APPENDIX A: SPECIES CHARACTERISTICS OF CONSERVATION SIGNIFICANT BIRDS AND BATS

Species	Conservation status	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
Birds							
Actitis hypoleucos (common sandpiper)	Migratory (EPBC Act, BC Act)	The common sandpiper inhabits coastal wetlands and some inland wetlands and is 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. The species is often associated with mangroves and sometimes found in areas of mud littered with rocks or snags (DCCEEW 2024b).	Waterbirds can be expected only as vagrants or otherwise in small numbers on wetlands in the region (RPS 2010).	• There is no habitat for migratory wading bird species, including the common sandpiper, within or proximate to the Project Area, although there are habitats within the region that are frequented by these species (RPS 2010). • Migratory bird species were found to primarily frequent or move through / between lowland areas where more suitable habitat for these species occurs. Local flyway orientations were considered unlikely to traverse the Project Area, due to the general north to south alignment of drainage basins and coastal wetlands, although the potential for some intermittent east to west bird movements may exist, due to the temporary nature of regional wetlands in response to periodic inundations, particularly those in the east (RPS 2010).	One bird has been recorded at Lake Thetis, approximately 35 km west of the Project Area (RPS 2010). Movements of this migratory species from the northern hemisphere are likely to be made along near coastal habitats. Although the distributions of common sandpiper extend inland considerable distances and so there may be some movements between the inland and coast when conditions are favourable.	Common sandpipers have been known to fly above 2,000 m during migration as needed when crossing some inland routes, such as mountain ranges (Summers et al. 2019).	• Flock sizes of up to 200 prior to migration movements (Hayman et al. 1986). However, species typically occurs and moves overland singly or in small flocks (Gils et al. 2020). • Total population of the common sandpiper ranges from 2,455,000–4,030,000 (DCCEEW 2024b). • Population estimates for this migratory shorebird in the East Asian–Australasian Flyway that regularly visit Australia is 190,000 (Hansen et al. 2016). • Individuals within Australia during the non-breeding season are estimated to be approximately 3,000 (DCCEEW 2024b).
Aphelocephala leucopsis (southern whiteface)	Vulnerable (EPBC Act)	• The southern whiteface occupies a wide range of open woodlands and shrublands where there is an understorey of grasses or shrubs or both. These areas are typically in habitats that are dominated by *Acacia* or *Eucalyptus* on ranges, foothills, lowlands, and plains (DCCEEW 2023b). • The southern whiteface prefers *Acacia* woodland particularly those dominated by mulga (*Acacia aneura*) and drought-resistant chenopod shrub species, including saltbush and bluebush (Atlas of Living Australia 2024a).	The southern whiteface is considered sedentary; however, individuals may move into wetter areas during times of drought (DCCEEW 2024c).	None of the vegetation types within the Project Area represent the southern whiteface's preferred open woodlands and shrublands where there is an understorey of grasses, shrubs, or both, in habitats typically dominated by *Acacia* or *Eucalypts* (DCCEEW 2023b).	The southern whiteface is distributed across most of mainland Australia south of the tropics, from the north-eastern edge of the Wheatbelt region of Western Australia to east of the Great Dividing Range (DCCEEW 2023b).	• Southern whiteface forage almost exclusively on the ground, favouring habitat with low tree densities and an herbaceous understorey litter cover (DCCEEW 2023b). • Flight height data for this species was not recorded during a literature review for this BBMP.	• Flocks of 2–8 birds during foraging and they form larger flocks during the non-breeding season of up to 70 birds (DCCEEW 2023b). • The currently estimated population is 477,000, ranging from 236,000 to 954,000 (DCCEEW 2024c).
Apus pacificus (fork-tailed swift)	Migratory (EPBC Act, BC Act)	• The fork-tailed swift is an aerial specialist that occurs patchily over a range of habitats at a range of elevations from quite close to the ground to at least 300 m, although likely higher. Although it occurs across a wide range of habitats within Australia it is mostly observed over inland plains and is seen over coastal beaches and cliffs, but its presence is transitory and there is much variation between years in locality of last sighting (Higgins 1999). A strongly migratory, non-breeding visitor to Australian skies from the northern hemisphere it is more frequently observed in coastal eastern Australia than elsewhere, due no doubt to a	• This species is almost exclusively aerial (including roosting) when in Australia and is an intermittent visitor in south-western Australia (Higgins 1999; RPS 2010). • Fork-tailed Swift are known to fly hundreds of metres above the ground (see Tarburton 2009) and often precede or follow low-pressure systems as they cross the country in	• This species was not observed during the October–November 2008 avifauna surveys for the Project Area from anywhere in the region, however it may occur irregularly during dispersive movements particularly in the summer months (RPS 2010). • Fork-tailed swifts were not observed or heard during a site utilisation survey's Vantage Point or Focal Follow campaigns and have not been detected in decades of biannual surveys at the nearby Cooljarloo Mineral Sands Mine (BCE 2025). Fork-tailed swifts are likely to occur very infrequently over the Waddi Wind Farm, with sparsely scattered records in southwestern Australia (Higgins 1999).	This species breeds in the northern hemisphere and arrives in Australia around October in Western Australia, they are commonly found in Broome. They leave south-east, north, and north-west Western Australia by April (DCCEEW 2024d). The species is recorded infrequently in south-western Australia with much variation in habitat use from one year to the next (Higgins 1999)	• From 1 m to at least 915 m above ground, and likely much higher (DCCEEW 2024d; Tarburton 2009). • The fork-tailed swift's habitat ranges from <1 m to 1,000 m (Department of the Environment 2015).	• The fork-tailed swift typically feeds in small flocks of ten, but can occur in large groups of 1,000 birds, particularly in the lead up to migration (DCCEEW 2024d). • There are no population estimates in Australia, however, the largest flocks recorded have been 90,000 birds and 50,000 birds in Victoria and 50,000 birds in New South Wales (DCCEEW 2024d).

Species	Conservation status	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
		higher density of observers (DCCEEW 2024d). • The fork-tailed swift mostly occurs over dry or open habitats, including riparian woodland and tea-tree swamps, low scrub, heathland or saltmarsh. They are also observed in treeless grassland and sandplains covered by spinifex, farmland, and inland and coastal dunes (DCCEEW 2024d). • This species forages aerially. The fork-tailed swift's feeding flight pattern is distinctive as they circle throughout areas of high prey concentration (DCCEEW 2024d).	search of food (Menkhorst et al. 2019).				
Arenaria interpres (ruddy turnstone)	Migratory (EPBC Act, BC Act)	• The ruddy turnstone is widespread within Australia during its non-breeding season and it almost exclusively found in coastal regions (Nettleship 2020). They exhibit a strong preference for beaches or rocky shores where there are large deposits of rotting seaweed. They occur near platforms and shelves, often with tidal pools and rocky, gravel or shingle beaches, and can inhabit sand, coral, or shell beaches. They have been occasionally observed in bays, harbours, estuaries and coastal lagoons, on mudflats, among sewage ponds and among saltmarsh or exposed beds of seagrass. • The nearest internationally important site for the ruddy turnstone is Rottnest Island, regularly supporting >0.1% of the East Asian Australasian Flyway population (Mather 2020).	This species tends to fly in tight coordinated flocks when moving locally, and in loose lines when migrating (DCCEEW 2024e).	• There is no habitat for migratory wading bird species, including the ruddy turnstone, within or proximate to the Project Area, although there are habitats within the region that are frequented by these species (RPS 2010). • Migratory bird species were found to primarily frequent or move through / between lowland areas where more suitable habitat for these species occurs. Local flyway orientations were considered unlikely to traverse the Project Area, due to the general north–south alignment of drainage basins and coastal wetlands, although the potential for some intermittent east to west bird movements may exist, due to the temporary nature of regional wetlands in response to periodic inundations, particularly those in the east (RPS 2010).	This species breeds in the northern hemisphere and migrates south to Australia in what may be two routes of migration. The birds in the western areas of Australia arrive from August onwards to north and south Western Australia. The birds migrate back to their breeding grounds from mid-March (DCCEEW 2024e).	Flocks of migrating birds have been recorded up to 1,000 m from the observer (Piersma et al. 1999).	• The species is commonly seen as individuals or in loose groups of 20–100 birds along coasts and occasionally inland (DCCEEW 2024e). • A recent estimate of the ruddy turnstone global population was 475,000–713,000 (DCCEEW 2024e). • Population estimates for this migratory shorebird in the East Asian–Australasian Flyway that regularly visit Australia is 30,000 (Hansen et al. 2016). • The Australian population is estimated to be 14,000 (DCCEEW 2024e).
Botaurus poiciloptilus (Australasian bittern)	Endangered (EPBC Act, BC Act)	Within Western Australia, the Australasian bittern was formerly widespread in the south-west, ranging from north to Moora, east to near Mount Arid and inland possibly as far as the Toolibin Lake area. Its distribution has declined throughout the 1900s and now is likely only to occur along the western coastal plain between Lancelin to Busselton (rarely and in small numbers), along the southern coastal plain between Augusta to east of Albany and inland to some wetlands in the Jarrah Forest belt, with isolated and small populations in swamps from west of Esperance eastwards to near Cape Arid (DBCA 2018) Since the 1980s the species has been known only from Forrestdale Lake, James Swamp and Thomsons Lake in the southern Perth metropolitan area, Benger Swamp near Harvey, Lake Qualeup west of Kojonup, the Muir-Unicup system, and wetlands along the south coast from Augusta east to Cape Arid (DBCA 2018).	The Australasian bittern is thought to be largely sedentary, however recent tracking studies in 2016 have shown extensive movements over hundreds of kilometres between wetlands in south-east Australia (New South Wales, South Australia, and Victoria) (TSSC 2019).	• There is no habitat suitable for Australasian bittern within or proximate to the Project Area, as there are no permanent and seasonal freshwater habitats within or intersecting the Project Area. • The Australasian bittern has been recorded from a wide range of freshwater and brackish wetland sites, including lacustrine habitats, palustrine habitats, estuarine habitats and in riverine habitats. A minor portion of these records (8.3%) were from farmland (O'Donnell and Hugh 2016).	• The Australasian bittern appears able to move between habitats as their suitability changes (TSSC 2019). • There are no contemporary records for the species in the region, with a lack of suitable habitat locally (DBCA 2018; TSSC 2019).	The Australasian bittern flight heights within New Zealand have been recorded at low altitudes, with 52.2% being <100 m above sea level, and 96.5% below 600 m above sea level. The highest altitude recorded was 691 m above sea level (O'Donnell and Hugh 2016).	• There are suggested to be less than 1,000 mature Australasian bittern within the Australian population (TSSC 2019). • The Australasian bittern is generally solitary; however, they can occur in pairs or dispersed aggregations of up to 12 birds (TSSC 2019).

Species	Conservation status	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
		The Australasian bittern favours permanent and seasonal freshwater habitats, particularly those dominated by sedges, rushes, and reeds or cutting grass over a peaty or muddy substrate (Threatened Species Scientific Committee [TSSC] 2019).					
Cacatua pastinator derbyi (western corella (northern))	Conservation Dependent (Specially Protected) (BC Act)	• Western corellas forage on the ground, often in large flocks. They use tree hollows to nest in, primarily in wandoo and salmon gum (Craig and Davis 2022). • A mixed flock of western corellas and Carnaby's cockatoo were observed foraging far within paddocks (BCE 2025) • Western corellas occupy eucalypt woodlands that are dominated by wandoo, salmon gum, marri and jarrah. They can occur in farmland, particularly where there are large trees for nesting and roosting and nearby water sources (Craig and Davis 2022).	Movements recorded during October–November 2008 avifauna surveys for the Project Area were locally nomadic (RPS 2010).	• Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was woodland / grassland (RPS 2010). • Western corellas have been recorded nesting at Coomallo Creek, which is approximately 30 km to the north-west of the Project Area • A pair of western corellas were observed frequently inspecting the active nesting hollow throughout the occupancy by Carnaby's cockatoo at a nesting tree in the Minyulo Nature Reserve (Figure E) (BCE 2025)	• The western corella is endemic to south-western Western Australia. The western corella (northern) is geographically isolated subspecies of the western corella (Blythman and Porter 2020). • Daily movements of western corellas studied in the northern Wheatbelt found that movements were primarily to a small number of areas, characterised by having good feeding areas, adjacent to a farm dam and areas of trees with dense canopy. These three resources were no more than 100–200 m apart. Therefore, a large portion of completely cleared wheatland was unsuitable for western corellas and was not used by them (Craig and Davis 2022). • Local movements of the western corella were noted as being primarily associated with lowland woodland habitats (RPS 2010).	• Flight heights recorded during October–November 2008 avifauna surveys for the Project Area and wider locality were predominantly below the surveyed RSA (i.e. <40 m), for 860 out of 901 records (95%) (RPS 2010). • On 7 October 2024, a mixed flock of Carnaby's cockatoos and western corellas feeding in a paddock took flight due to a close overhead pass of a crop-dusting aircraft (BCE 2025). The Carnaby's cockatoos and western corellas reached heights of approximately 12 m and 18 m respectively and settled back to the paddock to feed in approximately 30 seconds.	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were medium flocks (RPS 2010). • Flocks during the non-breeding season can consist of individuals from multiple breeding areas (Craig and Davis 2022).
Calidris acuminata (sharp-tailed sandpiper)	Migratory (EPBC Act, BC Act)	The sharp-tailed sandpiper inhabits the muddy edges of shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh, or other low vegetation. This includes lagoons, swamps, lakes and pools near the coast, and dams, waterholes, soaks, bore drains and bore swamps, saltpans, and hypersaline salt lakes inland. They also occur in saltworks and sewage farms. They use flooded paddocks, sedgelands and other ephemeral wetlands, but leave when they dry out (DCCEEW 2024f).	The species can be expected infrequently or otherwise in small numbers on wetlands in the region (RPS 2010).	• There is no habitat for migratory wading bird species, including the sharp-tailed sandpiper, within or proximate to the Project Area, although there are habitats within the region that are frequented by these species (RPS 2010). • Migratory bird species were found to primarily frequent or move through / between lowland areas where more suitable habitat for these species occurs. Local flyway orientations were considered unlikely to traverse the Project Area, due to the general north–south alignment of drainage basins and coastal wetlands, although the potential for some intermittent east to west bird movements may exist, due to the temporary nature of regional wetlands in response to periodic inundations, particularly those in the east (RPS 2010). • Their movements during the non-breeding period appear to be dispersive, moving to temporary or flooded wetlands and leaving them when they dry (DCCEEW 2024f).	• 23 birds were recorded during October–November 2008 avifauna surveys at a lake in the Upper Moore River catchment, approximately 37 km east of the Project Area (RPS 2010). This species migrate from the northern hemisphere and likely follow similar habitat down the Moore River catchment from the north (RPS 2010). • In south-west Western Australia, the migrating sharp-tailed sandpiper mainly arrives in November and when departing from non-breeding grounds can occur in large numbers between January and March (DCCEEW 2024f).	Migrating flight heights for this species has been recorded between 80-975 m (Lindström et al. 2011)	• They migrate in flocks of less than 1,000 birds to non-breeding areas south of the Equator (DCCEEW 2024f). • Population estimates for this migratory shorebird in the East Asian–Australasian Flyway that regularly visit Australia is 85,000 (Hansen et al. 2016). • During the non-breeding season, approximately 91% of the East Asian–Australasian Flyway population are found in Australian and New Zealand (DCCEEW 2024f).
Calidris canutus (red knot)	Endangered (EPBC Act, BC Act) Migratory (EPBC Act)	• The red knot inhabits intertidal mudflats, sandflats and sandy beaches of sheltered coasts, and in estuaries, inlets, harbours and lagoons. They are occasionally seen in terrestrial saline wetlands located near the coast, such as pools, pans, lagoons and lakes, and	The red knot migration patterns tend to involve long non-stop flights between only a few staging areas (DCCEEW 2024g).	• An an exclusively coastal species that specialises on bivalves, there is no habitat for the red knot, within or proximate to the Project Area, although there are coastal habitats within the region that are frequented by these species (RPS 2010; Menkhorst et al. 2019).	• On arrival to Austalia from their breeding grounds, most red knots remain in the north within less than 10,000 in southern Australia. The species moves south mainly along the coast, with some inland records from September to November, and arrive in south-west Australia from	• Migratory flight heights have been recorded at an average of 409 m (Green 2004). • Flocks of migrating birds have been recorded up to 1,000 m from the observer (Piersma et al. 1999). • Migrating waders departing from north-western Australia along the	• Red knots are known to feed in large mixed flocks with great knots, bar-tailed godwits, grey-tailed tattlers, curlew sandpipers and red-necked stints (DCCEEW 2024g).

Species	Conservation status	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
		have been recorded on sewage ponds and saltworks (DCCEEW 2024g). • The red knot is diurnal and nocturnal (DCCEEW 2024g).		• Migratory bird species were found to primarily frequent or move through / between lowland areas where more suitable habitat for these species occurs. Local flyway orientations were considered unlikely to traverse the Project Area, due to the general north–south alignment of drainage basins and coastal wetlands, although the potential for some intermittent east to west bird movements may exist, due to the temporary nature of regional wetlands in response to periodic inundations, particularly those in the east (RPS 2010).	September. Red knots leave north-west Australia from late March to late April (DCCEEW 2024g).	East Asian-Australasian Flyway were analysed and the maximum average altitude at which flocks were detected by radar was 804 m, with a range of 505–1600 m. Higher maximum altitudes were also recorded (Tulp et al. 1994).	• The global population of this species is estimated at 1,090,000 (DCCEEW 2024g). • Population estimates for this migratory shorebird in the East Asian–Australasian Flyway that regularly visit Australia is 110,000 (Hansen et al. 2016). • The Australian population during the non-breeding period of this species is estimated at 135,000 (DCCEEW 2024g).
Calidris ferruginea (curlew sandpiper)	Critically Endangered (EPBC Act, BC Act) Migratory (EPBC Act)	The curlew sandpiper mainly occurs on intertidal mudflats in sheltered coastal areas, such as estuaries, bays, inlets and lagoons, and around non-tidal swamps, lakes and lagoons near the coast, and ponds in saltworks and sewage farms. They are also recorded inland, though less often, including around ephemeral and permanent lakes, dams, waterholes and bore drains, usually with bare edges of mud or sand (DCCEEW 2024h).	Adult curlew sandpipers are able to fly non-stop to Australia from Hong Kong and Singapore (DCCEEW 2024h).	• There is no habitat for migratory wading bird species, including the curlew sand piper, within or proximate to the Project Area, although there are habitats within the region that are frequented by these species (RPS 2010). • Migratory bird species were found to primarily frequent or move through / between lowland areas where more suitable habitat for these species occurs. Local flyway orientations were considered unlikely to traverse the Project Area, due to the general north–south alignment of drainage basins and coastal wetlands, although the potential for some intermittent east to west bird movements may exist, due to the temporary nature of regional wetlands in response to periodic inundations, particularly those in the east (RPS 2010).	• The curlew sandpiper reaches the northern shores of Australia in late August and early September. They mainly migrate on a direct route to south-east Australia, with some birds moving from north-west Australia further south to southern Western Australia and sometimes arriving in coastal south-western Western Australia (DCCEEW 2024h). • The curlew sandpiper's return north to breeding grounds occurs further to the east than the southern route. Some passage of the curlew sandpiper is through inland areas, were at least some birds from south-eastern Australia move to north-west Australia before leaving the mainland.	The average flight height on migraton is 1,878 m (Geering et al. 2007).	• Curlew sandpipers are gregarious and often occur in large flocks. They mix freely with other small waders when foraging and roosting (DCCEEW 2024g). • The global population of this species is estimated at 1,850,000 (DCCEEW 2024g). • Population estimates for this migratory shorebird in the East Asian–Australasian Flyway that regularly visit Australia is 90,000 (Hansen et al. 2016). • There are an estimated 115,000 individuals that visit Australia during the non-breeding period however these numbers have subsequently declined (DCCEEW 2024g). • In Western Australia, they occur in large numbers around Port Headland saltworks, Eighty mile Beach, Roebuck Bay and Lake McLeod, but are only recorded in small numbers in the southwest (Commonwealth of Australia 2015).
Calidris melanotos (pectoral sandpiper)	Migratory (EPBC Act, BC Act)	The pectoral sandpiper prefers shallow fresh to saline wetlands, and can be found in estuaries, lakes, river pools, artificial wetlands, coastal lagoons, bays, inundated grasslands, saltmarshes and floodplains. They usually inhabit coastal or near coastal habitat but can be found	The pectoral sandpiper can be expected only as rare visitors or otherwise in small numbers on wetlands in the region (RPS 2010).	• There is no habitat for migratory wading bird species, includingh the pectoral sandpiper, within or proximate to the Project Area, although there are habitats within the region that are frequented by migratory shorebirds (RPS 2010). • Migratory bird species were found to primarily frequent or move through /	• One bird was recorded during October–November 2008 avifauna surveys at a lake in the Upper Moore River catchment, approximately 37 km east of the Project Area (RPS 2010). This species migrate from the northern hemisphere and likely follow similar	An average flight height of migrating birds, predominatly waders such as pectoral sandpiper and red phalarope (*Phalaropus fulicarius*), was recorded at 1,222 m (Alerstam and Gudmundsson 1999).	• The global population of this species is estimated at 25,000-100,000 individuals (BirdLife International 2024d). • Population estimates for this migratory shorebird in the East Asian–

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		further inland occasionally (DCCEEW 2024i).		between lowland areas where more suitable habitat for these species occurs. Local flyway orientations were considered unlikely to traverse the Project Area, due to the general north–south alignment of drainage basins and coastal wetlands, although the potential for some intermittent east to west bird movements may exist, due to the temporary nature of regional wetlands in response to periodic inundations, particularly those in the east (RPS 2010).	habitat down the Moore River catchment from the north (RPS 2010). • The pectoral sandpiper is found in Australia from September to June. They are rarely recorded within Western Australia (DCCEEW 2024i).		Australasian Flyway that regularly visit Australia is 1,220,000–1,930,000 (Hansen et al. 2016).

Species	Conservation status	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
Calidris ruficollis (red-necked stint)	Migratory (EPBC Act, BC Act)	The red-necked stint inhabits coastal areas, such as estuaries within intertidal mudflats, lagoons, bays and sheltered inlets. They are also found in ephemeral and permanent shallow wetlands near the coast or inland, in saltworks and sewage farms, saltmarsh, lakes, riverbanks, dams, soaks, and pools in salt flats. They sometimes use flooded paddocks or damp grasslands (DCCEEW 2024j).	• Movements recorded during October–November 2008 avifauna surveys for the Project Area were migratory/nomadic (RPS 2010). • Waterbirds can be expected only as vagrants or otherwise in small numbers on wetlands in the region (RPS 2010). • Red-necked stints are thought to be able to fly from Tasmania to north-west Australia non-stop (DCCEEW 2024j).	• Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was intertidal zone and saline wetlands (RPS 2010). • There is no habitat for migratory wading bird species, including the red-necked stint, within or proximate to the Project Area, although there are habitats within the region that are frequented by these species (RPS 2010). • Migratory bird species were found to primarily frequent or move through/ between lowland areas where more suitable habitat for these species occurs. Local flyway orientations were considered unlikely to traverse the Project Area, due to the general north–south alignment of drainage basins and coastal wetlands, although the potential for some intermittent east to west bird movements may exist, due to the temporary nature of regional wetlands in response to periodic inundations, particularly those in the east (RPS 2010).	The red-necked stint overwinters in Australasia, mainly within Australia. They arrive in Australia from August, and mostly from early September. From north-west Australia, some birds move to south-west Australia, likely along the west coast. From August to December, others migrate across the continent towards the south, south-east and east coasts. The red-necked stint leaves Australia from late February or March through to April (DCCEEW 2024j).	• Flight heights recorded during October–November 2008 avifauna surveys for the wider locality were below the surveyed RSA (i.e. <40 m) for 104 out of 104 records (RPS 2010). • Flight heights were not recorded within the Project Area (RPS 2010). • On migration, the altitude of red-necked stint flight are likely to exceed 1,500 metres, similar to other small to medium sized waders (Tulp et al. 1994).	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were medium-swift (RPS 2010). • The red-necked stint likely travels in flocks and have been observed to feed in dense flocks (DCCEEW 2024j). • The global population is estimated to be 471,000 (DCCEEW 2024j). • Population estimates for this migratory shorebird in the East Asian–Australasian Flyway that regularly visit Australia is 475,000 (Hansen et al. 2016). • The Australia population is estimated to be 353,000 (DCCEEW 2024j).
Calyptorhynchus banskii naso (forest red-tailed black cockatoo)	Vulnerable (EPBC Act, BC Act)	The forest red-tailed black cockatoo breeding habitat comprises woodland or forest and partially cleared woodland or forest including isolated trees. They nest in hollows of live or dead trees, and many Eucalyptus species may provide suitable hollows. Any tall trees may provide roosting habitat, particularly jarrah, marri, karri, blackbutt, tuart, introduced eucalypts or large trees on forest edges. Forest red-tailed black cockatoos forage primarily on seeds of jarrah and marri in woodlands and forest, and edges of karri forests, including wandoo and blackbutt. They also forage on cones of Allocasuarina, fruits of snottygobble (*Persoonia longifolia*) and mountain marri (*Corymbia haematoxylon*), and on less important food sources, such as blackbutt, bullich, *Allocasuarina fraseriana*, Hakea sp., tuart, redheart moit (*Eucalyptus decipens*) and bushy yate (*Eucalyptus lehmanni*) (DAWE 2022).	• The forest red-tailed black cockatoo's seasonal movements are irregular. It is suggested that movements more generally could relate to water availability as well as foraging resources (DCCEEW 2025b) • Flight behaviours are anticipated to similar to the Carnaby's cockatoo flight behaviours recorded by BCE (2025).	• The Project Area is outside of the forest red-tailed black cockatoo's modelled distribution (DAWE 2022). The northernmost extent of where the modelled species or species habitat may occur is near Boonanarring Nature Reserve, which is located over 70 km south of the Project Area • Foraging evidence of marri nuts with chew marks consistent with forest red-tailed black cockatoo were found under a marri tree north of the Waddi Road reserve, located within the roost area in the Project Area's north-eastern extent (BCE 2025). The chew marks were recent but not fresh. Landowners advised that forest red-tailed black cockatoos are seen and heard in the area very infrequently and possibly not every year. • Forest red-tailed black cockatoos have not been observed or heard during the avian surveys conducted within the Project Area (BCE 2025, RPS 2014, RPS 2010a), or recorded during surveys and mortality monitoring undertaken for the neighbouring wind farms (Ecologia Environment 2017; Alinta Energy 2022; Alinta Energy 2024; Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020)	• Flight behaviours are anticipated to similar to the Carnaby's cockatoo flight behaviours recorded by BCE (2025) • Flocks of up to 50 forest red-tailed black cockatoos roost in trees at night, and leave at sunrise in family groups of up to 10 individuals towards forested areas (DCCEEW 2025b). The species return to roosts at dusk.	• Flight heights were not recorded within the Project Area (RPS 2010). • Flight heights are anticipated to similar to the Carnaby's cockatoo flight heights recorded by BCE (2025).	• The forest red-tailed black cockatoo's current population is estimated to be 15,000 birds (DCCEEW 2025b) • The species usually occur in small family groups of up to 10 individuals, however groups may flock together (DCCEEW 2025b)
Charadrius leschenaultii (greater sand plover)	Migratory (EPBC Act) Vulnerable (BC Act)	The greater sand plover is found in many coastal areas of Australia during its non-breeding season, inhabiting littoral and estuarine habitats. They mainly occur on sheltered sandy, shelly, or muddy beaches with large intertidal mudflats or sandbanks, as well as sandy estuarine lagoons and rock platforms, sand cays, small rocky islands and inshore reefs. They seldom	The greater sand plover is a migratory species, breeding in the northern hemisphere and flying south for the boreal winter (DCCEEW 2024p).	• There is no habitat suitable for greater sand plover within or proximate to the Project Area, as it is situated approximately 31 km east of the Western Australian coastline. • Migratory bird species were found to primarily frequent or move through/ between lowland areas where more suitable habitat for these species occurs.	• The greater sand plover migratory route to Australia is more westerly than other shorebirds that visit Australia. The majority of wintering birds are found on the north coast, with small numbers occuring along other coastlines. They arrive in north-western Australia from late	Migrating waders departing from north-western Australia along the East Asian-Australasian Flyway were analysed and the maximum average altitude at which flocks were detected by radar was 804 m, with a range of 505–1600 m. Higher maximum altitudes were also recorded (Tulp et al. 1994).	• The greater sand plover forages singly or in loose flocks, often with other waders. However, they tend to avoid foraging where the density of foraging shorebirds is high (DCCEEW 2024k).

Species	Conservation status	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
		occur in shallow freshwater wetlands (DCCEEW 2024k).		Local flyway orientations were considered unlikely to traverse the Project Area, due to the general north–south alignment of drainage basins and coastal wetlands, although the potential for some intermittent east to west bird movements may exist, due to the temporary nature of regional wetlands in response to periodic inundations, particularly those in the east (RPS 2010).	July and usually leave from October (DCCEEW 2024k). • The paucity of inland records of the greater sand plover within Australia suggest that migratory movements to the southern and eastern areas of Australia occur around the coast rather than across the continent (DCCEEW 2024k).		• The greater sand plover are gregarious during the non-breeding season when it occurs as flocks. They migrate in flocks comprised of up to several hundred birds, often with other shorebirds such as the lesser sand plovers (DCCEEW 2024k). • The total population of the greater sand plover has been estimated at 200,000–275,000 or 190,000–360,000 (DCCEEW 2024k). • Population estimates for this migratory shorebird in the East Asian–Australasian Flyway that regularly visit Australia is 200,000–300,000 (Hansen et al. 2016). • During regular population monitoring counts in Australia, the number of greater sand plovers have ranged from 518–38,289 (DCCEEW 2024k).
Falco peregrinus (peregrine falcon)	Other Specially Protected (BC Act)	• The peregrine falcon is widespread in a range of environments across Australia but is often associated with cliff-lines or scattered tall trees that provide it with nest sites (RPS 2014). They prefer habitat over wooded and forested lands, open country, and wetlands of tropical and temperate areas (RPS 2010) and require abundant prey. • The peregrine falcon is a breeding visitor to Australia (BirdLife International 2024e). • It is essentially an aerial species and hunts above canopy vegetation where its favoured prey is medium sized birds such as Galah and Rock Doves (RPS 2010). • Peregrine falcons will pursue flying birds and they are able to hunt at high speeds and from great heights (Australian Museum 2019).	This species was observed once during October–November 2008 avifauna surveys for the Project Area, as such should be considered a potential occasional visitor (RPS 2010).	• The peregrine falcon was observed to be scarce during field investigations with only a single bird being recorded off site within the vicinity and wider locality of the Project Area (RPS 2010). The Project Area is situated within large areas of agricultural land used for cropping, as such seasonal influxes of prey species (mediums sized cockatoos such as galahs and corellas, but also non-native pigeons and doves) may attract predatory species (RPS 2014). • The peregrine falcon primarily requires bare rock faces, ledges or caves in cliffs on which to roost and nest. They are also known to use large- or medium-sized stick nests built by other bird species or, very rarely in south-western Australia, tree hollows (Olsen 1982). • There are scattered records of the species throughout the broader region, with a cluster of records to the northeast around Mount Gibson (Birdata 2025), likely due to increased survey effort but also the presence of more favourable habitat around the Mount Gibson Ranges.	• Peregrine falcons mate for life and maintain a home range of about 20–30 km^2 thoughout the year (Australian Museum 2019). • Young peregrine falcons disperse widely, however they often return to their orginal home area to breed once mature (Australian Museum 2019).	• The peregrine falcon is an aerial specialist and may at times fly at the surveyed RSA (i.e. 40–152 m) and above. • The peregrine falcon soars to great heights in search of prey (Australian Museum 2019).	• Most birds travel in pairs or singly even during migration (BirdLife International 2024e). • The global population is estimated to range from 100,000–499,999 mature individuals (BirdLife International 2024e).
Limosa lapponica (bar-tailed godwit)	Migratory (EPBC Act, BC Act)	• Bar-tailed godwits are found mainly in coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays. It is found often around beds of seagrass and, sometimes, in nearby saltmarsh. Bar-tailed godwits have been sighted in coastal sewage farms	Bar-tailed godwits leaving north-west Australia may fly non-stop to China (DCCEEW 2024l).	• There is no habitat suitable for bar-tailed godwit within or proximate to the Project Area, as it is situated approximately 31 km east of the Western Australian coastline. • Migratory bird species were found to primarily frequent or move through / between lowland areas where more suitable habitat for these species occurs.	The bar-tailed godwit migrates from breeding grounds and arrive in north-west Australia from August to mid-November. Small numbers move south from north-west Australian, apparently moving down the west coast to arrive in south-west Australia from late August. Larger numbers arrive from	• Migratory flight heights have been recorded at an average of 2,223 ± 481 m (Green 2004). • Migratory flight heights have been recorded at an average of 1,317 ± 1,316 m above ground level (Senner et al. 2018).	• The global population of the bar-tailed godwit is estimated to be 1,060,000–1,110,000 (DCCEEW 2024l). • Population estimates for this migratory shorebird in the East Asian–

Species	Conservation status	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
		and saltworks, salt lakes and brackish wetlands near coasts, sandy ocean beaches, rock platforms, and coral reef-flats. It is rarely found on inland wetlands or in areas of short grass, such as farmland, paddocks and airstrips (DCCEEW 2024l). • The bar-tailed godwit generally feeds during the day, but sometimes by moonlight (DCCEEW 2024l).		Local flyway orientations were considered unlikely to traverse the Project Area, due to the general north–south alignment of drainage basins and coastal wetlands, although the potential for some intermittent east to west bird movements may exist, due to the temporary nature of regional wetlands in response to periodic inundations, particularly those in the east (RPS 2010).	mid-October and to mid-December. The bar-tailed godwit shows high fidelity to non-breeding sites within south-east and north-west Australia. They usually depart early to mid-April (DCCEEW 2024l).	• Flocks of migrating birds have been recorded up to 2,000 m from the observer (Piersma et al. 1999). • Migrating waders departing from north-western Australia along the East Asian–Australasian Flyway were analysed and the maximum average altitude at which flocks were detected by radar was 804 m, with a range of 505–1600 m (Tulp et al. 1994).	Australasian Flyway that regularly visit Australia is 325,000 (Hansen et al. 2016).
Leipoa ocellata (malleefowl)	Vulnerable (EPBC Act, BC Act)	The malleefowl occurs in temperate Australia largely limited to the semi-arid zone. They are mostly limited to areas of inland semi-arid scrub, this species prefers a dry environment with low-growing eucalypt trees and shrubs, referred to as mallee country (Benshemesh 2007). Although their diet exhibits seasonal variation, they mostly feed on ants and the seeds of wattle and other legume plants. In Western Australia, they are found in some shrublands dominated by acacia and occasionally in woodlands dominated by eucalypts such as Wandoo, Marri, and Mallet (*Eucalyptus astringens*). Malleefowl distribution within the Wheatbelt region of Western Australia was found to be associated with landscapes that had lower rainfall, greater amounts of mallee and shrubland that occur as large remnants, and lighter soil surface textures (Benshemesh 2007).	• Breeding pairs of malleefowl tend to be sedentary, however a pair can sometimes move several kilometres between nesting seasons (Benshemesh 2007). • They appear to disperse on foot and use corridors of relatively thick vegetation when moving through open landscapes (Benshemesh 2007).	• Native vegetation types mapped within the Proposed Action's Indicative Disturbance area include Proteaceous scrub heath, Banksia Low Open Woodland, *Melaleuca* Low Open Woodland, *Eucalyptus todtiana* Woodland, and *Corymbia calophylla* Woodland. None of the Proposed Action's vegetation types were comprised of mallee shrubland or shrublands dominated by acacia, however woodland vegetation was identified (RPS 2023; Ecologia Environment 2016; Outback Ecology 2014; Outback Ecology 2010). Areas of *Corymbia calophylla* Woodland were found to be in Completely Degraded condition, as such these areas are unlikely to represent suitable habitat for the malleefowl. • Native vegetation within the Project Area is fragmented by areas cleared for agricultural land uses. The fragmented nature of native vegetation in the Project Area and its surroundings would make it difficult for the malleefowl to persist. • The nearest record of the species is in the Watheroo National Park, more than 35 km to the northeast of the Project Area (BirdLife 2025).	The malleefowl mostly travel by foot within their range, and rarely fly except when they disturbed or to roost in tree canopy (Benshemesh 2007).	The malleefowl spends most of its time on the ground and does not fly at RSA heights.	Little information is known about the malleefowl's population dynamics. Population monitoring in Victoria, South Australia and New South Wales show steep declines in breeding densities (Benshemesh 2007).
Motacilla cinerea (grey wagtail)	Migratory (EPBC Act, BC Act)	The grey wagtail is a very widespread species, with 20% of the global range in Europe. The grey wagtail is found around fast flowing mountain streams, often in forested areas, as well as lowland watercourses such as canals and rivers. Outside of the breeding season it is found in a greater variety of habitats, including farmlands, forested tracks, plantations and even town centres (BirdLife International 2024a). The grey wagtail is a scare but regular visitor to northern Australia, including Cocos Keeling, Christmas Island and Ashmore Reef, between late October and April (Menkhorst et al. 2019). It is considered a vagrant to southwestern Australia. It also occasionally occurs in the Kimberley, top end, Northern Territory and the Wet Tropics of Queensland (Menkhorst et al. 2019).	The grey wagtail is a non-breeding migrant to Australia (BirdLife International 2024a).	The grey wagtail is almost exclusively recorded near water. In the unlikely event the species was recorded in southwestern Australia, it is highly unlikely to occur within the Project Area due to the absence of suitable habitat.	The grey wagtail generally arrives in northern Australia in late October and leaves around March. This species is a rare non-breeding summer visitor to northern Australia (Department of the Environment 2015).	• Average nest heights of grey wagtail have been recorded at 159.7 m ± 98 cm above ground level (Rodríguez and Rodríguez 2007). • In the mountains of southern Iran, the grey wagtail has been observed at altitudes between 2,200-3,700 m (Desfayes and Praz 1978).	A preliminary estimate of the global population is 6,900,000–19,800,000 mature individuals (BirdLife International 2024a).

