitat’ may include areas of suboptimal habitat for the species. As potential habitat for many species contained within this SSMP may include most of the regional ecosystems of the Brigalow Belt Bioregion, the ‘general habitat’ category restricts the habitat to a more limited and realistic set of environmental parameters that are supported by literature and field based observation.

For the Masked lapwing all areas above the LAT and within approximately 2 km of a fresh water source (dam, river, creek or lake) that are mapped as having suitable habitat compositions are considered to constitute ‘general habitat’ for this species.

KP0 to KP30

No ‘general habitat’ exists for this species within this section of the GTP.

KP30 to KP40

No ‘general habitat’ exists for this species within this section of the GTP.

KP40 to KP130

No ‘general habitat’ exists for this species within this section of the GTP.
Figure 23.17a: Masked Lapwing (Vanellus miles) Habitat Ratings Based on Predictive Modelling KP312 to KP408.81

Figure 23.17b: Masked Lapwing (Vanellus miles) Habitat Ratings Based on Predictive Modelling KP312 to KP408.81

Source:
Gas Transmission Pipeline (GTP): Santos, Apr 2012.
Aerial: BING, Feb 2011.
Figure 23.17c: Masked Lapwing (Vanellus miles) Habitat Ratings Based on Predictive Modelling KP408.81 to KP409.04

Km

Figure

Habitat Ratings Based on Predictive Modelling

Source:
Aerial Bing, Feb 2011.

Date: 06/09/2012
Version: a
KP130 to KP312

No ‘general habitat’ exists for this species within this section of the GTP.

KP312 to KP408.81

No ‘general habitat’ exists for this species within this section of the GTP.

KP408.81 to KP409.04

No ‘general habitat’ for this species exists within KP408.81 to KP409.04 of the GTP although ‘general habitat’ for this species exists in close proximity to the ROW and ancillary areas and is shown in Figure 23.17c.

KP413.57 to KP419.69

Pre-clearance surveys did not identify ‘general habitat’ for this species within this section of the GTP although ‘general habitat’ was identified within close proximity to the GTP.

Figure 23.17d shows the location of ‘general habitat’ for the Masked lapwing.

Unlikely habitat

‘Unlikely habitat’ areas are those areas that do not contain records of the particular species and contain no habitat values to support the presence or existence of resident or migratory individuals or populations of the species.

23.10 Anticipated threats and potential impacts as a result of the GTP

Anticipated threats and potential impacts to migratory wetland species as a result of the GTP Project include:

- Loss and degradation of ‘essential habitat’ and ‘general habitat’ for migratory wetland species
- Changes to local foraging, roosting and nesting behaviour due to increased vehicle movement, noise, lighting etc
- Stress, injury and mortality to animals due to increases in noise, vehicle movement, lighting and clearing
- Destruction of nests
- Possible impacts causing a reduction of water quality (due to siltation, changes in chemistry, contamination by petroleum, sediment and erosion impacts, and salinity) on large water bodies (including artificial habitats)
- Potential alterations to groundwater and surface water hydrology due to excavations associated with trenches

23.11 Unavoidable impact from GTP

Table 23.6 summarises the direct disturbance of ‘essential habitat’ and ‘general habitat’ for general migratory species from clearing and construction activities for the GTP between KP0 to KP30, KP30 to KP40, KP40 to KP130, KP130 to KP312, KP312 to KP408.81, KP408.81 to KP409.04 and KP413.57 to KP419.69. It is important to note that these unavoidable impacts for the Great egret, Cattle egret, Australian painted snipe, Cotton pygmy-goose, Eastern osprey and Masked lapwing are considered to be minor and temporary in the
Figure 23.17d: Masked Lapwing (Vanellus miles) Habitat Ratings Based on Predictive Modelling
KP413.57 to KP419.69

Source: Gas Transmission Pipeline (GTP): Santos, Apr 2012.
Aerial: BING, Feb 2011.
context of the wide spread extent of ‘general habitat’ in the region. The location of this ‘general habitat’ and ‘essential habitat’ is shown in Figures 23.7a, 23.7b, 23.7c, 23.7d, 23.7e, 23.7f, 23.7g, 23.9a, 23.9b, 23.9c, 23.9d, 23.9e, 23.9f, 23.9g, 23.9h, 23.11a, 23.11b, 23.11c, 23.11d, 23.11e, 23.11f, 23.11g, 23.13a, 23.13b, 23.13c, 23.13d, 23.13e, 23.13f, 23.15a, 23.15b, 23.15c, 23.15d, 23.17a, 23.17b, 23.17c and 23.17d.

