

Species	EPBC Act Status ¹	Description	Desktop likelihood of occurrence	Survey methodology	Likelihood of occurrence and impact following field assessments
Reptiles					
<i>Varanus mertensi</i> Mertens' Water Monitor	E	<p>Distribution</p> <p>Distribution across northern Australia, from Eastern Queensland, across the north of the Northern Territory, to north-east Western Australia. It's southern extent in Queensland is from Mt Isa to Cairns (DCCEEW 2023b).</p> <p>Habitat</p> <p>A highly aquatic lizard that rarely ventures more than 5-10 m from the edge of water. Often found in semi-permanent pools, including springs, swamps, and creeks. Recorded sheltering in hollows between rocks and in burrows that have been dug into the banks of waterways (DCCEEW 2023b).</p> <p>Foraging</p> <p>An active predator that forages primarily in the water and at the water-land interface. Varied and adaptable diet contributes to widespread distribution in the wet-dry tropics of Australia (DCCEEW 2023b).</p> <p>Breeding</p> <p>Lays eggs in a burrow in the dry season and hatching in the wet season (DCCEEW 2023b).</p>	<u>Unlikely</u> – Potential habitat has not been identified within the study area, and there are no confirmed records within 100 km.	Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022).	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons (AARC 2025), neither the Mertens' Water Monitor nor its habitat, has been identified within the study area.</p> <p>The Project is, therefore, unlikely to impact the species.</p>
Birds					
<i>Actitis hypoleucos</i> Common Sandpiper	Mi	<p>Distribution</p> <p>The Common Sandpiper is widespread in small numbers. It is known to occur along all coastlines in Australia, and in many areas inland (DCCEEW 2025a). In Queensland, this species has been recorded in South-eastern Gulf of Carpentaria and Cairns Foreshore (DCCEEW 2025a). It migrates to Australia during the non-breeding season, migrating to Queensland from August (DCCEEW 2025a).</p>	<u>Potential</u> – Habitat for the species may occur within the study area, there are records within 50 km of the study area.	Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022) and the relevant	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons, including targeted survey effort (AARC 2025), the Common Sandpiper has not been identified within the study area.</p> <p>While there are no waterholes present in the study area and the two</p>

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		<p>Habitat</p> <p>The Common Sandpiper can occur in a broad range of coastal and inland wetlands with varying levels of salinity (DCCEEW 2024-2025). It is mostly found around muddy margins or rocky shores, which may be narrow and/or steep (DCCEEW 2024-2025). Rarely found on mudflats (DCCEEW 2024-2025).</p> <p>Foraging</p> <p>Generally, this species forages on bare soft mud at the edges of wetlands in shallow water, often in areas where objects protrude from the substrate (rocks or pneumatophores) (DCCEEW 2025a). Sometimes the Common Sandpiper will venture into grassy areas adjoining wetlands in search of food for extensive periods (molluscs, bivalves, crustaceans and a variety of insects) (DCCEEW 2025a).</p> <p>Breeding/Roosting</p> <p>Roost sites are typically on rocks or in roots/ branches of vegetation, especially mangroves (DCCEEW 2025a).</p> <p>Dispersal</p> <p>The southern migration passage is said to be mostly diurnal, whereas the northern passage mainly occurs by night (DCCEEW 2025a).</p>		Commonwealth survey guidelines.	<p>mapped VM wetlands identified are highly ephemeral wooded wetlands, nearby farm dams were specifically targeted for bird surveys. The Common Sandpiper is considered unlikely to occur within the study area.</p> <p>Additionally, the potential habitat available to migratory species in the study area is unlikely to provide important habitat for migratory species, including the Common Sandpiper (DoEE 2017).</p> <p>The Project is unlikely to disturb the species.</p>
<p><i>Apus pacificus</i> Fork-tailed Swift</p>	Mi	<p>Distribution</p> <p>The Fork-tailed Swift is a non-breeding visitor to all states and territories of Australia (DCCEEW 2025a). It is widespread throughout Queensland, with sightings common from February–March (DCCEEW 2025a).</p> <p>Habitat</p> <p>This species does not have specific habitat requirements and is found across a range of habitats, from inland open plains to</p>	<p><u>Potential</u> – Habitat for the species may occur within the study area. While the closest record of the species is over 65 km NW of the study area, this highly mobile species has a broad distribution, and there is potential for</p>	<p>Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022) and the relevant</p>	<p><u>Known</u> – The species was identified within the study area during the November 2024 and February 2025 field survey. Assessment of potential project impacts is included in Section 5 of the Esmeralda Project – MNES Terrestrial Ecology Impact</p>

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		<p>wooded and coastal areas, where it is exclusively aerial (DCCEEW 2025a).</p> <p>Foraging</p> <p>The Fork-tailed Swift forages aerially, up to hundreds of meters above the ground (DCCEEW 2025a). They often occur in areas of updraughts and along the edges of low-pressure systems eating small bees, wasps, termites and moths (DCCEEW 2025a).</p> <p>Breeding/Roosting</p> <p>It is thought that this species roosts aerially but are occasionally observed to land (DCCEEW 2025a).</p> <p>Dispersal</p> <p>It is not known to have specific dispersal habitat requirements.</p>	the species to fly over the study area.	Commonwealth survey guidelines.	Assessment Report (AARC 2025).
<p><i>Calidris acuminata</i></p> <p>Sharp-tailed Sandpiper</p>	V, Mi	<p>Distribution</p> <p>The Sharp-tailed Sandpiper is a non-breeding visitor to all states and territories of Australia (DCCEEW 2025a). It is widespread throughout Queensland, arriving in large numbers in September (DCCEEW 2025a).</p> <p>Habitat</p> <p>This species prefers 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. They use intertidal mudflats in sheltered bays, inlets, estuaries or seashores, and also swamps and creeks lined with mangroves (DCCEEW 2025a). They may be attracted to mats of algae and water weed either floating or washed up around terrestrial wetlands, and coastal areas with much beach cast</p>	<u>Potential</u> – Habitat for the species may occur within the study area, there are records within 50 km of the study area.	Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022) and the relevant Commonwealth survey guidelines.	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons, including targeted survey effort (AARC 2025), the Sharp-tailed Sandpiper has not been identified within the study area. While there are no waterholes present in the study area ephemeral creeks, swamps and nearby farm dams were specifically targeted for bird surveys. The Sharp-tailed Sandpiper is considered unlikely to occur within the study area.</p> <p>Furthermore, the study area is unlikely to provide important habitat for migratory species, including</p>