Species	Conservation status	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
Numenius madagascariensis (eastern curlew)	Critically Endangered (EPBC Act, BC Act) Migratory (EPBC Act)	• Within Australia, the eastern curlew has a primarily coastal distribution. The species is found in all states, particularly the north, east, and south-east regions including Tasmania. Eastern curlews are rarely recorded inland. They have a continuous distribution from Barrow Island and Dampier Archipelago, Western Australia, through the Kimberley Division and along Northern Territory, Queensland, and NSW coasts and the islands of Torres Strait. They are patchily distributed elsewhere. The eastern curlew is most associated with sheltered coasts, especially estuaries, bays, harbors, inlets and coastal lagoons, with large intertidal mudflats or sand flats, often with beds of seagrass. Occasionally, the species occurs on ocean beaches (often near estuaries), and coral reefs, rock platforms, or rocky islets. The birds are often recorded among salt marshes and on mudflats fringed by mangroves and sometimes use the mangroves. The birds are also found in salt works and sewage farms (DCCEEW 2024m). • The eastern curlew tends to forage within intertidal flats during periods of low tide and then roost in supertidal areas at high tides, where they probe their long bills into mud to find suitable prey (DCCEEW 2024m).	The eastern curlew is Australia's largest shorebird and is a long-haul flier (DCCEEW 2024m).	• There is no habitat for migratory wading bird species, including the eastern curlew, within or proximate to the Project Area, although there are coastal habitats within the region that are frequented by these species (RPS 2010). • Migratory bird species were found to primarily frequent or move through / between lowland areas where more suitable habitat for these species occurs. Local flyway orientations were considered unlikely to traverse the Project Area, due to the general north–south alignment of drainage basins and coastal wetlands, although the potential for some intermittent east to west bird movements may exist, due to the temporary nature of regional wetlands in response to periodic inundations, particularly those in the east (RPS 2010).	• The eastern curlew migrates from their breeding grounds and arrive in Australia from August to forage on crabs and molluscs in intertidal mudflats. The birds move onwards throughout the rest of Australia by October (DCCEEW 2024m). • During the non-breeding season, the eastern curlew's local-scale movements are commonly between areas of suitable habitat. These movements are often driven by changes in the tide (DCCEEW 2024m). • The eastern curlew is rarely recorded inland within Australia (DCCEEW 2024m).	• A study into migration pathways and flight altitude selection for the eastern curlew found that despite occasional high-altitude migrations at up to 5,550 m above ground, the shorebirds preferred to fly well below 1,000 m, particularly along the coast. They also preferred altitudes where visibility and wind support were the greatest (Galtbalt et al. 2021). • The eastern curlew tended to fly higher over land (median of 538 m above ground level) than flying over sea (median of 156 m) (Galtbalt et al. 2021). • Migrating waders departing from north-western Australia along the East Asian-Australasian Flyway were analysed and the maximum average altitude at which flocks were detected by radar was 804 m, with a range of 505–1600 m. Higher maximum altitudes were also recorded (Tulp et al. 1994).	• The eastern curlew often forage alone or in loose flocks. Ocassionally, foraging flocks have been observed to comprise of hundreds of individuals (DCCEEW 2024m). • The eastern curlew typically roosts in large flocks, separate to other shorebirds (DCCEEW 2024m). • Population estimates for this migratory shorebird in the East Asian–Australasian Flyway that regularly visit Australia is 35,000 (Hansen et al. 2016). • There is an estimated to be 22,500 mature indivduals in the Australian population (DCCEEW 2024m).
Oxyura australis (blue-billed duck)	Priority 4	The blue-billed duck is wholly aquatic and is rarely found on land (Australian Museum 2020). They are found in terrestrial wetlands, saline or freshwater, and nest in sedges, rushes, paperbark and lignum (BirdLife International 2024b).	The blue-billed duck prefers to stay in water and largely forages under the surface. They can dive up to 5 m deep. The blue-billed duck will dive under water when threatened rather than fly away (Cull, Newman and Plew 2021).	• The Project Area is intersected by an ephemeral watercourse, which does not represent suitable habitat for the blue-billed duck. There are no permanent water bodies within the Project Area. • Blue-billed ducks (approximately 80) were recorded at the Namming Lake, situated to the south of Guaraga Lake, approximately 24 km south of the Project Area. Namming Lake is surrounded by *Melaleuca* sp. trees that provide roosting and foraging sites for waterbirds and may represent breeding sites for the birds observed within the lake (RPS 2010).	The blue-billed duck is distributed across much of south-east Australia and through wetter parts of south-west Australia. Scattered inland records suggest that there may be some interchange between east and east, however there is no evidence that this occurs (BirdLife International 2024b).	• The blue-billed duck requires a minimum open water distance of a waterbody to enter and exit. This was assessed to be 97 m in Victoria. The minimum open water distance of all breeding habitats was assessed to be at least 140 m (Cull, Newman and Plew 2021). • The blue-billed duck appears to require a very long distance to attain flight speed and slowly gain height. Likewise, their landing is at a shallow angle and is very fast (Cull, Newman and Plew 2021).	• During autumn and winter, the blue-billed duck aggregates in large flocks but disperse to smaller water bodies when breeding. Aggregations also can occur during drought (BirdLife International 2024b). • The population size is estimated to be 11,000–19,000. Over a decade ago, there were thought to be 5,000 blue-billed ducks in south-west Australia (BirdLife International 2024b).

Species	Conservation status	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
Pandion haliaetus (osprey)	Migratory (EPBC Act, BC Act)	• Ospreys occur in littoral and coastal habitats and terrestrial wetlands of tropical and temperate Australia and offshore islands. They are mostly found in coastal areas but occasionally travel inland along major rivers, particularly in northern Australia. They exhibit a preference for coastal cliffs and elevated islands in some parts of their range, but may also occur on low sandy, muddy or rocky shores and over coral cays (DCCEEW 2024n). • Ospreys mainly feed on fish, and rarely insects, reptiles, birds or mammals (DCCEEW 2024n). • Ospreys usually forage diurnally but have also been observed hunting prey at night. Ospreys usually search for prey by soaring, quartering, or circling above a body of water and scanning for fish. Occasionally, they search for prey by scanning from a perch. When prey is located, they hover then dive downwards. Ospreys have also been observed snatching birds in flight. Captured prey is carried to a feeding perch for consumption (DCCEEW 2024n).	• Ospreys are mostly resident or sedentary around breeding territories.They occupy large territories used for breeding and at least some foraging (DCCEEW 2024n). • The osprey can fly over several hundred kilometres of open water (Duriez et al. 2018).	There is no habitat suitable for osprey within or proximate to the Project Area, as it is situated approximately 31 km east of the Western Australian coastline and there are no terrestrial wetlands or major rivers within or intersecting the Project Area.	Ospreys are moderately common in Australia. They are most abundant within northern Australia, and are generally rare to uncommon in southern Western Australia (DCCEEW 2024n). A population of around 13 breeding pairs occurs in the Perth metropolitan region (Singor 2021) and a number of breeding pairs are known on Garden Island and Rottnest Island of the Perth coast.	Ospreys have been recorded with a mean flight height of 363 m ± 375 m above sea level during migration over land, ranging from -16–1,974 m above sea level. Ospreys have been recorded with a mean flight height of 176 m ± 169 m above sea level during migration at sea, ranging from -9–899 m above sea level (Duriez et al. 2018).	• The global population of osprey is not known, however it is estimated to be less than 212,000 pairs (DCCEEW 2024n). • There are no published estimates of the Australian population of ospreys (DCCEEW 2024n).
Pezoporus flaviventris or *Pezoporus wallicus flaviventris* (western ground parrot)	Critically Endangered (EPBC Act, BC Act)	• The western ground parrot is a ground-dwelling bird that occupies low, dry or swampy near-coastal heathlands on sand plains and uplands. The species is usually recorded in habitats that are unburnt for long periods of time. They can forage in recently burnt habitats; however, these habitats are unsuitable for breeding and are only used occasionally. The western ground parrot's distribution is restricted to near coastal regions of south-western Western Australia. They are currently known to occur in two locations, Fitzgerald River National Park and Cape Arid National Park- Nuytsland Nature Reserve (TSSC 2013). • The western ground parrot leaves their roosting sites in the morning to forage during the day and they may fly 500 m between roosting and foraging sites (TSSC 2013).	• The western ground parrot will fly from roost to feeding area in the morning and vice versa in the evening. They are strong fliers but during the day they rarely take flight (Comer et al. 2015). • This species is capable of dispersing across sparse vegetation and clear areas (Department of Parks and Wildlife 2014).	The Project Area is significantly removed from where the western ground parrot populations are known to occur in the Fitzgerald River National Park and Cape Arid National Park-Nuytsland Nature Reserve (TSSC 2013). This species is likely to be locally extinct from the southwest region, including the locality of the wind farm.	This species is mainly sedentary but can move towards the coast in summer (RPS 2010).	The western ground parrot spends most of its time on the ground in dense heathlands, and it is only seen rarely (Molley et al 2020). This species is not expected to fly within the proposed RSA (18-180 m).	• The current population estimate for this species is very low at 110 mature individuals (TSSC 2013). • The current population estimate at Fitzgerald River National Park is less than 85 birds. The current population estimate at Cape Arid National Park- Nuytsland Nature Reserve is 90 birds (TSSC 2013). • The species has declined to one population, estimated to comprise of less than 150 individuals (Molley et al 2020).

Species	Conservation status	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
Platycercus icterotis xanthogenys (western rosella (inland))	Priority 4	• The western rosella (inland) occupies eucalypt and sheoak woodlands and scrubs, especially those containing wandoo (*Eucalyptus wandoo*), flooded gum (*Eucalyptus rudis*), salmon gum (*Eucalyptus salmonophloia*), tall mallee and rock sheoak (*Allocasuarina huegeliana*) (Department of Environment and Conservation 2009a). • It is generally found in forested areas but also feeds on grassy clearings and pasture. The western rosella (inland) and western rosella (south-west) distribution and range has significantly changed and since 1970 it has declined or become extinct from more than 25% of the shires it once occupied, including the Shire of Dandaragan where the Project Area is located (Department of Environment and Conservation 2009a). • The western rosella (inland) has disappeared from the northern and eastern parts of the Wheatbelt due to removal of foraging and breeding habitat. The Project Area is outside of the known distribution of the western rosella (inland), with its nearest point around Wongan Hills being more than 100 km east of the Project Area (Department of Environment and Conservation 2009). • They forage on the ground, and in trees and shrubs (Department of Environment and Conservation 2009a).	The western rosella (inland)'s flight is light and fluttery and less undulating than in other rosella species (BirdLife Australia 2024a).	• The Project Area is predominantly comprised of agricultural land used cropping with mapped areas of Proteaceous scrub heath of the Kwongan and *Eucalyptus todtiana* Woodland vegetation, which is potentially suitable foraging habitat for the western rosella (inland) (RPS 2023 and Outback Ecology 2014). However, this does not reflect the floristic composition of their favoured woodlands and scrub habitat as no wandoo, flooded gum, salmon gum and rock sheoak have been recorded within the Project Area • The Project Area is over 100 km removed from where the western rosella (inland)'s distribution extent is mapped over (Department of Environment and Conservation 2009a). This species is highly unlikely to occur within the Project Area due to the absence of their preferred habitat and being located outside of its distribution and range.	The western rosella (inland) is mainly sedentary but can move towards the coast in summer (RPS 2014).	The western rosella (inland) generally flies closer to the ground (RPS 2014).	• The western rosella (inland) is seen in small flocks during winter, however at other times of the year they are observed in pairs or family groups (BirdLife Australia 2024a). • They can occur occasionally in larger flocks of up to 30 birds at drinking and feeding sites (Department of Environment and Conservation 2009a).
Plegadis falcinellus (glossy ibis)	Migratory (EPBC Act, BC Act)	Glossy ibis' preferred habitat for foraging and breeding are freshwater marshes at the edges of lakes and rivers, lagoons, flood plains, wet meadows, swamps, reservoirs, sewage ponds, rice fields and cultivated areas under irrigation. The species is occasionally located in coastal locations such as deltas, saltmarshes, coastal lagoons, and estuaries. Within Western Australia, the glossy ibis is found generally east of the Kimberley and is also known to be patchily distributed across the state (DCCEEW 2024o).	The glossy ibis is considered migratory and nomadic (DCCEEW 2024o).	• There is no habitat suitable for glossy ibis within or proximate to the Project Area, as there are no terrestrial wetlands or rivers within or intersecting the Project Area. • Migratory bird species were found to primarily frequent or move through / between lowland areas where more suitable habitat for these species occurs. Local flyway orientations were considered unlikely to traverse the Project Area, due to the general north–south alignment of drainage basins and coastal wetlands, although the potential for some intermittent east to west bird movements may exist, due to the temporary nature of regional wetlands in response to periodic inundations, particularly those in the east (RPS 2010).	• Movements of glossy ibis within Australia is usually in response to good rainfall to expand its range. The core breeding areas are located within the Murray-Darling Basin region of NSW and Victoria, the Macquarie Marshes in New South Wales, and in southern Queensland. They fly north in autumn and return south to the main breeding areas in spring and summer (DCCEEW 2024o). • There are isolated records of small breeding colonies elsewhere in south-west Western Australia (DCCEEW 2024o).	Recorded flight height data for this species was not identified during a literature review for this BBMP.	• The glossy ibis is found in pairs or small flocks. During winter or dry seasons, the glossy ibis usually forages in small flocks of up to 30 individuals. Large flocks can occur, the largest recorded was approximately 60,000 birds in the Norther Territory (DCCEEW 2024o). • The global population size is estimated to be between 1,200,000–3,200,000 (DCCEEW 2024o). • The population within Australia is estimated to be 12% of the species total population (DCCEEW 2024o).

Species	Conservation status	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
Pluvialis fulva (Pacific golden plover)	Migratory (EPBC Act, BC Act)	• The Pacific golden plover utilises coastal habitats in Australia for their non-breeding grounds, however they occasionally occur around inland wetlands. They inhabit beaches, mudflats and sandflats in sheltered areas, such as lagoons, estuaries and harbours, and also in saltwork evaporation ponds. They are infrequently recorded around terrestrial wetlands, such as fresh, brackish, or saline lakes, billabongs, pools, swamps and wet claypans. Within Western Australia, the Pacific golden plover is not often recorded along the southern or south-western coasts, but they are more widespread along the Pilbara and Kimberley coasts between North-West Cape and the Northern Territory border (DCCEEW 2024p). • The Pacific golden plover forages diurnally and nocturnally (DCCEEW 2024p).	The Pacific golden plover is a migratory species, breeding in the northern hemisphere and flying south for the boreal winter (DCCEEW 2024p).	• There is no habitat for migratory wading bird species, including the Pacific golden plover, within or proximate to the Project Area (RPS 2010). It is also a species rarely recorded in southwestern Australia. • Migratory bird species were found to primarily frequent or move through / between lowland areas where more suitable habitat for these species occurs. Local flyway orientations were considered unlikely to traverse the Project Area, due to the general north–south alignment of drainage basins and coastal wetlands, although the potential for some intermittent east to west bird movements may exist, due to the temporary nature of regional wetlands in response to periodic inundations, particularly those in the east (RPS 2010).	• One bird was recorded during November 2008 avifauna surveys flying from Thetis Lake, approximately 35 km west of the Project Area, towards likely a shallow saline lake in the Nambung National Park (RPS 2010). Movements of this migratory species from the northern hemisphere are likely to be made along near coastal habitats. • The Pacific golden plover is present in its non-breeding grounds within Australia during September to May, with its greatest numbers in eastern and south-eastern Australia. The species arriving in the Kimberley division of Western Australia occur on passage in October, and leave in late April (DCCEEW 2024p). • The species is seldom recorded along the southern or south-western coasts (DCCEEW 2024p).	Recorded flight height data for this species was not identified during a literature review for this BBMP.	• The Pacific golden plover forages singly or in flocks of up to 100 or more. They fly in flocks of 20 to 50 birds but sometimes are observed as single birds (DCCEEW 2024p). • The global population is estimated to be 209,500, 170,000–220,000 or 100,000–1,000,000 (DCCEEW 2024p). • Population estimates for this migratory shorebird in the East Asian–Australasian Flyway that regularly visit Australia is 120,000 (Hansen et al. 2016). • The Australian population has been estimated to represent 4% of the global population (9,000) and 9–10% of the East Asian–Australasian Flyway (DCCEEW 2024p).
Pluvialis squatarola (grey plover)	Migratory (EPBC Act, BC Act)	• The grey plover utilises coastal areas in Australia for their non-breeding grounds. They inhabit sheltered embayments, estuaries and lagoons with mudflats and sandflats, and occasionally on rocky coasts. They are found around terrestrial wetlands, such as near-coastal lakes and swamps or salt lakes. Further inland, they are infrequently found near wetlands or salt-lakes. The Grey plover has been recorded across all states along the costs, and it is most abundant on the western and southern coastlines. In Western Australia, this is mainly between Albany and the northern Kimberly coast (DCCEEW 2024q). • The grey plover is a diurnal feeder that snatches flow-flying insects and dart forward to secure their prey. They locate prey visually from ground level (DCCEEW 2024b).	The grey plover is a migratory species, breeding in the northern hemisphere and flying south for the boreal winter (DCCEEW 2024q).	• There is no habitat for migratory wading bird species, including the Pacific golden plover, within or proximate to the Project Area (RPS 2010). • Migratory bird species were found to primarily frequent or move through / between lowland areas where more suitable habitat for these species occurs. Local flyway orientations were considered unlikely to traverse the Project Area, due to the general north–south alignment of drainage basins and coastal wetlands, although the potential for some intermittent east to west bird movements may exist, due to the temporary nature of regional wetlands in response to periodic inundations, particularly those in the east (RPS 2010).	Grey plovers arrive in northern Australia in August and early September and sometimes October. They move south following the coast and overland, arriving at sites on the southern coast. They leave south-west Western Australia in April (DCCEEW 2024q)	• Migratory flight heights have been recorded at an average of 1,726 ± 685 m (Green 2004). • Flocks of migrating birds have been recorded up to 2,000 m from the observer (Piersma et al. 1999). • Migrating waders departing from north-western Australia along the East Asian-Australasian Flyway were analysed and the maximum average altitude at which flocks were detected by radar was 804 m, with a range of 505–1600 m. Higher maximum altitudes were also recorded (Tulp et al. 1994).	• Grey plovers are usually solitary or occur in small flocks. They can occur in large flocks at communal roosts often with other wader species, such as Pacific golden plover, black-winged stints, knots and godwits (DCCEEW 2024q). • Total population of the grey plover ranges from 325,000–690,000 (DCCEEW 2024q). • Population estimates for this migratory shorebird in the East Asian–Australasian Flyway that regularly visit Australia is 80,000 (Hansen et al. 2016). • The number of birds recorded in Australia ranged from 620–2,888 (DCCEEW 2024q)

Species	Conservation status	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
Rostratula australis (Australian painted snipe)	Endangered (EPBC Act, BC Act)	• The Australian painted snipe has been recorded at wetlands in all states of Australia, but mainly occurs along the eastern and south-eastern coast of Australia from north Queensland to the Eyre Peninsula in South Australia. The species rarely recorded in southwestern Australia (del Hoyo et al. 2020). • The species generally inhabit shallow terrestrial wetlands, including permanent and temporary lakes, claypans and swamps, waterlogged grasslands, dams, rice crops and sewage farms. Their habitats typically include emergent tussocks of grass, rushes, sedges, reeds, or samphire, often with scattered lignum, tea-tree (*Melaleuca*) or cane grass. Areas lined with trees or with scattered fallen or washed-up timber may be used by the Australian painted snipe also (DCCEEW 2024r). • During the non-breeding period, the Australian painted snipe can use a broad range of wetland habitats, however during the breeding period their habitat requirements are more restricted. Nesting occurs in temporary freshwater wetlands just after they receive an influx of water. They require wetland habitat of low relief with a combination of complex shorelines, shallow water and exposed mud (Rogers et al. 2005).	This species may be possibly dispersive or migratory. Evidence for dispersal movements includes irregular and infrequent occurrences and breeding in some areas. Dispersive movements may be driven by local conditions, such as moving from drought-affected areas, from flying to inundated wetlands and to flooded areas. Evidence for migratory movements includes regular seasonal influxes (DCCEEW 2024r).	There is no habitat for the Australian painted snipe, within or proximate to the Project Area and its occurrence is highly unlikely (RPS 2010).	• There is some evidence that the species seasonally migrates from south-eastern Australia to northern regions in Australia (DCCEEW 2022). • The Australian painted snipe is active at dawn, dusk and during the night, and they prefer to stand or sit under reeds, grass or other dense cover. They generally occur within dense cover when foraging, however they may forage over open areas (grasslands, ploughed land, or over nearby mudflats (DCCEEW 2024r). • The movement patterns for this species are not well known. They are possibly dispersive, migratory, or may be described as nomadic where movements have no fixed spatial or temporal pattern (DCCEEW 2022).	Recorded flight height data for this species was not identified during a literature review for this BBMP.	• The Australian painted snipe is usually observed singly or in pairs, or less often seen in small flocks. Flocking occurs during the breeding season, when adults sometimes form loose gatherings around a group of nests. Flocks can also be formed after the breeding season (DCCEEW 2024r). • The total population is not known, however it is estimated to range from a few hundred individuals to 600-1700 breeding adults (del Hoyo et al. 2020).
Sternula nereis nereis (Australian fairy tern)	Vulnerable (EPBC Act, BC Act)	Within Australia, the Australian fairy tern occurs along the coasts of Victoria, Tasmania, South Australia and Western Australia, occurring as far north as the Dampier Archipelago near Karratha. This species nests on sheltered sandy beaches, spits and banks above the high tide line and below vegetation and has been found in embayments of a variety of habitats including offshore, estuarine or lacustrine (lake) islands, wetlands and mainland coastline (DCCEEW 2024s).	The Australian fairy tern may migrate within southern Western Australia and Tasmania where during winter they are seen less frequently. Within northern Western Australia, South Australia and Victoria, they are usually sedentary (DCCEEW 2024s).	There is no habitat suitable for Australian fairy tern within or proximate to the Project Area, as it is situated approximately 31 km east of the Western Australian coastline and there are no wetlands or estuarine or lacustrine islands within or intersecting the Project Area.	• The Western Australian meta-population of Australian fairy terns are spring–summer (September to March) breeding migrants. The southern part of the meta-population moves through the southern and central Abrolhos Islands in late March–early April. There appears to be two wintering areas (June to August), located at North Island at the northern tip of the Houtman Abrolhos and on the lower mid-west coast at Wedge Island (Dunlop and Greenwell 2021). • The longest distance travelled by Australian fairy terns was along the coastline was between Abrolhos Islands and Bremer Bay (Dunlop and Greenwell 2021).	Recorded flight height data for this species was not identified during a literature review for this BBMP.	• The Australian fairy tern is gregarious and often found in flocks of 50–150 birds. They are alos seen singly or in pairs (DCCEEW 2024s). • The total population is estimated to be 3,000–9,000 mature indivduals (DCCEEW 2024s). • Within Western Australia, there are less than 1,600 pairs of this species (DCCEEW 2024s). • The Western Australian meta-population of Australian fairy terns is small and is distributed along less than 2,500 km of coastline (Dunlop and Greenwell 2021).

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Thalasseus bergii (crested tern)	Migratory (EPBC Act, BC Act)	• The crested tern occupies tropical and subtropical coastlines, and forages within shallow waters of lagoons, coral reefs, estuaries, bays, inlets and harbours, along sandy, rocky, coral or muddy shores, on rocky outcrops in open sea, in mangrove swamps and also out to sea on open water. They are distributed on coastlines and islands in the tropics and subtropics, including Australia (BirdLife International 2024c). • The crested tern usually forages in marine waters within 20 km of the breeding colony (McLeay et al. 2010). • The crested tern is a breeding resident in southwestern Australia and while it is considered migratory under the EPBC Act and BC Act, there is no evidence the species is migratory in southwestern Australia. It is considered sedentary or resident in WA but may disperse after breeding (see Marchant & Higgins 1993).	• Many crested terns remain sedentary within their breeding areas or disperse locally; however, some birds are more migratory (BirdLife International 2024c). • The crested tern has a light build and long pointed wings, which gives them a fast, buoyant flight (iNaturalist Australia 2024).	• There is no habitat suitable for crested tern within or proximate to the Project Area, as it situated approximately 31 km east of the Western Australian coastline and there are no swamps or estuaries within or intersecting the Project Area.	• The crested tern populations in southwestern Australia are sedentary or reside but disperse after nesting (Marchant & Higgins 1993).	Recorded flight height data for this species was not identified during a literature review for this BBMP.	• The crested tern usually forages singly or in small groups, and several hundred birds may gather at roost sites. The species breeds in large dense colonies or in small groups of up to ten pairs alongside other species (BirdLife International 2024c). • The global population is estimated to be 150,000–1,100,000 individuals (BirdLife International 2024c).
Tringa glareola (wood sandpiper)	Migratory (EPBC Act, BC Act)	• The wood sandpiper inhabits well-vegetated, shallow, freshwater wetlands, such as swamps, billabongs, lakes, pools and waterholes. They are typically associated with emergent, aquatic plants or grass, and dominated by taller fringing vegetation, such as dense stands of rushes or reeds, shrubs, or dead or live trees, especially *Melaleuca* and river red gums (*Eucalyptus camaldulensis*) and often with fallen timber. They also frequent inundated grasslands, short herbage or wooded flood plains, where floodwaters are temporary or receding, and irrigated crops (DCCEEW 2024t). • The wood sandpiper can also be found at some small wetlands only when they are drying. The wood sandpiper has been recorded in large numbers in north-west Australia. Within Western Australia, the species is widespread but scattered in most regions (DCCEEW 2024t).	This species is migratory that breeds throughout Eurasia. Within Australia, some movements of the wood sandpiper are dispersive (DCCEEW 2024t).	• There is no habitat for migratory wading bird species, including the wood sandpiper, within or proximate to the Project Area, although there are habitats within the region that are frequented by these species (RPS 2010). • Migratory bird species were found to primarily frequent or move through / between lowland areas where more suitable habitat for these species occurs. Local flyway orientations were considered unlikely to traverse the Project Area, due to the general north–south alignment of drainage basins and coastal wetlands, although the potential for some intermittent east to west bird movements may exist, due to the temporary nature of regional wetlands in response to periodic inundations, particularly those in the east (RPS 2010).	The wood sandpiper arrives in Australia from August. They are common in southwestern Australia from summer to autumn (DCCEEW 2024t).	• In the mountains of southern Iran, a wood sandpiper was observed on a mountain at 2,100 m altitude (Desfayes and Praz 1978). • When startled, the wood sandpiper can burst into flight, zig-zagging off and then gliding gracefully to ground again (BirdLife Australia 2024b). • The wood sandpiper's aerial display during breeding involves a switchback flight in the air and then a glide back to ground with short trilling calls (BirdLife Australia 2024b).	• The wood sandpiper has been observed singly, in pairs or in small flocks of hundreds (DCCEEW 2024t). • The global population is estimated to be 3,055,000–4,320,000 (DCCEEW 2024t). • Population estimates for this migratory shorebird in the East Asian–Australasian Flyway that regularly visit Australia is 130,000 (Hansen et al. 2016).