A cumulative total of proposed clearing of habitat for general migratory species is provided in Table 23.6.
Table 23.6  Cumulative total of general migratory species habitat to be cleared

<table>
<thead>
<tr>
<th>Species</th>
<th>‘General habitat’</th>
<th>‘Essential habitat’</th>
<th>‘Core habitat’</th>
<th>Total habitat area impacted per species</th>
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<tr>
<td></td>
<td>KP0 to KP30</td>
<td>KP30 to KP40</td>
<td>KP40 to KP130</td>
<td>KP130 to KP312</td>
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23.12 Management practices and methods

23.12.1 Pre-construction mitigation measures

Measures to avoid impact

- Prior to the commencement of construction clearing, a suitably qualified and experienced EO will confirm the presence of active roosting and/or foraging habitat and establish an exclusion zone where necessary

Measures to minimise impacts

- Pre-clearing ecological surveys have been undertaken by a suitably qualified Ecologist(s) in accordance with the Survey Guidelines for Australia’s Threatened Birds. The surveys included carrying out a habitat assessment for these species and confirming their presence/absence within and adjacent the GTP ROW and ancillary areas
- Prior to site entry, all site personnel will be appropriately trained and made aware of the sensitive environs in which they will be working (refer Part 1, Section 7.7)

23.12.2 Construction phase mitigation measures

Measures to avoid impact

- Unless otherwise agreed by DEHP and DSEWPaC, active nests, roosting and/or foraging habitat will be declared temporary ‘No Go’ zones with the establishment of an exclusion zone until the area is no longer occupied by this species. The status of active nests will be regularly checked in a way that does not risk the nest being abandoned by the breeding pair (adult birds)
- All vehicles and pedestrians are to remain within the ROW throughout the above listed areas or on designated access tracks
- All reasonable and practical measures will be taken to locate site offices, construction camps, stockpiling/lay down areas and plant and equipment storage areas (including heavy machinery) on existing cleared lands. As per other conditions these structures would be located at least 100 m away from a watercourse

Measures to minimise impacts

- All vegetation clearing within known general migratory species habitat must comply with clearing approval conditions (eg NC Act and other statutory approvals)
- Implementation of the Fauna Handling Procedures (refer Appendix C)
- A licensed and experienced spotter catcher(s) will be onsite during all clearing activities and will ensure any injured animals are given to an appropriate wildlife carer group or vet (refer Appendix C). DSEWPaC and DEHP will be notified within 24 hours of any native animal injuries or deaths
- Clearing activities within these areas will be supervised by the relevant EO
- Clearing will be conducted in a sequential manner and in a way that directs escaping wildlife away from the clearing activities and into adjacent natural areas
Measures will be in place to facilitate fauna movement, including gaps between stockpiles and pipe strings

- Ensure equipment is regularly maintained and is good working order
- Wherever practicable, direct any lighting associated within night works away from sensitive areas or use engineering solutions to limit light spillage
- The construction phase component of the LRMP will be implemented
- Weather permitting, rehabilitation of all areas identified will commence immediately after the pipeline has been lowered in and backfilled (refer LRMP). With the exception of operational constraints, revegetation will be consistent with the plant density, floristic composition and distribution of the adjacent communities

23.12.3 Operational phase mitigation measures

Measures to avoid impact

- To avoid impacting on regenerating ‘general habitat’ for general migratory species, vehicle and pedestrian access will be restricted to the defined access tracks to and from the ROW and the defined access track within the GTP ROW

Measures to minimise impacts

- Implementation of the Fauna Handling Procedures (refer Appendix C)
- The operational phase component of the LRMP will be implemented
- The operational phase of the PWMP will be implemented to minimise the risk of weed and pest animal establishment within the above-listed locations