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		<p>seaweed (DCCEEW 2025a). Sometimes they occur on rocky shores and rarely on exposed reefs (DCCEEW 2025a).</p> <p>Foraging</p> <p>They forage at the edge of the water of wetlands or intertidal mudflats, either on bare wet mud or sand, or in shallow water. They also forage among inundated vegetation of saltmarsh, grass or sedges. They forage in sewage ponds, and often in hypersaline environments (DCCEEW 2025a). This species can also forage among inundated vegetation of saltmarsh, grass, or sedge, eating seeds, worms, molluscs, crustaceans, and insects (DCCEEW 2025a).</p> <p>Breeding/Roosting</p> <p>The species does not breed in Australia.</p> <p>Roosting occurs at edges of wetlands, on wet open mud or sand, or in short sparse vegetation, such as grass or saltmarsh (DCCEEW 2025a). Mangroves and on rocks in water are some other locations this species has been seen roosting (DCCEEW 2025a).</p> <p>Dispersal</p> <p>Movements occur during the non-breeding period, moving to temporary or flooded wetlands and leaving them when they dry (DCCEEW 2025a).</p>			<p>the Sharp-tailed Sandpiper (DoEE 2017). The Project is considered unlikely to impact the species.</p>
<p><i>Calidris ferruginea</i></p> <p>Curlew Sandpiper</p>	<p>CE, Mi</p>	<p>Distribution</p> <p>Widespread in small numbers, this species is known to occur around coasts in Australia and in many areas inland during the non-breeding season (DCCEEW 2025a). In Queensland, this species has been recorded in the Gulf of Carpentaria, with widespread records along the coast, south of Cairns (DCCEEW 2025a).</p> <p>Habitat</p> <p>Inhabiting wetland environments, the Curlew Sandpiper mainly occurs on intertidal mudflats in sheltered coastal areas, (estuaries,</p>	<p><u>Unlikely</u> – The Project is not located near the coastal main distribution of the species. While there is potential marginal habitat for the species in the form of ephemeral small swamps and farm dams, the closest records of the species are from large</p>	<p>Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022).</p>	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons (AARC 2025), the Curlew Sandpiper has not been identified within the study area.</p> <p>While there are no waterholes present in the study area ephemeral creeks, swamps and nearby</p>

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		<p>bays, inlets, and lagoons), as well as around non-tidal swamps, lakes and lagoons near the coast, and ponds in saltworks and sewage farms (DoE 2015a). Small numbers have been recorded living inland around ephemeral and permanent lakes, dams, waterholes and bore drains, usually with bare edges of mud or sand (DoE 2015a).</p> <p>Foraging</p> <p>Curlew Sandpipers forage on mudflats and nearby shallow water at the edge of shallow pools, wading through water 15-60 mm deep (DCCEEW 2025a). At high tide, they forage among low sparse emergent vegetation, such as saltmarsh, and sometimes forage in flooded paddocks or inundated salt flats (DCCEEW 2025a).</p> <p>Breeding/Roosting</p> <p>Roosting occurs on bare dry shingle, shell, or sand beaches, sandspits and islets in or around coastal or near-coastal lagoons and other wetlands (DCCEEW 2025a). Occasionally roosting occurs in dunes during very high tides and sometimes in saltmarsh (DCCEEW 2025a). Substantial numbers of Curlew Sandpipers remain in northern Australia throughout the nonbreeding season, arriving around September (DCCEEW 2025a).</p>	<p>permanent waterbodies located over 100 km of the study area.</p>		<p>farm dams were specifically targeted for bird surveys.</p> <p>The Project is, therefore, unlikely to impact the species.</p>
<p><i>Calidris melanotos</i></p> <p>Pectoral Sandpiper</p>	<p>Mi</p>	<p>Distribution</p> <p>The Pectoral Sandpiper occurs around Cairns in Queensland (DCCEEW 2025a). There are scattered records elsewhere, mainly from east of the Great Divide between Townsville and Yeppoon (DCCEEW 2025a). A few inland records have also been recorded at Mount Isa, Longreach, and Oakley (DCCEEW 2025a).</p> <p>Habitat</p> <p>This species prefers shallow wetlands with varying levels of salinity, in coastal or near coastal habitat (DCCEEW 2025a). It is sometimes found further inland in the following habitat types, coastal lagoons, swamps, lakes, inundated grasslands, estuaries, bays, saltmarshes, river pools, creeks, floodplains, and artificial</p>	<p><u>Unlikely</u> – The Project is not located near the coastal main distribution of the species. While there is potential marginal habitat for the species in the form of ephemeral small swamps and farm dams, the closest records of the species are from large permanent waterbodies</p>	<p>Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022).</p>	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons (AARC 2025), the Pectoral Sandpiper has not been identified within the study area.</p> <p>While there are no waterholes present in the study area ephemeral creeks, swamps and nearby farm dams were specifically targeted for bird surveys.</p>

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		<p>wetlands (DCCEEW 2025a). Its preferred habitat is wetlands that have open fringing mudflats and low, emergent, or fringing vegetation, such as grass or samphire (DCCEEW 2025a). It has also been recorded in swamp overgrown with lignum (DCCEEW 2025a).</p> <p>Foraging</p> <p>Foraging occurs in shallow water or soft mud at the edge of wetlands where they consume algae, seeds, crustaceans, arachnids, and insects (DCCEEW 2025a).</p> <p>Breeding/Roosting</p> <p>It is not known to have specific dispersal or roosting habitat requirements, and this species is found in Australia from September to June (DCCEEW 2025a).</p>	located over 100 km of the study area.		The Project is, therefore, unlikely to impact the species.
<i>Calidris ruficollis</i> Red-necked Stint	Mi	<p>Distribution</p> <p>The Red-necked Stint is distributed along most of the Australian coastline (DCCEEW 2025a). This species has been found inland in all states when conditions are suitable and is known from the coastlines of all states (DCCEEW 2025a).</p> <p>Habitat</p> <p>This species is found in coastal areas, including in sheltered inlets, bays, lagoons and estuaries with intertidal mudflats, often near spits, islets and banks and, sometimes, on protected sandy or coralline shores (DCCEEW 2025a). It can also occur along ephemeral or permanent shallow wetlands near the coast or inland, including lagoons, lakes, swamps, riverbanks, waterholes, bore drains, dams, soaks, and pools in salt flats. The Red-necked Stint has also been known to use flooded paddocks or damp grasslands; and have been recorded in areas with little or no perennial vegetation (DCCEEW 2025a).</p> <p>Foraging</p> <p>The Red-necked Stint forages on bare wet mud on intertidal mudflats or sandflats, or in very shallow water (DCCEEW 2025a). The species is also known to forage in non-tidal wetlands during high tides; including</p>	<u>Potential</u> – Potential habitat may occur within the study area. There are records of the species within 50 km of the study area.	Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022) and the relevant Commonwealth survey guidelines.	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons, including targeted survey effort (AARC 2025), the Red-necked Stint has not been identified within the study area.</p> <p>While there are no waterholes present in the study area ephemeral creeks, swamps and nearby farm dams were specifically targeted for bird surveys. The Red-necked Stint is considered unlikely to occur within the study area.</p> <p>Furthermore, the study area is unlikely to provide important habitat for migratory species, including</p>

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		<p>areas of flooded paddocks (DCCEEW 2025a). This species is omnivorous.</p> <p>Breeding/Roosting</p> <p>This species is a non-breeding visitor to Australia, it is known to breed in Siberia and sporadically in north and west Alaska (DCCEEW 2025a). The Red-necked Stint roosts on sheltered beaches, spits, banks or islets, of sand, mud, coral or shingle, sometimes in saltmarsh or other vegetation (DCCEEW 2025a).</p> <p>Dispersal</p> <p>The Red-necked Stint spends winter in Australasia, mostly in Australia for its non-breeding season (DCCEEW 2025a). The species begins to arrive in Australia from August, with the majority arriving from early September (DCCEEW 2025a). The Red-necked Stint leaves Australia from late February/ March through to April, with a few individuals remaining as late as May (DCCEEW 2025a).</p>			<p>the Red-necked Stint (DoEE 2017). The Project is considered unlikely to impact the species.</p>
<p><i>Charadrius veredus</i> Oriental Plover</p>	<p>Mi</p>	<p>Distribution</p> <p>Within Queensland, the species is found in the north-western part of the state (the Gulf Country), both in coastal and inland areas (DCCEEW -2025).</p> <p>Habitat</p> <p>Within Queensland, the Oriental Plover spends several weeks in coastal habitats such as estuarine mudflats, sandbanks, beaches, reefs, and near-coastal grasslands. They then move further inland, inhabiting areas such as flat, open, semi-arid grasslands where grass is sparse and interspersed with bare ground. During the wet season they may move into lightly wooded grasslands (DCCEEW 2025a).</p> <p>Foraging</p> <p>Little is known about the diet of the Oriental Plover, though it has been recorded eating a variety of insects, including beetles, grasshoppers and crickets. They forage among short grass or stony</p>	<p><u>Unlikely</u> – Potential habitat does not occur within the study area, which is characterised by low woodland. Additionally, there are no records of this species within 100 km of the study area.</p>	<p>Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022).</p>	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons (AARC 2025), the Oriental Plover has not been identified within the study area.</p> <p>The Project is, therefore, unlikely to impact the species.</p>