Species	Conservation status	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
Tringa nebularia (common greenshank)	Migratory (EPBC Act, BC Act)	Common greenshanks are found in a wide variety of inland wetlands and sheltered coastal habitats of varying salinity. It occurs in sheltered coastal habitats, typically with large mudflats and saltmarsh, mangroves or seagrass. The species uses both permanent and ephemeral terrestrial wetlands, including swamps, lakes, dams, rivers, creeks, billabongs, waterholes and inundated flood plains, claypans and salt flats (DCCEEW 2024u).	• Waterbirds can be expected only as vagrants or otherwise in small numbers on wetlands in the region (RPS 2010). • This species is a migratory species, where breeding occurs in the Palaearctic and they fly south in a broad front, overland and along coast to non-breeding areas for the boreal winter (DCCEEW 2024u).	• There is no habitat for migratory wading bird species, including the common greenshank, within or proximate to the Project Area, although there are habitats within the region that are frequented by these species (RPS 2010). • Migratory bird species were found to primarily frequent or move through / between lowland areas where more suitable habitat for these species occurs. Local flyway orientations were considered unlikely to traverse the Project Area, due to the general north–south alignment of drainage basins and coastal wetlands, although the potential for some intermittent east to west bird movements may exist, due to the temporary nature of regional wetlands in response to periodic inundations, particularly those in the east (RPS 2010).	• Five birds were recorded during November 2008 avifauna surveys flying from Thetis Lake, approximately 35 km west of the Project Area, likely towards a shallow saline lake in the Nambung National Park (RPS 2010). Twenty-three birds have been recorded at Lake Thetis and one bird has been recorded at the lake north-east of Lake Guraga, approximately 20 km south of the Project Area. This suggested movements to this more inland bay of lakes may be from near coastal saline wetlands, depending on habitat and prey availability. • Movements of this migratory species from the northern hemisphere are likely to be made along near coastal habitats. Although the distributions of common greenshank extend inland considerable distances and so there may be some movements between the inland and coast when conditions are favourable (RPS 2010). • The common greenshank arrives in Australia from August, mainly in the west, and move from Western Australia elsewhere in Australia by November (DCCEEW 2024u).	Flocks of migrating birds have been recorded up to 2,000 m from the observer (Piersma et al. 1999).	• The common greenshank is seen singly or in small to large flocks in a variety of coastal and inland wetlands (DCCEEW 2024u). • Their flight is rapid and often zigzagging (DCCEEW 2024u). • The global population is estimated to be 440,000–1,500,000 (DCCEEW 2024u). • Population estimates for this migratory shorebird in the East Asian–Australasian Flyway that regularly visit Australia is 110,000 (Hansen et al. 2016). • Approximately 18,000–19,000 of the East Asian–Australasian Flyway common greenshank population are thought to spend the non-breeding season in Australia (DCCEEW 2024u).
Zanda latirostris (Carnaby's cockatoo)	Endangered (EPBC Act, BC Act)	• Breeding habitat for Carnaby's cockatoo comprises woodland or forest and partially cleared woodland or forest including isolated trees. They nest in hollows of live or dead trees, and many *Eucalyptus* species may provide suitable hollows. Carnaby's cockatoos roost in or near riparian environments or natural or artificial water sources. Any tall trees may provide roosting habitat, particularly flat-topped yate (*Eucalyptus occidentalis*), salmon gum, wandoo, marri, karri, blackbutt, tuart, and introduced eucalypts and pines. They forage in native shrubland, heathland and woodland on seeds, nectar and flowers of native proteaceous plant species and on a range of introduced plant species including pine (DAWE 2022a). • Behaviour observed during the 2019 bird surveys for Badgingarra Wind Farm included over-flying, foraging and hovering over remnant vegetation (Ecoscape 2019a). • Behaviour observed during the 2022 bird surveys for Yandin Wind Farm included over-flying, foraging and perching in canopy of trees, and foraging in pine plantation, marri trees	• Movements recorded during October–November 2008 avifauna surveys for the Project Area were seasonally nomadic (RPS 2010). • Flight behaviours recorded were considered representative of Carnaby's cockatoo during the late winter, spring and early summer, and included the entire breeding season. Carnaby's cockatoo regularly used airspace to the south-west of the Project Area along Mullering Road, the Minyulo Nature Reserve and around the three roosting locations along the Project Area's eastern boundary (BCE 2025).	• Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was observed was forest / woodland / heath (RPS 2010). • Habitat recorded during 2022 surveys for Yandin Wind Farm which the species was observed using was airspace while transitioning, flying around pine plantation and foraging in pine plantation, marri trees and banksia (Alinta Energy 2022 and Alinta Energy 2024). • Flocks of Carnaby's cockatoo deployed at the Cataby breeding area were observed foraging on a combination of remnant native proteaceous vegetation in patches within the agricultural matrix and on road verges. They also foraged on introduced species, such as canola and wild radish (Murdoch University 2024). • The 2024–2025 utilisation survey found Carnaby's cockatoo foraging and feeding on *Hakea*, *Banksia*, marri and pines, with *Banksia* heath and marri woodland frequently targeted by the species. A substantial amount of foraging was observed in cropped paddocks of canola and lupins and on wild radish as weed species (Figure H).	• This species was found to primarily frequent low-land areas and movements of these species tended to follow valleys with woodland vegetation (RPS 2010). • This species breeds in the winter within the Wheatbelt region and moves to the coastal plain for the summer (RPS 2010). • This species observed flight path during the 2022 surveys for Yandin Wind Farm was sedentary, north-east, north-west, east, west and south-west (Alinta Energy 2022 and Alinta Energy 2024). • General flock movements of the Cataby breeding area during the post-fledging period shows that Carnaby's cockatoo continue to use main roosts around the breeding area for several months (December to March), and their numbers increased to about 200 as birds arrived from other breeding grounds with newly fledged young (Murdoch University 2024). • Within the Project Area, Carnaby's cockatoo did not appear to transit routinely from a specific roost to a	• Flight heights recorded during October–November 2008 avifauna surveys for the Project Area and wider locality from 101 records (RPS 2010): – Twenty-four records (24%) below surveyed RSA (i.e. <40 m) from Waddi Wind Farm. – Sixty-five records (64%) below surveyed RSA (i.e. <40 m) from the reference sites and Yandin Wind Farm. – Twelve records (12%) within surveyed RSA (i.e. 40–152 m) from Waddi Wind Farm. • Flight heights recorded during September 2017 avifauna surveys for Yandin Wind Farm (Ecologia Environment 2017): – Thirty-eight records flying between 0–40 m (commonly recorded at this height range) and between 40–152 m (occasionally recorded at this height range) • Flight heights recorded during 2017-2018 bird surveys for Badgingarra Wind Farm (Ecoscape 2018):	• Flight speeds recorded during October–November 2008 avifauna surveys for the Project Area were slow flocks (RPS 2010). • Individuals to flocks up to 400+ birds were recorded during 2017–2018 bird surveys for Badgingarra Wind Farm (Ecoscape 2018). • Four flocks with 2–22 birds in each flock (29 birds in total) were recorded during 2019 surveys for Badgingarra Wind Farm (Ecoscape 2019b). • 35 flocks with 1–166 birds in each flock were recorded (1,200+ birds in total) during 2020 surveys for Badgingarra Wind Farm (Ecoscape 2020). • The recorded average group size of Carnaby's cockatoo was 6 birds, with a maximum of 52

Species	Conservation status	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
		and banksia (Alinta Energy 2022 and Alinta Energy 2024). • There are three known breeding areas surrounding the Project Area, the Badgingarra breeding area (within 6 km to the north-east), the Cataby breeding area (approximately 6 km to the south), and the Moora breeding area (over 30 km to the east). There are other breeding areas at Coomallo Creek and Hill River (Murdoch University 2024). • Carnaby's cockatoos spent most of the time roosting and foraging, either on the ground or on vegetation (BCE 2025). This was true for individual birds and large flocks. When foraging and roosting in native vegetation or paddocks, groups of Carnaby's cockatoo would slowly move through the vegetation by leap frogging over birds that were perched or on the ground. Carnaby's cockatoo flights were often meandering however direct flights was observed occasionally in birds transiting larger distances, which defined most flights above 30 m (BCE 2025). A high number of Carnaby's cockatoo sightings were located in the lower landscape along the Project Area's eastern boundary, with occasional forays of smaller groups across higher ground in the south and centre (BCE 2025).	• Small flocks of Carnaby's cockatoo were observed to respond to disturbance by spiralling upwards or "vortexing". This was observed in response to a wedge-tailed eagle, a group of western corellas and a crop-dusting aircraft flying overhead, and the birds reached heights of up to 30 m. This behavioural response potentially places larger groups of Carnaby's cockatoos at risk of collision with turbine blades. However, none of the vortexing events observed to date has resulted in birds entering the proposed RSA (44 – 206 m) (BCE 2025).	• Night roost evidence was recorded at six separate locations within or near the Project Area (Figure E), and a roost location to the north of the Waddi Bush Resort is suspected. Nesting was observed in one tree on Minyulo Brook with one pair successfully raising a chick (Figure E). There were several wandoo and marri trees with chewed hollows consistent with nesting cockatoos along Minyulo Brook and in woodland north of Waddi Road.	specific foraging ground to define a flight pathway (BCE 2025).	– 3,751 records, of which 278 (9%) were estimated to be flying at the Badgingarra Wind Farm RSA height (20–150 m). – The majority of this species seen during surveys and opportunistically were observed to be flying below RSA height (~<20 m). • Flight heights recorded during 2019 bird surveys for Badgingarra Wind Farm (Ecoscape 2019a): – 923 records, or 25 flocks were observed. Five flocks were recorded flying at the Badgingarra Wind Farm RSA height (20–150 m). – Carnaby's cockatoo observed opportunistically were flying below the Badgingarra Wind Farm RSA height (0–20 m). • Flight heights recorded during 2022 bird surveys for Yandin Wind Farm (Alinta Energy 2022 and Alinta Energy 2024): – Eighty-four birds below 10 m, three birds above 10 m and three birds below 20 m. – Six birds at pine plantation canopy height – Six birds at 20 m – Thirty-three birds above 20 m. • Flight heights of Carnaby's cockatoos were recorded, as shown in Figure 4 relative to the wind turbine locations. The turbines are positioned on higher ground and have an anticipated ground clearance of approximately 44 m. Carnaby's cockatoo flights above 44 m comprised 0.13% of all bird time records. Furthermore, these four flights were recorded of single birds flying at 40 m or above and were in the lower areas of the landscape (BCE 2025). • Flight heights of Carnaby's cockatoos flying between 6 m – 40 m were 41.7% of the recorded bird time (35% at 6-10 m, 5.1% at 11-18 m, 1.5% at 19-30 m and 0.1% at 31-40 m; BCE 2025). None of the recorded flight lines of Carnaby's cockatoo overflew the proposed transmission line (Figure 4), however Carnaby's cockatoos have been observed flying over paddocks elsewhere in the Project Area and a foraging sign was been recorded proximate to the proposed transmission line (Figure H), therefore Carnaby's cockatoo may	birds (BCE 2025). Carnaby's cockatoo occurred in larger flocks of 20-50 birds during winter and early spring, and flock sizes diminished into summer when it is thought the Carnaby's cockatoos moved to over-wintering areas. The maximum flock size of 52 birds was relatively small compared to other areas in the region for the same period, including up to 300 birds near Cooljarloo, up to 300 birds near Badgingarra, and 400 birds near Ledge Point. • The total population of this species is estimated to be between 11,000–60,000 (DCCEEW 2024v)

Species	Conservation status	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
						overfly the proposed transmission line (approximately 7.5 – 40 m).	
Mammals							
Macroderma gigas (ghost bat)	Vulnerable (EPBC Act, BC Act)	• The ghost bat is found in habitats ranging from the arid Pilbara to tropical savanna woodlands and rainforests. During the daytime, they roost in rock crevices, old mines, and caves. Within Western Australia, ghost bats occur in the Kimberley and the Pilbara regions (TSSC 2016). • The ghost bat perches in vegetation to ambush passing prey and glean surfaces such as the ground while in flight (TSSC 2016).	The ghost bat's foraging areas are generally centred around daytime roost sites, within an average 1.9 km radius (TSSC 2016).	• Within Western Australia, ghost bats occur in the Kimberley and the Pilbara regions (TSSC 2016). • The Project Area is located within the Wheatbelt region of Western Australia, where populations of ghost bats are not expected to occur, and there is no roosting habitat present within the Project Area (i.e. rock crevices, old mines, and caves).	• Ghost bats are known to move long distances seasonally following productive foraging opportunities (Bullen, Reiffer and Trainer 2023). • The ghost bat's average maximum distance travelled from diurnal roosts has been recorded at 8.5 ± 3.8 km, ranging from 4.5 km to 17.7 km (Bullen, Reiffer and Trainer 2023). • The ghost bat's minimum distance travelled between caves has been recorded at 19.4 ± 9.1 km, ranging from 11.6 km to 41.0 km (Bullen, Reiffer and Trainer 2023).	The ghost bat often fly at fence height and substantial numbers are known to be killed when colliding with fencing wire (TSSC 2016).	• The total population size is estimated to be 7,000–9,000 individuals (TSSC 2016). • The total population size in Western Australia is estimated to be 4,300–6,000 individuals (TSSC 2016).

APPENDIX B: LIKELIHOOD OF OCCURRENCE

Species	Conservation status			Type of presence (DCCEEW 2024)	Likelihood of occurrence within the Project Area
	EPBC Act	BC Act	DBCA priority level		
Birds					
Actitis hypoleucos (common sandpiper)	Migratory (Migratory Wetlands Species)	Migratory	-	Species or species habitat may occur within area (In feature area)	**Unlikely** • The common sandpiper inhabits coastal wetlands and some inland wetlands and is 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. The species is often associated with mangroves, and sometimes found in areas of mud littered with rocks or snags (DCCEEW 2024b). • There is one record of common sandpiper in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a). The record was associated with the lake north-east of Lake Guraga, over 19 km south of the wind farm (Figure B). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–-2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • There is no habitat for migratory wading bird species, including the common sandpiper, within or proximate to the Project Area, although there are habitats within the region that are frequented by these species (RPS 2010). A number of migratory wading bird species were recorded from wetland habitats around Lake Guraga to the south-west, the near coastal Lake Thetis near Cervantes and from the Upper Moore River area to the north-west and west of Moora. This included one observation of a common sandpiper at Thetis Lake, which is located approximately 37 km west-north-west of the Project Area (RPS 2010). • Movements to and from these wetland habitats by migratory wading birds are likely to follow north–south routes, which follow the general landscape arrangement of these habitats in relation to drainage basins in the east and coastal dune topography in the west (RPS 2010). As such, it is unlikely that significant movements of migratory wading birds would take place in an east–west direction across the Koodiwoodie Range where the wind farm is to be constructed. Therefore, it is unlikely that the common sandpiper will be placed at significant risk of adverse impact due to the construction and operation of the wind farm.
Aphelocephala leucopsis (southern whiteface)	Vulnerable	-	-	Species or species habitat may occur within area (In feature area)	**Highly unlikely** • The southern whiteface is distributed across most of mainland Australia south of the tropics, from the north-eastern edge of the Wheatbelt region of Western Australia to east of the Great Dividing Range. The southern whiteface occupies a wide range of open woodlands and shrublands where there is an understorey of grasses or shrubs or both. These areas are typically in habitats that are dominated by *Acacia* or *Eucalypts* on ranges, foothills and lowlands and plains (DCCEEW 2023c). The southern whiteface prefers *Acacia* woodland particularly those dominated by mulga (*Acacia aneura*) and drought-resistant chenopod shrub species, including saltbush and bluebush (Atlas of Living Australia 2024a). This species is considered sedentary; however, they may move outside of their normal range into wetter areas during times of drought. Southern whiteface forage almost exclusively on the ground, favouring habitat with low tree densities and an herbaceous understorey litter cover (DCCEEW 2023c). • There are no records of the southern whiteface in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a) (Figure B). This species has not been recorded during the avian surveys conducted within the Project Area (RPS 2014 and RPS 2010). This species has also not been identified as a bird species that may occur proximate to the wind farm or recorded in studies conducted in the nearby Cooljarloo and Falcon areas (RPS 2014). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 km to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • The Project Area is located on the westernmost edge of the Wheatbelt region, which is a significant distance from the southern whiteface's distribution, which ranges from the north-eastern edge of the Wheatbelt region across central Australia (DCCEEW 2023c). This is reflected in the scarcity of occurrence records of this species regionally. The nearest southern whiteface records proximate to the Project Area includes two individuals recorded on 7 September 2021 located approximately 80 km north-north-west (Lake Logue–Indoon System near the Lake Logue Nature Reserve), one individual recorded on 14 August 1995 located approximately 105 km east (Damboring Nature Reserve near salt lakes) and one individual recorded on 22 September 2018 located approximately 113 km to the south-east (near granite outcrop wetlands immediately north of Wongan Hills) (Atlas of Living Australia 2024a). The species is more frequently recorded at distances more than 180 km from the Project Area. The sparse records of the southern whiteface 80 km to 113 km from the Project Area were proximate to water bodies, as such they may reflect individuals flying outside their normal range into wetter areas during times of drought. • None of the vegetation types within the Project Area represent the southern whiteface's preferred open woodlands and shrublands where there is an understorey of grasses or shrubs or both, in habitats typically dominated by *Acacia* or *Eucalypts* (DCCEEW 2023c). Considering the lack of preferred habitat for southern whiteface, the fact that the Project Area is located outside the normal range for this species, and it is unlikely to provide suitable wetter areas in time of drought, as Mullering Brook is ephemeral, it is highly unlikely that the southern whiteface would occur.

Species	Conservation status			Type of presence (DCCEEW 2024)	Likelihood of occurrence within the Project Area
	EPBC Act	BC Act	DBCA priority level		
Apus pacificus (fork-tailed swift)	Migratory (Migratory Marine Species)	Migratory	-	Species or species habitat likely to occur within area (In feature area)	**Highly unlikely** • The fork-tailed swift is essentially an aerial species that occurs widely over a range of habitats at a range of elevations from quite close to the ground to at least 300 m, although likely higher. Although it occurs across a wide range of habitats within Australia it is mostly observed over inland plains and is seen over coastal beaches and cliffs. A non-breeding visitor to Australian skies from the northern hemisphere it is more frequently observed in coastal eastern Australia than elsewhere, due no doubt to a higher density of observers (DCCEEW 2024d). • There is one record of fork-tailed swift in DBCA's database approximately 25 km to the north of the Project Area (DBCA 2023a) (Figure B). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 km to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • This species has not been recorded during the avian surveys conducted within the Project Area (BCE 2025, RPS 2014, RPS 2010a). Fork-tailed swifts were not observed or heard during an utilisation survey's Vantage Point or Focal Follow campaigns and have not been detected in decades of biannual surveys at the nearby Cooljarloo Mineral Sands Mine (BCE 2025). Fork-tailed swifts are likely to occur very infrequently over the Waddi Wind Farm.
Arenaria interpres (ruddy turnstone)	Migratory	Migratory	-	Not identified	**Unlikely** • The ruddy turnstone is widespread within Australia during its non-breeding season and is found in most coastal regions, with occasionally records of inland populations. They exhibit strong preference for beaches or rocky shores where there are large deposits of rotting seaweed. They live near platforms and shelves, often with tidal pools and rocky, gravel or shingle beaches, and can inhabit sand, coral, or shell beaches. They have been occasionally observed in bays, harbours, estuaries and coastal lagoons, on mudflats, among sewage ponds and among saltmarsh or exposed beds of seagrass. The ruddy turnstone can live away from coastal areas in habitats such as inland lakes, riverbeds and adjacent farmland (DCCEEW 2024e). • There are three records of ruddy turnstone in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a). The three records were identified approximately 2.4 km west of the Project Area (Figure B). The three records were collected in 1977 and 1979. • The ruddy turnstone was not identified in the Protected Matters Search Tool search for a 25 km radius of the Project Area (DCCEEW 2024a). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • There is no habitat for migratory wading bird species, including the ruddy turnstone, within or proximate to the Project Area, although there are habitats within the region that are frequented by these species (RPS 2010). A number of migratory wading bird species were recorded from wetland habitats around Lake Guraga to the south-west, the near coastal Lake Thetis near Cervantes and from the Upper Moore River area to the north-west and west of Moora. The ruddy turnstone was not observed during the avian surveys (RPS 2010). • Movements to and from these wetland habitats by migratory wading birds are likely to follow north–south routes, which follow the general landscape arrangement of these habitats in relation to drainage basins in the east and coastal dune topography in the west (RPS 2010). As such, it is unlikely that significant movements of migratory wading birds would take place in an east–west direction across the Koodiwoodie Range where the wind farm is to be constructed. Therefore, it is unlikely that the ruddy turnstone will be placed at significant risk of adverse impact due to the construction and operation of the wind farm.
Botaurus poiciloptilus (Australasian bittern)	Endangered	Endangered	-	Not identified	**Highly unlikely** • Within Western Australia, the Australian bittern was formerly widespread in the south-west, ranging from north to Moora, east to near Mount Arid and inland possibly as far as the Toolibin Lake area. Its distribution has declined throughout the 1900s, and now is likely only to occur along the western coastal plain between Lancelin to Busselton, along the southern coastal plain between Augusta to east of Albany and inland to some wetlands in the Jarrah Forest belt, with isolated and small populations in swamps from west of Esperance eastwards to near Cape Arid. The Australasian bittern favours permanent and seasonal freshwater habitats, particularly those dominated by sedges, rushes, and reeds or cutting grass over a peaty or muddy substrate (Threatened Species Scientific Committee [TSSC] 2019). • There is one record of Australian bittern DBCA's database approximately 25 km to the south of the Project Area (DBCA 2023a). The record was associated with the Karo Swamp and was collected in 1921. • The Australasian bittern was not identified in the Protected Matters Search Tool search for a 25 km radius of the Project Area (DCCEEW 2024a). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • The Project Area is approximately 40 km further north than the Australasian bittern likely current distribution along the western coastal plain between Lancelin to Busselton (TSSC 2019). This is reflected in the scarcity of occurrence records of this species regionally. The nearest Australasian bittern records proximate to the Project Area includes historical records with no dates located approximately 2.4 km to the west, approximately 15 km to the east-south-east, approximately 35 km to the south-east and approximately 40 km to the east, an individual recorded on 25 September 1913 located approximately 15 km to the east-south-east, an individual recorded on 15 October 1921 located approximately25 km to the south (near Karo Swamp) (Atlas of Living Australia 2024b). • There is no habitat suitable for Australian bittern within or proximate to the Project Area, as there are no permanent and seasonal freshwater habitats within or intersecting the Project Area. • This species has not been recorded during the avian surveys conducted within the Project Area (RPS 2014 and RPS 2010). This species is highly unlikely to occur within the Project Area due to the absence of suitable habitat and being situated outside of its likely distribution along the western coastal plain.

Species	Conservation status			Type of presence (DCCEEW 2024)	Likelihood of occurrence within the Project Area
	EPBC Act	BC Act	DBCA priority level		
Calidris acuminata (sharp-tailed sandpiper)	Migratory (Migratory Wetlands Species)	Migratory	-	Species or species habitat may occur within area (In feature area)	**Unlikely** • The sharp-tailed sandpiper inhabits the muddy edges of shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh or other low vegetation. This includes lagoons, swamps, lakes and pools near the coast, and dams, waterholes, soaks, bore drains and bore swamps, saltpans and hypersaline salt lakes inland. They also occur in saltworks and sewage farms. They use flooded paddocks, sedgelands and other ephemeral wetlands, but leave when they dry out (DCCEEW 2024f). • There are two records of sharp-tailed sandpiper in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a). Two records were associated with the lake north-east of Lake Guraga, over 19 km south of the Project Area (Figure B). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • There is no habitat for migratory wading bird species, including the sharp-tailed sandpiper, within or proximate to the Project Area, although there are habitats within the region that are frequented by these species (RPS 2010). A number of migratory wading bird species were recorded from wetland habitats around Lake Guraga to the south-west, the near coastal Lake Thetis near Cervantes and from the Upper Moore River area to the north-west and west of Moora. This included 23 observations of sharp-tailed sandpiper at the upper Moore River catchment near Moora, which is located approximately 37 km east of the Project (RPS 2010). The sharp-tailed sandpiper migrates from the northern hemisphere and likely follow similar habitat down the Moore River catchment from the north (RPS 2010). • Movements to and from these wetland habitats by migratory wading birds are likely to follow north–south routes, which follow the general landscape arrangement of these habitats in relation to drainage basins in the east and coastal dune topography in the west (RPS 2010). As such, it is unlikely that significant movements of migratory wading birds would take place in an east–west direction across the Koodiwoodie Range where the wind farm is to be constructed. Therefore, it is unlikely that the sharp-tailed sandpiper will be placed at significant risk of adverse impact due to the construction and operation of the wind farm.
Calidris canutus (red knot)	Endangered Migratory (Migratory Wetlands Species)	Endangered	-	Species or species habitat may occur within area (In feature area)	**Unlikely** • The red knot inhabits intertidal mudflats, sandflats and sandy beaches of sheltered coasts, and in estuaries, inlets, harbours and lagoons. They are occasionally seen in terrestrial saline wetlands located near the coast, such as pools, pans, lagoons and lakes, and have been recorded on sewage ponds and saltworks (DCCEEW 2024g). • There are no records of the pectoral sandpiper in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a) (Figure B). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • There is no habitat for migratory wading bird species, including the red knot, within or proximate to the Project Area, although there are habitats within the region that are frequented by these species (RPS 2010). A number of migratory wading bird species were recorded from wetland habitats around Lake Guraga to the south-west, the near coastal Lake Thetis near Cervantes and from the Upper Moore River area to the north-west and west of Moora. The red knot was not observed during the avian surveys (RPS 2010). • Movements to and from these wetland habitats by migratory wading birds are likely to follow north–south routes, which follow the general landscape arrangement of these habitats in relation to drainage basins in the east and coastal dune topography in the west (RPS 2010). As such, it is unlikely that significant movements of migratory wading birds would take place in an east–west direction across the Koodiwoodie Range where the wind farm is to be constructed. Therefore, it is unlikely that the red knot will be placed at significant risk of adverse impact due to the construction and operation of the wind farm.
Calidris ferruginea (curlew sandpiper)	Critically Endangered Migratory (Migratory Wetlands Species)	Critically Endangered	-	Species or species habitat may occur within area (In feature area)	**Unlikely** • The curlew sandpiper mainly occurs on intertidal mudflats in sheltered coastal areas, such as estuaries, bays, inlets and lagoons, and around non-tidal swamps, lakes and lagoons near the coast, and Ponds in saltworks and sewage farms. They are also recorded inland, though less often, including around ephemeral and permanent lakes, dams, waterholes and bore drains, usually with bare edges of mud or sand (DCCEEW 2024h). • There are two records of curlew sandpiper in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a). One record was associated with the lake north-east of Lake Guraga, over 19 km south of the Project Area, and another record was identified approximately 2.4 km west of the Project Area (Figure B). The two records were collected in 1978 and 1991. • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • There is no habitat for migratory wading bird species, including the curlew sand piper, within or proximate to the Project Area, although there are habitats within the region that are frequented by these species (RPS 2010). A number of migratory wading bird species were recorded from wetland habitats around Lake Guraga to the south-west, the near coastal Lake Thetis near Cervantes and from the Upper Moore River area to the north-west and west of Moora. The curlew sandpiper was not observed during the avian surveys (RPS 2010). • Movements to and from these wetland habitats by migratory wading birds are likely to follow north– south routes, which follow the general landscape arrangement of these habitats in relation to drainage basins in the east and coastal dune topography in the west (RPS 2010). As such, it is unlikely that significant movements of migratory wading birds would take place in an east–west direction across the Koodiwoodie Range where the wind farm is to be constructed. Therefore, it is unlikely that the curlew sandpiper will be placed at significant risk of adverse impact due to the construction and operation of the wind farm.

Species	Conservation status			Type of presence (DCCEEW 2024)	Likelihood of occurrence within the Project Area
	EPBC Act	BC Act	DBCA priority level		
Calidris melanotos (pectoral sandpiper)	Migratory (Migratory Wetlands Species)	Migratory	-	Species or species habitat may occur within area (In feature area)	**Unlikely** • The pectoral sandpiper prefers shallow fresh to saline wetlands, and can be found in estuaries, lakes, river pools, artificial wetlands, coastal lagoons, bays, inundated grasslands, saltmarshes and floodplains. They usually inhabit coastal or near coastal habitat but can be found further inland occasionally (DCCEEW 2024i). • There are no records of the pectoral sandpiper in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a) (Figure B). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • There is no habitat for migratory wading bird species, includingh the pectoral sandpiper, within or proximate to the Project Area, although there are habitats within the region that are frequented by these species (RPS 2010). A number of migratory wading bird species were recorded from wetland habitats around Lake Guraga to the south-west, the near coastal Lake Thetis near Cervantes and from the Upper Moore River area to the north-west and west of Moora. This included one observation of a pectoral sandpiper at the upper Moore River catchment near Moora, which is located approximately 37 km east of the Project Area (RPS 2010). The pectoral sandpiper migrates from the northern hemisphere and likely follow similar habitat down the Moore River catchment from the north (RPS 2010). • Movements to and from these wetland habitats by migratory wading birds are likely to follow north–south routes, which follow the general landscape arrangement of these habitats in relation to drainage basins in the east and coastal dune topography in the west (RPS 2010). As such, it is unlikely that significant movements of migratory wading birds would take place in an east–west direction across the Koodiwoodie Range where the wind farm is to be constructed. Therefore, it is unlikely that the pectoral sandpiper will be placed at significant risk of adverse impact due to the construction and operation of the wind farm.
Calidris ruficollis (red-necked stint)	Migratory (Migratory Wetlands Species)	Migratory	-	Not identified	**Unlikely** • The red-necked stint inhabits coastal areas, such as estuaries within intertidal mudflats, lagoons, bays and sheltered inlets. They are also found in ephemeral and permanent shallow wetlands near the coast or inland, in saltworks and sewage farms, saltmarsh, lakes, riverbanks, dams, soaks, and pools in salt flats. They sometimes use flooded paddocks or damp grasslands (DCCEEW 2024j). • There are eight records of red-necked stint in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a). Three records were associated with a lake north-east of Lake Guraga and at Lake Guraga, over 19 km south of the Project Area and another five records were identified approximately 2.4 km west of the Project Area (Figure B). The eight records were collected in 1977–1979, 1990, 1991 and 1999. • The red-necked stint was not identified in the Protected Matters Search Tool search for a 25 km radius of the Project Area (DCCEEW 2024a). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • There is no habitat for migratory wading bird species, including the red-necked stint, within or proximate to the Project Area, although there are habitats within the region that are frequented by these species (RPS 2010). A number of migratory wading bird species were recorded from wetland habitats around Lake Guraga to the south-west, the near coastal Lake Thetis near Cervantes and from the Upper Moore River area to the north-west and west of Moora. This included 35 observations of red-necked stints at the southern shoreline habitats of Lake Guraga and nearby lakes, which is located approximately 20 km to the south of the Project Area. They were observed foraging during the night at the north-east lake and movements were limited to accessing different foraging areas of the shoreline (RPS 2010). • Movements to and from these wetland habitats by migratory wading birds are likely to follow north– south routes, which follow the general landscape arrangement of these habitats in relation to drainage basins in the east and coastal dune topography in the west (RPS 2010). As such, it is unlikely that significant movements of migratory wading birds would take place in an east–west direction across the Koodiwoodie Range where the wind farm is to be constructed. Therefore, it is unlikely that red-necked stints will be placed at significant risk of adverse impact due to the construction and operation of the wind farm.
Calyptorhynchus banskii naso (forest red-tailed black cockatoo)	Vulnerable	Vulnerable	-	Not identified	**Highly unlikely** • Breeding habitat for forest red-tailed black cockatoo comprises woodland or forest and partially cleared woodland or forest including isolated trees. They nest in hollows of live or dead trees, and many Eucalyptus species may provide suitable hollows. Any tall trees may provide roosting habitat, particularly jarrah, marri, karri, blackbutt, tuart, introduced eucalypts or large trees on forest edges. Forest red-tailed black cockatoos forage primarily on seeds of jarrah and marri in woodlands and forest, and edges of karri forests, including wandoo and blackbutt. They also forage on cones of Allocasuarina, fruits of snottygobble (*Persoonia longifolia*) and mountain marri (*Corymbia haematoxylon*), and on less important food sources, such as blackbutt, bullich, *Allocasuarina fraseriana*, Hakea sp., tuart, redheart moit (*Eucalyptus decipens*) and bushy yate (*Eucalyptus lehmanni*) (DAWE 2022) • The Project Area is outside of the forest red-tailed black cockatoo's modelled distribution (DAWE 2022). The northernmost extent of where the modelled species or species habitat may occur is near Boonanarring Nature Reserve, which is located over 70 km south of the Project Area • There are no records of forest red-tailed black cockatoo in the DBCA's database within a 25 km radius of the Project Area. There are no Atlas of Living Australia occurrence records of forest red-tailed black cockatoo proximate to the Project Area, with the nearest record located approximately 65 km to the south-east observed in 2018 (Atlas of Living Australia 2025a) • Foraging evidence of marri nuts with chew marks consistent with forest red-tailed black cockatoo were found under a marri tree north of the Waddi Road reserve, located within the roost area in the Project Area's north-eastern extent (BCE 2025). The chew marks were recent but not fresh. Landowners advised that forest red-tailed black cockatoos are seen and heard in the area very infrequently and possibly not every year. Forest red-tailed black cockatoos have not been observed or heard during the avian surveys conducted within the Project Area (BCE 2025, RPS 2014, RPS 2010a), or recorded during surveys and mortality monitoring undertaken for the neighbouring wind farms (Ecologia Environment 2017; Alinta Energy 2022; Alinta Energy 2024; Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020) • Forest red-tailed black cockatoos are likely to occur very infrequently at the Project Area (BCE 2025)

Species	Conservation status			Type of presence (DCCEEW 2024)	Likelihood of occurrence within the Project Area
	EPBC Act	BC Act	DBCA priority level		
Charadrius leschenaultii (greater sand plover)	Migratory	Vulnerable	-	Not identified	**Highly unlikely** • The greater sand plover is found in many coastal areas of Australia during its non-breeding season, inhabiting littoral and estuarine habitats. They mainly occur on sheltered sandy, shelly, or muddy beaches with large intertidal mudflats or sandbanks, as well as sandy estuarine lagoons and rock platforms, sand cays, small rocky islands and inshore reefs. They seldom occur in shallow freshwater wetlands (DCCEEW 2024k). • There was one record of greater sand plover in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a). The record was identified approximately 2.4 km west of the Project Area (Figure B). The record was collected in 1977. • The greater sand plover was not identified in the Protected Matters Search Tool search for a 25 km radius of the Project Area (DCCEEW 2024a). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • There is no habitat suitable for greater sand plover within or proximate to the Project Area, as it is situated approximately 31 km east of the Western Australian coastline. • This species has not been recorded during the avian surveys conducted within the Project Area (RPS 2014 and RPS 2010). This species is highly unlikely to occur within the Project Area due to the absence of suitable habitat.
Falco peregrinus (peregrine falcon)	-	Other Specially Protected	-	Not identified	**Possible** • The peregrine falcon is widespread in a range of environments across Australia but is often associated with cliff-lines or scattered tall trees that provide it with nest sites (RPS 2014). They prefer habitat over wooded and forested lands, open country and wetlands of tropical and temperate areas (RPS 2010) and require abundant prey. Peregrine falcons will pursue flying birds and they are able to hunt at high speeds and from great heights (Australian Museum 2019). It is essentially an aerial species and hunts above canopy vegetation where its favoured prey is medium sized birds such as Galah and Rock Doves (RPS 2010). • There are two records of the peregrine falcon in DBCA's database within a 25 km radius of the project (DBCA 2023a). The records were located in the nearby Minyulo Brook approximately 700 m south-east of the project and to the south-east of the Project Area. • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • The peregrine falcon was observed to be scarce during field investigations with only a single bird being recorded off site within the vicinity and wider locality of the project (RPS 2010). The Project Area is situated within large areas of agricultural land used for cropping, as such seasonal influxes of prey species (mediums sized cockatoos such as galahs and corellas) may attract predatory species (RPS 2014). Therefore, the peregrine falcon may occur within the Project Area on at least an intermittent basis.
Limosa lapponica (bar-tailed godwit)	Migratory	Migratory	-	Not identified	**Highly unlikely** • Bar-tailed godwits are found mainly in coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays (DCCEEW 2024l). It is found often around beds of seagrass and, sometimes, in nearby saltmarsh. Bar-tailed godwits have been sighted in coastal sewage farms and saltworks, salt lakes and brackish wetlands near coasts, sandy ocean beaches, rock platforms, and coral reef-flats. It is rarely found on inland wetlands or in areas of short grass, such as farmland, paddocks and airstrips. • There were two records of bar-tailed godwit in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a). The two records were identified approximately 2.4 km west of the Project Area (Figure B). The two records were collected in 1977 and 1979. • The bar-tailed godwit was not identified in the Protected Matters Search Tool search for a 25 km radius of the Project Area (DCCEEW 2024a). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • There is no habitat suitable for bar-tailed godwit within or proximate to the Project Area, as it is situated approximately 31 km east of the Western Australian coastline. • This species has not been recorded during the avian surveys conducted within the Project Area (RPS 2014 and RPS 2010). This species is highly unlikely to occur within the Project Area due to the absence of suitable habitat.