23.12.4 Decommissioning phase mitigation measures

Measures to minimise impacts

- Implementation of the Fauna Handling Procedures (refer Appendix C)
- A decommissioning plan will be developed by GLNG Operations and provided for approval. The plan will aim to address the requirements of AS2885 and also to ensure environmental harm is avoided, including:
  - The Project area no longer contains hazardous contaminants and is left in stable condition
  - All the above ground infrastructure is removed
  - All areas disturbed by above ground infrastructure are rehabilitated in accordance with the relevant conditions
- For a minimum of five years after the completion of rehabilitation, rehabilitated areas will be monitored on a yearly basis
- The monitoring programme will include, but not necessarily be limited to:
  - Methods to monitor subsidence and erosion rates at rehabilitated buried transmission pipeline corridors and buried flow lines
- Monitoring of indicators identified in the LRMP at analogue sites to measure progressive and final rehabilitation success relevant to the final land use(s)
- Frequency and seasonality of monitoring analogue sites and rehabilitated areas to assess rehabilitation success
- Identification of the experimental design for analysing analogue and rehabilitated site data including statistical methods of analyses
24 Migratory woodland species

24.1 Black-faced monarch

24.1.1 EPBC Act legal status

Migratory (Bonn)

24.1.2 Biology and ecology

Characteristics

The Black-faced monarch (*Monarcha melanopsis*) ranges in size from 16 to 19 cm and has a distinctive black face that does not extend across the eyes. The dorsal parts, wings and upper breast are grey and with a rufous coloured belly. The blue-grey bill is hooked at the tip and eye is dark in colour. Young birds are similar but lack the black face, have a black bill and tend to have a brownish body and wings. The Black-faced monarch is one of the monarch flycatchers, a forest and woodland-dwelling group of small insect-eating birds, and is strictly arboreal (Pizzey & Knight 1997).

**Known distribution**

The Black-faced monarch occurs along the east coast of Australia. This species is located primarily on the eastern side of the Great Dividing Range, between Cape York Peninsula (Queensland) to Glendale National Park in eastern Victoria. This species is more abundant within the northern portion of its range (Pizzey & Knight 1997).
Figure 24.1  Distribution range of the Black-faced Monarch (DSEWPaC 2012ab)

Known species populations and their relationship with the GTP footprint

Suitable habitat for this species within KP312 to KP408.81, KP408.81 and KP409.04 and KP413.57 to KP419.69 of the GTP and ancillary areas is considered to be limited and to areas used during migration.

Biology and reproduction

The Black-faced monarch is a resident in the north of its range, but is a summer breeding migrant to coastal south-eastern Australia, arriving in September and returning northwards in March. It may also migrate to Papua New Guinea in autumn and winter (Pizzey & Knight 1997).

The Black-faced monarch forages for insects among foliage, or catches flying insects on the wing (Pizzey & Knight 1997).

The Black-faced monarch builds a deep cup nest of Casuarina needles, bark, roots, moss and spider web in the fork of a tree, about 3 to 6 m above the ground. Only the female builds the nest, but both sexes incubate the eggs and feed the young. Clutch size ranges from two to three and reproduction occurs between October and January (Pizzey & Knight 1997).

24.1.3 Habitat

The Black-faced monarch is known to inhabit rainforests, eucalypt-dominated woodlands and forests and coastal scrubs in addition to damp gullies in rainforests and eucalypt forests (Pizzey & Knight 1997).

On migration, this species occurs in coastal forests, woodlands, mangroves and drier woodlands and open forests (Blakers et al 1984, Emison et al 1987, Officer 1969, Pizzey & Knight 1997).
24.2 Spectacled monarch

24.2.1 EPBC Act legal status

Migratory (Bonn)

24.2.2 Biology and ecology

Characteristics

The Spectacled monarch (Monarcha trivirgatus) ranges in size from 14 to 16 cm. This species is blue-grey above, with a black face mask that extends across both eyes. The breast is rufous in colour and the underparts are white. The tail is black with white outer tips. Immature birds lack the black face and have a grey throat. The north Queensland subspecies albiventris has a rufous upper breast sharply defined from more extensive white underparts (Pizzey & Knight 1997).

Known distribution

The Spectacled monarch is found in coastal north-eastern and eastern Australia, including coastal islands, from Cape York, Queensland to Port Stephens, New South Wales. It is much less common in the south. It is also found in Papua New Guinea, the Moluccas and Timor (Blakers et al 1984, Pizzey & Knight 1997).
Known species populations and their relationship with the GTP footprint

Suitable habitat for this species within KP312 to KP408.81, KP408.81 and KP409.04 and KP413.57 to KP419.69 of the GTP and ancillary areas is considered to be limited and to areas used during migration.