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		<p>bare ground in a running, stopping and pecking action (DCCEEW 2025a).</p> <p>Breeding/Roosting</p> <p>This species does not breed in Australia (DCCEEW 2025a).</p> <p>Dispersal</p> <p>The species arrives in north-western Australia in early to mid-September. Within Australia, they may disperse in response to wet conditions and cold weather. They leave Australia between February and April (DCCEEW 2025a).</p>			
<p><i>Chloebia gouldiae</i></p> <p>Gouldian Finch</p>	E	<p>Distribution</p> <p>The Gouldian finch is found in northern Australia, ranging from the Cape York Peninsula through north-west Queensland, and the north of the Northern Territory to the Kimberley Region of Western Australia (TSSC 2016a).</p> <p>Habitat</p> <p>The species tends to inhabit open woodland dominated by Eucalyptus trees and a ground cover of Sorghum and other annual or perennial grasses. They also require a waterhole or spring within 2-3 km, and unburnt hollows for breeding (TSSC 2016a).</p> <p>Foraging</p> <p>The species can be found individually, travelling in pairs, or traveling in groups of anywhere from three to hundreds, or even in mixed flocks comprised of other finches (TSSC 2016a). They feed almost exclusively on grass seed and rely on a small number of grass species, feeding on freshly ripened seeds in the wet season, and on older dormant seeds during the dry season (TSSC 2016a).</p>	<p><u>Potential</u> – Potential habitat may occur within the study area. There are records of the species within 50 km of the study area.</p>	<p>Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022) and the relevant Commonwealth survey guidelines.</p>	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons, including targeted survey effort (AARC 2025), the Gouldian Finch has not been identified within the study area. Further, the species habitat requirements include waterholes or springs within 2-3 km. No permanent waterholes or wetlands were present within the study area. Ephemeral creeks, swamps and nearby farm dams were specifically targeted for bird surveys. The Gouldian Finch is considered unlikely to occur within the study area.</p> <p>Additionally, the study area does not possess unique habitat value for the species, as all</p>

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		<p>Breeding/Roosting</p> <p>They nest in tree hollows between April and July, laying roughly five eggs per clutch though they may raise several clutches each season (TSSC 2016a).</p>			<p>environmental features identified are also found in the surrounding region.</p> <p>The Project is unlikely to impact the species.</p>
<p><i>Cuculus optatus</i></p> <p>Oriental Cuckoo</p>	Mi	<p>Distribution</p> <p>Distributed throughout the northern parts of Western Australia, Northern Territory and Queensland, as well as along the Queensland and New South Wales coastline (DoE 2015a).</p> <p>Habitat</p> <p>Nonbreeding habitat occurs within rainforest margins, monsoon forest, vine scrubs, riverine thickets, wetter, densely canopied eucalypt forests or open <i>Casuarina</i>, <i>Acacia</i> or <i>Eucalyptus</i> woodlands (DoE 2015a).</p> <p>Foraging</p> <p>Not much is known about the ecology of this species (DoE 2015a).</p>	<p><u>Unlikely</u> – Potential habitat does not occur within study area, and closest record of the species is from over 200 km of the study area.</p>	<p>Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022).</p>	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons (AARC 2025), the Oriental Cuckoo has not been identified within the study area.</p> <p>The Project is, therefore, unlikely to impact the species.</p>
<p><i>Erythroriorchis radiatus</i></p> <p>Red Goshawk</p>	E	<p>Distribution</p> <p>Endemic to Australia, the Red Goshawk is sparsely dispersed across coastal and sub-coastal Australia, from western Kimberley Division to northeastern New South Wales, and occasionally on continental islands (DCCEEW 2025a). Birds recorded from far outside the breeding range in central Australia and the Pilbara likely include both dispersive juveniles and seasonal migrants from further north (DCCEEW 2023c).</p> <p>Habitat</p> <p>Any breeding or foraging habitat in areas where the species is known or likely to occur (as defined by the distribution (DCCEEW 2023c) and any newly discovered breeding or foraging locations should be considered habitat critical to survival (DCCEEW 2023c).</p>	<p><u>Unlikely</u> – the Project is not located near the coast or rainforest and lacks the habitat preferred by the species. Additionally, the closest record of this species is from around 65 km of the study area.</p>	<p>Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022).</p>	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons (AARC 2025), the Red Goshawk has not been identified within the study area.</p> <p>The Project is, therefore, unlikely to impact the species.</p>

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		<p><u>Foraging habitat:</u> The species inhabits coastal and sub-coastal tall open forests and woodlands, tropical savannas traversed by wooded or forested rivers, and the edges of rainforests (DCCEEW 2023c).</p> <p><u>Breeding habitat:</u> Areas with large, tall trees (>14m) within 2.5 km of a watercourse. Important breeding habitat includes riparian vegetation supporting tall stands or remnant paperbark trees (<i>Melaleuca</i> spp.) or tall dry woodlands in proximity to watercourses with Darwin stringybark (<i>Eucalyptus tetradonta</i>) dominated woodlands. These breeding habitats are often found in areas of topographic ruggedness such as plateaus or gorges where breeding can occur on elevated country (DCCEEW 2023c).</p> <p>Ecology</p> <p>This species ambushes its prey when hunting, feeding on medium to large birds (DCCEEW 2025a).</p> <p>The species prefers areas that appear to contain permanent water. Nest trees have been noted to be significantly taller (>20m) than surrounding trees, which commonly occur in proximity to watercourses and wetlands (DCCEEW 2025a).</p> <p>Movement patterns of the Red Goshawk are poorly known, they have been observed individually, in pairs, and in family groups (DCCEEW 2025a).</p>			
<i>Falco hypoleucos</i> Grey Falcon	V	<p>Distribution</p> <p>This species is sparsely distributed throughout arid and semi-arid Australia where annual rainfall is <500 mm, except for wet years followed by drought where the Grey Falcon may become more widespread throughout its range (TSSC 2020). In Queensland this species appears to be absent in areas East of the Great Dividing Range (TSSC 2020).</p> <p>Habitat</p> <p>The Grey Falcon prefers lightly timbered and bare lowland plains in acacia shrublands crossed by tree lined watercourses (TSSC 2020).</p>	<u>Unlikely</u> – The preferred habitat for the species does not occur within the study area, which is characterised by low woodlands. Additionally, there are no records of this species within 100 km of the study area.	Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022).	<u>Unlikely</u> – Despite extensive fauna surveys over two seasons (AARC 2025), the Grey Falcon has not been identified within the study area. The Project is, therefore, unlikely to impact the species.