Species	Conservation status			Type of presence (DCCEEW 2024)	Likelihood of occurrence within the Project Area
	EPBC Act	BC Act	DBCA priority level		
Leipoa ocellata (malleefowl)	Vulnerable	Vulnerable	-	Species or species habitat likely to occur within area (In feature area)	**Highly unlikely** • The malleefowl occurs in temperate Australia largely limited to the semi-arid zone. They are mostly limited to areas of inland semi-arid scrub, this species prefers a dry environment with low-growing eucalypt trees and shrubs, referred to as mallee country. Although their diet exhibits seasonal variation, they mostly feed on ants and the seeds of wattle and other legume plants. In Western Australia, they are found in some shrublands dominated by acacia and occasionally in woodlands dominated by eucalypts such as Wandoo, Marri, and Mallet (*Eucalyptus astringens*). Malleefowl distribution within the Wheatbelt region of Western Australia was found to be associated with landscapes that had lower rainfall, greater amounts of mallee and shrubland that occur as large remnants, and lighter soil surface textures (Benshemesh 2007). • Native vegetation types mapped within the Project's Indicative Disturbance area include Proteaceous scrub heath, Banksia Low Open Woodland, *Melaleuca* Low Open Woodland, *Eucalyptus todtiana* Woodland, and *Corymbia calophylla* Woodland. None of the project's vegetation types were comprised of mallee shrubland or shrublands dominated by acacia, however woodland vegetation was identified (RPS 2023; Ecologia Environment 2016; Outback Ecology 2014; Outback Ecology 2010). Areas of *Corymbia calophylla* Woodland were found to be in Completely Degraded condition, as such these areas are unlikely to represent suitable habitat for the malleefowl. Native vegetation within the Project Area is fragmented by areas cleared for agricultural land uses. The fragmented nature of native vegetation in the Project Area and its surroundings would make it difficult for the malleefowl to persist. • There are no records of the malleefowl in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a) (Figure B). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • This species has not been recorded during the avian surveys conducted within the Project Area (RPS 2014 and RPS 2010). This species is highly unlikely to occur within the Project Area due to the absence of suitable habitat.
Motacilla cinerea (grey wagtail)	Migratory (Migratory Terrestrial Species)	Migratory	-	Species or species habitat may occur within area (In feature area)	**Highly unlikely** • The grey wagtail is a very widespread species, with 20% of the global range in Europe. It is found across much of northern Africa, Europe and Asia, ranging from western Europe to the Far East. The grey wagtail is found around fast flowing mountain streams, often in forested areas, as well as lowland watercourses such as canals and rivers. Outside of the breeding season it is found in a greater variety of habitats, including farmlands, forested tracks, plantations and even town centres. Grey wagtail populations from islands and southern locations are resident, while other populations are partially or fully migratory. The grey wagtail is a vagrant to Australia and does not spend its breeding season within Australia (BirdLife International 2024a). • There are no records of the grey wagtail in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a) (Figure B). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • This species has not been recorded during the avian surveys conducted within the Project Area (RPS 2014 and RPS 2010). This species has also not been identified as a bird species that may occur in similar nearby habitat proximate to the Project Area or recorded in studies conducted in the nearby Cooljarloo and Falcon areas (RPS 2014). The grey wagtail is almost exclusively recorded near water, and therefore is highly unlikely to occur within the Project Area due to the absence of suitable habitat.
Numenius madagascariensis (eastern curlew)	Critically Endangered Migratory (Migratory Wetlands Species)	Critically Endangered	-	Species or species habitat may occur within area (In feature area)	**Highly unlikely** • Within Australia, the eastern curlew has a primarily coastal distribution. The species is found in all states, particularly the north, east, and south-east regions including Tasmania. Eastern curlews are rarely recorded inland. They have a continuous distribution from Barrow Island and Dampier Archipelago, Western Australia, through the Kimberley Division and along Northern Territory, Queensland, and NSW coasts and the islands of Torres Strait. They are patchily distributed elsewhere. The eastern curlew is most commonly associated with sheltered coasts, especially estuaries, bays, harbors, inlets and coastal lagoons, with large intertidal mudflats or sand flats, often with beds of seagrass. Occasionally, the species occurs on ocean beaches (often near estuaries), and coral reefs, rock platforms, or rocky islets. The birds are often recorded among salt marshes and on mudflats fringed by mangroves, and sometimes use the mangroves. The birds are also found in salt works and sewage farms (DCCEEW 2024m). • There are no records of the eastern curlew in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a) (Figure B). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • There is no habitat for migratory wading bird species, including the eastern curlew, within or proximate to the Project Area, although there are habitats within the region that are frequented by these species (RPS 2010). • This species has not been recorded during the avian surveys conducted within the Project Area (RPS 2014 and RPS 2010). This species is highly unlikely to occur within the Project Area due to the absence of suitable habitat.

Species	Conservation status			Type of presence (DCCEEW 2024)	Likelihood of occurrence within the Project Area
	EPBC Act	BC Act	DBCA priority level		
Oxyura australis (blue-billed duck)	-	-	Priority 4	Not identified	**Highly unlikely** • The blue-billed duck is wholly aquatic and is rarely found on land (Australian Museum 2020). They are found in terrestrial wetlands, saline or freshwater, and nest in sedges, rushes, paperbark and lignum (BirdLife International 2024b). • There are seven records of the blue-billed duck in DBCA's database within a 25 km radius of the project (DBCA 2023a). All records were associated with water sources, with three records near farm lakes (over 9 km east of the project), three records near Guraga Lake and a lake to its north-east (over 19 km south of the project) and one record near wetlands (over 13 km south-west of the project) (Landgate 2024). Approximately 80 blue-billed ducks have been observed at Namming Lake, located to the south of Guraga Lake (RPS 2010). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • The Project Area is intersected by an ephemeral watercourse, which does not represent suitable habitat for the blue-billed duck. There are no permanent water bodies within the Project Area. This species is highly unlikely to occur within the Project Area due to the absence of suitable habitat.
Pandion haliaetus (osprey)	Migratory (Migratory Wetlands Species)	Migratory	-	Species or species habitat known to occur within area (In buffer area only)	**Highly unlikely** • Ospreys occur in littoral and coastal habitats and terrestrial wetlands of tropical and temperate Australia and offshore islands. They are mostly found in coastal areas but occasionally travel inland along major rivers, particularly in northern Australia. They exhibit a preference for coastal cliffs and elevated islands in some parts of their range, but may also occur on low sandy, muddy or rocky shores and over coral cays (DCCEEW 2024n). • There are no records of the osprey in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a) (Figure B). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • There is no habitat suitable for osprey within or proximate to the Project Area, as it is situated approximately 31 km east of the Western Australian coastline and there are no terrestrial wetlands or major rivers within or intersecting the Project Area. • This species has not been recorded during the avian surveys conducted within the Project Area (RPS 2014 and RPS 2010). This species is highly unlikely to occur within the Project Area due to the absence of suitable habitat.
Pezoporus flaviventris or *Pezoporus wallicus flaviventris* (western ground parrot)	Critically Endangered	Critically Endangered	-	Not identified	**Locally extinct** • The western ground parrot is a ground-dwelling bird that occupies low, dry or swampy near-coastal heathlands on sand plains and uplands. The species is usually recorded in habitats that are unburnt for long periods of time. They can forage in recently burnt habitats; however, these habitats are unsuitable for breeding and are only used occasionally. The western ground parrot's distribution is restricted to near coastal regions of south-western Western Australia. They are currently known to occur in two locations, Fitzgerald River National Park and Cape Arid National Park- Nuytsland Nature Reserve (TSSC 2013). • There are no records of the western ground parrot in DBCA's database within a 25 km radius of the Project Area (Figure B) and the nearest western ground parrot record proximate to the Project Area is over 500 km to the south-east (Atlas of Living Australia 2024b and DBCA 2023a). • The western ground parrot was not identified in the Protected Matters Search Tool search for a 25 km radius of the Project Area (DCCEEW 2024a). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • This species has not been recorded during the avian surveys conducted within the Project Area (RPS 2014 and RPS 2010). However, the species (*Pezoporus wallicus*) was identified as a bird species that may occur in similar nearby habitat within the Project's vicinity or recorded in studies conducted in the nearby Cooljarloo and Falcon areas (RPS 2014). There have been several unconfirmed sightings in the Jurien–Leeman–Badgingarra–Mt Adams area, including one report near the intersection of Wongonderrah Road and Brand Highway, just north of the Project Area (RPS 2014). • The Project Area is significantly removed from where the western ground parrot populations are known to occur in the Fitzgerald River National Park and Cape Arid National Park- Nuytsland Nature Reserve (TSSC 2013). This species is likely to be locally extinct in the locality of the wind farm.

Species	Conservation status			Type of presence (DCCEEW 2024)	Likelihood of occurrence within the Project Area
	EPBC Act	BC Act	DBCA priority level		
Platycercus icterotis xanthogenys (western rosella (inland)	-	-	Priority 4	Not identified	**Highly unlikely** • The western rosella (inland) occupies eucalypt and sheoak woodlands and scrubs, especially those containing wandoo (*Eucalyptus wandoo*), flooded gum (*Eucalyptus rudis*), salmon gum (*Eucalyptus salmonophloia*), tall mallee and rock sheoak (*Allocasuarina huegeliana*) (Department of Environment and Conservation 2009). The western rosella (inland) is mainly sedentary but can move towards the coast in summer (RPS 2014). It is generally found in forested areas but also feeds on grassy clearings and pasture. The western rosella (inland) and western rosella (south-west) distribution and range has significantly changed and since 1970 it has declined or become extinct from more than 25% of the shires it once occupied, including the Shire of Dandaragan where the Project Area is located (Department of Environment and Conservation 2009). The western rosella (inland) has disappeared from the northern and eastern parts of the Wheatbelt due to removal of foraging and breeding habitat. The Project Area is outside of the known distribution of the western rosella (inland), with its nearest point around Wongan Hills being more than 100 km east of the Project Area. • There are two records of the western rosella (inland) in DBCA's database within a 25 km radius of the project (DBCA 2023a). The two records are over 14 km east of the Project Area within a radials distance of up to approximately 10 km and 50 km. The records were collected in 1977 and 1979 near Minyulo Brook and south of Dandaragan. • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • This species has not been recorded during the avian surveys conducted within the Project Area (RPS 2014 and RPS 2010). • The Project Area is predominantly comprised of agricultural land used cropping with mapped areas of Proteaceous scrub heath of the Kwongan and *Eucalyptus todtiana* Woodland vegetation, which is potentially suitable foraging habitat for the western rosella (inland) (Outback Ecology 2014 and RPS 2023). However, this does not reflect the floristic composition of their favoured woodlands and scrub habitat as no wandoo, flooded gum, salmon gum and rock sheoak have been recorded within the Project Area. • The Project Area is over 100 km removed from where the western rosella (inland)'s distribution extent is mapped over (Department of Environment and Conservation 2009). This species is highly unlikely to occur within the Project Area due to the absence of their preferred habitat and being located outside of its distribution and range.
Plegadis falcinellus (glossy ibis)	Migratory	Migratory	-	Not identified	**Highly unlikely** • Glossy Ibis' preferred habitat for foraging and breeding are freshwater marshes at the edges of lakes and rivers, lagoons, flood plains, wet meadows, swamps, reservoirs, sewage ponds, rice fields and cultivated areas under irrigation. The species is occasionally located in coastal locations such as deltas, saltmarshes, coastal lagoons, and estuaries. Within Western Australia, the glossy ibis is found generally east of the Kimberley and is also known to be patchily distributed across the state (DCCEEW 2024o). • There were three records of glossy ibis in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a). All records were associated with water sources, with one record near a flood plain wetland and stream (over 8 km to the south-west) and two records near the lake adjacent to Guraga Lake (over 19 km south of the project) (Landgate 2024). The records were collected in 1990 and 1999. • The glossy ibis was not identified in the Protected Matters Search Tool search for a 25 km radius of the Project Area (DCCEEW 2024a). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • This species has not been recorded during the avian surveys conducted within the Project Area (RPS 2014 and RPS 2010). This species is highly unlikely to occur within the Project Area due to the absence of suitable habitat.
Pluvialis fulva (Pacific golden plover)	Migratory	Migratory	-	Not identified	**Highly unlikely** • The Pacific golden plover utilises coastal habitats in Australia for their non-breeding grounds, however they occasionally occur around inland wetlands. They inhabit beaches, mudflats and sandflats in sheltered areas, such as lagoons, estuaries and harbours, and also in saltwork evaporation ponds. They are infrequently recorded around terrestrial wetlands, such as fresh, brackish, or saline lakes, billabongs, pools, swamps and wet claypans. Within Western Australia, the Pacific golden plover is not often recorded along the southern or south-western coasts, but they are more widespread along the Pilbara and Kimberley coasts between North-West Cape and the Northern Territory border (DCCEEW 2024p). • There was one record of Pacific golden plover in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a). The record was associated with water sources as it was near the lake adjacent to Guraga Lake (over 19 km south of the project) (Landgate 2024). The record was collected in 1991. • The Pacific golden plover was not identified in the Protected Matters Search Tool search for a 25 km radius of the Project Area (DCCEEW 2024a). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • This species has not been recorded during the avian surveys conducted within the Project Area (RPS 2014 and RPS 2010). This species is highly unlikely to occur within the Project Area due to the absence of suitable habitat.

Species	Conservation status			Type of presence (DCCEEW 2024)	Likelihood of occurrence within the Project Area
	EPBC Act	BC Act	DBCA priority level		
Pluvialis squatarola (grey plover)	Migratory	Migratory	-	Not identified	**Highly unlikely** • The grey plover utilises coastal areas in Australia for their non-breeding grounds. They inhabit sheltered embayments, estuaries and lagoons with mudflats and sandflats, and occasionally on rocky coasts. They are found around terrestrial wetlands, such as near-coastal lakes and swamps or salt lakes. Further inland, they are infrequently found near wetlands or salt-lakes. The Grey plover has been recorded across all states along the costs, and it is most abundant on the western and southern coastlines. In Western Australia, this is mainly between Albany and the northern Kimberly coast (DCCEEW 2024q). • There was one record of grey plover in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a). The record was identified approximately 2.4 km west of the Project Area (Figure B). The record was collected in 1977. • The grey plover was not identified in the Protected Matters Search Tool search for a 25 km radius of the Project Area (DCCEEW 2024a). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • This species has not been recorded during the avian surveys conducted within the Project Area (RPS 2014 and RPS 2010). This species is highly unlikely to occur within the Project Area due to the absence of suitable habitat.
Rostratula australis (Australian painted snipe)	Endangered	Endangered	-	Species or species habitat likely to occur within area (In feature area)	**Highly unlikely** • The Australian painted snipe has been recorded at wetlands in all states of Australia, and mainly occurs along the eastern and south-eastern coast of Australia. They generally inhabit shallow terrestrial wetlands, including permanent and temporary lakes, claypans and swamps, waterlogged grasslands, dams, rice crops and sewage farms. Their habitats typically include emergent tussocks of grass, rushes, sedges, reeds, or samphire, often with scattered lignum, tea-tree (*Melaleuca*) or cane grass. Areas lined with trees or with scattered fallen or washed-up timber may be used by the Australian painted snipe also (DCCEEW 2024r). • There are no records of the Australian painted snipe in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a) (Figure B). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • There is no habitat for wading bird species, including the Australian painted snipe, within or proximate to the Project Area, although there are habitats within the region that are frequented by these species (RPS 2010). • This species has not been recorded during the avian surveys conducted within the Project Area (RPS 2014 and RPS 2010). This species is highly unlikely to occur within the Project Area due to the absence of suitable habitat.
Sternula nereis nereis (Australian fairy tern)	Vulnerable	Vulnerable	-	Species or species habitat may occur within area (In buffer area only)	**Highly unlikely** • Within Australia, the Australian fairy tern occurs along the coasts of Victoria, Tasmania, South Australia and Western Australia, occurring as far north as the Dampier Archipelago near Karratha. This species nests on sheltered sandy beaches, spits and banks above the high tide line and below vegetation and has been found in embayments of a variety of habitats including offshore, estuarine or lacustrine (lake) islands, wetlands and mainland coastline (DCCEEW 2024s). • There are no records of Australian fairy tern in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • There is no habitat suitable for Australian fairy tern within or proximate to the Project Area, as it is situated approximately 31 km east of the Western Australian coastline and there are no wetlands or estuarine or lacustrine islands within or intersecting the Project Area. • This species has not been recorded during the avian surveys conducted within the Project Area (RPS 2014 and RPS 2010). This species is highly unlikely to occur within the Project Area due to the absence of suitable habitat.
Thalasseus bergii (crested tern)	Migratory	Migratory	-	Not identified	**Highly unlikely** • The crested tern occupies tropical and subtropical coastlines, and forages within shallow waters of lagoons, coral reefs, estuaries, bays, inlets and harbours, along sandy, rocky, coral or muddy shores, on rocky outcrops in open sea, in mangrove swamps and also out to sea on open water. They are distributed on coastlines and islands in the tropics and subtropics, including Australia (BirdLife International 2024c). • There were three records of crested tern in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a). All three records were identified approximately 2.4 km west of the Project Area (Figure B). The records were collected in 1977, 1978 and 1979. • The crested tern was not identified in the Protected Matters Search Tool search for a 25 km radius of the Project Area (DCCEEW 2024a). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • This species has not been recorded during the avian surveys conducted within the Project Area (RPS 2014 and RPS 2010). This species is highly unlikely to occur within the Project Area due to the absence of suitable habitat and as it is situated approximately 31 km east of the Western Australian coastline.

Species	Conservation status			Type of presence (DCCEEW 2024)	Likelihood of occurrence within the Project Area
	EPBC Act	BC Act	DBCA priority level		
Tringa glareola (wood sandpiper)	Migratory	Migratory	-	Not identified	**Highly unlikely** • The wood sandpiper inhabits well-vegetated, shallow, freshwater wetlands, such as swamps, billabongs, lakes, pools and waterholes. They are typically associated with emergent, aquatic plants or grass, and dominated by taller fringing vegetation, such as dense stands of rushes or reeds, shrubs, or dead or live trees, especially *Melaleuca* and river red gums (*Eucalyptus camaldulensis*) and often with fallen timber. They also frequent inundated grasslands, short herbage or wooded flood plains, where floodwaters are temporary or receding, and irrigated crops. They are also found at some small wetlands only when they are drying. The wood sandpiper has been recorded in large numbers in north-west Australia. Within Western Australia, the species is widespread but scattered in most regions (DCCEEW 2024t). • There were two records of wood sandpiper in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a). The records were associated with water sources as they were found near the lake adjacent to Guraga Lake (over 19 km south of the project) (Landgate 2024). The records were collected in 1990 and 1991. • The wood sandpiper was not identified in the Protected Matters Search Tool search for a 25 km radius of the Project Area (DCCEEW 2024a). • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • This species has not been recorded during the avian surveys conducted within the Project Area (RPS 2014 and RPS 2010). This species is highly unlikely to occur within the Project Area due to the absence of suitable habitat.
Tringa nebularia (common greenshank)	Migratory (Migratory Wetlands Species)	Migratory	-	Species or species habitat likely to occur within area (In buffer area only)	**Unlikely** • Common greenshanks are found in a wide variety of inland wetlands and sheltered coastal habitats of varying salinity. It occurs in sheltered coastal habitats, typically with large mudflats and saltmarsh, mangroves or seagrass. The species uses both permanent and ephemeral terrestrial wetlands, including swamps, lakes, dams, rivers, creeks, billabongs, waterholes and inundated flood plains, claypans and salt flats. It was once recorded with black-winged stilts (*Himantopus himantopus*) in pasture but are generally not found in dry grassland (DCCEEW 2024u). • There are six records of common greenshank in DBCA's database within a 25 km radius of the Project Area (DBCA 2023a). Most records are associated with the lakes north-east and south of Lake Guraga, over 19 km south of the Project Area, and another record was identified approximately 2.4 km west of the Project Area (Figure B). The six records were collected in 1978, 1979, 1990,1991, and 2001. • This species has not been recorded during the 2017 avian survey and 2021–2023 bird and bat mortality surveys conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024), or during the 2017–2018 avian surveys and 2019–2020 bird and bat mortality surveys conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). • There is no habitat for migratory wading bird species, including the common greenshank, within or proximate to the Project Area, although there are habitats within the region that are frequented by these species (RPS 2010). • A number of migratory wading bird species were recorded from wetland habitats around Lake Guraga to the south-west, the near coastal Lake Thetis near Cervantes and from the Upper Moore River area to the north-west and west of Moora. This included one observation of a common greenshank at the southern shoreline habitats of Lake Guraga and nearby lakes, which is located approximately 20 km to the south of the Project Area, and 23 observations of common greenshank at the Lake Thetis, which is located approximately 37 km west-north-west of the Project Area (RPS 2010). • Movements of common greenshanks were observed at the lake north-east of Lake Guraga and at Lake Thetis, which suggests that there may be some movements between the inland and coast when conditions are favourable (RPS 2010). Movements to and from these wetland habitats by migratory wading birds are likely to follow north–south routes, which follow the general landscape arrangement of these habitats in relation to drainage basins in the east and coastal dune topography in the west (RPS 2010). As such, it is unlikely that significant movements of migratory wading birds would take place in an east–west direction across the Koodiwoodie Range where the wind farm is to be constructed. Therefore, it is unlikely that common greenshanks will be placed at significant risk of adverse impact due to the construction and operation of the wind farm.

Species	Conservation status			Type of presence (DCCEEW 2024)	Likelihood of occurrence within the Project Area
	EPBC Act	BC Act	DBCA priority level		
Zanda latirostris (Carnaby's cockatoo)	Endangered (listed as *Calyptorhynchus latirostris*)	Endangered	-	Breeding known to occur within area (In feature area)	**Seasonal roosting, breeding and foraging visitor** • Breeding habitat for Carnaby's cockatoo comprises of woodland or forest and partially cleared woodland or forest including isolated trees. They nest in hollows of live or dead trees, and many *Eucalyptus* species may provide suitable hollows. Carnaby's cockatoos roost in or near riparian environments or natural or artificial water sources. Any tall trees may provide roosting habitat, particularly flat-topped yate (*Eucalyptus occidentalis*), salmon gum, wandoo, marri, karri, blackbutt, tuart, introduced eucalypts and introduced pines. They forage in native shrubland, heathland and woodland on seeds, nectar and flowers of native proteaceous plant species. They also forage on seeds of introduced species, including *Pinus* spp., *Erodium* spp., wild radish, canola, almonds, macadamia and pecan nuts; insects and insect larvae; occasionally apples and persimmons; and liquidambar (DAWE 2022a). • There are 298 records of Carnaby's cockatoo in the DBCA's database within a 25 km radius of the Project Area (DBCA 2023a). Only one record was within the Project Area and was situated over 2 km to the east of the Disturbance Area / turbine locations (Figure D). • Carnaby's cockatoos have been observed frequently within 20 km of the Project Area. There are records of one roosting site and 99 confirmed and potential breeding sites, which are typically located adjacent to watercourses. Ninety-six of the 99 breeding sites are within 12 km of the Project Area (Figure E). This includes the Cataby Key Biodiversity Areawhich supports up to 24 breeding pairs of Carnaby's cockatoo, located approximately 8 km south of the Project Area (Figure E; BirdLife International 2022). Carnaby's cockatoos mainly forage in areas up to 12 km from nesting trees during the breeding season and in areas up to 20 km, or higher, from known night roosting habitat during the non-breeding season. • This species has been recorded during the 2017 avian surveys (38 records) and 2021–2023 bird observations (139 records) conducted for Yandin Wind Farm approximately 10 to 25 km south-east of the Project Area (Ecologia Environment 2017, Alinta Energy 2022 and Alinta Energy 2024) and during the 2017–2018 avian surveys (3,751 records) and 2019–2020 Carnaby's cockatoo site use and abundance surveys (26 records and 1,200+ records) conducted for Badgingarra Wind Farm approximately 15 to 20 km north-west of the Project Area (Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020). No injuries or strike mortalities of Carnaby's cockatoo were recorded during Badgingarra Wind Farm's 2019–2020 bird and bat mortality surveys or Yandin Wind Farm's 2021–2023 bird and bat mortality surveys. • This species was recorded during the avian surveys conducted within the Project Area and there is suitable foraging, breeding and roosting habitat for Carnaby's cockatoo present (BCE 2025, RPS 2014, RPS 2010a). The 2008 – 2009 and 2013 surveys found that habitatutilisation was consistent with what is generally known for this species, where onsite occurrences were largely confined to intact marri (*Corymbia calophylla*) woodland areas, which occur as riparian remnants along valley bottom watercourses and lower slopes, and tall heathland communities and their remnants on sand plains and lower slopes in the wider locality. Local movements were restricted to valley vegetation corridors and rarely traversed more elevated open country at low elevations. During the survey period, a large flock (200+) was noted over a pine plantation east of Cervantes, over 30 km north-west of the Project Area. The 2024–2025 utilisation survey found Carnaby's cockatoo foraging and feeding on Hakea, Banksia, Marri and pines, with Banksia heath and Marri woodland frequently targeted by the species. A substantial amount of foraging was observed in cropped paddocks of Canola and Lupins and on Wild Radish as weed species (Figure M). Night roost evidence was recorded at six separate locations within or near the Project Area (Figure L), and a roost location to the north of the Waddi Bush Resort is suspected. Nesting was observed in one tree on Minyulo Brook with one pair successfully raising a chick (Figure L). There were several Wandoo and Marri trees with chewed hollows consistent with nesting Black-Cockatoos along Minyulo Brook and in woodland north of Waddi Road. • No evidence of foraging was detected (chewing of banksia infructescences and pinecones by black cockatoos is obvious and was not observed), nor were any black cockatoos seen by Terrestrial Ecosystems (2022). No evidence to indicate that Carnaby's cockatoo was breeding in or near the Disturbance Area was identified by Terrestrial Ecosystems (2022).
Mammals					
Macroderma gigas (ghost bat)	Vulnerable	Vulnerable	-	Species or species habitat may occur within area (In feature area)	**Highly unlikely** • The ghost bat is found in habitats ranging from the arid Pilbara to tropical savanna woodlands and rainforests. During the daytime, they roost in rock crevices, old mines, and caves. Within Western Australia, ghost bats occur in the Kimberley and the Pilbara regions (TSSC 2016). • A bat survey was undertaken over two separate periods (between October and November 2008 and in May 2009) with detectors at six locations across the Project Area to detect and record passing bats as they echolocate to navigate and find prey (RPS 2014). The detectors were positioned in locations near the proposed wind turbines and either near or between features known to be used by bats such as linear features (e.g. tree line wind breaks), native vegetation, woodland stands or water bodies. All five bat species detected near the proposed turbine locations are fairly common and they have been previously detected during bat surveys for other wind farm developments in the region. No bat species of conservation significance were detected (i.e. ghost bat) (RPS 2014). • The Project Area is located within the Wheatbelt region of Western Australia, where populations of ghost bats are not expected to occur, and there is no roosting habitat present within the Project Area (i.e. rock crevices, old mines, and caves). As such, this species is highly unlikely to occur within the Project Area due to its known areas of distribution in Western Australia and the absence of suitable habitat within the Project Area and the wider locality.

APPENDIX C: SPECIES CHARACTERISTICS OF COMMON BIRDS

Species	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
Accipiter cirrhocephalus (collared sparrowhawk)	• The collared sparrowhawk is a predominantly bird hunting species which targets passerine birds, particularly in woodland habitats (RPS 2010). • They usually forage near the habitat of their woodland prey; however, they are known to soar at considerable heights usually over foraging areas (RPS 2010). • They also perform elevated courtship displays, typically over breeding habitat and associated with foraging areas (RPS 2010). • The collared sparrowhawk hunts for flying insects by circling over treetops and hunts for terrestrial insects from grass at a low perch (Czechura, Debus and Mooney 1987).	• Movements recorded during October–November 2008 avifauna surveys for the Project Area were sedentary (large territory) (RPS 2010). • The collared sparrowhawk is generally resident but may be partly migratory. However, their movements are not well known (Australian Museum 2022a).	• Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was forest / woodland (RPS 2010). • This species is expected to be primarily associated with the lowland woodland areas that are not closely associated with the ridge top locations (RPS 2010).	• The collared sparrowhawk relies on trees or tall shrubs to ambush their prey (Australian Museum 2022a). • They hunt at dawn and dusk to exploit birds entering or leaving communal roosts. Attack flights are seldom longer than 50 m. Prey are occasionally attacked in a vertical or near-vertical stoop, a vertical dive into canopy, or in a swoop to the ground (Czechura, Debus and Mooney 1987).	• Flight heights recorded during October–November 2008 avifauna surveys for the Project Area and wider locality were below the surveyed RSA (i.e. <40 m), for two out of two records (100%) (RPS 2010). • The collared sparrowhawk occasionally stoop from several hundred metres up into flocks of ground-feeding birds, but this may be opportunism while they are soaring for other purposes (Czechura, Debus and Mooney 1987).	Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were slow-swift (RPS 2010).
Anthus novaeseelandiae (Australasian pipit)	• The Australasian pipit is essentially open country species, foraging and nesting on the ground (RPS 2010). • They prefer open country habitats, ranging from saltmarshes to dry shrublands and open woodland clearings (Australian Museum 2022b) • Their courtship ritual involves males making swooping dives from a height. They nest within a depression in the ground, sometimes sheltered by stones, wood or grass tussock (Australian Museum 2022b).	Movements recorded during October–November 2008 avifauna surveys for the Project Area were aerial breeding displays (RPS 2010).	• Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was grassland (RPS 2010). • The Australasian pipit has been observed at Yandin Wind Farm (Ecologia Environment 2017). • The Australasian pipit has been opportunistically observed during the first year of operational monitoring at Yandin Wind Farm (Alinta Energy 2022).	• This species's foraging strategy will depend on the prey, ranging from pecking at plants, to dashing along the ground and into short flights, rising up into the wind over lakes to catch mayflies (Beauchamp 2013). • This species is resident or sedentary, and probably largely sedentary, over most of mainland (BirdLife Australia 2023r).	• Flight heights recorded during October–November 2008 avifauna surveys for the Project Area and wider locality were predominantly below the surveyed RSA (i.e. <40 m), for 99 out of 105 records (94%) (RPS 2010). • Flight heights recorded during the September 2017 avifauna surveys at Yandin Wind Farm were all below the surveyed RSA (i.e. <40 m), for 6 records (Ecologia Environment 2017).	Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were medium (RPS 2010).
Aquila audax (wedge-tailed eagle)	• Flight behaviours of the wedge-tailed eagles observed during the January, February, March, August 2022 and February and October 2023 monitoring for Yandin Wind Farm included soaring, circling and gliding (Alinta Energy 2022 and Alinta Energy 2024). • Occasional behaviours observed included feeding in pasture and fighting (Alinta Energy 2022 and Alinta Energy 2024). • Wedge-tailed eagles were observed flying above the surveyed RSA (i.e. 40–152 m), which is likely due to their dependence upon strong winds and thermals to stay aloft (RPS 2010).	• Movements recorded during October–November 2008 avifauna surveys for the Project Area were sedentary (large territory) (RPS 2010). • The relatively high sightings of wedge-tailed eagles within the Project Area are largely due to the sedentary nature of local birds (i.e. within established breeding territories) and their high visibility from long distances, resulting in individuals repeatedly observed from several census sites (RPS 2010). • This species occupies large territories representing large areas, and therefore the number of individuals noted within	• Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was forest / woodland / grassland (RPS 2010). • Habitat recorded during the January, February, March, August 2022 and February and October 2023 monitoring for Yandin Wind Farm over which or within the species was recorded was pasture, paddock with low scrub, pine plantation, planted trees/ harvested crop and remnant woodland (Alinta Energy 2022 and Alinta Energy 2024). • The relatively high number of wedge-tailed eagle sightings was due, at least in part, to the obvious flight profile this species offers even at a great distance rather than the importance of the site (RPS 2010). • A pair of wedge-tailed eagles were recorded on numerous occasions in the vincinty of one of Yandin Wind Farm's turbines, and appear to be resident birds (Alinta Energy 2022). This turbine is located approximately 11 km south-east of the Project Area. • A wedge-tailed eagle was observed passing over a flock of 12 Carnaby's cockatoos, which resulted in the flock spiralling upwards	• Movements of established pairs is resident, while non-breeding and young birds are dispersive in their movements. Established pairs in arid regions of Western Australia appear to hold territories all year (BirdLife Australia 2023a). • Two wedge-tailed eagle nests were found in valley woodland habitat during the October–November 2008 avifauna surveys, located immediately east of the Project Area and over 2.5 km east of the closest wind turbine (WTG09) (Figure 1). The nests were no more than 7 m high and were positioned on a slope that allows the birds to fly down-slope to the east away from the Project Area to become airbourne. Furthermore, access to the nest is from the east so that birds fly uphill into the prevailing wind to alight on the nest (RPS 2010).	• This species is highly aerial, as they can soar for long periods, reaching heights of 2,000 m (BirdLife Australia 2023a). • Flight heights recorded during October–November 2008 avifauna surveys for the Project Area and wider locality were predominantly within the surveyed RSA (i.e. 40–152 m), for 22 out of 82 records (27%) and above the surveyed RSA (i.e. >152 m), for 42 out of 82 records (51%) (RPS 2010). • Flight heights for ten wedge-tailed eagles recorded during the January, February, March, August 2022 and February and October 2023 monitoring for Yandin Wind Farm were below the RSA (12 m), ranging from ground level to 35 m above ground (four birds), and within the proposed RSA (18–180 m), ranging from 20–200 m above ground (nine birds) (Alinta Energy 2022 and Alinta Energy 2024). • Three carcasses of a struck wedge-tailed eagle were recorded during the construction phase in August, September and December 2020 at Yandin Wind Farm (Alinta Energy 2022). The RSA of these wind turbines are 12–180 m.	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were slow-swift (RPS 2010). • The wedge-tailed eagle is a solitary or gregarious eagle in most terrestrial habitats. They can gather in numbers around carrion (BirdLife Australia 2023a). • Despite some losses resulting from anthropogenic causes, there is no evidence that the population is declining (BirdLife Australia 2023a).