Biology and reproduction

The Spectacled monarch is a resident in the north of its range (ie from Rockhampton in QLD northward), but is a summer breeding migrant to coastal south-eastern Australia, arriving in September and returning northwards in March. It may also migrate to Papua New Guinea in autumn and winter (Pizzey & Knight 1997).

The Spectacled monarch forages for insects among foliage, or catches flying insects on the wing (Pizzey & Knight 1997).

The Spectacled monarch builds a small cup nest of fine bark, plant fibres, moss and spider web in a tree fork or in hanging vines 1 to 6 m above the ground, often near water. Only the female builds the nest, but both sexes incubate the eggs and feed the young. Clutch size consists of two eggs. Reproduction occurs between October and February (Pizzey & Knight 1997).

24.2.3 Habitat

The Spectacled monarch inhabit both dense low vegetation and habitats with fairly open understoreys (Bravery 1970, Huggett 2000) and prefers understorey of mountain and lowland rainforests, thickly wooded gullies and waterside vegetation; mostly well below the canopy (Pizzey & Knight 1997).

The spectacled monarch forages at most levels in the forest, though most often at low or middle levels, within 6 m of the ground (Crome 1978, Hughes & Hughes 1980).
24.3 Satin flycatcher

24.3.1 EPBC Act legal status

Migratory (Bonn)

24.3.2 Biology and ecology

Characteristics

The Satin flycatcher (*Myiagra cyanoleuca*) ranges in size from 15 to 17 cm. This species is blue-black and white bird with a small crest. The sexes are dimorphic. Males are glossy blue-black dorsally, with a blue-black chest and white below. Females are duskier blue-black dorsally, with an orange-red chin, throat and breast, and white underparts and pale-edged wing and tail feathers. Young birds are dark brown-grey above, with pale streaks and buff edges to the wing feathers, and a mottled brown-orange throat and chest (Pizzey & Knight 1997).

Known distribution

The Satin flycatcher occurs along the east coast of Australia from far northern Queensland to Tasmania, including south-eastern South Australia. It is also found in New Guinea. The Satin flycatcher is not a commonly seen species, especially in the far south of its range, where it is a summer breeding migrant (Birdlife Australia 2012f).

The Satin flycatcher is a migratory species, moving northwards in winter to northern Queensland and Papua New Guinea, returning south to breed in spring (Pizzey & Knight 1997).
Known species populations and their relationship with the GTP footprint

Suitable habitat for this species within KP312 to KP408.81, KP408.81 and KP409.04 and KP413.57 to KP419.69 of the GTP and ancillary areas is considered to be limited and to areas used during migration.

Biology and reproduction

The Satin flycatcher is a resident in the north of its range, but is a migrant to coastal south-eastern Australia, arriving in August to October and returning northwards in February to April (Pizzey & Knight 1997).

The Satin flycatcher forages for insects among foliage, or catches flying insects on the wing (Pizzey & Knight 1997).

The Satin flycatcher builds a neat cup of bark strips, moss, spiders webs on a horizontal dead branch located 5 to 25 m above the ground under living foliage (Pizzey & Knight 1997). This species has been reported to nest in lose groups with each individual pair spaced between 20 to 50 m apart. Both sexes build the nest, incubate the eggs and feed the young (Pizzey & Knight 1997).

Clutch size ranges from two to three eggs and breeding occurs between October and February (Pizzey & Knight 1997).

24.3.3 Habitat

The Satin flycatcher is found in tall forests, preferring wetter habitats such as heavily forested gullies, but not rainforests (Birdlife Australia 2012f).