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		<p>It is also known to occur in grassland, sand dune and open woodland habitats, and has been observed hunting in treeless areas (TSSC 2020).</p> <p>Foraging</p> <p>The Grey Falcon feeds almost exclusively on birds such as doves, pigeons, small parrots and finches while breeding (TSSC 2020). It has also been seen consuming small mammals and lizards (TSSC 2020).</p> <p>Breeding/Roosting</p> <p>Breeding occurs from June to November in the old nests of other birds particularly raptor or corvid nests (TSSC 2020). These nests are usually located in the tallest tree along watercourses in tree species such as River Red Gum (<i>Eucalyptus camaldulensis</i>) and Coolabah (<i>Eucalyptus coolabah</i>) (TSSC 2020).</p>			
<p><i>Gallinago hardwickii</i> Latham's Snipe</p>	V, Mi	<p>Distribution</p> <p>The Latham's Snipe is a non-breeding visitor to south-eastern Australia, and a passage migrant through northern Australia (DCCEEW 2025a). In Queensland, their range extends inland over the eastern tablelands in south-eastern Queensland (and occasionally from Rockhampton in the north), and to west of the Great Dividing Range (DCCEEW 2025a).</p> <p>Habitat</p> <p>This species prefers open freshwater permeant and ephemeral wetlands, typically with low dense vegetation (DCCEEW 2025a). It can be found in a variety of vegetation communities including but not limited to tussock grasslands, coastal and alpine heathlands, tea-tree scrub, and open forests (DCCEEW 2025a).</p>	<p><u>Potential</u> – Potential habitat may occur in the study area, and the Project is located within the distribution range of the species, with records from around 80 km of the study area.</p>	<p>Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022).</p>	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons (AARC 2025), the Latham's Snipe has not been identified within the study area.</p> <p>Swamps and nearby farm dams were specifically targeted for bird surveys. The Red-necked Stint is considered unlikely to occur within the study area.</p> <p>The Project is, therefore, unlikely to impact the species.</p>

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		<p>Foraging</p> <p>The foraging habitat of the Latham’s Snipe consists of areas of mud (exposed or beneath very shallow water) with low, dense vegetation present (DCCEEW 2025a).</p> <p>Breeding/Roosting</p> <p>They roost near their foraging sites, in areas that provide some shelter (clumps of vegetation, in drainage ditches, among boulders, or in shallow water if cover is not available) (DCCEEW 2025a).</p> <p>Dispersal</p> <p>Latham's Snipe is dispersive during its stay in Australia, arriving from July to November. The snipe is thought to disperse in response to rainfall and the availability of food (DCCEEW 2025a).</p>			
<p><i>Glareola maldivarum</i></p> <p>Oriental Pratincole</p>	<p>Mi</p>	<p>Distribution</p> <p>Within Queensland, the species is found in the north-western part of the state (the Gulf Country), both in coastal and inland areas (DCCEEW 2025a).</p> <p>Habitat</p> <p>Within Queensland, the Oriental Pratincole inhabits open plains, floodplains, or short grasslands with large patches of bare ground. They are found near wetlands, lakes, creeks, and artificial wetlands such as reservoirs, saltworks and sewage farms. In coastal areas they are found on beaches, mudflats, and islands (DCCEEW 2025a).</p> <p>Foraging</p> <p>The species is insectivorous, feeding on dragonflies, cicadas, beetles, ants, flies, grasshoppers and wasps, usually foraging in flocks, searching between 0 m and 300 m off the ground (DCCEEW 2025a).</p>	<p><u>Unlikely</u> – Potential habitat does not occur within the study area, which is characterised by low woodlands. Additionally, the closest records of the species are from around 80 km from the study area.</p>	<p>Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022).</p>	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons (AARC 2025), the Oriental Pratincole has not been identified within the study area.</p> <p>While there are no waterholes present in the study area ephemeral creeks, swamps and nearby farm dams were specifically targeted for bird surveys.</p> <p>The Project is, therefore, unlikely to impact the species.</p>

Species	EPBC Act Status ¹	Description	Desktop likelihood of occurrence	Survey methodology	Likelihood of occurrence and impact following field assessments
		<p>Breeding/Roosting</p> <p>This species does not breed in Australia (DCCEEW 2025a).</p> <p>Dispersal</p> <p>The species arrives in north-western Australia in early to late October during their non-breeding season, usually coinciding with storm events that increase the number of insects. They typically leave in late March (DCCEEW 2025a).</p>			
<p><i>Grantiella picta</i></p> <p>Painted honeyeater</p>	<p>V</p>	<p>Distribution</p> <p>The species is sparsely distributed from south-eastern Australia to north-western Queensland and eastern Northern Territory, with the highest concentration found in the Great Dividing Range, between Grampians, Victoria, and Roma (DoE 2015b).</p> <p>Habitat</p> <p>The Painted Honeyeater uses mistletoe trees as host trees, found within eucalypt forests/woodlands, riparian woodlands, acacia-dominated woodlands, paperbark forests and residential areas, preferring those areas with higher densities of mature trees. It is more commonly found in wider blocks of remnant woodland but will use narrow strips for breeding if sufficient mistletoe trees are present (DoE 2015b).</p> <p>Foraging</p> <p>The most specialised of Australia's honeyeaters, the species diet primarily consists of mistletoe fruits, however, is supplemented by nectar and arthropods (DoE 2015b).</p> <p>Breeding/Roosting</p> <p>The species occurs in singles or pairs, with breeding occurring between October and March when the mistletoe fruits are most available. The species appears to prefer mistletoe as a nest substrate and selects nest sites in habitats where mistletoe prevalence and parasitism rates are high. The species builds a nest</p>	<p><u>Potential</u> – Habitat may occur within the study area, and there are records for the species within 50 km of the study area.</p>	<p>Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022) and the relevant Commonwealth survey guidelines.</p>	<p><u>Unlikely</u> – Despite extensive fauna surveys over several years and seasons, including targeted study effort (AARC 2025), the Painted Honeyeater has not been identified within the study area. Further, the specific habitat for the species (abundant mistletoe trees) was not recorded within the study area.</p> <p>The species is considered unlikely to occur within the study area and will not be impacted by the Project.</p>

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		<p>from plant fibres and spider webs between 3 and 20 m high in trees (DoE 2015b).</p> <p>Dispersal</p> <p>The species moves seasonally north-south with the fruiting of mistletoe. After breeding, many individuals move to semi-arid regions such as north-eastern South Australia. Western Queensland, and central Northern Territory (DoE 2015b). The species is considered to have a single population.</p>			
<p><i>Hirundapus caudacutus</i></p> <p>White-throated Needletail</p>	V, Mi	<p>Distribution</p> <p>The White-throated Needletail migrates to Australia during the non-breeding season around September/October (DCCEEW 2025a; TSSC 2019). During this time, this species is widespread across eastern and south-eastern Australia (DCCEEW 2025a; TSSC 2019). In eastern Australia, it has been recorded in all coastal regions of Queensland, extending inland to the western slopes of the Great Divide and occasionally onto adjacent inland plains (DCCEEW 2025a).</p> <p>Habitat</p> <p>Primarily an aerial species, this species is known to occur across a variety of habitats including wooded areas, open forests, and rainforests (DCCEEW 2025a). Large tracts of native vegetation, particularly forest, is considered likely to be a key habitat requirement for this species (DoE 2015a). It has been observed flying over farmland, typically over partially cleared pasture or within remnant vegetation at the edge of paddocks (DCCEEW 2025a).</p> <p>Ecology</p> <p>This species predominantly forages aerially at heights up to 'cloud level', along the edges of low-pressure systems (DCCEEW 2025a). This species is also known to forage much closer to the ground (still aerial) in open habitats or recently disturbed areas feeding on a wide variety of insects (DCCEEW 2025a). It prefers to roost in forest and woodlands, both among dense foliage in the canopy or in tree hollows, as well as</p>	The White-throated Needletail was not identified in the desktop searches.	Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022) and the relevant Commonwealth survey guidelines.	<u>Known</u> – The species was identified within the study area during the November 2024 field survey. Assessment of potential project impacts is included in Section 5 of the Esmeralda Project – MNES Terrestrial Ecology Impact Assessment Report (AARC 2025).