Species	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
		the Project Area and wider locality were generally low (RPS 2010).	before descending to a straight flight of around 10 m height (BCE 2025). This was observed at CVP02, located approximately 6 km east of the Project Area.			
Artamus cinereus (black-faced woodswallow)	• The black-faced woodswallow forages on insects and seeds (Rowley 2006). • This species is found in open country, often far from water, as well as in open woodlands, around lakes and wetlands and in irrigated areas (Birds in Backyards 2024a).	Movements recorded during October–November 2008 avifauna surveys for the Project Area were sedentary migratory (RPS 2010).	• Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was forest / woodland / grassland / aerial (RPS 2010). • The black-faced woodswallow has been observed at Yandin Wind Farm (Ecologia Environment 2017).	• The black-faced woodswallow's flight is characterised by short glides interspersed with rapid wingbeats. They fly fast with great agility when hunting close to the ground or when high up. However, if the wind is very strong, they only make brief sorties from convenient low perches, such as weeds or fence lines (Rowley 2006). • Considered to be the most sedentary of the woodswallows, it will move to coastal areas during droughts (Birds in Backyards 2024a).	• Flight heights recorded during October–November 2008 avifauna surveys for the Project Area and wider locality were predominantly below the surveyed RSA (i.e. <40 m), for 94 out of 96 records (98%) (RPS 2010). • Flight heights recorded during the September 2017 avifauna surveys at Yandin Wind Farm were all below the surveyed RSA (i.e. <40 m), for six records (Ecologia Environment 2017).	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were slow-swift (RPS 2010). • Outside of breeding season, several groups may forage, perch and roost together (Rowley 2006). • They often forage in flocks with swifts and swiflets (Birds in Backyards 2024a).
Banardius zonarius (Australian ringneck)	• This species mainly feeds on the ground, foraging on seeds, fruits, flowers, insects and nectar (Australian Museum 2023). • The Australian ringneck uses hollows in living or dead trees to breed (Australian Museum 2023).	Movements recorded during October–November 2008 avifauna surveys for the Project Area were sedentary (RPS 2010).	• Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was forest / woodland (RPS 2010). • The Australian ringneck has been observed within Badgingarra Wind Farm (Ecoscape 2018). • The Australian ringneck has been observed at Yandin Wind Farm within parkland cleared, marri woodland, protaceous heath, *Eucalytpus todtiana* woodland and creekline habitat (Ecologia Environment 2017). • The Australian ringneck has been opportunistically observed during the first year of operational monitoring at Yandin Wind Farm (Alinta Energy 2022).	• The flight of this species is swift and undulating (Australian Museum 2023). • The Australian ringneck is mainly resident or sedentary, but they may move in arid areas in response to rainfall (Australian Museum 2023).	• Flight heights recorded during October–November 2008 avifauna surveys for the Project Area and wider locality were predominantly below the surveyed RSA (i.e. <40 m), for 369 out of 374 records (99%) (RPS 2010). • Flight heights recorded during the September 2017 avifauna surveys at Yandin Wind Farm were all below the surveyed RSA (i.e. <40 m), for 21 out of 21 records (Ecologia Environment 2017). • One feather spot has been recorded at Yandin Wind Farm. It was difficult to determine if the feather spot was due to turbine strike or unrelated death (Alinta Energy 2024).	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were swift (RPS 2010). • This species are found in pairs or small flocks over lightly timbered areas, tree lined watercourses and open woodlands (Australian Museum 2023).
Cacatua roseicapilla (galah)	This species occupies a variety of open habitats, such as woodlands and forests, grasslands and savanna. They are less commonly found in shrublands, mangroves and beaches. The galah is well adapted to agricultural lands (San Diego Zoo Wildlife Alliance 2019).	Movements recorded during October–November 2008 avifauna surveys for the Project Area were locally nomadic (RPS 2010).	• Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was woodland / grassland (RPS 2010). • The galah has been observed within Badgingarra Wind Farm (Ecoscape 2018). • The galah has been observed at Yandin Wind Farm within parkland cleared, marri woodland, protaceous heath and *Eucalyptus todtiana* woodland habitat (Ecologia Environment 2017). • The galah has been opportunistically observed during the first year of operational monitoring at Yandin Wind Farm (Alinta Energy 2022).	The galah can fly long distances from roost to foraging areas. Some individuals are nomadic, while others are resident. Nomadic birds leave home ranges and form flocks elsewhere (San Diego Zoo Wildlife Alliance 2019).	• Flight heights recorded during October–November 2008 avifauna surveys for the Project Area and wider locality were predominantly below the surveyed RSA (i.e. <40 m), for 355 out of 458 records (78%) (RPS 2010). • Flight heights recorded during the September 2017 avifauna surveys at Yandin Wind Farm predominantly below the surveyed RSA (i.e. <40 m), for 21 records (up to 95%) (Ecologia Environment 2017).	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were medium flocks (RPS 2010). • The galah is gregarious and is found in pairs, small flocks, or large flocks up to 1,000 birds. They can form very large flocks of up to 2,000 birds infrequently (San Diego Zoo Wildlife Alliance 2019). • They are strong and fast fliers, and use short flights to move between tree branches and feeding patches (San Diego Zoo Wildlife Alliance 2019).
Certhionyx niger (black honeyeater)	The black honeyeater is found in open woodlands and shrublands of the arid and semi-arid regions. They also occur in spinifex savanna (Birds in Backyards 2024b).	Movements recorded during October–November 2008 avifauna surveys for the Project Area were sedentary / nomadic (RPS 2010).	Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was shrubland/ heath (RPS 2010).	The seasonal movements of this species are related to flowering of food plants, as well as in response to drought. They can move southwards in spring and summer, and nove northwards in autumn and winter (Birds in Backyards 2024b).	Flight heights recorded during October–November 2008 avifauna surveys for the Project Area and wider locality were below the surveyed RSA (i.e. <40 m), for nine out of nine records (RPS 2010).	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were medium-swift (RPS 2010). • They sometimes form large mixed flocks at food sources with other

Species	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
						honeyeaters (Birds in Backyards 2024b). • The species nests in groups or loose colonies (Birds in Backyards 2024b).
Chenonetta jubata (Australian wood duck)	The Australian wood duck can occupy open woodlands, grasslands, wetlands, flooded pastures and coastal inlets and bays. They are also found on farmland with dams (Birds in Backyards 2024c).	Movements recorded during October–November 2008 avifauna surveys for the Project Area were locally nomadic (RPS 2010).	• Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was wetlands (RPS 2010). • The Australian wood duck was opportunistically observed during the first year of operational monitoring at Yandin Wind Farm (Alinta Energy 2022).	• The Australian wood duck is found widespread in Australia (Birds in Backyards 2024c). • They can travel to feeding sites up to 10 km from roosting sites (Department of Environment and Conservation 2009b). • Overall, it appears that the Australian wood duck does not disperse widely, and most remain within a 200 km radius of the flock (Department of Environment and Conservation 2009b).	• Flight heights recorded during October–November 2008 avifauna surveys for the wider locality were below the surveyed RSA (i.e. <40 m), for 13 out of 13 records (RPS 2010). • Flight heights were not recorded within the Project Area (RPS 2010). • This species can reach heights of 20–100 m (BirdLife Australian 2023q).	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were medium (RPS 2010). • They are observed in pairs, family groups and small flocks, and occasionally in large flocks of up to 450 birds (Department of Environment and Conservation 2009b).
Cheramoeca leucosterna (white-backed swallow)	Within arid or semi-arid regions, the white-backed swallow is found over grasslands and low shrublands. They occasionally occur in taller open shrublands or open woodlands. This species is usually associated in areas with sandy or loose soil to support excavation of tunnels for nesting and roosting. They also often occur around wetlands, watercourses, and artificial watering points (BirdLife Australia 2023b).	Movements recorded during October–November 2008 avifauna surveys for the Project Area were sedentary (RPS 2010).	Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was watercourses (RPS 2010).	• This species is widespread in southern Australia, particularly in arid and semi-arid areas (BirdLife Australia 2023b). • Their movements are poorly known, however they are likely to be resident or seen thoroughout the year (BirdLife Australia 2023b).	• Flight heights recorded during October–November 2008 avifauna surveys for the wider locality were below the surveyed RSA (i.e. <40 m) for two records and within the surveyed RSA (i.e. 40–152 m) for two records (RPS 2010). • Flight heights were not recorded within the Project Area (RPS 2010). • This species forages by sallying, by snatching insects out of the air and returning to a perch to feed. All prey is taken in air, at heights ranging from ground to high up. They have been recorded as foraging at >15 m above ground (BirdLife Australia 2023b).	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were slow-medium (RPS 2010). • The white-backed swallow occurs singly or in small flocks (BirdLife Australia 2023b).
Cincloramphus cruralis (brown songlark)	• The brown songlark is essentially an open country species, foraging and nesting on the ground (RPS 2010). • This species is found in open treeless grasslands or chenopod shrublands and, where near or abutting timbered habitats (such as open woodland or tall shrubland), never in trees. They are also commonly found in pastures and crops (BirdLife Australia 2023c).	Movements recorded during October–November 2008 avifauna surveys for the Project Area were aerial breeding displays (RPS 2010).	• Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was grassland (RPS 2010). • The brown songlark has been observed within Badgingarra Wind Farm (Ecoscape 2018).	• This species is migratory and breeds in southern Australia in spring-summer, moving inland and to northern Australia for autumn–winter (BirdLife Australia 2023c). • They often move in response to climatic factors, such as moving to eastern coastal areas during inland droughts (BirdLife Australia 2023c).	• Flight heights recorded during October–November 2008 avifauna surveys for the Project Area and wider locality were predominantly below the surveyed RSA (i.e. <40 m), for 191 out of 236 records (81%) (RPS 2010). • They are known to forage on the ground for insects or seeds. They are primarily terrestrial, however in breeding season, males often perch on shrubs and overhead wires. They fly up to 50 m above ground before flying across their territory and descending in a long slow glide (BirdLife Australia 2023c).	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were medium (RPS 2010). • This species is mainly seen in pairs or singly, and occasionally reported in small flocks. They can flock in large numbers also (BirdLife Australia 2023c).
Coracina novaehollandiae (black-faced cuckoo-shrike)	This species is found mainly in dry eucalypt forests and woodlands. They are also found in farmland or urban areas. They are occasionally found in coastal and inland heathland (BirdLife Australia 2023d).	Movements recorded during October–November 2008 avifauna surveys for the Project Area were locally nomadic (RPS 2010).	• Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was forest / woodland / shrubland (RPS 2010). • The black-faced cuckoo-shrike has been observed at Yandin Wind Farm (Ecologia Environment 2017). • The black-faced cuckoo-shrike has been opportunistically observed during the first year of operational monitoring at Yandin Wind Farm (Alinta Energy 2022).	This species is partly migratory and partly resident or sedentary. In Western Australia, they are partly resident or sedentary, with passage and some seasonal occurrences observed over much of state (BirdLife Australia 2023d).	• Flight heights recorded during October–November 2008 avifauna surveys for the Project Area and wider locality were predominantly below the surveyed RSA (i.e. <40 m), for 38 out of 41 records (92%) (RPS 2010). • Flight heights recorded during the September 2017 avifauna surveys at Yandin Wind Farm were all below the surveyed RSA (i.e. <40 m), for three records (Ecologia Environment 2017). • This species can forage at all heights from ground or close to ground to in canopies and subcanopies. A mean height of foraging was recorded at 11.4 m (BirdLife Australia 2023d).	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were medium (RPS 2010). • This species is mainly seen in pairs or singly, and in small flocks up to 12. They occur in larger flocks of 50+, mainly during the non-breeding season (BirdLife Australia 2023d).
Corvus coronoides (Australian raven)	The Australian raven occupies a variety of natural and modified open habitats. They are frequently recorded in edge habitats, such as woodlands or forests adjacent to farmland. They are also	• Movements recorded during October–November 2008 avifauna surveys for the Project Area were	• Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was forest / woodland / heath / grassland (RPS 2010).	Observations of Australian ravens flying over high topography suggest that this species flew low over the tops of hills to avoid stronger winds at higher elevations, particularly in the context of the Project Area, which is prone to	• Flight heights recorded during October–November 2008 avifauna surveys for the Project Area and wider locality were predominantly below the surveyed RSA (i.e. <40 m), for 365 out of 427 records (85%) (RPS 2010).	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were medium (RPS 2010).

Species	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
	common in grasslands and farmland (BirdLife Australia 2023e).	locally nomadic (RPS 2010). • Adult breeding pairs are territorial and sedentary, while young birds and non-breeding adults gather in dispersive flocks (BirdLife Australia 2023e).	• The Australian raven has been observed within Badgingarra Wind Farm (Ecoscape 2018). • The Australian raven has been observed within Yandin Wind Farm (Ecologia Environment 2017). • The Australian raven has been opportunistically observed during the first year of operational monitoring at Yandin Wind Farm (Alinta Energy 2022).	moderate–high wind velocities for much of each day (RPS 2010).	• Flight heights recorded during the September 2017 avifauna surveys at Yandin Wind Farm were all below the surveyed RSA (i.e. <40 m), for seven records (Ecologia Environment 2017). • One carcass of a struck Australian raven was recorded during July–November 2019 at Badgingarra Wind Farm (Ecoscape 2019b). The RSA of these wind turbines are 20–150 m. • One carcass of a struck Australian raven was recorded during March–April 2020 at Badgingarra Wind Farm (Ecoscape 2020). The RSA of these wind turbines are 20–150 m. • This species mainly forages on the ground in open habitats, such as grasslands and beaches. They occasionally forage in the air and take eggs and young birds from nests (BirdLife Australia 2023e). • In travelling flights, they usually fly >30 m (BirdLife Australia 2023e).	• Small to large dispersive flocks of young birds are formed to forage. This species forages singly, in pairs or small groups, or in mobile flocks (BirdLife Australia 2023e).

Species	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
Gymnorhina tibicen (Australian magpie)	The Australian magpie is found in mainly open habitats with low and open ground cover or bare ground, with sparse to moderate density of trees. They are found in grasslands, farmland, residential areas, low shrublands and heathlands, and dry open woodlands and forests (BirdLife Australia 2023f).	• Movements recorded during October–November 2008 avifauna surveys for the Project Area were sedentary (RPS 2010). • This species is sedentary and territorial throughout the year (BirdLife Australia 2023f).	• Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was forest / woodland / grassland (RPS 2010). • The Australian magpie has been observed within Badgingarra Wind Farm (Ecoscape 2018). • The Australian magpie has been observed at Yandin Wind Farm within parkland cleared habitat (Ecologia Environment 2017). • The Australian magpie has been opportunistically observed during the first year of operational monitoring at Yandin Wind Farm (Alinta Energy 2022).	Movement patterns for the species appear highly local, with territorial birds infrquently moving from their territories, and non-territorial birds flying further distances (BirdLife Australia 2023f).	• Flight heights recorded during October–November 2008 avifauna surveys for the Project Area and wider locality were predominantly below the surveyed RSA (i.e. <40 m), for 174 out of 198 records (88%) (RPS 2010). • One carcass of a struck Australian magpie in April 2019 and one carcass of a struck Australian magpie in April 2020 at Badgingarra Wind Farm (Ecoscape 2020). The RSA of these wind turbines are 20–150 m. • Two carcasses of a struck Australian magpie were recorded in May 2022 during the operational phase at Yandin Wind Farm (Alinta Energy 2022). There was speculation that one of these carcasses was related to turbine blade strike or from territorial interactions. The RSA of these wind turbines are 12–180 m. • This species forages mostly on the ground, and has been recorded foraging up to 15 m (BirdLife Australia 2023f).	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were medium-swift (RPS 2010). • The estimated population for the south-west Western Australian subspecies (*Gymnorhina tibicen dorasalis*) is 450,000–900,000 birds (BirdLife Australia 2023f).
Elanus axillaris (black-shouldered kite)	• The black-shouldered kite occupies open country and grasslands. They are found in all rainfall zones. They prefer open grasslands, natural and pasture, but also use low vegetation or lightly timbered habitats (BirdLife Australia 2023g). • Flight behaviours of the black-shouldered kite observed during the July and August 2023 monitoring for Yandin Wind Farm included directional flight (flapping) (Alinta Energy 2024). • Occasional behaviours observed included territorial displays and perching (Alinta Energy 2024).	• Movements recorded during October–November 2008 avifauna surveys for the Project Area were localy nomadic / dispersive (RPS 2010). • Their movements are dispersive or irregular in many parts of their range (BirdLife Australia 2023g).	• Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was grassland / woodland (RPS 2010). • Habitat recorded during July and August 2023 monitoring for Yandin Wind Farm over which the species was recorded was pasture and cropped land (Alinta Energy 2024).	In south-west Western Australia, they appear to move farther inland in winter and spring (BirdLife Australia 2023g).	• Flight heights recorded during October–November 2008 avifauna surveys for the Project Area and wider locality were within the surveyed RSA (i.e. 40–152 m), for two out of two records (RPS 2010). • Flight heights recorded during the September 2017 avifauna surveys at Yandin Wind Farm were within the surveyed RSA (i.e. <40 m), for two records (Ecologia Environment 2017). • Flight heights have been recorded at Yandin Wind Farm from ground level to 12 m above ground (two birds), and within the proposed RSA (18–180 m) ranging from 15–20 m above ground (one bird) (Alinta Energy 2022 and Alinta Energy 2024). • One carcass of a struck black-shouldered kite was recorded in November 2020 during the construction phase at Yandin Wind Farm (Alinta Energy 2022). The RSA of these wind turbines are 12–180 m. • They are accomplished fliers but usually to no great height. They can hover 10–30 m above ground, and make low sweeps over grassland (BirdLife Australia 2023g).	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were slow (RPS 2010). • Usually seen singly or in small flocks. They may disperse in groups (BirdLife Australia 2023g).
Falco berigora (brown falcon)	The brown falcon occupies open habitats, including grasslands and low shrublands, pasture, woodland, open forest, and plantations of pines (BirdLife Australia 2023h).	Movements recorded during October–November 2008 avifauna surveys for the Project Area were sedentary / dispersive (RPS 2010).	Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was grassland/ woodland edges (RPS 2010).	Movements of the brown falcon can be aseasonal, where in the south-west Western Australia numbers have been observed to increase in dry periods (BirdLife Australia 2023h).	• Flight heights recorded during October–November 2008 avifauna surveys for the Project Area and wider locality were predominantly within the surveyed RSA (i.e. 40–152 m), for three out of four records (RPS 2010). • They soar to at least 200 m, using thermals to lift, and usually fly or hover at heights of 10–50 m (BirdLife Australia 2023h).	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were slow-swift (RPS 2010). • This species occurs singly or in pairs. They sometimes form loose flocks in autumn (BirdLife Australia 2023h). • The total Australian population is estimated to be more than 225,000 pairs (BirdLife Australia 2023h).

Species	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
Falco cenchroides (nankeen kestrel)	• Flight behaviours of the nankeen kestrels observed during the December 2021, February 2022, December 2022, January, August, September, October and November 2023 monitoring for Yandin Wind Farm included directional flight (flapping), soaring, circling and gliding (Alinta Energy 2022 and Alinta Energy 2024). • Occasional behaviours observed included perching on fence posts, perching in pasture and shrubs, perching in cropped land and feeding in pasture (Alinta Energy 2022).	• Movements recorded during October–November 2008 avifauna surveys for the Project Area were sedentary/dispersive (RPS 2010). • Nankeen kestrels are resident, partially migratory, dispersive and nomadic (Olsen and Olsen 1987).	• Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was grassland / woodland edges (RPS 2010). • The nankeen kestrel has been observed within Badgingarra Wind Farm (Ecoscape 2018). • The nankeen kestrel has been opportunistically observed during the first year of operational monitoring at Yandin Wind Farm (Alinta Energy 2022).	• The nankeen kestrel was observed flying at RSA elevations on more than a rare occasion, but as with the majority of bird species observed flying within the surveyed RSA height, the greatest proportion of these observations were birds flying over valley areas and not the ridgetop contexts where turbines will be located (RPS 2010). • There are seasonal movement of this species northward and coastally for the winter, out of the deserts for the summer, and down from higher altitudes in the south-eastern Australia for the winter (Olsen and Olsen 1987).	• Flight heights recorded during October–November 2008 avifauna surveys for the Project Area and wider locality were predominantly below the surveyed RSA (i.e. <40 m), for 55 out of 70 records (79%) (RPS 2010). • Flight heights recorded during the September 2017 avifauna surveys at Yandin Wind Farm were predominantly below the surveyed RSA (i.e. <40 m), for four records (Ecologia Environment 2017). • Flight heights for eight nankeen kestrels recorded during the December 2021, February 2022, December 2022, January, August, September, October and November 2023 monitoring for Yandin Wind Farm were ground level to 15 m above ground (22 birds), and within the proposed RSA (18-180 m) ranging from 20–80 m above ground (two birds) (Alinta Energy 2022 and Alinta Energy 2024). • One carcass of a struck nankeen kestrel in April 2019, three carcasses of struck nankeen kestrels in July–November 2019 and three carcasses of struck nankeen kestrels in March–April 2020 were recorded at Badgingarra Wind Farm (Ecoscape 2019b). The RSA of these wind turbines are 20–150 m. • Two carcasses and two feather spots of nankeen kestrel were recorded in September and November 2020 during the construction phase and in December 2021, January, September and October 2023 during the operational phase at Yandin Wind Farm (Alinta Energy 2022). The RSA of these wind turbines are 12-180 m.	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were slow-swift (RPS 2010). • They are found solitary or in pairs and family parties. They usually feed alone, however they can form groups of up to 20 (BirdLife Australia 2023i).
Falco longipennis (Australian hobby)	This species is found in wooded and forested lands and open country. They mainly use lowlands and foothills, but some can move to high country in warmer months (BirdLife Australia 2023j).	Movements recorded during October–November 2008 avifauna surveys for the Project Area were sedentary / dispersive (RPS 2010).	Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was grassland/ woodland edges (RPS 2010).	The Australian hobby largely forages and performs aerial courtship displays at low elevations, however there are times when they soar or fly at higher elevations. Australian hobby birds were observed elsewhere in the region during the October–November 2008 avifauna surveys were flying at elevations below the surveyed RSA (i.e. <40 m). One bird was targeting young welcome swallows that were flying at low elevation and perching on heathland vegetation near the sea (RPS 2010).	• Flight heights recorded during October–November 2008 avifauna surveys for the Project Area and wider locality were below the surveyed RSA (i.e. <40 m), for two out of two records (RPS 2010). • Flight heights recorded during the September 2017 avifauna surveys at Yandin Wind Farm were predominantly below the surveyed RSA (i.e. <40 m), for one record (Ecologia Environment 2017). • They often soar at height up to at least 500 m, using thermals to lift, and rarely hover (BirdLife Australia 2023j).	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were slow-swift (RPS 2010). • They are usually observed singly, sometimes in pairs and family groups (BirdLife Australia 2023j).
Grallina cyanoleuca (Australian magpie-lark)	The Australian magpie-lark is found in open and lightly timbered habitat and grasslands, and almost always near or associated with water (BirdLife Australia 2023k).	Movements recorded during October–November 2008 avifauna surveys for the Project Area were sedentary (RPS 2010).	• Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was forest / woodland / grassland (RPS 2010). • The Australian magpie-lark has been observed within Badgingarra Wind Farm (Ecoscape 2018). • The Australian magpie-lark has been observed at Yandin Wind Farm within parkland cleared and banksia woodland habitat (Ecologia Environment 2017). • The Australian magpie-lark has been opportunistically observed during the first year of operational monitoring at Yandin Wind Farm (Alinta Energy 2022).	Populations of Australian magpie-lark in southern Australia comprise sedentary and territorial breeding pairs and flocks of non-breeding birds, which move locally and show some regional movements (BirdLife Australia 2023k).	• Flight heights recorded during October–November 2008 avifauna surveys for the Project Area and wider locality were predominantly below the surveyed RSA (i.e. <40 m), for 112 out of 114 records (98%) (RPS 2010). • Flight heights recorded during the September 2017 avifauna surveys at Yandin Wind Farm were all below the surveyed RSA (i.e. <40 m) (Ecologia Environment 2017). • One carcass of a struck Australian magpie lark was recorded during July–November 2019 at Badgingarra Wind Farm (Ecoscape 2019b). The RSA of these wind turbines are 20–150 m. • This species forages almost entirely on the ground, and very occasionally in trees or aerially. Australian magpie-lark flocks have been recorded flying at a height of 30 m (BirdLife Australia 2023k).	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were slow-medium (RPS 2010). • They are ususaally observed singly or in pairs, and young birds can form flocks of a few to several hundred birds in autumn and winter (BirdLife Australia 2023k).

Species	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
Petrochelidon ariel (fairy martin)	The fairy martin occurs in airspace over open or sparsely wooded habitats, such as grasslands, shrublands and woodlands, and also modified areas such as pasture. They mostly occur round wetlands, both permanent and ephemeral, natural and artificial (BirdLife Australia 2023l).	Movements recorded during October–November 2008 avifauna surveys for the Project Area were sedentary (RPS 2010).	Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was aerial proximate to nesting sites (RPS 2010).	This species is possibly migratory in Western Australia, however the movement pattern is less distinct with no specific north to south pattern evident (BirdLife Australia 2023l).	• Flight height recorded during October–November 2008 avifauna surveys for the Project Area was within the surveyed RSA (i.e. 40–152 m), for one out of one record (RPS 2010). • This species mainly forages in the air at various heights, sometimes at low open or grassy areas, sometimes in canopy (> 10 m) of eucalypt woodland, and sometimes above tree-tops (BirdLife Australia 2023l).	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were medium-swift (RPS 2010). • They mainly forage in small flocks and have been recorded in larger flocks (BirdLife Australia 2023l).
Gavicalis virescens (singing honeyeater)	The singing honeyeater is found in a variety of open wooded habitats, mostly in low woodlands and open shrublands, especially those dominated by acacias (BirdLife Australia 2023m).	Movements recorded during October–November 2008 avifauna surveys for the Project Area were sedentary (RPS 2010).	• Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was forest / woodland / shrubland (RPS 2010). • The singing honeyeater has been observed at Yandin Wind Farm within protaceous heath habitat (Ecologia Environment 2017).	• This species is resident or sedentary across its range, and there is no evidence of large scale seasonal movements. • In the Wheatbelt region, they readily fly over open agricultural land, so they are not very susceptible to population fragmentation (BirdLife Australia 2023m).	• Flight heights recorded during October–November 2008 avifauna surveys for the Project Area and wider locality were below the surveyed RSA (i.e. <40 m), for 29 out of 29 records (RPS 2010). • Flight heights recorded during the September 2017 avifauna surveys at Yandin Wind Farm were all below the surveyed RSA (i.e. <40 m), for two records (Ecologia Environment 2017). • This species forages at lower levels that other honeyeaters. They usually forage on the ground or in low shrubs (BirdLife Australia 2023m).	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were medium (RPS 2010). • They forage singly, and may forage in loose flocks (BirdLife Australia 2023m).
Gliciphila melanops (tawny-crowned honeyeater)	The tawny-crowned honeyeater is found mainly in heathland, preferring low dry shrub heathland (BirdLife Australia 2023n).	Movements recorded during October–November 2008 avifauna surveys for the Project Area were sedentary (RPS 2010).	• Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was heath (RPS 2010). • The tawny-crowned honeyeater has been observed within Badgingarra Wind Farm (Ecoscape 2018).	Regular movements of tawny-crowned honeyeater have been recorded in southern Western Australia, indicating that movements are related to the flowering of plants (BirdLife Australia 2023n).	• Flight heights recorded during October–November 2008 avifauna surveys for the Project Area and wider locality were below the surveyed RSA (i.e. <40 m), for 15 out of 15 records (RPS 2010). • This species forages at all levels, from ground to top of heath vegetation, mostly in low shrubs (BirdLife Australia 2023n).	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were slow-medium (RPS 2010). • This species usually forages singly (BirdLife Australia 2023n). • During local movements, large flocks of up to 150 birds have been recorded (BirdLife Australia 2023n).
Tadorna tadornoides (Australian shelduck)	The Australian shelduck occupies grasslands and croplands, terrestrial wetlands, estuarine waters, and occasionally wooded grasslands (BirdLife Australia 2023o).	Movements recorded during October–November 2008 avifauna surveys for the Project Area were sedentary/dispersive (RPS 2010).	• Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was wetlands (RPS 2010). • High numbers of the Australian shelduck were recorded at the Guraga Lake North and Namming Lake, approximately 20 km south of the Project Area. Namming Lake is surrounded by *Melaleuca* sp. trees that provide roosting and foraging sites for waterbirds and may represent breeding sites (where there are suiably sized tree hollows) for the birds observed within the lake (RPS 2010). • Fluctuating numbers of the Australian shelduck were recorded at a lake/dam to the south-east of Namming Lake, opposite the Brand Highway and Nammegarra Road intersection, located approximately 28 km south-south-east of the Project Area (RPS 2010).	The majority of the Australian shelduck population is migratory between dispersed breeding sites and moulting places (BirdLife Australia 2023o).	• Flight heights recorded during October–November 2008 avifauna surveys for the wider locality were predominantly below the surveyed RSA (i.e. <40 m), for 4,508 out of 4,509 records (99.99%) (RPS 2010). • Flight heights were not recorded within the Project Area (RPS 2010). • This species flies in formation at great heights (BirdLife Australia 2023o).	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were medium (RPS 2010). • They occur as solitary or pairs during the breeding season, and can form large flocks outside of breeding season (BirdLife Australia 2023o).

Species	Behaviour and habitat	Flight or demographic factors	Site use	Flight paths	Flight heights	Soaring, flocking and population numbers
Threskiornis spinicollis (straw-necked ibis)	• The straw-necked ibis is found in grasslands, cultivated land, terrestrial wetlands and, rarely, sheltered marine habitats. They are mainly distributed away from the coast and prefer pastures and cultivated land (BirdLife Australia 2023p). • Near farmland, they prefer roosts with sufficient trees to accommodate whole flocks and near water resource (BirdLife Australia 2023p).	Movements recorded during October–November 2008 avifauna surveys for the Project Area were locally nomadic (RPS 2010).	• Habitat recorded during October–November 2008 avifauna surveys for the Project Area over which the species was recorded was wetlands / grassland (RPS 2010). • The straw-necked ibis has been observed within Badgingarra Wind Farm (Ecoscape 2018).	This species is partially migratory, with some birds locally sedentary near breeding sites, and other birds flying long distances seasonally or in response to local conditions (BirdLife Australia 2023p).	• Flight heights recorded during October–November 2008 avifauna surveys for the Project Area and wider locality were predominantly below the surveyed RSA (i.e. <40 m), for 308 out of 366 records (84%) (RPS 2010). • Flight heights recorded during the September 2017 avifauna surveys at Yandin Wind Farm were all within the surveyed RSA (i.e. 40–152 m), for eight records (Ecologia Environment 2017). • This species can fly freely up to great heights, soaring in thermals up to several hundred metres (BirdLife Australia 2023p).	• Flight speeds recorded October–November 2008 avifauna surveys for the Project Area were slow (RPS 2010). • This species is found in fairly compact flocks feeding on wet or dry grassland or cultivated land, and as loose groups around wetlands (BirdLife Australia 2023o).