- This species is known to inhabit heavily vegetated gullies in eucalypt-dominated forests and taller woodlands (cited in DSEWPaC 2012ac) usually above the shrub layer (Pizzey & Knight 1997)
- On migration, this species occur in coastal forests, woodlands, mangroves and drier woodlands and open forests (Blakers et al 1984, Emison et al 1987, Officer 1969) as well as trees in open country and gardens (Pizzey & Knight 1997)
24.4  Rufous fantail

24.4.1  EPBC Act legal status

Migratory (Bonn)

24.4.2  Biology and ecology

Characteristics

The Rufous fantail (*Rhipidura rufifrons*) is a small, active bird which has a distinctive orange/rufous rump and continuously fanned tail. This species ranges in size from 15 to 16.5 cm. The crown, face, neck and shoulders are grey-brown, shading to orange/rufous on the lower back, rump and upper tail. The eyebrow is reddish-brown, the chin and throat are white, grading into a dappled black and white breast, and the rest of the underparts are white tinged red-brown. The wings are grey-brown and the tail feathers have red-brown bases, but are otherwise dark grey, tipped white. Young birds are similar, but duller, with less distinct markings on the breast (Pizzey & Knight 1997).

Known distribution

The Rufous fantail is found in northern and eastern coastal Australia, being more common in the north. It is also found in New Guinea, the Solomon Islands, Sulawesi and Guam (Pizzey & Knight 1997).

This species is a breeding migrant (October to April) within south-eastern Australia, primarily east of the Great Dividing Range. The species is vagrant in Tasmania. This species is strongly migratory in the south of its range and it moves northwards in winter, and virtually disappears from Victoria and New South Wales during the winter months. In north-eastern New South Wales, this species is an altitudinal migrant (Pizzey & Knight 1997).
Known species populations and their relationship with the GTP footprint

Suitable habitat for this species within KP312 to KP408.81, KP408.81 to KP409.04 and KP413.57 to KP419.69 of the GTP and ancillary areas is considered to be limited and to areas used during migration.

Biology and reproduction

The Rufous fantail is a resident in the north of its range, but is a migrant to coastal south-eastern Australia, arriving in September to October and returning northwards in March to April (Pizzey & Knight 1997).

The Rufous fantail forages for insects among foliage, or catches flying insects on the wing (Pizzey & Knight 1997).

The Rufous fantail builds a neat, fawn coloured tailed cup of bark strips, moss, spider’s webs in a shaded fork, low in tress/shrubs (ie less than 5 m from the ground) (Pizzey & Knight 1997).

Clutch size ranges from two to three glossy, stone coloured eggs. Breeding occurs between October and February (Pizzey & Knight 1997).

24.4.3 Habitat

The Rufous fantail is found in the undergrowth of rainforest and wetter eucalypt forests/gullies, monsoon forests, paperbark and sub-inland/coastal scrub, mangroves, watercourses, parks and gardens. During migration, it may be found in more open habitats or urban areas such as farms, suburban streets and building structures (Pizzey & Knight 1997).
24.5 Oriental cuckoo

24.5.1 EPBC Act legal status

Migratory (CAMBA, JAMBA and ROKAMBA)

24.5.2 Biology and ecology

Characteristics

The Oriental cuckoo (*Cuculus optatus*) is a large cuckoo of 28 to 33 cm. The bill is part-yellow and the eye, eye-ring and feet are yellow. The underparts are whitish and boldly barred black. The female is similar with the upperbreast washed buff. Some ‘hepatic’ females are red-brown above, whitish below, barred black on the upperparts, rump and tail and barred finer below, from the throat down. Immature birds are barred as the female with the upperparts grey-brown or red-brown with buff scalloping. The bill and legs are grey-yellow (Pizzey & Knight 1997).

![Oriental cuckoo (Source: Aviceda 2005b)](image)

**Known distribution**

The Oriental cuckoo is a regular non-breeding migrant from September to May to coastal north and east Australia and islands from Kimberley in Western Australia to north-east and eastern Queensland and eastern New South Wales. Some remain through the Australian winter (Pizzey & Knight 1997).
Known species populations and their relationship with the GTP footprint

Suitable habitat for this species within KP413.57 and KP419.69 of the GTP and ancillary areas is considered to be limited and to areas used during migration.

Biology and reproduction

The Oriental cuckoo’s diet consists of insects and their larvae, with a particular preference for caterpillars. The Oriental cuckoo forages for prey on the ground and in trees and bushes.

The Oriental cuckoo breeds in Mongolia, China and Japan and is a regular non-breeding resident to Australia (Pizzey & Knight 1997).

24.5.3 Habitat

The Oriental cuckoo inhabits rainforest margins, monsoon forest, vine scrub, riverine thickets, wetter, densely canopied eucalypt forest, paperbark swamp and mangroves (Morcombe 2003).