Species	EPBC Act Status ¹	Description	Desktop likelihood of occurrence	Survey methodology	Likelihood of occurrence and impact following field assessments
		on bark or rock faces, and maybe aerially on occasion (DCCEEW 2025a; DoE 2015a).			
<i>Hirundo rustica</i> Barn Swallow	Mi	<p>Distribution</p> <p>In Queensland, the species occurs along the north coast and down to Fraser Island. Its range continues along the top of Australia, down along the western side to the Pilbara (DCCEEW 2025a).</p> <p>Habitat</p> <p>When in Australia, the species is found in open country in coastal lowlands, often near water, towns and cities, in addition to freshwater wetlands, paperbark woodland, mesophyll shrub thickets and tussock grassland (DCCEEW 2025a)</p> <p>Foraging</p> <p>The species is primarily insectivorous, feeding on flying insects by skimming them from the water surface, or by simple aerial pursuit while flying low over the ground (DCCEEW 2025a).</p> <p>Breeding/Roosting</p> <p>This species does not breed in Australia (DCCEEW 2025a).</p> <p>Dispersal</p> <p>The species breeds in the northern hemisphere in temperate regions, travelling south to Australia to spend the boreal winter, staying from November to March (DCCEEW 2025a).</p>	<u>Unlikely</u> – Habitat occurs within the study area, however the closest record of the species is from over 200 km of the study area.	Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022).	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons (AARC 2025), the Barn Swallow has not been identified within the study area.</p> <p>While there are no waterholes present in the study area ephemeral creeks, swamps and nearby farm dams were specifically targeted for bird surveys.</p> <p>The Project is, therefore, unlikely to impact the species.</p>
<i>Motacilla cinerea</i> Grey Wagtail	Mi	<p>Distribution</p> <p>The species occurs along much of the coast, ranging west from Adelaide, all the way around to Townsville, with a patch of non-occurrence north of Cairns in Queensland (DoE 2015a).</p>	<u>Unlikely</u> – Potential habitat for the species in the study area is limited to the wet season and to farm dams located in the vicinity of the study area. However, the closest record of the species is	Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons (AARC 2025), the Grey Wagtail has not been identified within the study area.</p> <p>While there are no waterholes present in the</p>

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		<p>Habitat</p> <p>Both in and out of Australia the species is highly associated with water. In Australia they are most commonly found in creeks, rivers, and waterfalls (DoE 2015a).</p> <p>Foraging</p> <p>They are known to forage within rocky tidal flats during migration, but will forage in their primary habitat otherwise, feeding on a variety of insects, molluscs, crustaceans, small fish and tadpoles, depending on what is available (DoE 2015a).</p> <p>Breeding/Roosting</p> <p>The species does not breed in Australia (DoE 2015a).</p> <p>Dispersal</p> <p>The species regularly travels to from Russia to Australia, staying from late October to March (DoE 2015a).</p>	<p>from over 370 km of the study area.</p>	<p>Queensland (Eyre 2022).</p>	<p>study area ephemeral creeks, swamps and nearby farm dams were specifically targeted for bird surveys.</p> <p>The Project is, therefore, unlikely to impact the species.</p>
<p><i>Motacilla tschutschensis</i> Yellow Wagtail</p>	<p>Mi</p>	<p>Distribution</p> <p>This species may occur throughout Australia during the non-breeding season (DoE 2015a).</p> <p>Habitat</p> <p>The Yellow Wagtail prefers mostly well-watered open grasslands and the fringes of wetlands (DoE 2015a).</p> <p>Foraging</p> <p>The species roosts in mangroves and other dense vegetation (DoE 2015a).</p>	<p><u>Unlikely</u> – Potential habitat does not occur within the study area, which is characterised by low woodlands, with some ephemeral wooded swamps and small farm dams near the study area. Additionally, the closest record of the species is from over 200 km of the study area.</p>	<p>Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022).</p>	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons (AARC 2025), the Yellow Wagtail has not been identified within the study area.</p> <p>While there are no waterholes present in the study area ephemeral creeks, swamps and nearby farm dams were specifically targeted for bird surveys.</p> <p>The Project is, therefore, unlikely to impact the species.</p>

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<p><i>Pandion haliaetus</i> Eastern Osprey</p>	Mi	<p>Distribution</p> <p>The breeding range of the Eastern Osprey extends around the northern coast of Australia (including many offshore islands) from Albany in Western Australia to Lake Macquarie in New South Wales; with a second isolated breeding population on the coast of South Australia (DCCEEW 2025a). The total range (breeding plus non-breeding) around the northern coast is more widespread and is continuous around this region, except for Eighty Mile Beach (DCCEEW 2025a).</p> <p>Habitat</p> <p>Predominantly occupies coastal and littoral habitats as well as terrestrial wetlands of tropical and temperate Australia and offshore islands. they visit a variety of wetland habitats including coastal cliffs, beaches, estuaries, inshore waters, reefs, bays, broad rivers, reservoirs, large lakes, and mangrove swamps (DCCEEW 2025a).</p> <p>Foraging</p> <p>The Eastern Osprey require extensive areas of open fresh, brackish or saline water for foraging, which mostly occurs during the day (DCCEEW 2025a). They mainly feed on fish, diving directly into the water to obtain their prey (DCCEEW 2025a). Eastern Osprey's occupy large territories that are used for breeding and at least some foraging (DCCEEW 2025a). They forage more widely, continuing to visit their breeding grounds in the non-breeding season (DCCEEW 2025a).</p> <p>Breeding/Roosting</p> <p>This species does not have specific breeding habitat requirements and are known to nest on a variety of natural and artificial sites (trees, cliffs, rocky headland, jetties, lighthouses cranes for example) (DCCEEW 2025a).</p> <p>Dispersal</p> <p>Adult Eastern Ospreys are mostly resident or sedentary around breeding territories. They forage more widely but continue to make at least intermittent visits to their breeding grounds in the non-breeding</p>	<p><u>Unlikely</u> – Habitat for the species has not been identified within the study area, and the closest record of the species is from over 150 km of the study area.</p>	<p>Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022).</p>	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons (AARC 2025), the Eastern Osprey has not been identified within the study area.</p> <p>While there are no waterholes present in the study area ephemeral creeks, swamps and nearby farm dams were specifically targeted for bird surveys.</p> <p>The Project is, therefore, unlikely to impact the species.</p>

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		<p>season (DCCEEW 2025a). Some dispersal is evident including apparent movement along the Murray River (DCCEEW 2025a) and extensions of range in north-western Western Australia and north-eastern Queensland in autumn; and an apparent extension of range inland in north-western Queensland in winter (DCCEEW 2025a). Absence of the species from some offshore islands in the non-breeding season; and records of single birds in central Australia between May and December during years of average or above-average rainfall, when fish are abundant in inland waterways also occur. These movements may represent dispersal by young birds (DCCEEW 2025a). Young birds may disperse more than 700 km from their natal territories, but many return to their natal areas to breed (DCCEEW 2025a).</p>			
<p><i>Plegadis falcinellus</i> Glossy Ibis</p>	Mi	<p>Distribution</p> <p>Within Australia, the Glossy Ibis is generally located east of the Kimberley in Western Australia and Eyre Peninsula in South Australia (DCCEEW 2025a). This species is known to breed in select locations, which include the Channel Country in Queensland (DCCEEW 2025a).</p> <p>Habitat</p> <p>Fresh water marshes at the edges of lakes and rivers, lagoons, floodplains, wet meadows, swamps, reservoirs, sewage ponds, rice-fields and cultivated areas under irrigation are the preferred foraging and breeding habitats for this species. They are also occasionally found in coastal locations such as estuaries, deltas, saltmarshes, and coastal lagoons (DCCEEW 2025a). It is known to occur in large densities in drying Top End grass/sedge swamps and Channel Country grass/forb meadows (DCCEEW 2025a).</p> <p>Foraging</p> <p>The species feeds in very shallow water, probing the water/ mud in search of its preferred food source (aquatic invertebrates/insects) (DCCEEW 2025a). Preferred foraging habitat mentioned above.</p>	<p><u>Potential</u> – Habitat for the species may occur within the study area, and there are records for the species within 50 km of the study area.</p>	<p>Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022).</p>	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons, including targeted survey effort (AARC 2025), the Glossy Ibis has not been identified within the study area. While there are no waterholes present in the study area ephemeral creeks, swamps and nearby farm dams were specifically targeted for bird surveys. The Glossy Ibis is considered unlikely to occur within the study area.</p> <p>Additionally, the study area does not possess unique habitat value for the species, as all environmental features identified are also found in the surrounding region.</p>

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		<p>Breeding/Roosting</p> <p>Australian breeding habitat types include wooded and shrubby swamps in the semi-arid and arid regions, including the Channel Country in Queensland (DCCEEW 2025a). Glossy Ibis roost in trees or shrubs usually near water bodies (DCCEEW 2025a). The breeding season is from mid spring to the end of summer; however, reproduction may extend to September to April if persistent food resources are available at breeding sites (DCCEEW 2025a).</p> <p>Dispersal</p> <p>Within Australia, the species moves in response to good rainfalls, expanding its range (DCCEEW 2025a). It often moves north in autumn, then return south to the main breeding areas in spring and summer (DCCEEW 2025a).</p>			<p>The Project is unlikely to impact the species.</p>
<p><i>Poephila cincta cincta</i></p> <p>Black-throated Finch (White rumped subspecies)</p>	<p>E</p>	<p>Distribution</p> <p>They appear in two general locations – in the Townsville region, and at scattered sites in central-eastern Queensland (DCCEEW 2025a). Historically it was found almost as far south as the NSW border, through eastern Queensland and north to the Burdekin and Lynd Rivers, however it is now extinct at most sites south of the Burdekin River, found only in small pockets of suitable habitat (DCCEEW 2025a).</p> <p>Habitat</p> <p>Mainly grassy, open woodlands and forests dominated by Eucalyptus, Corymbia, and Melaleuca, sometimes tussock grasslands or freshwater wetlands (DCCEEW 2025a). Their habitat is often near a watercourse, most typically in a riparian habitat. It is suspected that they require a mosaic of habitat in order to find seed in the wet season (DCCEEW 2025a).</p> <p>Foraging</p> <p>They can be found in pairs, or in flocks ranging up to 160 members (DCCEEW 2025a). They feed on the half-ripe seeds of grasses and</p>	<p><u>Potential</u> – Potential habitat may occur within the study area and, while the Project is located north of the known distribution of the Black-throated Finch (southern subspecies), there are records of the species within 50 km of the study area.</p>	<p>Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022).</p>	<p><u>Unlikely</u> – Although the desktop searches identified some records within 50 km of the study area (DETSI 2024), the Project is located within the known distribution of the <i>Poephila cincta atropygialis</i> (Black-throated Finch (Black-rumped subspecies)) and west of the known distribution of the Black-throated Finch (White-rumped subspecies) (ALA 2025, DCCEEW 2024b, AARC 2025).</p> <p>Nevertheless, the species was targeted during the surveys (AARC 2025), and despite extensive fauna</p>

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		<p>herbaceous plants, with some seasonal variation in diet, and tend to drink from water sources in the early morning and late afternoon unless water is easily available throughout the day (DCCEEW 2025a).</p> <p>Breeding/Roosting</p> <p>The species reaches sexual maturity in 6 months, breeding throughout the year if conditions are good, but typically during the wet season between February and May in the Townsville region, August to December in other areas (DCCEEW 2025a). When they breed, they do so in colonies with individual nests dispersed from several in one tree to 50m away from each other, usually in non-remnant vegetation associated with solodic soils and alluvial plains.</p> <p>Dispersal</p> <p>The movements of the Black-throated Finch (southern) are poorly known. The subspecies is described as resident around Townsville and Charters Towers (DCCEEW 2025a) and is said to have been resident at Rockhampton and in northern NSW (DCCEEW 2025a).</p> <p>The Black-throated Finch (southern) may undertake some movements in response to rainfall or drought (DCCEEW 2025a). These movements could be prompted by changes in the availability of food during drought or wet conditions (DCCEEW 2025a).</p> <p>There may be some local movement away from nest sites once the breeding period is complete (DCCEEW 2025a). However, Black-throated Finches (southern) are still encountered (at a reduced frequency) at their breeding sites during the non-breeding period. This suggests that birds remain around their nest sites during the non-breeding period, and forage more widely throughout the surrounding habitat (DCCEEW 2025a).</p> <p>No quantitative information is available on territories or home ranges. However, it is possible that the home range of the Black-throated Finch (southern) could be subject to seasonal variation, with birds roaming more widely during the non-breeding period (DCCEEW 2025a).</p>			<p>surveys over two seasons, only records of the Black-throated Finch (Black-rumped subspecies) have been identified within the study area. The Black-throated Finch (White-rumped subspecies) is considered unlikely to occur within the study area.</p> <p>In addition, the study area does not possess unique habitat value for the species, as all environmental features identified are also found in the surrounding region.</p> <p>The Project is unlikely to impact the species.</p>

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<p><i>Rostratula australis</i></p> <p>Australian Painted Snipe</p>	E	<p>Distribution</p> <p>Known to occur within wetlands within all states of Australia (DCCEEW 2025a). This species is most common in eastern Australia, where it has been recorded throughout much of Queensland, New South Wales, Victoria, and south-eastern South Australia at scattered locations (DCCEEW 2025a).</p> <p>Habitat</p> <p>The Australian Painted Snipe generally inhabits shallow freshwater (sometimes brackish) wetlands, including temporary and permanent lakes, swamps and claypans (DCCEEW 2025a). It has also been known to occupy inundated or waterlogged grassland or saltmarsh, dams, rice crops, sewage farms and bore drains (DCCEEW 2025a). These areas usually include emergent tussocks of grass, sedges, rushes or reeds, or samphire; often with scattered clumps of lignum <i>Muehlenbeckia</i>, Canegrass or Tea-tree (<i>Melaleuca</i> sp.) (DCCEEW 2025a). Areas lined with trees, or that have some scattered fallen or washed-up timber are sometimes also used (DCCEEW 2025a).</p> <p>Foraging</p> <p>This species generally remains in dense cover when feeding, although may forage over nearby mudflats and other open areas such as ploughed land or grassland (DCCEEW 2025a). This species requires suitable wetland areas even in drought conditions (DCCEEW 2025a). Most nest records are from or near small islands in freshwater wetlands, which contain a combination of very shallow water, exposed mud, dense low cover and sometimes some tall dense cover (DCCEEW 2025a). This species is mainly crepuscular (active at dawn and dusk) and highly cryptic (DCCEEW 2025a).</p> <p>Breeding/Roosting</p> <p>Breeding habitat requirements are specific: shallow wetlands with areas of bare wet mud and both upper and canopy cover (low and</p>	<p><u>Potential</u> – Potential habitat may occur within the study area. Although there are no confirmed records of this species within 100 km of the study area, given the wide distribution of this highly mobile species, there is potential for the species to fly over the study area.</p>	<p>Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022).</p>	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons (AARC 2025), the Australian Painted Snipe has not been identified within the study area.</p> <p>Ephemeral creeks, swamps and nearby farm dams were specifically targeted for bird surveys.</p> <p>The Project is, therefore, unlikely to impact the species.</p>

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		<p>sometimes tall and dense) nearby (DCCEEW 2025a). This species may breed in response to wetland conditions rather than during a season (DCCEEW 2025a).</p> <p>Dispersal</p> <p>The Australian Painted Snipe is possibly dispersive or migratory (DCCEEW 2025a). Dispersive movements have been attributed to local conditions: moving to flooded areas; moving from drying to permanent wetlands; moving away from areas affected by drought (DCCEEW 2025a).</p>			
<p><i>Tringa nebularia</i> Common Greenshank</p>	<p>E, Mi</p>	<p>Distribution</p> <p>This species distribution is widespread in the Gulf country and eastern Gulf of Carpentaria (DCCEEW 2025a). This species is recorded in most coastal regions. There have been few records south of a line near Dalby to Mt Guide, with sparsely scattered records elsewhere (DCCEEW 2025a).</p> <p>Habitat</p> <p>The Greenshank occurs in all types of wetlands and is described as having the widest distribution of any shorebird in Australia (DCCEEW 2025a). This species inhabits a wide variety of inland wetlands and sheltered coastal habitats (varying salinity) (DCCEEW 2025a). Habitats include embankments, harbours, river estuaries, deltas and lagoons but can also include tidal pools, rock-flats, and rock-platforms (DCCEEW 2025a). Sheltered coastal habitat features include large mudflats, saltmarsh, mangroves, and seagrass (DCCEEW 2025a). The Greenshank utilises both permanent and ephemeral systems including swamps, lakes, rivers, creeks, dams, billabongs, waterholes, and inundated floodplains, claypans and salt flats (DCCEEW 2025a). This species will also inhabit artificial waterbodies including sewage farms, saltworks dams, inundated rice crops and bores (DCCEEW 2025a).</p> <p>Foraging</p> <p>The Greenshank is known to forage in soft mud on mudflats, in channels or in shallows around the edge of water and on the edges of</p>	<p><u>Potential</u> – Potential habitat may occur within the study area, and there are records within 50 km of the study area.</p>	<p>Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022) and the relevant Commonwealth survey guidelines.</p>	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons, including targeted survey effort (AARC 2025), the Common Greenshank has not been identified within the study area. Nearby farm dams, ephemeral creeks, and swamps were specifically targeted for bird surveys during the field assessments.</p> <p>The Common Greenshank is considered unlikely to occur within the study area. Furthermore, the potential habitat available to migratory species in the study area is unlikely to provide important habitat for migratory species, including the Common Greenshank (DoEE 2017).</p>

Species	EPBC Act Status ¹	Description	Desktop likelihood of occurrence	Survey methodology	Likelihood of occurrence and impact following field assessments
		<p>wetlands, often in areas of sparse emergent or fringing vegetation (DCCEEW 2025a).</p> <p>Breeding/Roosting</p> <p>This species is a non-breeding visitor to Australia. The Greenshank roosts and loafs around wetlands and in shallow pools and puddles or on slightly elevated rocks, sandbanks or small muddy islets (DCCEEW 2025a). An important roost site for this species during the non-breeding season occurs on an inland claypan near Roebuck Bay in Western Australia (DCCEEW 2025a).</p>			<p>The Project is unlikely to impact the species.</p>
<p><i>Tringa stagnatilis</i></p> <p>Marsh Sandpiper</p>	<p>Mi</p>	<p>Distribution</p> <p>The Marsh Sandpiper is found on coastal and inland wetlands throughout Australia and is widespread in coastal Queensland (DCCEEW 2025a). This species is also recorded in all regions of New South Wales and is found in coastal Victoria (DCCEEW 2025a). Scattered records of this species have been found across Western Australia, Northern Territory and South Australia (DCCEEW 2025a).</p> <p>Habitat</p> <p>This species lives in permanent or ephemeral wetlands of varying salinity, including swamps, lagoons, billabongs, saltpans, saltmarshes, estuaries, pools on inundated floodplains, and intertidal mudflats (DCCEEW 2025a). The species is less often found at reservoirs, waterholes, soaks, bore-drain swamps and flooded inland lakes (DCCEEW 2025a).</p> <p>Foraging</p> <p>The Marsh Sandpiper usually forages in shallow water at the edge of wetlands. They probe wet mud of mudflats or feed among marshy vegetation. This species is carnivorous and has been recorded eating insects, molluscs, and crustaceans (DCCEEW 2025a).</p> <p>Breeding/Roosting</p> <p>This species is a non-breeding visitor to Australia and is known to breed from eastern Europe to eastern Siberia (DCCEEW 2025a).</p>	<p><u>Potential</u> – Potential habitat may occur within the study area, and there are records within 50 km of the study area.</p>	<p>Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022) and the relevant Commonwealth survey guidelines.</p>	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons, including targeted survey effort (AARC 2025), the Marsh Sandpiper has not been identified within the study area. Nearby farm dams, ephemeral creeks, and swamps were specifically targeted for bird surveys during the field assessments. The Marsh Sandpiper is considered unlikely to occur within the study area.</p> <p>Furthermore, the potential habitat available to migratory species in the study area is unlikely to provide important habitat for migratory species, including the Marsh Sandpiper (DoEE 2017).</p>

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		<p>This species has been recorded potentially roosting on tidal mudflats, near low saltmarsh, and around inland swamps (DCCEEW 2025a).</p> <p>Dispersal</p> <p>This species is known to arrive in Australia from September and disperse across Australia from September to December (DCCEEW 2025a). The Marsh Sandpiper begins to migrate north in March and April, with temporary influxes of populations occurring at some sites along the eastern coast (DCCEEW 2025a).</p>			<p>The Project is unlikely to impact the species.</p>
<p><i>Tyto novaehollandiae kimberli</i></p> <p>Masked Owl (Northern Subspecies)</p>	<p>V</p>	<p>Distribution</p> <p>The distribution of this species is poorly known, but estimated extent of occurrence is 1 800 00 km², though is assumed to be declining (DCCEEW 2025a). In Queensland, they have been recorded in the Normanton region, and on the Pascoe, Archer, Chester and Watson Rivers in the Cape York Peninsula, extending to the Atherton Tablelands and Einasleigh-Burdekin divide, possibly as far south as Mackay or Coomooboolaroo Station (DCCEEW 2025a).</p> <p>Habitat</p> <p>They have been found to occur in riparian forest, open forest, Melaleuca swamps and the edges of mangroves (DCCEEW 2025a). There have also been recordings along the margins of sugar cane field (DCCEEW 2025a). They appear to live in low densities so require an expansive area for hunting prey, with trees large enough to form appropriate hollows (DCCEEW 2025a). Their core area is approximately 155 ha, while their home range during the non-breeding season can extend as far as 1178 ha (DCCEEW 2025a).</p> <p>Foraging</p> <p>The masked owl is sedentary and territorial of its core area, moving out into its home area to hunt mammals or for finding a mate (DCCEEW 2025a). The female will occupy the nest for up to 10 weeks prior to laying – expectedly between March and October –</p>	<p><u>Unlikely</u> – Potential habitat may occur within the study area; however, the closest record of the species is over 350 km from the study area.</p>	<p>Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022).</p>	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons (AARC 2025), the Masked Owl (Northern Subspecies) has not been identified within the study area.</p> <p>The Project is, therefore, unlikely to impact the species.</p>

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		<p>the female lays two to three eggs and incubates them in a large hollow (DCCEEW 2025a). Both before and after hatching the male will hunt for the female and the chicks, then both will hunt after 3 weeks of brooding, the young being dependent for approximately 2 months (DCCEEW 2025a). This being the case, the masked owl can usually be seen singly but can also be found in pairs or family groups (DCCEEW 2025a).</p>			
Mammals					
<p><i>Macroderma gigas</i> Ghost Bat</p>	V	<p>Distribution</p> <p>The Ghost Bat is endemic to Australia, occurring in Queensland, northern Pilbara and Kimberley in Western Australia, and the top end of the Northern Territory (TSSC 2016b, Hourigan 2011). In Queensland, this species is currently distributed in 4-5 highly disjunct populations along the coast and inland from the McIlwraith Range in Cape York to Rockhampton, with the biggest colony occurring at Mount Etna (Hourigan 2011). Habitat modelling studies suggest that the Ghost Bat is a geographically remnant species in southern, arid landscapes, present only because caves provide suitable roost microclimates (TSSC 2016b).</p> <p>Habitat</p> <p>This species occupies a variety of habitats ranging from arid Pilbara to tropical savanna woodlands and rainforests. During the daytime they roost in caves, rock crevices and old mines (TSSC 2016b).</p> <p>Foraging</p> <p>Foraging areas are approximately 60 ha in size (TSSC 2016b). Their diet consists of large insects, small mammals, reptiles, birds and bats, and prey availability is thought to influence foraging habitat for this species (Hourigan 2011). Ghost Bats usually require several caves to move between seasonally or as dictated by weather conditions (TSSC 2016b). It is known to forage up to 2 km from its daytime roost area and will use the same foraging area each night (TSSC 2016b, Hourigan 2011).</p>	<p><u>Unlikely</u> – Habitat for the species has not been identified in the study area. The closest record of the species is from over 150 km of the study area.</p>	<p>Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022).</p>	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons (AARC 2025), including Microchiroptera bat echolocation detection, the Ghost Bat has not been identified within the study area.</p> <p>The Project is, therefore, unlikely to impact the species.</p>

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		<p>Breeding/Roosting</p> <p>Roost sites consist of caves, rock crevices and disused mine entrances (TSSC 2016b). Permanently used roost sites are generally deep natural caves or disused mines with a relatively stable temperature of 23°–28°C, with a moderate to high relative humidity of 50–100% and the ceiling at least 2 m above the floor (TSSC 2016b, Hourigan 2011). Individuals aggregate in these maternity roosts during spring and summer (Hourigan 2011).</p>			
<p><i>Petauroides minor</i></p> <p>Northern Greater Glider</p>	V	<p>Distribution</p> <p>This species occurs in the wet-dry tropical region of north-eastern Australia, ranging from Townsville, north to the Windsor Tablelands. The distribution is not solid and is in fact very patchy with several isolated subpopulations (DCCEEW 2022). While the range has not changed significantly within the past few hundred years, population and area of occupancy has decreased dramatically due to land clearing, fragmentation effects, and symptoms of climate change (DCCEEW 2022).</p> <p>Habitat</p> <p>The greater glider (northern) predominantly resides within eucalypt forests and woodlands in north-eastern Australia, with a higher abundance within areas of higher elevated, wetter conditions in open woodlands and forests (DCCEEW 2022). These habitats contain more old trees with plenty of hollows for nesting. Even within these ideal habitats, variability of structural characteristics and foraging potential can result in only portions being available for use (DCCEEW 2022).</p> <p>Foraging</p> <p>The primary food sources of the species are foliage - preferentially young foliage - with buds and flowers also supplementing their diet. They feed from a restricted range of eucalypt species, preferring areas of high diversity to make the most of seasonal variation. Most of the species water requirements are met by leaves they consume (DCCEEW 2022).</p>	<p><u>Unlikely</u> – Potential habitat may be in the study area in the larger creeks, however, there are no records of this species within 100 km of the study area.</p>	<p>Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022).</p>	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons (AARC 2025), including spotlights at all habitat types, the Northern Greater Glider has not been identified within the study area.</p> <p>The Project is, therefore, unlikely to impact the species.</p>

Species	EPBC Act Status ¹	Description	Desktop likelihood of occurrence	Survey methodology	Likelihood of occurrence and impact following field assessments
		<p>Breeding/Roosting</p> <p>During the day this nocturnal species rests in tree hollows, ideally large hollows (>10cm in diameter). Studies show that individuals of the species <i>Eucalyptus acmenoides</i>, <i>Corymbia citriodora</i>, and <i>E. tereticornis</i> are preferred denning trees. Individual gliders utilise multiple dens throughout their habitat, with the frequency of use and number of dens changing throughout the year and with availability (DCCEEW 2022). The fact that male home ranges overlap with other males and females indicates a polygamous mating system. Females give birth to a single young from March to June, which then reaches sexual maturity sometime in its second year. Individuals are estimated to live for 15 years. Their low rate of reproduction may put smaller populations at risk of extinction (DCCEEW 2022).</p> <p>Dispersal</p> <p>Home ranges for males are 2.5 ha on average, while ranges for females are almost half the size (1.3 ha), with some overlap forming an average density of 0.24/ha to 5.8/ha depending on habitat quality. High densities occur within the Einasleigh Uplands in areas of open forest with undulating plains and high density of preferred tree species (DCCEEW 2022).</p>			
<p><i>Saccolaimus saccolaimus nudicluniatus</i></p> <p>Bare-rumped Sheathtail Bat</p>	V	<p>Distribution</p> <p>Within Australia, the species is thought to likely live along the east coast of Queensland from Cape York to just south of Townsville, and along the northern coast of the Northern Territory, extending as far west as Broome in Western Australia, however actual observations have only been made in isolated pockets, and only two of those observations have been made in the last ten years (DCCEEW 2025a). Internationally, the species has been known to occur in New Guinea, Solomon Islands, Indonesia, the Malay Peninsula, Philippines, Burma, Thailand, Sri Lanka, Bangladesh, and India (DCCEEW 2025a).</p>	<p><u>Unlikely</u> – Distribution is not near the study area. The closest record of the species is from over 350 km of the study area.</p>	<p>Survey timing, methodology and effort were consistent with the Terrestrial Vertebrate Fauna Survey Guidelines for Queensland (Eyre 2022).</p>	<p><u>Unlikely</u> – Despite extensive fauna surveys over two seasons (AARC 2025), including Microchiroptera bat echolocation detection, the Bare-rumped Sheathtail Bat has not been identified within the study area.</p> <p>The Project is, therefore, unlikely to impact the species.</p>

Species	EPBC Act Status ¹	Description	Desktop likelihood of occurrence	Survey methodology	Likelihood of occurrence and impact following field assessments
		<p>Habitat</p> <p>Records indicate that the species is found in lowland areas, typically in woodland, forest, and open environments (DCCEEW 2025a). They have been found to roost in tree hollows in Poplar Gum, Darwin Woollybutt, and Darwin Stringybark, all trees which are susceptible to fire and termites (DCCEEW 2025a).</p> <p>Foraging</p> <p>The species has a direct, fast flying style which they use to feed on aerial insects, foraging over the canopy along the edges of rainforests but potentially flying lower in more open environments such as forest clearings (DCCEEW 2025a).</p> <p>Breeding/Roosting</p> <p>Very little breeding information exists outside of the fact they typically give birth to one pup (DCCEEW 2025a).</p>			