APPENDIX D: BIRD AND BAT RISK ASSESSMENT

Table D-1: Conservation significant bird and bat species long-term impact risk assessment

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within proposed RSA (likely to be 44–206 m; maximum of 58–220 m)	Chance of occurrence within proposed transmission line heights (approx. 7.5–40 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
Birds										
Actitis hypoleucos (common sandpiper)	Migratory (EPBC Act, BC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Negligible	Negligible	This species has been concluded as unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species inhabits coastal wetlands and some inland wetlands and is mostly found around muddy margins or rocky shores and rarely on mudflats (DCCEEW 2024b). Suitable habitat for this species is not present within or proximate to the Project Area. • This species has not been recorded within the Project Area. The closest record of this species was associated with the lake north-east of Lake Guruga, located over 19 km south of the Project Area (DBCA 2023a). • Their flight heights when migrating have been known to fly above 2,000 m as required. This flight heights are expected to be above the RSA, however as they are known to occur at ground-level habitats, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. Therefore, it is considered unlikely that the potential impacts will affect this species and so there is a negligible consequence of this happening.
						Death or injury from collision with overhead transmission line	Unlikely	Negligible	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	
Aphelocephala leucopsis (southern whiteface)	Vulnerable (EPBC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Negligible	Negligible	This species has been concluded as highly unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species occupies a wide range of open woodlands and shrublands where there is an understorey of grasses or shrubs or both (DCCEEW 2023c). None of the vegetation types within the Project Area represent the southern whiteface's preferred open woodlands and shrublands where there is an understorey of grasses or shrubs or both, in habitats typically dominated by *Acacia* or *Eucalypts*. • This species has not been recorded within the Project Area. The closest records of this species were associated with the Lake Logue–Indoon System near the Lake Logue Nature Reserve, located approximately 80 km north–north-west (Atlas of Living Australia 2024a). • Records of their flight heights could not be identified. However, they forage almost exclusively on the ground, favouring habitat with low tree densities and an herbaceous understorey litter cover (DCCEEW 2023c). So their flight heights are unlikely to frequently occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. Therefore, it is considered unlikely that the potential impacts will affect this species and so there is a negligible consequence of this happening.
						Death or injury from collision with overhead transmission line	Unlikely	Negligible	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	
Apus pacificus (fork-tailed swift)	Migratory (EPBC Act, BC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Negligible	Negligible	This species has been concluded as highly unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species is essentially an aerial species that occurs widely over a range of habitats. Although it occurs across a wide range of habitats
						Death or injury from collision with	Unlikely	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within proposed RSA (likely to be 44–206 m; maximum of 58–220 m)	Chance of occurrence within proposed transmission line heights (approx. 7.5–40 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
						overhead transmission line				within Australia it is mostly observed over inland plains and is seen over coastal beaches and cliffs (DCCEEW 2024d). Potential aerial foraging habitat over dry open habitats, including riparian woodland, heathland and farmland is present within the Project Area. • The closest record of this species was approximately 25 km to the north of the Project Area (DBCA 2023a). • This species has not been recorded within the Project Area or its wider locality, however it may occur locally during dispersive movements particularly in the summer months (RPS 2010). Local occurences are likely to be intermittent spasmodic seasonal occurrences. • An utilisation survey was undertaken by experienced ornithologists from August 2024 to January 2025, which overlapped the period when fork-tailed swifts may be expected in Western Australia (in late October, December and January) (BCE 2025). No fork-tailed swifts were seen or heard during the large amount of sampling undertaken when they may be present. In December 2024, a storm-front was observed to the north east of the Project Area, which would provide conditions conducive for the fork-tailed swift. A long-term monitoring project (30 years; approximately 1,320 person-days) in the adjacent Cooljarloo mine site has not encountered fork-tailed swifts, and Dr Mike Bamford has observed the species twice in the region during a bird-watching career spanning nearly half a century. Fork-tailed swifts are likely to occur very infrequently over the Waddi Wind Farm. • Their flight heights range from 1 m to at least 300 m above ground, and likely much higher (DCCEEW 2024d). There is potential for this species to fly at transmission line heights (approximately 7.5–40 m) and RSA (likely to be 44–206 m) if flocks were to move through the area under some seasonal conditions. Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low–moderate. • This species has considerable aerial ability and is likely to easily avoid collision (RPS 2010). • This species is a non–breeding visitor to all states and territories of Australia (DCCEEW 2024d). As such, this species is widely dispersed within areas of suitable habitat within its range and its habitat is relatively widely dispersed. • There are no population estimates in Australia, however the largest flocks recorded have been 90,000 birds and 50,000 birds in Victoria and 50,000 birds in New South Wales (DCCEEW 2024d). Therefore, it is considered unlikely that the potential impacts will affect this species and so there is a negligible consequence of this happening.
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within proposed RSA (likely to be 44–206 m; maximum of 58–220 m)	Chance of occurrence within proposed transmission line heights (approx. 7.5–40 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
Arenaria interpres (ruddy turnstone)	Migratory (EPBC Act, BC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Negligible	Negligible	This species has been concluded as unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species exhibits strong preference for beaches or rocky shores and live near platforms and shelves, often with tidal pools and rocky, gravel or shingle beaches, and can inhabit sand, coral, or shell beaches. They can live away from coastal areas in habitats such as inland lakes, riverbeds, and adjacent farmland (DCCEEW 2024e). • This species has not been recorded within the Project Area. The closest records of this species were from 1977 and 1979 within a radial distance of up to approximately 110 km from the Project Area (DBCA 2023a). • Their flight heights when migrating are expected to be above the RSA, as they have been observed migrating at heights up to 1,000 m (Piersma et al. 1999). However, as they are known to occur at ground-level habitats they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. Therefore, it is considered unlikely that the potential impacts will affect this species and so there is a negligible consequence of this happening.
						Death or injury from collision with overhead transmission line	Unlikely	Negligible	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	
Botaurus poiciloptilus (Australasian bittern)	Endangered (EPBC Act, BC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Low	Negligible	This species has been concluded as highly unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species favours permanent and seasonal freshwater habitats, particularly those dominated by sedges, rushes, and reeds or cutting grass over a peaty or muddy substrate (TSSC 2019). Suitable habitat for this species is not present within or proximate to the Project Area. • Furthermore, habitat critical to the survival of this species identified in its Recovery Plan is not present within or proximate to the Project Area. This habitat can be considered to include any natural wetland habitat where the species is known or likely to occur (breeding or foraging habitat) within the indicative distribution map (DCCEEW 2023c). This species or species habitat was not identified in the Project Area's PMST results (Appendix D). • This species has not been recorded within the Project Area. The closest record of this species was associated with the Karo Swamp, located approximately 25 km south of the Project Area, and was collected in 1921 (DBCA 2023a). • Their flight heights have been recorded at low altitudes (<100 m) and up to 691 m above sea level (O'Donnell and Hugh 2016), which partially overlaps the RSA heights (18–180 m). As they are known to occur at ground-level habitats, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. • Waterbirds can be expected only as vagrants or otherwise in small numbers on wetlands in the region (RPS 2010). • This species occurs throughout Australia. Due to the lack of suitable habitat and recent records within and proximate to the Project Area, the population of this species is not expected to be concentrated or abundant within the Project Area. • There are suggested to be less than 1,000 mature Australasian bittern within the Australian population (TSSC 2019). • This species is listed as Endangered under the EPBC Act and BC Act.
						Death or injury from collision with overhead transmission line	Unlikely	Low	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within proposed RSA (likely to be 44–206 m; maximum of 58–220 m)	Chance of occurrence within proposed transmission line heights (approx. 7.5–40 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
										Therefore, it is considered unlikely that the potential impacts will affect this species, but with a low consequence assigned to the potential impacts resulting in death or injury considering its high conservation status and low population size in Australia. A negligible consequence has been assigned to the potential impact from changes to site utilisation as suitable habitat is not present within or proximate to the Project Area.
Calidris acuminata (sharp-tailed sandpiper)	Migratory (EPBC Act, BC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Negligible	Negligible	This species has been concluded as unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species inhabits the muddy edges of shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh, or other low vegetation. This includes lagoons, swamps, lakes and pools near the coast, and dams, waterholes, soaks, bore drains and bore swamps, saltpans, and hypersaline salt lakes inland (DCCEEW 2024f). Suitable habitat for this species is not present within or proximate to the Project Area. • This species has not been recorded within the Project Area. The closest records of this species were associated with the lake north-east of Lake Guruga, over 19 km south of the Project Area (DBCA 2023a). • Migrating flight heights for this species have been recorded between 80–975 m (Lindström et al. 2011), which partially overlaps the RSA heights (18–180 m). As they are known to occur at ground-level habitats, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. Therefore, it is considered unlikely that the potential impacts will affect this species and so there is a negligible consequence of this happening.
						Death or injury from collision with overhead transmission line	Unlikely	Negligible	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	
Calidris canutus (red knot)	Endangered (EPBC Act, BC Act) Migratory (EPBC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Negligible	Negligible	This species has been concluded as unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species inhabits inhabits intertidal mudflats, sandflats and sandy beaches of sheltered coasts, and in estuaries, inlets, harbours and lagoons, and they are occasionally seen in terrestrial saline wetlands (DCCEEW 2024g). Suitable habitat for this species is not present within or proximate to the Project Area. • This species has not been recorded within the Project Area. There are no records of this species within a 25 km radius of the Project Area (DBCA 2023a). • Migrating flight heights for this species have been recorded at an average of 409 m (Green 2004), up to 1,000 m (Piersma et al. 1999), and ranging from 505–1,600 m. As such they are likely to fly above the RSA heights (18–180 m). However, as they are known to occur at ground-level habitats, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. Therefore, it is considered unlikely that the potential impacts will affect this species and so there is a negligible consequence of this happening.
						Death or injury from collision with overhead transmission line	Unlikely	Negligible	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	
Calidris ferruginea (curlew sandpiper)	Critically Endangered (EPBC Act, BC Act) Migratory (EPBC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Low	Negligible	This species has been concluded as unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species mainly occurs on intertidal mudflats in sheltered coastal areas and around non–tidal swamps, lakes, and lagoons near the coast.
						Death or injury from collision with	Unlikely	Low	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within proposed RSA (likely to be 44–206 m; maximum of 58–220 m)	Chance of occurrence within proposed transmission line heights (approx. 7.5–40 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
						overhead transmission line				They are also recorded inland, though less often, including around ephemeral and permanent lakes, dams, waterholes and bore drains (DCCEEW 2024h). Suitable habitat for this species is not present within or proximate to the Project Area.
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	• This species has not been recorded within the Project Area. The closest record of this species was associated with the lake north-east of Lake Guruga, over 19 km south of the Project Area (DBCA 2023a). • Migrating flight heights for this species have been recorded at an average of 1,878 m (Geering et al. 2007). As such they are likely to fly above the RSA heights (18–180 m). However, as they are known to occur at ground-level habitats, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. Therefore, it is considered unlikely that the potential impacts will affect this species, but with a low consequence assigned to the potential impacts resulting in death or injury considering its high conservation status. A negligible consequence has been assigned to the potential impact from changes to site utilisation as suitable habitat is not present within or proximate to the Project Area.
Calidris melanotos (pectoral sandpiper)	Migratory (EPBC Act, BC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Negligible	Negligible	This species has been concluded as unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species prefers shallow fresh to saline wetlands, and can be found in estuaries, lakes, river pools, artificial wetlands, coastal lagoons, bays, inundated grasslands, saltmarshes and flood plains. They usually inhabit coastal or near coastal habitat but can be found further inland occasionally (DCCEEW 2024i). Suitable habitat for this species is not present within or proximate to the Project Area. • This species has not been recorded within the Project Area. There are no records of this species within a 25 km radius of the Project Area (DBCA 2023a). • Migrating flight heights for this species have been recorded at an average of 1,222 m (Alerstam and Gudmundsson 1999). As such they are likely to fly above the RSA heights (18–180 m). However, as they are known to occur at ground-level habitats, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. Therefore, it is considered unlikely that the potential impacts will affect this species and so there is a negligible consequence of this happening.
						Death or injury from collision with overhead transmission line	Unlikely	Negligible	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	
Calidris ruficollis (red-necked stint)	Migratory (EPBC Act, BC Act)	Low	Moderate	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Negligible	Negligible	This species has been concluded as unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species inhabits coastal areas, such as estuaries within intertidal mudflats, lagoons, bays and sheltered inlets. They are also found in ephemeral and permanent shallow wetlands near the coast or inland lakes, riverbanks, dams, soaks, and pools in salt flats. They sometimes use flooded paddocks or damp grasslands (DCCEEW 2024j). Suitable habitat for this species is not present within or proximate to the Project Area. • This species has not been recorded within the Project Area. This species has been observed at the southern shoreline habitats of Lake Guraga and nearby lakes, which is located approximately 20 km to the south of
						Death or injury from collision with overhead transmission line	Unlikely	Negligible	Negligible	
						Changes to utilisation of the site and its	Unlikely	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within proposed RSA (likely to be 44–206 m; maximum of 58–220 m)	Chance of occurrence within proposed transmission line heights (approx. 7.5–40 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
						surrounds from disturbance				the Project Area. They were observed foraging during the night at the north-east lake and movements were limited to accessing different foraging areas of the shoreline (RPS 2010). • Flight heights of this species were recorded in the wider locality as less than 40 m for 104 records (RPS 2010). As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. • Waterbirds can be expected only as vagrants or otherwise in small numbers on wetlands in the region (RPS 2010). Therefore, it is considered unlikely that the potential impacts will affect this species and so there is a negligible consequence of this happening.
Calyptorhynchus banksii naso (forest red-tailed black cockatoo)	Vulnerable (EPBC Act, BC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Rare	Negligible	Negligible	This species has been concluded as highly unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species' breeding habitat comprises woodland or forest and partially cleared woodland or forest including isolated trees. They nest in hollows of live or dead trees, and many Eucalyptus species may provide suitable hollows. Any tall trees may provide roosting habitat, particularly jarrah, marri, karri, blackbutt, tuart, introduced eucalypts or large trees on forest edges. Forest red-tailed black cockatoos forage primarily on seeds of jarrah and marri in woodlands and forest, and edges of karri forests, including wandoo and blackbutt. They also forage on cones of Allocasuarina, fruits of snottygobble (*Persoonia longifolia*) and mountain marri (*Corymbia haematoxylon*), and on less important food sources, such as blackbutt, bullich, *Allocasuarina fraseriana*, Hakea sp., tuart, redheart moit (*Eucalyptus decipens*) and bushy yate (*Eucalyptus lehmanni*) (DAWE 2022). • Foraging evidence of marri nuts with chew marks consistent with forest red-tailed black cockatoo were found under a marri tree north of the Waddi Road reserve, located within the roost area in the Project Area's north-eastern extent (BCE 2025). The chew marks were recent but not fresh. Landowners advised that forest red-tailed black cockatoos are seen and heard in the area very infrequently and possibly not every year. Forest red-tailed black cockatoos have not been observed or heard during the avian surveys conducted within the Project Area (BCE 2025, RPS 2014, RPS 2010a), or recorded during surveys and mortality monitoring undertaken for the neighbouring wind farms (Ecologia Environment 2017; Alinta Energy 2022; Alinta Energy 2024; Ecoscape 2018, Ecoscape 2019a, Ecoscape 2019b and Ecoscape 2020) • The Project Area is outside of the forest red-tailed black cockatoo's modelled distribution (DAWE 2022). The northernmost extent of where the modelled species or species habitat may occur is near Boonanarring Nature Reserve, which is located over 70 km south of the Project Area • There are no records of forest red-tailed black cockatoo in the DBCA's database within a 25 km radius of the Project Area. There are no Atlas of Living Australia occurrence records of forest red-tailed black cockatoo proximate to the Project Area, with the nearest record located approximately 65 km to the south-east observed in 2018. • Flight heights are anticipated to similar to the Carnaby's cockatoo flight heights recorded by BCE (2025). Therefore, it is considered unlikely that the potential impacts will affect this species and so there is a negligible consequence of this happening.
						Death or injury from collision with overhead transmission line	Rare	Negligible	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Rare	Negligible	Negligible	
Charadrius leschenaultii		Low	Low	Low	Low	Death or injury from collision with	Rare	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within proposed RSA (likely to be 44–206 m; maximum of 58–220 m)	Chance of occurrence within proposed transmission line heights (approx. 7.5–40 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
(greater sand plover)	Migratory (EPBC Act) Vulnerable (BC Act)					wind turbines and barotrauma				This species has been concluded as highly unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species mainly occurs on sheltered sandy, shelly, or muddy beaches with large intertidal mudflats or sandbanks, as well as sandy estuarine lagoons and rock platforms, sand cays, small rocky islands, and inshore reefs. They seldom occur in shallow freshwater wetlands (DCCEEW 2024k). Suitable habitat for this species is not present within or proximate to the Project Area. • This species has not been recorded within the Project Area. The closest record of this species was from 1977 within a radial distance of up to approximately 110 km from the Project Area (DBCA 2023a). • Migrating flight heights for this species have been recorded at a maximum average of 804 m, ranging from 505–1,600 m Tulp et al. 1994). As such they are likely to fly above the RSA heights (18–180 m). However, as they are known to occur at ground-level habitats, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. Therefore, it is considered rare that the potential impacts will affect this species and so there is a negligible consequence of this happening.
						Death or injury from collision with overhead transmission line	Rare	Negligible	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Rare	Negligible	Negligible	
Falco peregrinus (peregrine falcon)	Other Specially Protected (BC Act)	Low-Moderate	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Negligible	Negligible	This species has been concluded as possible to occur within the Project Area. The following information was considered for the risk rating: • This species is widespread in a range of environments across Australia but is often associated with cliff–lines or scattered tall trees that provide it with nest sites (RPS 2014). They prefer habitat over wooded and forested lands, open country, and wetlands of tropical and temperate areas (RPS 2010) and require abundant prey. The Project Area is situated within large areas of agricultural land used for cropping, as such seasonal influxes of prey species (mediums sized cockatoos such as galahs and corellas) may attract predatory species (RPS 2014). • The peregrine falcon requires bare rock faces on which to roost and nest and as there are few, if any opportunities, within the Project Area, they are not expected to be found at this location on a regular basis (RPS 2014). • This species has not been recorded within the Project Area. This species has been observed once off site within the vicinity and wider locality of the Project Area. As such, should be considered a potential occasional visitor (RPS 2010). This species has also been recorded in the Minyulo Brook, less than 1 km to the south-east of the Project Area (DBCA 2023a). • This species is an aerial specialist and may at times fly at the proposed RSA (likely to be 44–206 m) and transmission lines heights (approximately 7.5–40 m) and above. Peregrine falcons will pursue flying birds and they are able to hunt at high speeds and from great heights (Australian Museum 2019). • Due to its considerable aerial ability it is considered unlikely that peregrines would collide with turbine blades during normal flight, but it is possible that collision could occur during hunting manoeuvres while the bird might be focussed on its prey. However, the chance of this occurrence is considered remote, due to the low frequency of local observations (RPS 2014). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low.
						Death or injury from collision with overhead transmission line	Unlikely	Negligible	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within proposed RSA (likely to be 44–206 m; maximum of 58–220 m)	Chance of occurrence within proposed transmission line heights (approx. 7.5–40 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
										Therefore, it is considered unlikely that the potential impacts will affect this species and so there is a negligible consequence of this happening.
Limosa lapponica (bar-tailed godwit)	Migratory (EPBC Act, BC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Rare	Negligible	Negligible	This species has been concluded as highly unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species is found mainly in coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons, and bays. It is rarely found on inland wetlands or in areas of short grass, such as farmland, paddocks, and airstrips (DCCEEW 2024l). Suitable habitat for this species is not present within or proximate to the Project Area. • This species has not been recorded within the Project Area. The closest records of this species were from 1977 and 1979 within a radial distance of up to approximately 110 km from the Project Area (DBCA 2023a). • Migrating flight heights for this species have been recorded at a maximum average of 804 m, ranging from 505–1,600 m Tulp et al. 1994), an average of 1,317 ± 1,316 m (Senner et al. 2018), an average of 2,223 ± 481 m (Green 2004), and up to 2,000 m (Piersma et al. 1999). As such they are likely to fly above the RSA heights (18–180 m). However, as they are known to occur at ground-level habitats, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. Therefore, it is considered rare that the potential impacts will affect this species and so there is a negligible consequence of this happening.
						Death or injury from collision with overhead transmission line	Rare	Negligible	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Rare	Negligible	Negligible	
Leipoa ocellata (malleefowl)	Vulnerable (EPBC Act, BC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Rare	Low	Negligible	This species has been concluded as highly unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species occurs in temperate Australia largely limited to the semi-arid zone. They are mostly limited to areas of inland semi-arid scrub, this species prefers a dry environment with low–growing eucalypt trees and shrubs, referred to as mallee country. In Western Australia, they are found in some shrublands dominated by acacia and occasionally in woodlands dominated by eucalypts such as wandoo, marri, and mallet (*Eucalyptus astringens*). Malleefowl distribution within the Wheatbelt region of Western Australia was found to be associated with landscapes that had lower rainfall, greater amounts of mallee and shrubland that occur as large remnants, and lighter soil surface textures (Benshemesh 2007). None of the Project Area's vegetation types were comprised of mallee shrubland or shrublands dominated by acacia, however woodland vegetation was identified (RPS 2023; Ecologia Environment 2016; Outback Ecology 2014; Outback Ecology 2010). • Native vegetation within the Project Area is fragmented by areas cleared for agricultural land uses. The fragmented nature of native vegetation in the Project Area and its surroundings would make it difficult for the malleefowl to persist. • This species has not been recorded within the Project Area. There are no records of this species within a 25 km radius of the Project Area (DBCA 2023a). • The malleefowl spends most of its time on the ground and does not fly at RSA heights (Brett Lane & Associates Pty Ltd 2017). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. Therefore, it is considered rare that the potential impacts of collision with wind turbines, barotrauma or collision with transmission lines will affect this
						Death or injury from collision with overhead transmission line	Rare	Low	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within proposed RSA (likely to be 44–206 m; maximum of 58–220 m)	Chance of occurrence within proposed transmission line heights (approx. 7.5–40 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
										species as it spends most of its time on the ground. A low consequence has been assigned to these potential impacts considering its high conservation status. It is considered unlikely that the potential impacts of changes to site utilisation will affect this species, as large extents of suitable habitat are not present within or proximate to the Project Area, and so there is a negligible consequence of this happening.
Motacilla cinerea (grey wagtail)	Migratory (EPBC Act, BC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Rare	Negligible	Negligible	This species has been concluded as highly unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species is found around fast flowing mountain streams, often in forested areas, as well as lowland watercourses such as canals and rivers. Outside of the breeding season it is found in a greater variety of habitats, including farmlands, forested tracks, plantations and even town centres (BirdLife International 2024a). This species is recorded almost exclusively recorded near water, and therefore suitable habitat for this species is not present within or proximate to the Project Area. • This species has not been recorded within the Project Area. There are no records of this species within a 25 km radius of the Project Area (DBCA 2023a). • This species has been observed at heights of 159.7 m ± 98 cm (Rodríguez and Rodríguez 2007) and between 2,200–3,700 m (Desfayes and Praz 1978), which partially overlaps the RSA heights (18–180 m). As they are known to occur at ground-level habitats, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. • This species is a rare non–breeding summer visitor to northern Australia (Department of the Environment 2015). Therefore, it is considered rare that the potential impacts of collision with wind turbines, barotrauma or collision with transmission lines will affect this species, as suitable habitat is not present within or proximate to the Project Area and infrequently fly within the collision zones, so there is a negligible consequence of this happening. It is considered unlikely that the potential impacts of changes to site utilisation will affect this species, as suitable habitat is not present within or proximate to the Project Area, and so there is a negligible consequence of this happening.
						Death or injury from collision with overhead transmission line	Rare	Negligible	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	
Numenius madagascariensis (eastern curlew)	Critically Endangered (EPBC Act, BC Act) Migratory (EPBC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Rare	Moderate	Negligible	This species has been concluded as highly unlikely to occur within the Project Area (Table 11). The following information was considered for the risk rating: • This species is most associated with sheltered coasts, especially estuaries, bays, harbors, inlets and coastal lagoons, with large intertidal mudflats or sandflats, often with beds of seagrass. Occasionally, the species occurs on ocean beaches (often near estuaries), and coral reefs, rock platforms, or rocky islets (DCCEEW 2024m). Suitable habitat for this species is not present within or proximate to the Project Area. • The eastern curlew is rarely recorded inland within Australia (DCCEEW 2024m). • This species has not been recorded within the Project Area. There are no records of this species within a 25 km radius of the Project Area (DBCA 2023a). • Migrating flight heights for this species have been recorded at up to 5,550 m and well below 1,000 m particularly along the coast, at a median
						Death or injury from collision with overhead transmission line	Rare	Moderate	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within proposed RSA (likely to be 44–206 m; maximum of 58–220 m)	Chance of occurrence within proposed transmission line heights (approx. 7.5–40 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
										of 538 m flying over land and a median of 156 m flying over sea (Galtbalt et al. 2021), and a maximum average of 804 m, ranging from 505–1,600 m Tulp et al. 1994). As such they are likely to fly above the RSA heights (18–180 m). However, as they are known to occur at ground-level habitats, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. • This species has a primarily coastal distribution. Due to the lack of suitable habitat and records within and proximate to the Project Area, the population of this species is not expected to be concentrated or abundant within the Project Area. • There are estimated to be 22,500 mature indivduals in the Australian population (DCCEEW 2024m). • This species is listed as Critically Endangered under the EPBC Act and BC Act. Therefore, it is considered rare that the potential impacts of collision with wind turbines, barotrauma or collision with transmission lines will affect this species as it usually flies above the RSA. A moderate consequence has been assigned to these potential impacts considering its high conservation status and low population size in Australia. It is considered unlikely that the potential impacts of changes to site utilisation will affect this species, as suitable habitat is not present within or proximate to the Project Area, and so there is a negligible consequence of this happening.
Oxyura australis (blue-billed duck)	Priority 4	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Negligible	Negligible	This species has been concluded as highly unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species is wholly aquatic and is rarely found on land (Australian Museum 2020). They are found in terrestrial wetlands, saline or freshwater, and nest in sedges, rushes, paperbark and lignum (BirdLife International 2024b). The Project Area is intersected by an ephemeral watercourse, which does not represent suitable habitat for the blue–billed duck. There are no permanent water bodies within the Project Area. • This species has not been recorded within the Project Area. This species has been observed at Namming Lake, located to the south of Guraga Lake, located approximately 24 km south of the Project Area (RPS 2010). This species has also been recorded within a 25 km radius in areas associated with water sources, including near farm lakes (approximately 9 km to the east), near Guraga Lake and its north-eastern lake (over 19 km to the south) and near wetlands (over 13 km to the south-west) (DBCA 2023a). • Records of their flight heights could not be identified. However, they prefer to stay in water and largely forage under the surface, they respond to threats by diving rather than flying away and they require very long distance to attain flight speed and slowly gain height (Cull, Newman and Plew 2021). So their flight heights are unlikely to frequently occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. Therefore, it is considered unlikely that the potential impacts will affect this species and so there is a negligible consequence of this happening.
						Death or injury from collision with overhead transmission line	Unlikely	Negligible	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	
		Low	Low	Low	Low	Death or injury from collision with	Unlikely	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within proposed RSA (likely to be 44–206 m; maximum of 58–220 m)	Chance of occurrence within proposed transmission line heights (approx. 7.5–40 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
Pandion haliaetus (osprey)	Migratory (EPBC Act, BC Act)					wind turbines and barotrauma				This species has been concluded as highly unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species is found in littoral and coastal habitats and terrestrial wetlands of tropical and temperate Australia and offshore islands. They are mostly found in coastal areas but occasionally travel inland along major rivers, particularly in northern Australia. They exhibit a preference for coastal cliffs and elevated islands in some parts of their range, but may also occur on low sandy, muddy, or rocky shores and over coral cays (DCCEEW 2024n). Suitable habitat for this species is not present within or proximate to the Project Area. • This species has not been recorded within the Project Area. There are no records of this species within a 25 km radius of the Project Area (DBCA 2023a). • Migrating flight heights for this species have been recorded at an average 363 m ± 375 m flying over land, ranging from 16–1,974 m, and an average 176 m ± 169 m flying over sea, ranging from –9–899 m (Duriez et al. 2018). As such they are likely to fly within and above the RSA heights (18–180 m). However, as they are known to occur at ground-level habitats, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. Therefore, it is considered unlikely that the potential impacts will affect this species and so there is a negligible consequence of this happening.
						Death or injury from collision with overhead transmission line	Unlikely	Negligible	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	
Pezoporus flaviventris or *Pezoporus wallicus flaviventris* (western ground parrot)	Critically Endangered (EPBC Act, BC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Rare	Moderate	Negligible	This species has been concluded as locally extinct to occur within the Project Area. The following information was considered for the risk rating: • This species occupies low, dry or swampy near–coastal heathlands on sand plains and uplands. The species is usually recorded in habitats that are unburnt for long periods of time. The western ground parrot's distribution is restricted to near coastal regions of south-western Western Australia. They are currently known to occur in two locations, Fitzgerald River National Park and Cape Arid National Park– Nuytsland Nature Reserve (TSSC 2013). The Project Area is significantly removed from where the western ground parrot populations are known to occur in the Fitzgerald River National Park and Cape Arid National Park– Nuytsland Nature Reserve (TSSC 2013). This species is likely to be locally extinct in the locality of the wind farm. • Furthermore, habitat critical to the survival of this species identified in its Recovery Plan is not present within or proximate to the Project Area. This habitat can be considered to include the current area of occupancy, possible other areas used, and potential habitat into which this species could disperse or be translocated (Department of Parks and Wildlife 2014). The Project Area is outside its current area of occupancy and is not expected to be utilised or dispersed into as the nearest record was over 500 km to the south-east (Atlas of Living Australia 2024b). • This species has not been recorded within the Project Area. There are no records of this species within a 25 km radius of the Project Area (DBCA 2023a). • The western ground parrot spends most of its time on the ground in dense heathlands, and it is only seen rarely (Molley et al 2020). This species is not expected to fly within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m).
						Death or injury from collision with overhead transmission line	Rare	Negligible	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Rare	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within proposed RSA (likely to be 44–206 m; maximum of 58–220 m)	Chance of occurrence within proposed transmission line heights (approx. 7.5–40 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
										Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. • This species has declined to one population, estimated to comprise of less than 150 individuals (Molley et al 2020). • This species is listed as Critically Endangered under the EPBC Act and BC Act. Therefore, it is considered rare that the potential impacts of collision with wind turbines, barotrauma or collision with transmission lines will affect this species as it is restricted to two known locations. A moderate consequence has been assigned to these potential impacts considering its high conservation status and low population size in Australia. It is considered rare that the potential impacts of changes to site utilisation will affect this species, as it is restricted to two known locations, and so there is a negligible consequence of this happening.
Platycercus icterotis xanthogenys (western rosella (inland))	Priority 4	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Negligible	Negligible	This species has been concluded as highly unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species generally found in forested areas but also feeds on grassy clearings and pasture. They occupy eucalypt and sheoak woodlands and scrubs, especially those containing wandoo (*Eucalyptus wandoo*), flooded gum (*Eucalyptus rudis*), salmon gum (*Eucalyptus salmonophloia*), tall mallee and rock sheoak (*Allocasuarina huegeliana*) (Department of Environment and Conservation 2009a). The Project Area is predominantly comprised of agricultural land used cropping with mapped areas of Proteaceous scrub heath of the Kwongan and *Eucalyptus todtiana* Woodland vegetation, which is potentially suitable foraging habitat for the western rosella (inland) (RPS 2023 and Outback Ecology 2014). However, this does not reflect the floristic composition of their favoured woodlands and scrub habitat as no wandoo, flooded gum, salmon gum and rock sheoak have been recorded within the Project Area. • The Project Area is over 100 km removed from where the western rosella (inland)'s distribution extent is mapped over (Department of Environment and Conservation 2009a). This species is highly unlikely to occur within the Project Area due to the absence of their preferred habitat and being located outside of its distribution and range. • This species has not been recorded within the Project Area. The closest records were from 1977 and 1979 within radial distances of up to approximately 10 km and 50 km, located 14 km to the east (DBCA 2023a). • The western rosella (inland) generally flies closer to the ground (RPS 2014). However, they can fly at RSA heights (18–180 m) and transmission line heights (approximately 7.5–40 m) (Brett Lane & Associates Pty Ltd 2017). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. Therefore, it is considered unlikely that the potential impacts will affect this species and so there is a negligible consequence of this happening.
						Death or injury from collision with overhead transmission line	Unlikely	Negligible	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	
Plegadis falcinellus (glossy ibis)	Migratory (EPBC Act, BC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Negligible	Negligible	This species has been concluded as highly unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species are found in freshwater marshes at the edges of lakes and rivers, lagoons, flood plains, wet meadows, swamps, reservoirs, sewage ponds, rice fields and cultivated areas under irrigation. They are occasionally located in coastal locations such as deltas, saltmarshes,
						Death or injury from collision with overhead transmission line	Unlikely	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within proposed RSA (likely to be 44–206 m; maximum of 58–220 m)	Chance of occurrence within proposed transmission line heights (approx. 7.5–40 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	coastal lagoons, and estuaries (DCCEEW 2024o). Suitable habitat for this species is not present within or proximate to the Project Area. • They feed on mainly aquatic invertebrates/ insects, frogs and tadpoles, fish, dryland invertebrates, lizards, small snakes and nesting birds (DCCEEW 2024o), which are found in ground-level habitats. • This species has not been recorded within the Project Area. The closest records were associated with water sources, one record near a floodplain wetland and stream (over 8 km to the south-west) and two records near the lake adjacent to Guraga Lake (over 19 km to the south) (DBCA 2023a). • Records of their flight heights could not be identified. During migration, they may fly at or above RSA heights (18–180 m). However, as they are known to occur at ground-level habitats, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. Therefore, it is considered unlikely that the potential impacts will affect this species and so there is a negligible consequence of this happening.
Pluvialis fulva (Pacific golden plover)	Migratory (EPBC Act, BC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Negligible	Negligible	This species has been concluded as highly unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species utilises coastal habitats in Australia for their non–breeding grounds, however they occasionally occur around inland wetlands. They inhabit beaches, mudflats and sandflats in sheltered areas, such as lagoons, estuaries and harbours, and also in saltwork evaporation ponds. They are infrequently recorded around terrestrial wetlands, such as fresh, brackish, or saline lakes, billabongs, pools, swamps and wet claypans (DCCEEW 2024p). Suitable habitat for this species is not present within or proximate to the Project Area. • This species has not been recorded within the Project Area. This species has been observed flying from Thetis Lake, approximately 35 km west of the Project Area, towards likely a shallow saline lake in the Nambung National Park (RPS 2010). • Movements of this migratory species from the northern hemisphere are likely to be made along near coastal habitats. They also have been recorded associated with the lake adjacent to Guraga Lake over 19 km to the south (DBCA 2023a). • Records of their flight heights could not be identified. During migration, they may fly at or above RSA heights (18–180 m). However, as they are known to occur at ground-level habitats, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. Therefore, it is considered unlikely that the potential impacts will affect this species and so there is a negligible consequence of this happening.
						Death or injury from collision with overhead transmission line	Unlikely	Negligible	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	
Pluvialis squatarola (grey plover)	Migratory (EPBC Act, BC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Negligible	Negligible	This species has been concluded as highly unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species inhabits sheltered embayments, estuaries and lagoons with mudflats and sandflats, and occasionally on rocky coasts. They are found around terrestrial wetlands, such as near-coastal lakes and swamps or salt lakes. Further inland, they are infrequently found near
						Death or injury from collision with overhead transmission line	Unlikely	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within proposed RSA (likely to be 44–206 m; maximum of 58–220 m)	Chance of occurrence within proposed transmission line heights (approx. 7.5–40 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	wetlands or salt–lakes (DCCEEW 2024q). Suitable habitat for this species is not present within or proximate to the Project Area. • This species has not been recorded within the Project Area. The closest record of this species was from 1977 within a radial distance of up to approximately 110 km from the Project Area (DBCA 2023a). • Migrating flight heights for this species have been recorded at a maximum average of 804 m, ranging from 505–1,600 m (Tulp et al. 1994), an average of 1,726 ± 685 m (Green 2004) and up to 2,000 m (Piersma et al. 1999). As such they are likely to fly within and above the RSA heights (18–180 m). However, as they are known to occur at ground-level habitats, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. Therefore, it is considered unlikely that the potential impacts will affect this species and so there is a negligible consequence of this happening.
Rostratula australis (Australian painted snipe)	Endangered (EPBC Act, BC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Low	Negligible	This species has been concluded as highly unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species inhabits shallow terrestrial wetlands, including permanent and temporary lakes, claypans and swamps, waterlogged grasslands, dams, rice crops and sewage farms. Their habitats typically include emergent tussocks of grass, rushes, sedges, reeds, or samphire, often with scattered lignum, tea–tree (*Melaleuca*) or cane grass. This species generally occurs within dense cover when foraging, however they may forage over open areas (grasslands, ploughed land, or over nearby mudflats (DCCEEW 2024r). Suitable habitat for this species is not present within or proximate to the Project Area. • Furthermore, habitat critical to the survival of this species identified in its Recovery Plan is not present within or proximate to the Project Area. This habitat can be considered to comprise (Australian Government 2022): – Any natural wetland habitat where the species is known or likely to occur (especially with suitable breeding habitat) within the indicative distribution map. – Any location outside the above area that may be periodically occupied by Australian Painted Snipe when wetland conditions are favourable. • This species or species habitat is likely occur within the Project Area in the PMST results (Appendix D). However as stated above, the Project Area does not comprise any natural wetland habitats. • This species has not been recorded within the Project Area. There are no records of this species within a 25 km radius of the Project Area (DBCA 2023a). • Records of their flight heights could not be identified. The movement patterns for this species are not well known. They are possibly dispersive, migratory, or may be described as nomadic where movements have no fixed spatial or temporal pattern (DCCEEW 2022). As they are known to occur at ground-level habitats, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. • This species' total population is not known, however it is estimated to range from a few hundred individuals to 5,000 breeding adults (DCCEEW 2024r).
						Death or injury from collision with overhead transmission line	Unlikely	Low	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within proposed RSA (likely to be 44–206 m; maximum of 58–220 m)	Chance of occurrence within proposed transmission line heights (approx. 7.5–40 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
										• This species is listed as Endangered under the EPBC Act and BC Act. Therefore, it is considered unlikely that the potential impacts will affect this species, but with a low consequence assigned to the potential impacts resulting in death or injury considering its high conservation status and low population. A negligible consequence has been assigned to the potential impact from changes to site utilisation as suitable habitat is not present within or proximate to the Project Area.
Sternula nereis nereis (Australian fairy tern)	Vulnerable (EPBC Act, BC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Rare	Low	Negligible	This species has been concluded as highly unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species nests on sheltered sandy beaches, spits and banks above the high tide line and below vegetation and has been found in embayments of a variety of habitats including offshore, estuarine or lacustrine (lake) islands, wetlands and mainland coastline (DCCEEW 2024s). Suitable habitat for this species is not present within or proximate to the Project Area. • Furthermore, habitat critical to the survival of this species identified in its Recovery Plan is not present within or proximate to the Project Area. This habitat can be considered to comprise (DAWE 2022b): – Suitable habitat where the species is known or likely to breed or forage as shown in the indicative distribution map. – Any suitable habitat outside the above area that may be periodically occupied by non–breeding Australian fairy terns. • This species or species habitat may occur within the 25 km buffer area only in the Project Area's PMST results (Appendix D). As stated above, the Project Area does not comprise suitable habitat for this species' foraging or breeding requirements. • This species has not been recorded within the Project Area. There are no records of this species within a 25 km radius of the Project Area (DBCA 2023a). • Records of their flight heights could not be identified. This species are spring–summer (September to March) breeding migrants. The southern part of the meta-population moves through the southern and central Abrolhos Islands in late March–early April, and they winter at North Island at the northern tip of the Houtman Abrolhos and on the lower mid-west coast at Wedge Island (Dunlop and Greenwell 2021). Noting that their movements are distributed along coastline habitats and they are unlikely to fly over land frequently, their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. • This species' total population is estimated to be 3,000–9,000 mature indivduals (DCCEEW 2024s). • This species is listed as Vulnerable under the EPBC Act and BC Act. Therefore, it is considered rare that the potential impacts will affect this species, but with a low consequence assigned to the potential impacts resulting in death or injury considering its moderate conservation status and low population. A negligible consequence has been assigned to the potential impact from changes to site utilisation as suitable habitat is not present within or proximate to the Project Area.
						Death or injury from collision with overhead transmission line	Rare	Low	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Rare	Negligible	Negligible	
Thalasseus bergii (crested tern)	Migratory (EPBC Act, BC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Rare	Negligible	Negligible	This species has been concluded as highly unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species occupies tropical and subtropical coastlines, and forages within shallow waters of lagoons, coral reefs, estuaries, bays, inlets and
						Death or injury from collision with	Rare	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within proposed RSA (likely to be 44–206 m; maximum of 58–220 m)	Chance of occurrence within proposed transmission line heights (approx. 7.5–40 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
						overhead transmission line				harbours, along sandy, rocky, coral or muddy shores, on rocky outcrops in open sea, in mangrove swamps and also out to sea on open water. They are distributed on coastlines and islands in the tropics and subtropics, including Australia (BirdLife International 2024c). Suitable habitat for this species is not present within or proximate to the Project Area. • This species has not been recorded within the Project Area. The closest records of this species were from 1977, 1978 and 1979 within a radial distance of up to approximately 110 km from the Project Area (DBCA 2023a). • Records of their flight heights could not be identified. This species can dive from heights of 5–8 m when hunting over water bodies for fish (Government of South Australia n.d.). As they are known to occur at ground-level habitats, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. Therefore, it is considered rare that the potential impacts will affect this species and so there is a negligible consequence of this happening.
						Changes to utilisation of the site and its surrounds from disturbance	Rare	Negligible	Negligible	
Tringa glareola (wood sandpiper)	Migratory (EPBC Act, BC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Negligible	Negligible	This species has been concluded as highly unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species inhabits well-vegetated, shallow, freshwater wetlands, such as swamps, billabongs, lakes, pools, and waterholes. They are typically associated with emergent, aquatic plants or grass, and dominated by taller fringing vegetation, such as dense stands of rushes or reeds, shrubs, or dead or live trees, especially *Melaleuca* and river red gums (*Eucalyptus camaldulensis*) and often with fallen timber (DCCEEW 2024t). Suitable habitat for this species is not present within or proximate to the Project Area. • This species has not been recorded within the Project Area. The closest records were associated with water sources as they were found near the lake adjacent to Guraga Lake (over 19 km to the south (DBCA 2023a). • Records of their migratory flight heights could not be identified, however this species has been identified at 2,100 m altitude (Desfayes and Praz 1978). This species can burst into flight when startled in a zig-zag pattern before gliding to the ground and their breeding aerial display involves a switchback flight in the air and then a glide back to ground (BirdLife Australia 2024b). As they are known to occur at ground-level habitats, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. Therefore, it is considered unlikely that the potential impacts will affect this species and so there is a negligible consequence of this happening.
						Death or injury from collision with overhead transmission line	Unlikely	Negligible	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	
Tringa nebularia (common greenshank)	Migratory (EPBC Act, BC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Negligible	Negligible	This species has been concluded as unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species is found in a wide variety of inland wetlands and sheltered coastal habitats of varying salinity. It occurs in sheltered coastal habitats, typically with large mudflats and saltmarsh, mangroves, or seagrass. The species uses both permanent and ephemeral terrestrial wetlands, including swamps, lakes, dams, rivers, creeks, billabongs, waterholes, and inundated flood plains, claypans and salt flats (DCCEEW 2024u). Suitable habitat for this species is not present within or proximate to the Project Area.
						Death or injury from collision with overhead transmission line	Unlikely	Negligible	Negligible	
						Changes to utilisation of the	Unlikely	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within proposed RSA (likely to be 44–206 m; maximum of 58–220 m)	Chance of occurrence within proposed transmission line heights (approx. 7.5–40 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
						site and its surrounds from disturbance				• This species has not been recorded within the Project Area. This species has been observed flying from Thetis Lake, approximately 35 km west of the Project Area, towards likely a shallow saline lake in the Nambung National Park (RPS 2010). They have been observed at Lake Thetis and at the lake north-east of Lake Guraga, approximately 20 km to the south. This suggested movements to this more inland bay of lakes may be from near coastal saline wetlands. • Movements of this migratory species from the northern hemisphere are likely to be made along near coastal habitats. Although the distributions of Common Greenshank extend inland considerable distances and so there may be some movements between the inland and coast when conditions are favourable (RPS 2010). • Migrating flight heights have been recorded up to 2,000 m (Piersma et al. 1999). As they are known to occur at ground-level habitats, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. Therefore, it is considered unlikely that the potential impacts will affect this species and so there is a negligible consequence of this happening.
Zanda latirostris (Carnaby's cockatoo)	Endangered (EPBC Act, BC Act)	High	Moderate	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Negligible	Negligible	This species has been concluded to occur as seasonal vagrants within the Project Area. The following information was considered for the risk rating: • This species's breeding habitat comprises of woodland or forest and partially cleared woodland or forest including isolated trees. They nest in hollows of live or dead trees, and many *Eucalyptus* species may provide suitable hollows. They roost in or near riparian environments or natural or artificial water sources. Any tall trees may provide roosting habitat, particularly flat–topped yate (*Eucalyptus occidentalis*), salmon gum, wandoo, marri, karri, blackbutt, tuart, introduced eucalypts and introduced pines. They forage in native shrubland, heathland and woodland on seeds, nectar, and flowers of native proteaceous plant species (DAWE 2022a). There is potential foraging, roosting, and breeding habitat for this species within the Project Area (Figure E and Figure H). • This species has been recorded within the Project Area, and were found to primarily frequent low–land areas and movements of these species tended to follow valleys with woodland vegetation (i.e. outside the turbine locations) (RPS 2010). • Flight behaviours recorded were considered representative of Carnaby's cockatoo during the late winter, spring and early summer, and included the entire breeding season. Carnaby's cockatoo regularly used airspace south-west along Mullering Road, along the Minyulo Nature Reserve and between and around the three roosting locations along the Project Area's eastern boundary (Figure D and Figure E) (BCE 2025). • The recorded flight heights for this species within the Project Area, Yandin wind farm and reference sites were primarily were below the surveyed RSA (<40 m) (RPS 2010), which was consistent with observations at two nearby wind farms (Ecologia Environment 2017, Ecoscape 2018, Alinta Energy 2022 and Alinta Energy 2024).
						Death or injury from collision with overhead transmission line	Unlikely	Low	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within proposed RSA (likely to be 44–206 m; maximum of 58–220 m)	Chance of occurrence within proposed transmission line heights (approx. 7.5–40 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
										• There were 12 records (12%) of this species were flying at the within surveyed RSA (i.e. 40–152 m) within the Project Area. Those observations made within the RSA were largely in down–slope areas outside formal survey plots. Along the ridgetop environments Carnaby's cockatoo was observed to be moving intently between locations rather than milling or foraging (RPS 2010). There were no records of Carnaby's cockatoo occurring within the assessed RSA in ridge top contexts nor of this species flying above 152 metres (RPS 2010). This is likely due to avoidance of moderate to high wind velocities that characterise the wind farm site on a daily basis and the somewhat laboured flight action of Carnaby's cockatoos. • Flight heights of Carnaby's cockatoos were recorded and compared to the Proposed Action's likely dimensions of the wind turbines RSA, where the turbines are positioned on higher ground and the turbines have a likely ground clearance of 44 m. Carnaby's cockatoo flights above 44 m comprised 0.13% of all bird time records. Furthermore, these four flights were recorded of single birds flying at 40 m or above and were in the lower areas of the landscape (BCE 2025). • Small flocks of Carnaby's cockatoo were observed to respond to disturbance by spiralling upwards or "vortexing". This was observed in response to a wedge-tailed eagle, a group of western corellas and a crop dusting aircraft flying overhead, and the birds reached heights of up to 30 m. This behavioural response potentially places larger groups of Carnaby's cockatoos at risk of collision with turbine blades. However, none of the vortexing events observed to date has resulted in birds entering the proposed RSA (44 – 206 m) (BCE 2025). • Observations of Carnaby's cockatoo during wind farm monitoring have witnessed Carnaby's cockatoos adjusting their flight heights as they approach turbines (Mike Bamford pers. obs.). Similar behaviour has been noted when a flock of Carnaby's cockatoos crossed the Brand Highway, with a loose flock of about 30 birds flying up to about 10 m when crossing the highway despite the absence of traffic; this suggested that the birds were aware of the risk from traffic (Mike Bamford pers obs.). Despite this observation, Carnaby's cockatoos do suffer from roadkill under at least some circumstances, notably when drinking or feeding (on spilt grain) on the roadside. Overall, in the Waddi area and in the times of the year when surveys were undertaken, it appears that Carnaby's cockatoos generally fly below the proposed RSA when the lower height is >40m. It also appears, from other studies, that Carnaby's cockatoos may learn to avoid turbines. This suggests a very low risk (BCE 2025). • The transmission line will be located above 64 marri trees, of which 11 marri trees were identified as having suitably sized hollows to support Carnaby's cockatoo nesting (Terrestrial Ecosystems 2022), and over potential foraging habitat. There is no evidence to suggest that any of the 11 marri trees with hollows of suitable dimensions for Carnaby's cockatoo nesting have been or are currently in use for either breeding (Terrestrial Ecosystems 2022; Murdoch University 2024) or roosting (Murdoch University 2024, BCE 2025). • Flight heights of Carnaby's cockatoos flying between 6 m – 40 m were 41.7% of the recorded bird time (35% at 6-10 m, 5.1% at 11-18 m, 1.5% at 19-30 m and 0.1% at 31-40 m; BCE 2025). None of the recorded flight lines of Carnaby's cockatoo overflew the proposed transmission line (Figure 4), however Carnaby's cockatoos have been observed flying over paddocks elsewhere in the Project Area and a foraging sign was been recorded proximate to the proposed transmission line (Figure H), therefore Carnaby's cockatoo may overfly the proposed transmission line.

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within proposed RSA (likely to be 44–206 m; maximum of 58–220 m)	Chance of occurrence within proposed transmission line heights (approx. 7.5–40 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
										• There is also an unlikely potential collision / entanglement risk to Carnaby's cockatoo presented by the operational transmission lines being situated directly above the marri trees. There are already significant transmission line infrastructure in the Cooljarloo and Cataby areas required to support Tronox and Iluka's sand mining operations, Pinjar Gas Turbine and Yandin Wind Farm. There have been no reports of Carnaby's cockatoo being impacted by the transmission line infrastructure as part the Yandin or Badgingarra wind farms' monitoring programs (Ecoscape 2019b, Ecoscape 2020, Alinta Energy 2022 and Alinta Energy 2024). The movement patterns of Carnaby's cockatoo in the Cooljarloo and Cataby areas also appears to be unaltered from the installation of transmission line infrastructure required for the sand mining operations and energy projects (Murdoch University 2024 and RPS 2010). • Given that this species inhabits areas with various scales of transmission line infrastructure and there have not been any significant impacts associated with the infrastructure identified for this species (DAWE 2022a), it is likely that Carnaby's cockatoo has limited interactions with transmission line infrastructure when flying or roosting. This maybe due to the somewhat laboured flight action of Carnaby's cockatoos, when compared to other bird species, which may provide opportunity for early visual detection of the transmission line infrastructure. Anecdotally, avian collisions appear to be the result of birds being struck by an object that it did not see, rather than of a bird failing to avoid a visible object (Smales 2006). • This species is listed as Endangered under the EPBC Act and BC Act. Therefore, it is considered unlikely that the potential impacts will affect this species, and a negligible consequence assigned to the potential impacts resulting in death or injury from collision with wind turbines and barotrauma due to recent observations of flight heights and behaviours of Carnaby's cockatoo at the Project Area. A low consequence was assigned to potential impacts resulting in death or injury from collision with overhead transmission line for the above reasons. A negligible consequence has been assigned to the potential impact from changes to site utilisation as it is not anticipated that the existing flock movement patterns would be materially altered because of the operational wind farm.
Bats										
Macroderma gigas (ghost bat)	Vulnerable (EPBC Act, BC Act)	Low	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Rare	Negligible	Negligible	This species has been concluded as highly unlikely to occur within the Project Area. The following information was considered for the risk rating: • This species is found in habitats ranging from the arid Pilbara to tropical savanna woodlands and rainforests. During the daytime, they roost in rock crevices, old mines, and caves. Within Western Australia, ghost bats occur in the Kimberley and the Pilbara regions (TSSC 2016). The Project Area is located within the Wheatbelt region of Western Australia, where populations of ghost bats are not expected to occur, and there is no roosting habitat present within the Project Area (i.e. rock crevices, old mines, and caves). • This species have not been recorded within the Project Area. There are no records of this species within a 25 km radius of the Project Area (DBCA 2023a). • Records of their flight heights could not be identified. However, they often fly at fence height and substantial numbers are known to be killed when colliding with fencing wire (TSSC 2016). Fencing heights would be below the e RSA (likely to be 44–206 m) and transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project
						Death or injury from collision with overhead transmission line	Rare	Negligible	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Rare	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within proposed RSA (likely to be 44–206 m; maximum of 58–220 m)	Chance of occurrence within proposed transmission line heights (approx. 7.5–40 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
										Area's proposed RSA or proposed transmission line heights is considered low. Therefore, it is considered rare that the potential impacts will affect this species and so there is a negligible consequence of this happening.

Table D-2: Common bird and bat species long-term impact risk assessment

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within RSA (likely to be 44–206 m)	Chance of occurrence within transmission line heights (approx. 7.5–37 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
Birds										
Accipiter cirrhocephalus (collared sparrowhawk)	-	High	Low	Low-Moderate	Low-Moderate	Death or injury from collision with wind turbines and barotrauma	Almost certain	Low	Low	The following information was considered for the risk rating: • This species is a predominantly bird hunting species which targets passerine birds, particularly in woodland habitats (RPS 2010). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the Project and wider locality (two records) (RPS 2010). • Flight heights of this species were recorded in the Project Area and wider locality as below the surveyed RSA (i.e. <40 m) (RPS 2010). This species can fly up to several hundred metres above ground and can swoop to the ground when hunting. As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low-moderate. • The hunting behaviour of some raptors may increase its collision risk with wind turbines and transmission lines due to high-speed flights in pursuit of prey or from not looking ahead when searching for prey (Bernardino et al. 2018). • This species' prey are mobile, such as birds and insects (RPS 2010). • This widespread and common status of this raptor species makes population impacts at regional and national levels low. This species appears not to be deterred by the presence of operating wind turbines and occur regularly at other wind farms in Australia. Therefore, it is considered almost certain that the potential impacts from collisions will affect this species, but will have a low consequence as this species is widespread and abundant in Australia. It is considered unlikely that the potential impacts from changes to site utilisation will affect this species and so there is a negligible consequence of this happening.
						Death or injury from collision with overhead transmission line	Almost certain	Low	Low	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	
Anthus novaeseelandiae (Australasian pipit)	-	High	Moderate	Low-Moderate	Moderate	Death or injury from collision with wind turbines and barotrauma	Unlikely	Low	Negligible	The following information was considered for the risk rating: • This species is essentially open country species, foraging and nesting on the ground (RPS 2010). They prefer open country habitats, ranging from saltmarshes to dry shrublands and open woodland clearings (Australian Museum 2022b). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the project and wider locality (105 records) (RPS 2010). They have also been recorded at Yandin Wind Farm (Alinta Energy 2022). • Flight heights of this species were recorded in the Project Area and wider locality as predominantly below the surveyed RSA (i.e. <40 m) (RPS 2010). Flight heights recorded at Yandin Wind Farm were all below the surveyed RSA (i.e. <40 m) for six records (Ecologia Environment 2017). This species is highly aerial, as they can soar expertly for long periods, reaching heights of
						Death or injury from collision with overhead transmission line	Unlikely	Low	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Low	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within RSA (likely to be 44–206 m)	Chance of occurrence within transmission line heights (approx. 7.5–37 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
										2,000 m (BirdLife Australia 2023a). As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low-moderate to moderate. • The movements of this species when recorded was breeding aerial displays over grassland habitat (RPS 2010). This species is resident or sedentary, and probably largely sedentary, over most of mainland (BirdLife Australia 2023r). Resident birds have a profound knowledge of all obstacles within their home range and seem to adapt their flight to avoid exposure to transmission lines or wind turbines (Bernardino et al. 2018). As such, it is considered likely that local birds would easily avoid collisions with wind turbines and transmission line. Therefore, it is considered unlikely that the potential impacts will affect this species, but with a low consequence assigned to the potential impacts considering it is present in the wider locality and known to fly within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m) yet is widespread and abundant in Australia.
Aquila audax (wedge–tailed eagle)	–	High	Low	Moderate–High	Moderate	Death or injury from collision with wind turbines and barotrauma	Almost certain	Low	Low	The following information was considered for the risk rating: • This species has been recorded over forest, woodland, and grassland habitats (RPS 2010). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the Project Area and wider locality (82 records) (RPS 2010). They have also been recorded in Yandin Wind Farm (Alinta Energy 2022). A wedge-tailed eagle was observed passing over a flock of 12 Carnaby's cockatoos, which resulted in the flock spiralling upwards before descending to a straight flight of around 10 m height (BCE 2025). This was observed at CVP02, located approximately 6 km east of the Project Area. • Flight heights of this species were recorded in the Project Area and wider locality as within the surveyed RSA (i.e. 40–152 m) (RPS 2010). This species is highly aerial, as they can soar expertly for long periods, reaching heights of 2,000 m (BirdLife Australia 2023a). Flight heights have been recorded at Yandin Wind Farm from ground level to 35 m above ground (4 birds), and within the proposed RSA (likely to be 44–206 m), ranging from 20–200 m above ground (9 birds) (Alinta Energy 2022 and Alinta Energy 2024). As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered moderate. • Three carcasses have been recorded at Yandin Wind Farm (Alinta Energy 2022). • The hunting behaviour of some raptors may increase its collision risk with wind turbines and transmission lines due to high–speed flights in pursuit of prey or from not looking ahead when searching for prey (Bernardino et al. 2018). • This species is carnivorous taking live prey and carrion (BirdLife Australia 2023a). • This species was observed to be sedentary (large territory) (RPS 2010). Resident birds have a profound knowledge of all obstacles within their home range and seem to adapt their flight to avoid exposure to transmission lines or wind turbines (Bernardino et al. 2018). As such, it is considered likely that local birds would easily avoid collisions with wind turbines and transmission line. • This species is diurnal (BirdLife Australia 2023a), so it is unlikely there would be periods when the wind turbines and transmission line would be unsighted by individuals. • This widespread and common status of this raptor species makes population impacts at regional and national levels low. This species appears not to be deterred by the presence of operating wind turbines and occur regularly at other wind farms in Australia.
						Death or injury from collision with overhead transmission line	Almost certain	Low	Low	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within RSA (likely to be 44–206 m)	Chance of occurrence within transmission line heights (approx. 7.5–37 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
										Therefore, it is considered almost certain that the potential impacts from collisions will affect this species, but will have a low consequence as this species is widespread and abundant in Australia. It is considered unlikely that the potential impacts from changes to site utilisation will affect this species and so there is a negligible consequence of this happening.
Artamus cinereus (black–faced woodswallow)	–	High	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Low	Negligible	The following information was considered for the risk rating: • This species is found in open country, often far from water, as well as in open woodlands, around lakes and wetlands and in irrigated areas (Birds in Backyards 2024a). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the Project and wider locality (96 records) (RPS 2010). They have also been recorded at Yandin Wind Farm (Ecologia Environment 2017). • Flight heights of this species were recorded in the Project Area and wider locality as predominantly below the surveyed RSA (i.e. <40 m) (RPS 2010). Flight heights recorded at Yandin Wind Farm were all below the surveyed RSA (i.e. <40 m) for six records (Ecologia Environment 2017). The black–faced woodswallow's flight is characterised by short glides interspersed with rapid wingbeats. They fly fast with great agility when hunting close to the ground or when high up. However, if the wind is very strong, they only make brief sorties from convenient low perches, such as weeds or fence lines (Rowley 2006). As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. • This species was observed to be sedentary migratory (RPS 2010). Considered to be the most sedentary of the woodswallows, it will move to coastal areas during droughts (Birds in Backyards 2024a). Resident birds have a profound knowledge of all obstacles within their home range and seem to adapt their flight to avoid exposure to transmission lines or wind turbines (Bernardino et al. 2018). As such, it is considered likely that local birds would easily avoid collisions with wind turbines and transmission line. Therefore, it is considered unlikely that the potential impacts will affect this species, but with a low consequence assigned to the potential impacts considering it is present in the wider locality and known to fly within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m) yet is widespread and abundant in Australia.
						Death or injury from collision with overhead transmission line	Unlikely	Low	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Low	Negligible	
Banardius zonarius (Australian ringneck)	–	High	Moderate	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Low	Negligible	The following information was considered for the risk rating: • This species has been recorded over forest, woodland, parkland cleared and creekline habitat (RPS 2010 and Ecologia Environment 2017). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the project and wider locality (374 records) (RPS 2010). They have also been recorded at the Badgingarra and Yandin wind farms (Ecologia Environment 2017, Ecoscape 2018 and Alinta Energy 2022). • Flight heights of this species were recorded in the Project Area and wider locality as predominantly below the surveyed RSA (i.e. <40 m) (RPS 2010). Flight heights recorded at Yandin Wind Farm were all below the surveyed RSA (i.e. <40 m) for 21 records (Ecologia Environment 2017). The flight of this species is swift and undulating (Australian Museum 2023). They could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. • One feather spot has been recorded at Yandin Wind Farm. It was difficult to determine if the feather spot was due to turbine strike or unrelated death (Alinta Energy 2024). • This species was observed to be sedentary (RPS 2010). The Australian ringneck is mainly resident or sedentary, but they may move in arid areas in response to rainfall (Australian Museum 2023). Resident birds have a
						Death or injury from collision with overhead transmission line	Unlikely	Low	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Low	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within RSA (likely to be 44–206 m)	Chance of occurrence within transmission line heights (approx. 7.5–37 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
										profound knowledge of all obstacles within their home range and seem to adapt their flight to avoid exposure to transmission lines or wind turbines (Bernardino et al. 2018). As such, it is considered likely that local birds would easily avoid collisions with wind turbines and transmission line. Therefore, it is considered unlikely that the potential impacts will affect this species, but with a low consequence assigned to the potential impacts considering it is present in the wider locality and known to fly within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m) yet is widespread and abundant in Australia.
Cacatua pastinator derbyi (western corella (northern))	-	High	Moderate	Low–Moderate	Low–Moderate	Death or injury from collision with wind turbines and barotrauma	Unlikely	Low	Negligible	The following information was considered for the risk rating: • This species occupy eucalypt woodlands that are dominated by wandoo, salmon gum, marri and jarrah. They can occur in farmland, particularly where there are large trees for nesting and roosting and nearby water sources (Craig and Davis 2022). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the Project and wider locality (901 records) (RPS 2010). They have also been recorded nesting at Coomallo Creek, which is approximately 30 km to the north-west of the Project Area. • Flight heights of this species were recorded in the Project Area and wider locality as predominantly below the surveyed RSA (i.e. <40 m) (RPS 2010). Local movements of the western corella were noted as being primariliy associated with lowland woodland habitats (RPS 2010). As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. • This species was observed to be locally nomadic (RPS 2010). Daily movements of western corellas studied in the northern Wheatbelt found that movements were primarily to a small number of areas, characterised by having good feeding areas, adjacent to a farm dam and areas of trees with dense canopy. These three resources were no more than 100–200 m apart. Therefore, a large portion of completely cleared wheatland was unsuitable for western corellas and was not used by them (Craig and Davis 2022). Resident birds have a profound knowledge of all obstacles within their home range and seem to adapt their flight to avoid exposure to transmission lines or wind turbines (Bernardino et al. 2018). As such, it is considered likely that local birds would easily avoid collisions with wind turbines and transmission line. Therefore, it is considered unlikely that the potential impacts will affect this species, but with a low consequence assigned to the potential impacts considering it is present in the wider locality and known to fly within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m) yet is widespread and abundant in Australia.
						Death or injury from collision with overhead transmission line	Unlikely	Low	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Low	Negligible	
Cacatua roseicapilla (galah)	–	High	Moderate	Low–Moderate	Low–Moderate	Death or injury from collision with wind turbines and barotrauma	Unlikely	Low	Negligible	The following information was considered for the risk rating: • This species occupies a variety of open habitats, such as woodlands and forests, grasslands and savanna. They are less commonly found in shrublands, mangroves and beaches. The galah is well adapted to agricultural lands (San Diego Zoo Wildlife Alliance 2019). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the Project and wider locality (458 records) (RPS 2010). They have also been recorded in the Badgingarra and Yandin wind farms (Ecologia Environment 2017, Ecoscape 2018 and Alinta Energy 2022). • Flight heights of this species were recorded in the Project Area and wider locality as predominantly below the surveyed RSA (i.e. <40 m) (RPS 2010). Flight heights recorded at Yandin Wind Farm were predominantly below the surveyed RSA (i.e. <40 m) (Ecologia Environment 2017). The galah can fly long distances from roost to foraging areas. Some individuals are nomadic, while others are resident. Nomadic birds leave home ranges and form flocks elsewhere (San Diego Zoo Wildlife Alliance 2019). As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line
						Death or injury from collision with overhead transmission line	Unlikely	Low	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Low	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within RSA (likely to be 44–206 m)	Chance of occurrence within transmission line heights (approx. 7.5–37 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
										heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low–moderate. • This species was observed to be locally nomadic (RPS 2010). Resident birds have a profound knowledge of all obstacles within their home range and seem to adapt their flight to avoid exposure to transmission lines or wind turbines (Bernardino et al. 2018). As such, it is considered likely that local birds would easily avoid collisions with wind turbines and transmission line. Therefore, it is considered unlikely that the potential impacts will affect this species, but with a low consequence assigned to the potential impacts considering it is present in the wider locality and known to fly within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m) yet is widespread and abundant in Australia.
Certhionyx niger (black honeyeater)	–	High	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Low	Negligible	The following information was considered for the risk rating: • This species found in open woodlands and shrublands of the arid and semi–arid regions. They also occur in spinifex savanna (Birds in Backyards 2024b). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the Project and wider locality (nine records) (RPS 2010). • Flight heights of this species were recorded in the Project Area and wider locality as below the surveyed RSA (i.e. <40 m) (RPS 2010). The seasonal movements of this species are related to flowering of food plants, as well as in response to drought. They can move southwards in spring and summer, and nove northwards in autumn and winter (Birds in Backyards 2024b). As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. • This species was observed to be sedentary / nomadic (RPS 2010). Resident birds have a profound knowledge of all obstacles within their home range and seem to adapt their flight to avoid exposure to transmission lines or wind turbines (Bernardino et al. 2018). As such, it is considered likely that local birds would easily avoid collisions with wind turbines and transmission line. Therefore, it is considered unlikely that the potential impacts will affect this species, but with a low consequence assigned to the potential impacts considering it is present in the wider locality and known to fly within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m) yet is widespread and abundant in Australia.
						Death or injury from collision with overhead transmission line	Unlikely	Low	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Low	Negligible	
Chenonetta jubata (Australian wood duck)	–	High	Low–Moderate	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Low	Negligible	The following information was considered for the risk rating: • This species can occupy open woodlands, grasslands, wetlands, flooded pastures and coastal inlets and bays. They are also found on farmland with dams (Birds in Backyards 2024c). Suitable habitat is present within and proximate to the Project Area. • This species has not been recorded within the Project Area. They have been recorded within the wider locality (13 records) (RPS 2010). They have also been recorded at Yandin Wind Farm (Alinta Energy 2022). • This species can reach heights of 20–100 m (BirdLife Australian 2023q). As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. • They feed in both day and night, and they have been recorded as medium speed fliers and were locally nomadic (RPS 2010). They can travel to feeding sites up to 10 km from roosting sites. Overall, it appears that the Australian wood duck does not disperse widely and most remain within a 200 km radius of the flock (Department of Environment and Conservation 2009b). This species generally roosts near water (BirdLife Australian 2023q). The Project Area is unlikely to comprise roosting habitat, any foraging activity within the Project Area could be during the day or night. As such, if feeding at night there may be periods when the wind turbines and transmission line would be unsighted by individuals.
						Death or injury from collision with overhead transmission line	Unlikely	Low	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within RSA (likely to be 44–206 m)	Chance of occurrence within transmission line heights (approx. 7.5–37 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
										• Experience at other wind farms in Australia indicates few waterbirds collide with turbines, even near large waterbird concentrations (e.g. lakes), where birds confine most of their activities to the wetlands and do not move across farmland frequently (Brett Lane & Associates 2017). Therefore, it is considered unlikely that the potential impacts will affect this species, but with a low consequence assigned to the potential impacts resulting in death or injury considering it is present in the wider locality and known to fly within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m) yet is widespread and abundant in Australia. A negligible consequence has been assigned to the potential impact from changes to site utilisation as suitable water habitats are limited within the Project Area.
Cheramoeca leucosterna (white–backed swallow)	–	High	Low	Moderate	Moderate	Death or injury from collision with wind turbines and barotrauma	Unlikely	Low	Negligible	The following information was considered for the risk rating: • This species is found over grasslands and low shrublands. They occasionally occur in taller open shrublands or open woodlands. This species is usually associated in areas with sandy or loose soil to support excavation of tunnels for nesting and roosting. They also often occur around wetlands, watercourses, and artificial watering points (BirdLife Australia 2023b). Suitable habitat is present within and proximate to the Project Area. • This species has not been recorded within the Project Area. They have been recorded in the wider locality (4 records) (RPS 2010). • Flight heights of this species were recorded in the wider locality as below and within the surveyed RSA (i.e. <40 m) (RPS 2010). This species forages by sallying, by snatching insects out of the air and returning to a perch to feed. All prey is taken in air, at heights ranging from ground to high up. They have been recorded as foraging at >15 m above ground (BirdLife Australia 2023b). As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered moderate. • This species was observed to be sedentary (RPS 2010). Resident birds have a profound knowledge of all obstacles within their home range and seem to adapt their flight to avoid exposure to transmission lines or wind turbines (Bernardino et al. 2018). As such, it is considered likely that local birds would easily avoid collisions with wind turbines and transmission line. Therefore, it is considered unlikely that the potential impacts will affect this species, but with a low consequence assigned to the potential impacts considering it is present in the wider locality and known to fly within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m) yet is widespread and abundant in Australia.
						Death or injury from collision with overhead transmission line	Unlikely	Low	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Low	Negligible	
Cincloramphus cruralis (brown songlark)	–	High	Moderate	Low–Moderate	Low–Moderate	Death or injury from collision with wind turbines and barotrauma	Unlikely	Low	Negligible	The following information was considered for the risk rating: • This species is essentially an open country species, foraging and nesting on the ground (RPS 2010). This species is found in open treeless grasslands or chenopod shrublands and, where near or abutting timbered habitats (such as open woodland or tall shrubland), never in trees. They are also commonly found in pastures and crops (BirdLife Australia 2023c). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the Project and wider locality (236 records) (RPS 2010). They have also been recorded in Badgingarra wind farm (Ecoscape 2018). • Flight heights of this species were recorded in the wider locality as predominantly below the surveyed RSA (i.e. <40 m) (RPS 2010). They are known to forage on the ground for insects or seeds. They are primarily terrestrial, however in breeding season, males often perch on shrubs and overhead wires. They fly up to 50 m above ground before flying across their territory and descending in a long slow glide (BirdLife Australia 2023c). Movements recorded within the Project and wider locality were aerial breeding displays (RPS 2010). As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low–moderate.
						Death or injury from collision with overhead transmission line	Unlikely	Low	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Low	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within RSA (likely to be 44–206 m)	Chance of occurrence within transmission line heights (approx. 7.5–37 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
										• This species is migratory and breeds in southern Australia in spring–summer, moving inland and to northern Australia for autumn–winter. In south-west Western Australia, they are generally present July to January, but may occur from June to February (BirdLife Australia 2023c). • Considering that the movement recorded within the Project and wider locality was aerial breeding displays (RPS 2010), when they may be more at risk of collisions with the Project Area's proposed RSA or proposed transmission line heights, and the males sing persistently during the day and perform distinctive songflights (BirdLife Australia 2023c), it is unlikely there would be periods when the wind turbines and transmission line would be unsighted by individuals. Therefore, it is considered unlikely that the potential impacts will affect this species, but with a low consequence assigned to the potential impacts considering it is present in the wider locality and known to fly within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m) yet is widespread and abundant in Australia.
Coracina novaehollandiae (black–faced cuckoo–shrike)	–	High	Low	Low–Moderate	Low–Moderate	Death or injury from collision with wind turbines and barotrauma	Unlikely	Low	Negligible	The following information was considered for the risk rating: • This species is found mainly in dry eucalypt forests and woodlands. They are also found in farmland or urban areas. They are occasionally found in coastal and inland heathland (BirdLife Australia 2023d). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the Project and the wider locality (41 records) (RPS 2010). They have also been recorded at Yandin Wind Farm (Ecologia Environment 2017 and Alinta Energy 2022). • Flight heights of this species were recorded in the wider locality as predominantly below the surveyed RSA (i.e. <40 m) (RPS 2010). This species can forage at all heights from ground or close to ground to in canopies and subcanopies. A mean height of foraging was recorded at 11.4 m (BirdLife Australia 2023d). As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low–moderate. • This species was observed to be locally nomadic (RPS 2010). In Western Australia, they are partly resident or sedentary, with passage and some seasonal occurrences observed over much of the state (BirdLife Australia 2023d). Resident birds have a profound knowledge of all obstacles within their home range and seem to adapt their flight to avoid exposure to transmission lines or wind turbines (Bernardino et al. 2018). As such, it is considered likely that local birds would easily avoid collisions with wind turbines and transmission line. Therefore, it is considered unlikely that the potential impacts will affect this species, but with a low consequence assigned to the potential impacts considering it is present in the wider locality and known to fly within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m) yet is widespread and abundant in Australia.
						Death or injury from collision with overhead transmission line	Unlikely	Low	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Low	Negligible	
Corvus coronoides (Australian raven)	–	High	Moderate	Low–Moderate	Low–Moderate	Death or injury from collision with wind turbines and barotrauma	Likely	Low	Low	The following information was considered for the risk rating: • This species occupies a variety of natural and modified open habitats. They are frequently recorded in edge habitats, such as woodlands or forests adjacent to farmland. They are also common in grasslands and farmland (BirdLife Australia 2023e). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the Project Area and wider locality (427 records) (RPS 2010). They have also been observed at the Badgingarra and Yandin wind farms (Ecoscape 2018, Ecologia Environment 2017 and Alinta Energy 2022). • Flight heights of this species were recorded in the Project Area and wider locality were predominantly below the surveyed RSA (i.e. <40 m) (RPS 2010). Flight heights recorded at Yandin Wind Farm were all below the surveyed RSA (i.e. <40 m) (Ecologia Environment 2017). This species mainly forages
						Death or injury from collision with overhead transmission line	Likely	Low	Low	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within RSA (likely to be 44–206 m)	Chance of occurrence within transmission line heights (approx. 7.5–37 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
										on the ground in open habitats, such as grasslands and beaches. They occasionally forage in the air and take eggs and young birds from nests. In travelling flights, they usually fly >30 m (BirdLife Australia 2023e). They could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low–moderate. • Two carcasses have been recorded at Badgingarra Wind Farm (Ecoscape 2019b and Ecoscape 2020). • Adult breeding pairs are territorial and sedentary, while young birds and non-breeding adults gather in dispersive flocks (BirdLife Australia 2023e). Resident birds have a profound knowledge of all obstacles within their home range and seem to adapt their flight to avoid exposure to transmission lines or wind turbines (Bernardino et al. 2018). As such, it is considered likely that local birds would easily avoid collisions with wind turbines and transmission line. Therefore, it is considered likely that that the potential impacts from collisions will affect this species, but will have a low consequence as this species is widespread and abundant in Australia. It is considered unlikely that the potential impacts from changes to site utilisation will affect this species and so there is a negligible consequence of this happening.
Gymnorhina tibicen (Australian magpie)	–	High	Moderate	Low–Moderate	Low–Moderate	Death or injury from collision with wind turbines and barotrauma	Likely	Low	Low	The following information was considered for the risk rating: • This species is found in mainly open habitats with low and open ground cover or bare ground, with sparse to moderate density of trees. They are found in grasslands, farmland, residential areas, low shrublands and heathlands, and dry open woodlands and forests (BirdLife Australia 2023f). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the Project Area and wider locality (198 records) (RPS 2010). They have also been observed at the Badgingarra and Yandin wind farms (Ecoscape 2018, Ecologia Environment 2017 and Alinta Energy 2022). • Flight heights of this species were recorded in the Project Area and wider locality was predominantly below the surveyed RSA (i.e. <40 m) (RPS 2010). This species forages mostly on the ground, and has been recorded foraging up to 15 m (BirdLife Australia 2023f). They could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low–moderate. • Dive-bombing during territorial disputes may put this species at risk of collision with turbines or proposed transmission line (BirdLife Australia 2023f). • Two carcasses have been recorded at Badgingarra Wind Farm (Ecoscape 2019a and Ecoscape 2020). • One carcass and one feather spot have been recorded at Yandin Wind Farm. There was speculation that the carcass was related to turbine blade strike or from territorial interactions (Alinta Energy 2022). • This species is sedentary and territorial throughout the year (BirdLife Australia 2023f). Resident birds have a profound knowledge of all obstacles within their home range and seem to adapt their flight to avoid exposure to transmission lines or wind turbines (Bernardino et al. 2018). As such, it is considered likely that local birds would easily avoid collisions with wind turbines and transmission line. Therefore, it is considered likely that that the potential impacts from collisions will affect this species, but will have a low consequence as this species is widespread and abundant in Australia. It is considered unlikely that the potential impacts from changes to site utilisation will affect this species and so there is a negligible consequence of this happening.
						Death or injury from collision with overhead transmission line	Likely	Low	Low	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	
	–	High	Low	Moderate	Moderate	Death or injury from collision with	Almost certain	Low	Low	The following information was considered for the risk rating:

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within RSA (likely to be 44–206 m)	Chance of occurrence within transmission line heights (approx. 7.5–37 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
Elanus axillaris (black–shouldered kite)						wind turbines and barotrauma				• This species occupies open country and grasslands. They prefer open grasslands, natural and pasture, but also use low vegetation or lightly timbered habitats (BirdLife Australia 2023g). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the Project Area and wider locality (two records) (RPS 2010). They also have been recorded at Yandin Wind Farm (Ecologia Environment 2017). • Flight heights of this species were recorded in the Project Area and wider locality as within the surveyed RSA (i.e. 40–152 m) (RPS 2010). They are accomplished fliers but usually to no great height. They can hover 10–30 m above ground, and make low sweeps over grassland (BirdLife Australia 2023g). Flight heights have been recorded at Yandin Wind Farm from ground level to 12 m above ground (2 birds), and within the proposed RSA (likely to be 44–206 m) ranging from 15–20 m above ground (1 bird) (Alinta Energy 2022 and Alinta Energy 2024). As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered moderate. • The hunting behaviour of some raptors may increase its collision risk with wind turbines and transmission lines due to high–speed flights in pursuit of prey or from not looking ahead when searching for prey (Bernardino et al. 2018). • One carcass has been recorded at Yandin Wind Farm (Alinta Energy 2022). • This species is feeds on small rodents and grasshoppers and other insects (BirdLife Australia 2023g). • This is diurnal and often crepuscular and can hunt at night (BirdLife Australia 2023g), so there could be periods when the wind turbines and transmission line would be unsighted by individuals. • This widespread and common status of this raptor species makes population impacts at regional and national levels low. This species appears not to be deterred by the presence of operating wind turbines and occur regularly at other wind farms in Australia. Therefore, it is considered almost certain that the potential impacts from collisions will affect this species, but will have a low consequence as this species is widespread and abundant in Australia. It is considered unlikely that the potential impacts from changes to site utilisation will affect this species and so there is a negligible consequence of this happening.
						Death or injury from collision with overhead transmission line	Almost certain	Low	Low	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	
Falco berigora (brown falcon)	–	High	Low	Moderate	Moderate	Death or injury from collision with wind turbines and barotrauma	Almost certain	Low	Low	The following information was considered for the risk rating: • This species occupies open habitats, including grasslands and low shrublands, pasture, woodland, open forest, and plantations of pines (BirdLife Australia 2023h). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the Project Area and wider locality (four records) (RPS 2010). • Flight heights of this species were recorded in the Project Area and wider locality as predominantly below the surveyed RSA (i.e. <40 m) (RPS 2010). They soar to at least 200 m, using thermals to lift, and usually fly or hover at heights of 10–50 m (BirdLife Australia 2023h). As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered moderate. • The hunting behaviour of some raptors may increase its collision risk with wind turbines and transmission lines due to high-speed flights in pursuit of prey or from not looking ahead when searching for prey (Bernardino et al. 2018). • This species is an opportunistic carnivore (BirdLife Australia 2023h). • This species was observed to be sedentary / dispersive (RPS 2010). Resident birds have a profound knowledge of all obstacles within their home range and seem to adapt their flight to avoid exposure to transmission lines or wind
						Death or injury from collision with overhead transmission line	Almost certain	Low	Low	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within RSA (likely to be 44–206 m)	Chance of occurrence within transmission line heights (approx. 7.5–37 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
										turbines (Bernardino et al. 2018). As such, it is considered likely that local birds would easily avoid collisions with wind turbines and transmission line. • This widespread and common status of this raptor species makes population impacts at regional and national levels low. This species appears not to be deterred by the presence of operating wind turbines and occur regularly at other wind farms in Australia. Therefore, it is considered almost certain that the potential impacts from collisions will affect this species, but will have a low consequence as this species is widespread and abundant in Australia. It is considered unlikely that the potential impacts from changes to site utilisation will affect this species and so there is a negligible consequence of this happening.
Falco cenchroides (nankeen kestrel)	–	High	Low–Moderate	Moderate	Moderate	Death or injury from collision with wind turbines and barotrauma	Almost certain	Low	Low	The following information was considered for the risk rating: • This species can be gound in grassland and woodland edges and in pasture (RPS 2010). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the Project Area and wider locality (70 records) (RPS 2010). They also have been recorded at the Badgingarra and Yandin wind farms (Ecoscape 2019b and Alinta Energy 2022). • Flight heights of this species were recorded in the Project Area and wider locality as predominantly below the surveyed RSA (i.e. <40 m) (RPS 2010). The nankeen kestrel was observed flying at RSA elevations on more than a rare occasion, but as with the majority of bird species observed flying within the surveyed RSA height, the greatest proportion of these observations were birds flying over valley areas and not the ridgetop contexts where turbines will be located (RPS 2010). Flight heights have been recorded at Yandin Wind Farm from ground level to 15 m above ground (22 birds), and within the proposed RSA (likely to be 44–206 m) ranging from 20–80 m above ground (2 birds) (Alinta Energy 2022 and Alinta Energy 2024). As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered moderate. • The hunting behaviour of some raptors may increase its collision risk with wind turbines and transmission lines due to high-speed flights in pursuit of prey or from not looking ahead when searching for prey (Bernardino et al. 2018). • Seven carcasses, and five carcasses and two feathers spots have been recorded at the Badgingarra and Yandin wind farms respectively (Ecoscape 2019a, Ecoscape 2019, Alinta Energy 2022 and Alinta Energy 2024). • This species was observed to be sedentary / dispersive (RPS 2010). Resident birds have a profound knowledge of all obstacles within their home range and seem to adapt their flight to avoid exposure to transmission lines or wind turbines (Bernardino et al. 2018). As such, it is considered likely that local birds would easily avoid collisions with wind turbines and transmission line. • This species is normally diurnal, so it is unlikely there would be periods when the wind turbines and transmission line would be unsighted by individuals. • This widespread and common status of this raptor species makes population impacts at regional and national levels low. This species appears not to be deterred by the presence of operating wind turbines and occur regularly at other wind farms in Australia. Therefore, it is considered almost certain that the potential impacts from collisions will affect this species, but will have a low consequence as this species is widespread and abundant in Australia. It is considered unlikely that the potential impacts from changes to site utilisation will affect this species and so there is a negligible consequence of this happening.
						Death or injury from collision with overhead transmission line	Almost certain	Low	Low	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	
Falco longipennis (Australian hobby)	–	High	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Almost certain	Low	Low	The following information was considered for the risk rating: • This species is found in wooded and forested lands and open country. They mainly use lowlands and foothills, but some can move to high country in

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within RSA (likely to be 44–206 m)	Chance of occurrence within transmission line heights (approx. 7.5–37 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
						Death or injury from collision with overhead transmission line	Almost certain	Low	Low	warmer months (BirdLife Australia 2023j). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the Project Area and wider locality (two records) (RPS 2010). They also have been recorded at Yandin Wind Farm (Ecologia Environment 2017). • Flight heights of this species were recorded in the Project Area and wider locality were below the surveyed RSA (i.e. <40 m) (RPS 2010). They often soar at height up to at least 500 m, using thermals to lift, and rarely hover (BirdLife Australia 2023j). They could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. • The hunting behaviour of some raptors may increase its collision risk with wind turbines and transmission lines due to high–speed flights in pursuit of prey or from not looking ahead when searching for prey (Bernardino et al. 2018). • This species was observed to be sedentary / dispersive (RPS 2010). Resident birds have a profound knowledge of all obstacles within their home range and seem to adapt their flight to avoid exposure to transmission lines or wind turbines (Bernardino et al. 2018). As such, it is considered likely that local birds would easily avoid collisions with wind turbines and transmission line. • This species hunts diurnally and nocturnally (BirdLife Australia 2023j), so there could be periods when the wind turbines and transmission line would be unsighted by individuals. • This widespread and common status of this raptor species makes population impacts at regional and national levels low. This species appears not to be deterred by the presence of operating wind turbines and occur regularly at other wind farms in Australia. Therefore, it is considered almost certain that the potential impacts from collisions will affect this species, but will have a low consequence as this species is widespread and abundant in Australia. It is considered unlikely that the potential impacts from changes to site utilisation will affect this species and so there is a negligible consequence of this happening.
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	
Grallina cyanoleuca (Australian magpie–lark)	–	High	Moderate	Low–Moderate	Low–moderate	Death or injury from collision with wind turbines and barotrauma	Likely	Low	Low	The following information was considered for the risk rating: • This species is found is found in open and lightly timbered habitat and grasslands, and almost always near or associated with water (BirdLife Australia 2023k). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the Project Area and wider locality (114 records) (RPS 2010). They have also been observed at the Badgingarra and Yandin wind farms (Ecoscape 2018, Ecologia Environment 2017 and Alinta Energy 2022). • Flight heights of this species were recorded in the Project Area and wider locality were predominantly below the surveyed RSA (i.e. <40 m) (RPS 2010). Flight heights recorded at Yandin Wind Farm were all below the surveyed RSA (i.e. <40 m) (Ecologia Environment 2017). This species forages almost entirely on the ground, and very occasionally in trees or aerially. Australia magpie-lark flocks have been recorded flying at a height of 30 m (BirdLife Australia 2023k). They could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low–moderate. • Dive-bombing during territorial disputes may put this species at risk of collision with turbines or proposed transmission line (BirdLife Australia 2023k). • One carcass has been recorded at Badgingarra Wind Farm (Ecoscape 2019b). • This species is sedentary (RPS 2010). Resident birds have a profound knowledge of all obstacles within their home range and seem to adapt their flight to avoid exposure to transmission lines or wind turbines (Bernardino et
						Death or injury from collision with overhead transmission line	Likely	Low	Low	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within RSA (likely to be 44–206 m)	Chance of occurrence within transmission line heights (approx. 7.5–37 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
										al. 2018). As such, it is considered likely that local birds would easily avoid collisions with wind turbines and transmission line. Therefore, it is considered likely that that the potential impacts from collisions will affect this species, but will have a low consequence as this species is widespread and abundant in Australia. It is considered unlikely that the potential impacts from changes to site utilisation will affect this species and so there is a negligible consequence of this happening.
Petrochelidon ariel (fairy martin)	–	High	Low	Moderate	Moderate	Death or injury from collision with wind turbines and barotrauma	Unlikely	Low	Negligible	The following information was considered for the risk rating: • This species occurs in airspace over open or sparsely wooded habitats, such as grasslands, shrublands and woodlands, and also modified areas such as pasture. They mostly occur round wetlands, both permanent and ephemeral, natural and artificial (BirdLife Australia 2023l). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the Project (one record) (RPS 2010). • A flight height of this species was recorded in the Project Area as within the surveyed RSA (i.e. <40 m) (RPS 2010). This species mainly forages in the air at various heights, sometimes at low open or grassy areas, sometimes in canopy (>10 m) of eucalypt woodland, and sometimes above tree–tops (BirdLife Australia 2023l). As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered moderate. • This species was observed to be sedentary (RPS 2010). Resident birds have a profound knowledge of all obstacles within their home range and seem to adapt their flight to avoid exposure to transmission lines or wind turbines (Bernardino et al. 2018). As such, it is considered likely that local birds would easily avoid collisions with wind turbines and transmission line. Therefore, it is considered unlikely that the potential impacts will affect this species, but with a low consequence assigned to the potential impacts considering it is present in the wider locality and known to fly within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m) yet is widespread and abundant in Australia.
						Death or injury from collision with overhead transmission line	Unlikely	Low	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Low	Negligible	
Gavicalis virescens (singing honeyeater)	–	High	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Low	Negligible	The following information was considered for the risk rating: • This species is found in a variety of open wooded habitats, mostly in low woodlands and open shrublands, especially those dominated by acacias (BirdLife Australia 2023m). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the Project Area and wider locality (29 records) (RPS 2010). They have also been observed at Yandin Wind Farm (Ecologia Environment 2017). • Flight heights of this species were recorded in the Project Area as below the surveyed RSA (i.e. <40 m) (RPS 2010). Flight heights recorded at Yandin Wind Farm were all below the surveyed RSA (i.e. <40 m) (Ecologia Environment 2017). This species forages at lower levels that other honeyeaters. They usually forage on the ground or in low shrubs (BirdLife Australia 2023m). As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. • This species was observed to be sedentary (RPS 2010). Resident birds have a profound knowledge of all obstacles within their home range and seem to adapt their flight to avoid exposure to transmission lines or wind turbines (Bernardino et al. 2018). As such, it is considered likely that local birds would easily avoid collisions with wind turbines and transmission line. Therefore, it is considered unlikely that the potential impacts will affect this species, but with a low consequence assigned to the potential impacts considering it is present in the wider locality and known to fly within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m) yet is widespread and abundant in Australia.
						Death or injury from collision with overhead transmission line	Unlikely	Low	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Low	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within RSA (likely to be 44–206 m)	Chance of occurrence within transmission line heights (approx. 7.5–37 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
Gliciphila melanops (tawny–crowned honeyeater)	–	High	Low	Low	Low	Death or injury from collision with wind turbines and barotrauma	Unlikely	Low	Negligible	The following information was considered for the risk rating: • This species is found mainly in heathland, preferring low dry shrub heathland (BirdLife Australia 2023n). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the Project Area and wider locality (15 records) (RPS 2010). They have also been observed at Badgingarra Wind Farm (Ecoscape 2018). • Flight heights of this species were recorded in the Project Area as below the surveyed RSA (i.e. <40 m) (RPS 2010). This species forages at all levels, from ground to top of heath vegetation, mostly in low shrubs (BirdLife Australia 2023n). As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low. • This species was observed to be sedentary (RPS 2010). Resident birds have a profound knowledge of all obstacles within their home range and seem to adapt their flight to avoid exposure to transmission lines or wind turbines (Bernardino et al. 2018). As such, it is considered likely that local birds would easily avoid collisions with wind turbines and transmission line. Therefore, it is considered unlikely that the potential impacts will affect this species, but with a low consequence assigned to the potential impacts considering it is present in the wider locality and known to fly within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m) yet is widespread and abundant in Australia.
						Death or injury from collision with overhead transmission line	Unlikely	Low	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Low	Negligible	
Tadorna tadornoides (Australian shelduck)	–	High	Low–Moderate	Low	Low–Moderate	Death or injury from collision with wind turbines and barotrauma	Unlikely	Low	Negligible	The following information was considered for the risk rating: • This species occupies grasslands and croplands, terrestrial wetlands, estuarine waters, and occasionally wooded grasslands (BirdLife Australia 2023o). Suitable habitat is present within and proximate to the Project Area. • This species has not been recorded within the Project Area. They have been recorded within the Project Area's wider locality (4,509 records) (RPS 2010). • Flight heights of this species were recorded in the wider locality as predominantly below the surveyed RSA (i.e. <40 m) (RPS 2010). This species flies in formation at great heights (BirdLife Australia 2023o). As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low and low–moderate. • They have been recorded as medium speed fliers and were sedentary/dispersive (RPS 2010). Resident birds have a profound knowledge of all obstacles within their home range and seem to adapt their flight to avoid exposure to transmission lines or wind turbines (Bernardino et al. 2018). As such, it is considered likely that local birds would easily avoid collisions with wind turbines and transmission line. • This species is active during the day and roost at night (BirdLife Australia 2023o). As such, it is unlikely there would be periods when the wind turbines and transmission line would be unsighted by individuals. • Experience at other wind farms in Australia indicates few waterbirds collide with turbines, even near large waterbird concentrations (e.g. lakes), where birds confine most of their activities to the wetlands and do not move across farmland frequently (Brett Lane & Associates 2017). Therefore, it is considered unlikely that the potential impacts will affect this species, but with a low consequence assigned to the potential impacts resulting in death or injury considering it is present in the wider locality and known to fly within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m), yet is widespread and abundant in Australia. A negligible consequence has been assigned to the potential impact from changes to site utilisation as suitable water habitats are limited within the Project Area.
						Death or injury from collision with overhead transmission line	Unlikely	Low	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within RSA (likely to be 44–206 m)	Chance of occurrence within transmission line heights (approx. 7.5–37 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
Threskiornis spinicollis (straw-necked ibis)	–	High	Moderate	Low–Moderate	Low–Moderate	Death or injury from collision with wind turbines and barotrauma	Unlikely	Low	Negligible	The following information was considered for the risk rating: • This species is found in grasslands, cultivated land, terrestrial wetlands and, rarely, sheltered marine habitats. They are mainly distributed away from the coast and prefer pastures and cultivated land (BirdLife Australia 2023p). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the project and wider locality (366 records) (RPS 2010). They have also been recorded at Badgingarra Wind Farm (Ecoscape 2018). • Flight heights of this species were recorded in the Project Area and wider locality as predominantly below the surveyed RSA (i.e. <40 m) (RPS 2010). Flight heights has also been recorded at Yandin Wind Farm within the surveyed RSA (i.e. 40–152 m), for eight records (Ecologia Environment 2017). This species can fly freely up to great heights, soaring in thermals up to several hundred metres (BirdLife Australia 2023p). As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA or proposed transmission line heights is considered low–moderate. • Near farmland, they prefer roosts with sufficient trees to accommodate whole flocks and near water resources (BirdLife Australia 2023p). The extent of the Mullering Brook within the Project Area is not expected to support roosting flocks of straw-necked ibis as it is an ephemeral watercourse. • They have been recorded as slow fliers and locally nomadic (RPS 2010). They forage about 75% of the day, before nocturnal communal roosting (BirdLife Australia 2023p). As the Project Area is unlikely to roosting habitat, any foraging activity within the Project Area is likely to be during the day, it is unlikely there would be periods when the wind turbines and transmission line would be unsighted by individuals. • Experience at other wind farms in Australia indicates few waterbirds collide with turbines, even near large waterbird concentrations (e.g. lakes), where birds confine most of their activities to the wetlands and don't move across farmland frequently (Brett Lane & Associates 2017). Therefore, it is considered unlikely that the potential impacts will affect this species, but with a low consequence assigned to the potential impacts resulting in death or injury considering it is present and known to fly within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m) yet is widespread and abundant in Australia. A negligible consequence has been assigned to the potential impact from changes to site utilisation as suitable water habitats are limited within the Project Area.
						Death or injury from collision with overhead transmission line	Unlikely	Low	Negligible	
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	
Bats										
Chalinolobus gouldii (Gould's wattled bat)	–	High	Low	Low	–	Death or injury from collision with wind turbines and barotrauma	Likely	Negligible	Negligible	The following information was considered for the risk rating: • This species can use a variety of habitat types, including open forest, mallee, dense forest, tall shrubland and urban areas (Chruszcz and Barclay 2002). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the Project and wider locality (four records) (RPS 2014). Low numbers of the Gould's wattled bat were recorded across the Project Area, indicating a low but ubiquitous presence (RPS 2014). • The Gould's wattled bat is known to forage above and below the forest canopy and in the open area just below the forest canopy. Flight is direct and rapid, and manoeuvrability is limited (Chruszcz and Barclay 2002). This species tends to stay below 20 m and may descend to a height of 1 m above the ground (Chruszcz and Barclay 2002). As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA height is considered low. • Woodlands within the Project Area are mostly long narrow bands of vegetation following watercourses and roads. Here bats are likely to fly low and close to the vegetation most of the time (RPS 2014).
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	

Species	Conservation status	Chance of occurrence within Project Area	Abundance within Project Area vicinity	Chance of occurrence within RSA (likely to be 44–206 m)	Chance of occurrence within transmission line heights (approx. 7.5–37 m)	Potential impact pathway	Likelihood of event	Consequence of event	Risk rating	Comments
										• The Gould's wattled bat is a microbat, as it belongs to the suborder Microchiroptera. Microbats navigate and forage using echolocation, achieved by generating rapid sequences of high-frequency calls that bounce off objects and the returning echoes provide details of their surroundings (O'Leary 2011). There is no evidence to suggest that microbats are at risk of new overhead transmission lines (RPS 2014). Therefore, it is considered likely that the potential impacts from collisions with wind turbines will affect this species, but with a negligible consequence as this species is widespread and abundant in Australia. It is considered unlikely that the potential impacts from changes to site utilisation will affect this species and so there is a negligible consequence of this happening.
Mormopterus sp. (sp 4) (or *Ozimops planiceps*) (southern freetail bat)	–	High	Low	Low	–	Death or injury from collision with wind turbines and barotrauma	Likely	Negligible	Negligible	The following information was considered for the risk rating: • This species is found across a number of vegetation types including mallee, shrubland, open forest and woodland, with a preference for wetter environments (Atlas of Living Australia 2024c). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the project and wider locality (65 records) (RPS 2014). The southern freetail bat was the most commonly detected species and was regularly recorded at all sampling locations but in relatively low numbers (RPS 2014). • The flight habits of the species may occasionally put it at risk of collision with the surveyed RSA (i.e. 40–152 m) (RPS 2014). As such, they could occur within the proposed RSA (likely to be 44–206 m) or proposed transmission line heights (approximately 7.5–40 m). Their chance of flying through the Project Area's proposed RSA height is considered low. • Woodlands within the Project Area are mostly long narrow bands of vegetation following watercourses and roads. Here bats are likely to fly low and close to the vegetation most of the time (RPS 2014). • The southern freetail bat is a microbat, as it belongs to the suborder Microchiroptera. Microbats navigate and forage using echolocation, achieved by generating rapid sequences of high–frequency calls that bounce off objects and the returning echoes provide details of their surroundings (O'Leary 2011). There is no evidence to suggest that microbats are at risk of new overhead transmission lines (RPS 2014). Therefore, it is considered likely that the potential impacts from collisions with wind turbines will affect this species, but with a negligible consequence as this species is widespread and abundant in Australia. It is considered unlikely that the potential impacts from changes to site utilisation will affect this species and so there is a negligible consequence of this happening.
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	
Tadarida australis (*or Austronomus australis*) (white-striped freetail bat)	–	High	Low	Moderate	–	Death or injury from collision with wind turbines and barotrauma	Likely	Negligible	Negligible	The following information was considered for the risk rating: • This species roosts can be found in most habitats from closed forest, open flood plain and within urban areas (Atlas of Living Australia 2024d). Suitable habitat is present within and proximate to the Project Area. • This species has been recorded within the project and wider locality (11 records) (RPS 2014). • The white–striped freetail bat is a specialised high-altitude, fast-flying interceptor insectivore (Atlas of Living Australia 2024d). The white-striped freetail bat is common in winter and commonly flies at height and possibly within the surveyed RSA (i.e. 40–152 m) (RPS 2014). Their chance of flying through the Project Area's proposed RSA height is considered moderate. Therefore, it is considered likely that the potential impacts from collisions with wind turbines will affect this species, but with a negligible consequence as this species is widespread and abundant in Australia. It is considered unlikely that the potential impacts from changes to site utilisation will affect this species and so there is a negligible consequence of this happening.
						Changes to utilisation of the site and its surrounds from disturbance	Unlikely	Negligible	Negligible	

APPENDIX E: EXAMPLE CARCASS SEARCH SURVEY DATA SHEET

WADDI WIND FARM

Survey timing and location details			
Date:		**Type of survey location:**	Turbine
Start time:		**Survey location ID:**	
Finish time:		**Survey location coordinates:**	Easting: Northing:
Portion of time the turbine was operational over the past five days (%):		**Portion of time the turbine was operational over the past 30 days (%):**	

Survey area details			
Shape of survey area: (tick one)	☐ Circle ☐ Other:	**GPS track taken:** (tick one)	☐ Yes ☐ No
Dimensions of survey area: (tick one)	☐ Radius = 120 m from turbine ☐ Other:	**Transect width (m):**	
Size of survey area (m^2):			

Survey area stratum and environmental setting		
Distance to key habitat feature(s) (i.e. dam or wetland, watercourse, woodland):		
Description of vegetation within survey area (i.e. type, height, density):		
Ground visibility within survey area (%):	Bare ground = Short or sparse vegetation = Long or dense vegetation =	

Weather conditions				
Temperature (°C):		**Wind direction:**		
Rainfall: (tick one)	☐ Fine ☐ Rain ☐ Drizzle ☐ Heavy rain	**Wind strength:** (tick one)	☐ Calm ☐ Breeze	☐ Strong ☐Moderate
Cloud cover (%):			☐ Speed (km/hr) =	

Carcass search survey method			
Survey method: (tick one)	☐ Detection dogs and handlers ☐ Ecologists	**Names of searchers:**	
Number of searchers:			

Carcass search survey findings			
Dead or injured bird or bat data sheet(s) completed for each find: (tick one)	☐ Yes ☐ No	**Photograph(s) taken for each find:** (tick one)	☐ Yes ☐ No
Total number of carcasses recorded:			
Additional notes:			

APPENDIX F: EXAMPLE DEAD OR INJURED BIRD OR BAT DATA SHEET

WADDI WIND FARM

Timing and location details			
Date:		**Turbinetransmission line ID:**	
Time carcass/injured animal was found:		**Carcass coordinates:**	Easting: Northing:
Observer / personnel (company) involved:			

Detection			
Survey method: (tick one)	☐ Planned carcass search survey by detection dogs and handlers ☐ Planned carcass search survey by ecologists ☐ Incidental find		
Distance of find from observer after detection (m):		**Behavioural change in dog, if relevant:**	
Distance of find from turbine/transmission line (m):		**Direction of find from turbine / transmission line (bearing):**	
Photograph(s) taken and attached to the data sheet: (tick one)	☐ Yes ☐ No	**Ground visibility within 1 m radius of find:** (tick one)	☐ Bare ground ☐ Short or sparse vegetation ☐ Long or dense vegetation
Describe detection area: (i.e. stratum / vegetation)			

Weather conditions			
Temperature (°C):		**Wind direction:**	
Rainfall: (tick one)	☐ Fine ☐ Rain ☐ Drizzle ☐ Heavy rain	**Wind strength:** (tick one)	☐ Calm ☐ Breeze ☐ Strong ☐ Moderate
Cloud cover (%):			☐ Speed (km/hr) =
Any unusual weather in the past 48 hours:			

Carcass / injured animal details			
Preliminary species identification:		**Carcass identifier:**	
Age of animal: (tick one)	☐ Unknown ☐ Adult ☐ Juvenile	**Sex of animal:** (tick one)	☐ Unknown ☐ Female ☐ Male
Condition of animal: (tick one)	☐ Injured ☐ Intact carcass ☐ Partial remains ☐ Scavenged ☐ Feathers only ☐ Other:	**Degree of decay:** (tick one)	☐ Fresh ☐ >3 days ☐ 1–3 days ☐ Other:
		Signs of scavenging, if relevant:	
Fate of carcasses from incidental finds: (tick one)	☐ Removed ☐ Left in place (if ≤ 5 days from planned survey)	**Signs of injury, if relevant:**	

WADDI WIND FARM

If a carcass is found, post-find actions include:	If an injured animal is found, post-find actions include:
1. Report to the O&M contractor environment representative or transmission line operator environment representative and follow carcass detection / find protocol.	1. Report to the O&M contractor environment representative or transmission line operator environment representative and follow injured bird and bat find protocol.

Safety note: Do not touch any bats, instead call in a qualified and appropriately vaccinated ecologist or wildlife carer.

Photograph(s) of the carcass / injured animal:

APPENDIX G: EXAMPLE CARCASS PERSISTENCE TRIAL DATA SHEET

WADDI WIND FARM

Timing and location details

Date:		**Type of trial location:**	Turbine
Time:			

Carcass persistence trial method

Trial method: (tick one)	☐ Detection dogs and handlers ☐ Ecologists ☐ Motion sensitive camera	**Names of searchers:**	
Number of searchers:			

Weather conditions and trial area stratum

General weather conditions since previous carcass persistence trial:		**Ground visibility within trial area:** (tick one)	☐ Bare ground ☐ Short or sparse vegetation ☐ Long or dense vegetation

Carcass persistence trial records

Turbine trial location ID	Carcass category and carcass species (e.g. small / medium / large sized birds)	Distance and direction from turbine (m, bearing)	Carcass coords (easting, northing)	Date carcass was put in place	No. of days the carcass has been checked	Condition of carcass	Evidence of scavenging (e.g., scavenger scats, bones, feathers, animal parts and type of scavenging, if visible)

WADDI WIND FARM

Additional notes: