

Appendix D

Likelihood of occurrence

Table D-1: Likelihood of Occurrence definitions

Potential to Occur	Description
Known	<p>The species or community has been recorded within the Exploratory Works Survey area by a known source (i.e. by ecologists, or published in a report or scientific paper)</p> <p>OR</p> <p>Recent record(s) on ALA (<10 years) are present within the Exploratory Works Survey area.</p>
Likely	<p>For flora and fauna species, suitable habitat is present within the Exploratory Works Survey area AND recent records (<10 years) are present within the locality of the Project (<30 km)</p> <p>OR</p> <p>Historical records (>10 years) occur within the Exploratory Works Survey area.</p> <p>For TECs, constituent REs are mapped as occurring within the Exploratory Works Survey area.</p>
Possible	<p>For flora and fauna species, suitable habitat is present within the Exploratory Works Survey area AND recent records (<10 years) are not present within the locality of the Project (<30 km) but occur in the region (<50 km)</p> <p>OR</p> <p>Suitable habitat is present within the Exploratory Works Survey area AND historical records (>10 years) are present within the locality of the Project (<30 km).</p>
Unlikely	<p>For flora and fauna species, suitable habitat is not present in the Exploratory Works Survey area or is present, but highly modified and/or degraded or lacking specific habitat requirements for the species</p> <p>OR</p> <p>The species may be an occasional visitor but is unlikely to have a sedentary/resident population</p> <p>OR</p> <p>The species has a restricted range to discreet populations that are unlikely to occur within the Exploratory Works Survey area</p> <p>OR</p> <p>The current known range of the species does not overlap with the Exploratory Works Survey area.</p> <p>For TECs, constituent REs are not mapped within the Exploratory Works Survey area.</p>

Table D-2: Likelihood of occurrence in the Exploratory Works Survey area

Common name	Scientific name	EPBC Act status ¹	Likelihood in Exploratory Works Survey area*	Habitat	Justification
Flora					
-	<i>Coleus omissus</i> (syn. <i>Plectranthus omissus</i>)	Endangered	Likely	<p>This species is primarily lithophytic and is found in open sclerophyll forest and vine forest habitats (DEWHA, 2008).</p> <p>Suitable habitat occurs within the Exploratory Works Survey area, including REs 12.12.16, 12.11.10, 12.12.23, and 12.11.3.</p>	<p>Suitable habitat is present within the Exploratory Works Survey area and recent historical records (<10 years) are present within the locality of the Project (<30 km). Additionally, this species was detected during field surveys within the Borumba PHES Survey area. In 2022, approximately 15 individuals were recorded growing on a rocky outcrop within notophyll vine forest (RE 12.11.10) located 1.2 km east of the Exploratory Works Survey area by Attexo.</p> <p>The Exploratory Works Survey area was comprehensively surveyed for threatened flora, and <i>Coleus omissus</i> was not recorded. Nonetheless, due to the proximity of known records, it is considered likely for the species to occur within the Exploratory Works Survey area.</p>
-	<i>Romnalda strobilacea</i>	Vulnerable	Unlikely	<p>This species occurs in moist gullies or stream bank situations in rainforests communities on nutrient rich basalt soils (DEWHA, 2008).</p> <p>Suitable rainforest type vegetation on basaltic soils is not known to occur in the Exploratory Works Survey area.</p>	<p>This species was not detected during field surveys and no suitable habitat was identified. The closest verified records are approximately 30 km and 20 km south east of the Exploratory Works Survey area dating back to 2018 and 2000 respectively (ALA, 2023).</p> <p>The Exploratory Works Survey area was comprehensively surveyed for threatened flora, and <i>Romnalda strobilacea</i> was not recorded. As such, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>
Austral cornflower	<i>Leuzea australis</i> (syn. <i>Rhaponticum australe</i>)	Vulnerable	Unlikely	<p>This species is primarily associated with heavy black clays. In these areas it grows in a range of habitats from grassy open forests to disturbed roadsides. Its core distribution is largely associated with higher elevations of the Great Dividing Range (DEWHA, 2008).</p> <p>No suitable habitat is supported in the Exploratory Works Survey area.</p>	<p>Suitable habitat is not present within the Exploratory Works area. Habitat for the Austral cornflower is associated with heavy black clays which is not found within the Exploratory Works Survey area. The closest known record, made in 2004, is 45 km west of the Exploratory Works Survey area (ALA, 2023).</p> <p>The Exploratory Works Survey area was comprehensively surveyed for threatened flora, and <i>Leuzea australis</i> was not recorded. As such, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>
Austral toadflax	<i>Thesium australe</i>	Vulnerable	Possible	<p>This species is semi-parasitic and targets the roots of grass species and is therefore found in several habitats that support native grasses. The species appears to have a strong association with <i>Themeda triandra</i> (Kangaroo grass) (DoE, 2013).</p> <p>Suitable habitat occurs within the Exploratory Works Survey area, including REs 12.11.14, 12.11.3, 12.11.9, 12.12.12, 12.12.15, 12.12.23 and 12.3.7.</p>	<p>Suitable habitat is present within the Exploratory Works Survey area and historical records (>10 years) are present within the locality (<30 km). A specimen was collected 3 km north of the Exploratory Works Survey area in 1993, however, the collector noted that the species was rare at the site (ALA, 2023). Suitable habitat is present within the Borumba PHES Survey area and the favoured host plant, <i>Themeda triandra</i>, was commonly recorded during surveys.</p> <p>The Exploratory Works Survey area was comprehensively surveyed for threatened flora, and <i>Thesium australe</i> was not recorded. The species is cryptic and difficult to detect; as such, it is considered possible for the species to occur within the Exploratory Works Survey area.</p>
Bahrs scrub fontainea	<i>Fontainea venosa</i>	Vulnerable	Unlikely	<p>This species grows in Araucarian microphyll vine forest with a mean annual rainfall of 1,000mm on alluvial soil along creeks (DEWHA, Approved Conservation Advice for Fontainea venosa, 2008).</p>	<p>Suitable habitat is not present within the Exploratory Works Survey area. This species was not recorded during field surveys and the closest record is over 25 km to the north of the Survey area, observed recently in 2014, and historically in 1934 (ALA, 2023). As</p>

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				No habitat within the Exploratory Works Survey area is considered to be suitable for this species.	such, the species is considered unlikely to occur within the Exploratory Works Survey area.
Ball nut	<i>Floydia praealta</i>	Vulnerable	Known to occur	<p>This species inhabits closed riverine and subtropical rainforests or coastal scrubland (DEWHA, 2008).</p> <p>Suitable habitat in the Exploratory Works Survey area is represented by patches of the following REs: 12.11.10 and 12.12.16.</p>	<p>Suitable habitat is present within the Exploratory Works Survey area and recent records (<10 years old) are present within the locality (<30 km from the Survey area). The species was also confirmed to occur within the Survey area during field surveys. The records of <i>Floydia praealta</i> are situated 500 m west of the Exploratory Works Survey area.</p> <p>The Project footprint was comprehensively surveyed for threatened flora, and <i>Floydia praealta</i> was not recorded. However, the species was recorded from an area adjacent the footprint and as such the species is known to occur within the Exploratory Works Survey area.</p>
Blotched sarcochilus	<i>Sarcochilus weinthalii</i>	Vulnerable	Possible	<p>This species is typically epiphytic but can also occur as a lithophyte. Habitats preferred include rainforests and vine scrub from 400 to 700 m in elevation (DOE, Approved Conservation Advice for <i>Sarcochilus weinthalii</i> (blotched sarcochilus), 2014).</p> <p>Habitat is present in the Exploratory Works Survey area. However, this is limited to areas of rainforest above 400 m elevation.</p>	<p>Suitable habitat is present within the Exploratory Works Survey area and historical records (>10 years) are present within the locality (<30 km). The closest known record was made in 1986, 18 km north west of the Exploratory Works Survey area (ALA, 2023).</p> <p>The Exploratory Works Survey area was comprehensively surveyed for threatened flora, and <i>Sarcochilus weinthalii</i> was not recorded. Nonetheless, it is considered possible for the species to occur within the Exploratory Works Survey area.</p>
Bluegrass	<i>Dichanthium setosum</i>	Vulnerable	Unlikely	<p>This species is strongly associated with volcanic soils such as heavy basaltic soils and red-brown clayey loams. Where these soils occur, the species may utilise a range of habitats, including disturbed areas roadside pasture and woodlands (DEWHA, Approved Conservation Advice for <i>Dichanthium setosum</i> (bluegrass), 2008).</p> <p>Suitable soil types for this species are not found in the Exploratory Works Survey area.</p>	<p>Suitable habitat is not present in the Exploratory Works Survey area. The nearest known record of the species, from 2000, was made approximately 75 km south of the Survey area (ALA, 2023). Suitable soil types are not present in the Survey area, as the Exploratory Works Survey area is mostly situated on metamorphic rock and lacks the soil features of any basaltic soils or clayey loams.</p> <p>The Exploratory Works Survey area was comprehensively surveyed for threatened flora, and <i>Dichanthium setosum</i> was not recorded. As such, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>
Brush sophora	<i>Sophora fraseri</i>	Vulnerable	Known to occur	<p>Brush sophora most often occurs in ecotones of eucalypt forest and rainforest with high moisture content and sparse canopy cover. Ideal areas of habitat are often the result of natural or anthropogenic disturbance (DAF, 2023) (DEWHA, 2008).</p> <p>Suitable habitat within the Exploratory Works Survey area comprises REs 12.11.3, 12.11.10 and 12.12.16.</p>	<p>The species has been recorded within the Exploratory Works Survey area by a known source (Ecologist). A population of approximately 29 individuals was recorded in mostly moist to dry eucalypt open woodlands on metamorphic and volcanic rocks (RE 12.11.3).</p> <p>The species is known to occur within the Exploratory Works Survey area.</p>
Cossinia	<i>Cossinia australiana</i>	Endangered	Unlikely	<p>This species occurs in drier rainforest types, including vine thickets and Araucarian scrub growing on red volcanic soil and black loam in central and southern Queensland (DEWHA, Approved Conservatin Advide for <i>Cossinia australiana</i> (Cossinia), 2008). The species can grow in closed forest communities but prefers ecotonal areas around dry rainforest edges (DES, 2022).</p> <p>No preferred habitat has been identified in the Exploratory Works Survey area.</p>	<p>No preferred habitat is present in the Exploratory Works Survey area. The closest known record of this species occurs approximately 35 km to the north of the Exploratory Works Survey area and was made in 2011 (ALA, 2023). The distribution of the species is poorly understood, with a limited number of records spanning a range of 300 km from Rockhampton to Kingaroy (DEWHA, Approved Conservatin Advide for <i>Cossinia australiana</i> (Cossinia), 2008). Although the Exploratory Works is within the mapped 'likely' habitat for <i>Cossinia australiana</i> (DEWHA, Approved Conservatin Advide for <i>Cossinia australiana</i> (Cossinia), 2008), limited areas of preferred habitat are present within the Survey area (notophyll vine forest +/- <i>Araucaria cunninghamii</i>).</p>

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					The Exploratory Works Survey area (including the area of potential habitat for the species) was comprehensively surveyed for threatened flora, and <i>Cossinia australiana</i> was not recorded. As such, the species is considered unlikely to occur within the Exploratory Works Survey area.
Deep Creek fontainea	<i>Fontainea rostrata</i>	Vulnerable	Unlikely	<p>This species primarily occurs in vine forest communities in association with metamorphic geologies. The only known populations occur at 10 sites in the Gympie district (DEWHA, Approved Conservation Advice dor Fontainea rostrata , 2008).</p> <p>Some suitable habitat occurs in the Exploratory Works Survey area, such as RE 12.11.10.</p>	Potentially suitable habitat is present within the Exploratory Works Survey area; however, the known range of the species is restricted to discreet populations that do not occur within the Exploratory Works area. The species is found within a distribution range of only 100 km ² in a few localities between Tinana Creek and Gympie (Wang, 1996). The closest known records, made in 1983 and 2007, are located 20 km north of the Survey area (ALA, 2023). As such, the species is considered unlikely to occur within the Exploratory Works Survey area.
Glossy spice bush	<i>Triunia robusta</i>	Endangered	Unlikely	<p>This species occurs in a wide range of rainforest associations such as vine forest and open sclerophyll forests with rainforest substratum. It is mainly found in well-drained soils with some sandy components (DEWHA, 2008).</p> <p>Suitable habitat is present within the Exploratory Works Survey area, including REs 12.11.10 and 12.12.16.</p>	<p>The known range of the species does not overlap with the Exploratory Works Survey area. The range of <i>Triunia robusta</i> is restricted to a small (40 km) area on Queensland's Sunshine Coast, between Pomona and Woombye, mainly in the Maroochy River catchment (DEWHA, 2008). An observation of the species in 2024 was located 30 km east of the Exploratory Works Survey area, (ALA, 2023). Broadly suitable habitat is present within the Exploratory Works Survey area, including notophyll vine forests on alluvial plains, foothills, and ranges.</p> <p>The Exploratory Works Survey area was comprehensively surveyed for threatened flora, and <i>Triunia robusta</i> was not recorded. As such, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>
Hairy-joint grass	<i>Arthraxon hispidus</i>	Vulnerable	Possible	<p>The species occurs in or on the edges of rainforest and in wet eucalypt forest, often near creeks or swamps, as well as woodland. In South East Queensland, the species has been recorded around freshwater springs on coastal foreshore dunes, in shaded small gullies, on creek banks, and on sandy alluvium in creek beds in open forests and with bog mosses in mound springs (DEWHA, 2008).</p> <p>Suitable habitat occurs within the Exploratory Works Survey area and is associated with the following REs: 12.3.7, 12.11.10 and 12.12.16.</p>	<p>Suitable habitat is present within the Exploratory Works Survey area and historical records (>10 years old) are present within the locality (<30 km from the Survey area). Suitable habitat within the Survey area includes notophyll vine forests on foothills and ranges (RE 12.11.10), and Eucalyptus open forest and woodlands on drainage lines and alluvial plains (RE 12.3.7).</p> <p>The species was not detected during field surveys within the Exploratory Works Survey area or the Borumba PHES Survey area. A historical record of the species was made in 1939 4 km north of the Exploratory Works Survey area (ALA, 2023). It is considered possible for the species to occur within the Exploratory Works Survey area.</p>
Hawkweed	<i>Picris evae</i>	Vulnerable	Unlikely	<p>Hawkweed can occur in a variety of habitats including open woodlands, grasslands, and disturbed areas such as road reserves and paddocks. However, it is largely restricted to volcanic soils in these areas including black, dark grey or red-brown soils, reddish clay-loam, or medium clay soils (DEWHA, 2008q).</p> <p>No suitable habitat has been identified within the Exploratory Works Survey area.</p>	<p>Suitable habitat is not present in the Exploratory Works area. The closest record of this species was made in 2000, 100 km west of the Survey area (ALA, 2023).</p> <p>The Exploratory Works Survey area was comprehensively surveyed for threatened flora, and <i>Picris evae</i> was not recorded. As such, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>
Knotweed	<i>Persicaria elatior</i>	Vulnerable	Unlikely	<p>This species grows primarily on alluvia or sands in association with poor draining areas such as swamps, riparian zones and freshwater</p>	<p>Suitable habitat is not present in the Exploratory Works area, or is present, but highly modified and/or degraded. This species is known from only seven sites in Queensland with the closest contemporary record from North Stradbroke Island, more than 100 km from the</p>

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				lakes (DEWHA, Approved Conservation Advice for <i>Persicaria elatior</i> , 2008). Some marginal habitat occurs within the Exploratory Works Survey area.	Exploratory Works Project and observed in 2019 (ALA, 2023). The Exploratory Works Survey area was comprehensively surveyed for threatened flora, and <i>Persicaria elatior</i> was not recorded. As such, the species is considered unlikely to occur within the Exploratory Works Survey area.
Leafless tongue-orchid	<i>Cryptostylis hunteriana</i>	Vulnerable	Unlikely	This species occurs in a range of habitats near the coast including sandy coastal plains, heathlands and heathy woodlands, coastal swamp margins, sedgeland, and coastal forests (DEWHA, 2008). No suitable habitat has been identified in the Exploratory Works Survey area.	No suitable habitat is present in the Exploratory Works area. The species is only known from five coastal populations in Queensland, with the nearest known record being made in 2020 approximately 40 km east of the Exploratory Works Survey area (ALA, 2023). The species was not recorded during field surveys and suitable habitat is not present in the Exploratory Works Survey area. Therefore, the species is considered unlikely to occur within the Exploratory Works Survey area.
Lesser swamp-orchid	<i>Phaius australis</i>	Endangered	Unlikely	This species is primarily associated with coastal wetlands including swampy heathland, sedgeland, grassland and woodland (DOE, Approved Conservation Advice for <i>Phaius australis</i> (Lesser Swamp-Orchid), 2014). No suitable habitat occurs within the Exploratory Works Survey area.	Suitable habitat is not present in the Exploratory Works area. The closest record of this species was made in 1990 and was 30 km east of the Survey area (ALA, 2023). The Exploratory Works Survey area was comprehensively surveyed for threatened flora, and <i>Phaius australis</i> was not recorded. As such, the species is considered unlikely to occur within the Exploratory Works Survey area.
Macadamia nut	<i>Macadamia integrifolia</i>	Vulnerable	Likely	This species is generally found on volcanic or alluvial soils in higher rainfall areas associated with lowland warm complex notophyll and Araucarian notophyll vine forests (DEWHA, Approved Conservation Advice for <i>Macadamia integrifolia</i> , 2008). Suitable habitat occurs within the Exploratory Works Survey area within patches of the following REs: 12.11.10, and 12.12.16.	Suitable habitat is mapped within the Exploratory Works area and recent historical records (<10 years) are present within the locality (<30 km). The species has been recorded in Imbil State Forest, located 5-8 km north-east of the Exploratory Works Survey area in 2022, 2007 and historically, in 1954 (ALA, 2023). Suitable habitat for the macadamia nut occurs within the Exploratory Works Survey area including notophyll vine forests on alluvial plains, foothills, and ranges. The Exploratory Works Survey area was comprehensively surveyed for threatened flora, and <i>Macadamia integrifolia</i> was not recorded. Nonetheless, the species is considered likely to occur within the Exploratory Works Survey area.
Mt Berryman phebalium	<i>Phebalium distans</i>	Endangered	Unlikely	This species is strongly associated with semi-evergreen vine thicket, hoop pine scrub and other similar softwood scrubs growing on basaltic or lateritic red soils. In these areas it can occur in ecotonal areas within eucalypt woodland (TSSC, 2022). Optimal habitat types are not supported in the Exploratory Works Survey area.	Suitable habitat is not present in the Exploratory Works area. The closest record of this species was made in 2009, 60 km west of the Exploratory Works Survey area (ALA, 2023). The Exploratory Works Survey area was comprehensively surveyed for threatened flora, and <i>Phebalium distans</i> was not recorded. As such, the species is considered unlikely to occur within the Exploratory Works Survey area.

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Native guava	<i>Rhodomyrtus psidioides</i>	Critically endangered	Known to occur	<p>Habitat for this species includes a range of rainforest vegetation classes such as subtropical, warm temperate, and littoral rainforests. It also occurs in association with wet sclerophyll forest, especially those adjoining areas of suitable rainforest (TSSC, 2020).</p> <p>Areas of suitable habitat are supported within the Exploratory Works Survey area, including the REs 12.11.10 and 12.12.16 and the ecotone between these REs and Eucalypt dominated REs.</p>	<p>The species has been recorded within and in proximity to the Exploratory Works Survey area by a known source (Ecologist). 1,295 individuals were recorded in the Borumba PHES Survey area, with 1,267 in the Exploratory Works survey area.</p> <p>Based on the above information, and the amount of suitable habitat available in the Survey area, the species is known to occur within the Exploratory Works Survey area.</p>
Nightcap coleus	<i>Coleus nitidus</i> (syn. <i>Plectranthus nitidus</i>)	Endangered	Possible	<p>This species is primarily found growing in gullies with boulders and rocky outcrops associated with rainforest vegetation communities and ecotones (DEWHA, 2008s).</p> <p>Broadly suitable habitat exists in the Exploratory Works Survey area.</p>	<p>Suitable habitat is present within the Exploratory Works Survey area and historical records (>10 years) are present within the locality (<30 km). The species is formally only known from the McPherson and Nightcap Ranges near the New South Wales and Queensland state borders (DEWHA, 2008s). <i>Coleus nitidus</i> prefers complex notophyll vine forest on Cainozoic igneous rocks below 600 m ASL (RE 12.8.3), which is not found within the Exploratory Works Survey area. However, there is some broadly similar habitat present including gullies with boulders and rocky outcrops associated with rainforest vegetation communities and ecotones (mainly associated with REs 12.11.10 and 12.12.16). A preserved specimen was collected by Anthony Bean, and staff of the Queensland National Parks and Wildlife Service (QPWS), 18 km west of the Exploratory Survey area in 2009 (ALA, 2023).</p> <p>The Exploratory Works Survey area was comprehensively surveyed for threatened flora, and <i>Coleus nitidus</i> was not recorded. Nonetheless, it is considered possible for the species to occur within the Exploratory Works Survey area.</p>
Pineapple zamia	<i>Macrozamia pauli-guilielmi</i>	Endangered	Unlikely	<p>This species occurs in coastal lowlands (<230 m) within open forest, woodland, and heathland on sandy and loamy soils (Queensland Herbarium, 2007).</p> <p>No suitable habitat has been identified within the Exploratory Works Survey area.</p>	<p>Suitable habitat is not present in the Exploratory Works area. Publicly available location records are obscured (due to poaching risks) and therefore cannot be used for fine scale occurrence predictions. However, the DCCEEW Species of National Environmental Significance dataset distribution map shows the Survey area to be beyond where the species is 'likely' to or 'may' occur.</p> <p>This distinctive species was not recorded during field surveys. As such, the species is unlikely to occur within the Exploratory Works Survey area.</p>
Quassia	<i>Samadera bidwillii</i>	Vulnerable	Possible	<p>Quassia habitat comprises lowland (<500 m) rainforest communities and margins, as well as open forest and woodland. In these vegetation types it is often associated with watercourses (DEWHA, 2008).</p> <p>Most rainforest and woodland communities within the Exploratory Works Survey area are considered habitat for the species.</p>	<p>Suitable habitat is present within the Exploratory Works Survey area, and a record of the species was made 48 km north east of the Survey area in 2020 (ALA, 2023). However, the species is not known to occur south of Gympie (40 km north of the Exploratory Works Survey area).</p> <p>The Exploratory Works Survey area was comprehensively surveyed for threatened flora, and <i>Samadera bidwillii</i> was not recorded. Due to the presence of suitable habitat, it is considered possible for the species to occur within the Exploratory Works Survey area.</p>
Ravine orchid	<i>Sarcochilus fitzgeraldii</i>	Vulnerable	Unlikely	<p>This species is primarily a lithophyte but is occasionally epiphytic. Typical habitats comprise of moist rocky gorges within subtropical rainforest or open forest at elevations above 500 m (DEWHA, 2008).</p> <p>No suitable habitat is available within the Exploratory Works Survey area.</p>	<p>Suitable habitat is not present within the Exploratory Works Survey area. Furthermore, the closest record is more than 30 km to the south and dates back to 1990 (ALA, 2023). The DCCEEW Species of National Environmental Significance dataset distribution map shows</p>

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					<p>the Survey area to be beyond where the species is ‘likely’ to or ‘may’ occur.</p> <p>The Exploratory Works Survey area was comprehensively surveyed for threatened flora, and <i>Sarcochilus fitzgeraldii</i> was not recorded. As such, the species is unlikely to occur within the Exploratory Works Survey area.</p>
Rough-shelled bush nut	<i>Macadamia tetraphylla</i>	Vulnerable	Unlikely	<p>This species is primarily associated with complex notophyll vine forest, littoral rainforest, and wet sclerophyll vegetation communities. Regional ecosystems associations cited in the Recovery Plan for this species include 12.2.1, 12.3.2, 12.8.8, 12.9-10.16 and 12.11.5 (Costello, Gregory, & Donatiu, 2009).</p> <p>No associated REs occur within the Exploratory Works Survey area, but broadly suitable habitat does occur, including REs 12.11.10, and 12.12.16.</p>	<p>Although suitable habitat is present within the Exploratory Works area and historical records (>10 years) are present within the locality (<30km), the recovery plan and SPRAT profile indicate the species’ northernmost occurrence in Queensland in the wild is at Mount Cotton more than 130 km from the Exploratory Works area. Records within the locality are likely from cultivated populations.</p> <p>The Exploratory Works Survey area was comprehensively surveyed for threatened flora, and <i>Macadamia tetraphylla</i> was not recorded. Therefore, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>
Scrub turpentine	<i>Rhodamnia rubescens</i>	Critically endangered	Known to occur	<p>Scrub turpentine occurs in rainforests and can often be found within and on ecotones with sclerophyll forest. Preferred soil types also vary and include sedimentary and volcanic derived soils (TSSC, 2020).</p> <p>Suitable confirmed habitat types include those associated with REs 12.11.3, 12.11.10, 12.12.15 and 12.12.16.</p>	<p>The species has been recorded within the Borumba PHES Survey area and the Exploratory Works Survey area by a known source (Ecologist). A population of 415 individuals was recorded in the Exploratory Works Survey area.</p>
Shiny-leaved condoo	<i>Planchonella eerwah</i>	Endangered	Unlikely	<p>This species is largely restricted to Araucarian vine forest communities growing on volcanic or metamorphic derived soils (DEWHA, 2008r).</p> <p>Marginally suitable habitat exists in the Exploratory Works Survey area, represented by RE 12.11.10.</p>	<p>The species has a range restricted to discrete populations that do not occur within the Exploratory Works Survey area. The current distribution of the species includes three areas in Queensland, namely the Ipswich-Beaudesert area, the Beenleigh-Ormeau-Pimpama area, and the Nambour-Maleny district on the Sunshine Coast (DEWHA, 2008r). The Exploratory Works Survey area is not situated within the known range, with the closest known record made in 2006 more than 30 km from the Survey area (ALA, 2023). Furthermore, the species requires remnant complex notophyll vine forest dominated by <i>Argyrodendron</i> sp., which is not found within the Exploratory Works Survey area.</p> <p>The Exploratory Works Survey area was comprehensively surveyed for threatened flora, and <i>Planchonella eerwah</i> was not recorded. As such, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>
Silver coleus	<i>Coleus torrenticola</i> (syn. <i>Plectranthus torrenticola</i>)	Endangered	Known to occur	<p>This species grows on rocky outcrops associated with a range of habitat types including heathland, sclerophyll forest and margins of rainforests. In these areas it is often found near watercourses with exposed rock (DEWHA, 2008).</p> <p>Suitable habitat in the Exploratory Works Survey area (permanent rocky watercourses) is found in a range of vegetation communities, including REs 12.12.16, 12.11.10, 12.12.23, and 12.11.3.</p>	<p>The species has been recorded within the Borumba PHES Survey area and the Exploratory Works Survey area. A total of 246 individuals were recorded in the Borumba PHES Survey area, with 214 of these in the Exploratory Works Survey area. The individuals are in moist to dry eucalypt open woodlands on metamorphic and volcanic rocks (RE 12.11.3), growing on exposed rock of small watercourses.</p> <p>The species is known to occur within the Exploratory Works Survey area.</p>
Small-fruited Queensland nut	<i>Macadamia ternifolia</i>	Vulnerable	Likely	<p>This species is generally found on volcanic or alluvial soils in higher rainfall areas associated with lowland warm complex notophyll and Araucarian notophyll vine forests. In these habitats it typically grows in</p>	<p>Suitable habitat is mapped within the Exploratory Works area and recent historical records (<10 years) are present within the locality (<30 km). The most recent record was observed 14 km southeast of the Exploratory Works Survey area in 2022 by a citizen scientist on</p>

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				<p>association with complex landforms including scree slopes, gullies, benches and alluvial terraces (Costello, Gregory, & Donatiu, 2009).</p> <p>Suitable habitat occurs within the Exploratory Works Survey area within patches of the following REs: 12.11.10, and 12.12.16.</p>	<p>iNaturalist and has been verified by an Ecologist (ALA, 2023). Suitable habitat for the <i>Macadamia ternifolia</i> occurs within the Exploratory Works Survey area including notophyll vine forests on alluvial plains, foothills, and ranges.</p> <p>The Exploratory Works Survey area was comprehensively surveyed for threatened flora, and <i>Macadamia ternifolia</i> was not recorded. Nonetheless, the species is considered likely to occur within the Exploratory Works Survey area.</p>
Smooth-bark rose apple	<i>Syzygium hodgkinsoniae</i>	Vulnerable	Unlikely	<p>This species primarily occurs along watercourses within rainforest communities on highly fertile basalt derived or alluvial soils (DEWHA, 2008).</p> <p>Broadly suitable habitat is present within the Exploratory Works Survey area, though is limited in extent.</p>	<p>The known range of the species is highly restricted and does not overlap with the Exploratory Works Survey area; it is only known to occur in four areas on the Sunshine Coast including Maleny, Obi Obi creek, Obi Obi gorge and Kin Kin creek. However, broadly suitable habitat for the species occurs in the Exploratory Works Survey area. The nearest known record of the species was made in 2022, 35 km south east of the Survey area (ALA, 2023).</p> <p>The Exploratory Works Survey area was comprehensively surveyed for threatened flora, and <i>Syzygium hodgkinsoniae</i> was not recorded. As such, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>
Tall velvet sea-berry	<i>Haloragis exalata</i> subsp. <i>velutina</i>	Vulnerable	Unlikely	<p>This species occurs within or adjacent to rainforest communities including in grasslands and open grassy woodlands, typically above 500 m in elevation.</p> <p>Potential grassy woodland and grassland habitat in the Exploratory Works Survey area is extremely limited as most areas are below 500 m in elevation.</p>	<p>The primary habitat for this species is grassy woodland and grassland, which does not occur in the Exploratory Works Survey area but is present in the broader locality. The nearest record of the threatened plant occurs 12 km south west of the Exploratory Works Survey area. The collector, A.R. Bean, noted that the plant was common at the site with more than 100 plants in 2020 (ALA, 2023). The site was on the edge of <i>Eucalyptus siderophloia</i> and <i>E. propinqua</i> open forest in an open grassy area situated at 485 m ASL. Woodland with, or close to, an open grassy area, is not present in the Exploratory Works Survey area. Suitable habitat above 500 m in elevation is limited within the Exploratory Works Survey area, and the species was not recorded during field surveys. As such, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>
Three-leaved bosistoa	<i>Bosistoa transversa</i>	Vulnerable	Likely	<p>This species grows in wet sclerophyll forest, dry sclerophyll forest, and lowland subtropical rainforest up to 300 m above sea level (ASL) and is found from the Nightcap Range (north of Lismore) in north-east New South Wales to Mount Larcom (near Gladstone) in South East Queensland (DEWHA, 2008).</p> <p>Suitable habitat within the Exploratory Works Survey area includes patches of the following REs: 12.11.3, 12.11.10, 12.12.15 and 12.12.16.</p>	<p>Suitable habitat is present within the Exploratory Works Survey area and there are recent records (<10 years old) of the species within the locality (<30 km). Suitable habitat for the species within the Survey area includes lowland subtropical rainforest, notophyll vine forests on foothills and ranges, and wet sclerophyll forest.</p> <p>The species was not detected during field surveys within the Exploratory Works Survey area but was recorded within the Borumba PHES Survey area. One observation of the species was made above 300 m ASL, and therefore suitable habitat above 300 m ASL should not be excluded from consideration. The species is considered likely to occur within the Exploratory Works Survey area.</p>
Wandering peppercress	<i>Lepidium peregrinum</i>	Endangered	Unlikely	<p>This species has been found in shrubby open forest communities in riparian zones as well as adjacent tussock grasslands. It may also occur in disturbed habitats such as pine plantations (DOE, Approved Conservation Advice for <i>Lepidium peregrinum</i> (Wandering Peppercress), 2014).</p>	<p>The species has a range restricted to discreet populations that do not occur within the Exploratory Works area. Wandering peppercress was not recorded during field surveys and any local records would constitute a range extension for the species. The nearest known record was made in 2007 45 km southwest of the Exploratory Works</p>

Common name	Scientific name	EPBC Act status ¹	Likelihood in Exploratory Works Survey area*	Habitat	Justification
				Marginally suitable habitat is available in the Exploratory Works Survey area as RE 12.3.7.	Survey area (ALA, 2023). As such, the species is considered unlikely to occur within the Exploratory Works Survey area.
Wedge-leaf tuckeroo	<i>Cupaniopsis shirleyana</i>	Vulnerable	Unlikely	<p>This species has a relatively restricted distribution and primarily occurs in dry rainforest associations, often on the slopes of streams and gullies, including scree slopes (DEWHA, Approved conservtaion advice for Cupaniopsis shirleyana (Wedge-leaf Tuckeroo), 2008).</p> <p>Preferred dry rainforest type habitat is absent within the Exploratory Works Survey area.</p>	<p>No preferred habitat is present in the Exploratory Works Survey area. The nearest known records were made in 2009, approximately 25 km to the north of the Exploratory Works Survey area (ALA, 2023).</p> <p>The Exploratory Works Survey area (including the area of potential habitat for the species) was comprehensively surveyed for threatened flora, and <i>Cupaniopsis shirleyana</i> was not recorded. As such, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>
Birds					
Australasian bittern	<i>Botaurus poiciloptilus</i>	Endangered	Unlikely	<p>The Australasian bittern is primarily found in freshwater wetlands and occasionally in saline environments such as saltmarsh. It prefers areas with tall and dense aquatic and sub-aquatic vegetation such as sedges and reeds with interspaced areas of shallow water for hunting (Menkhorst, et al., 2017).</p> <p>Preferred habitat for this species does not occur within the Exploratory Works Survey area.</p>	<p>The nearest confirmed historical observation of the species was recorded in 1995, >30 km north-west of the Exploratory Works Survey area nearby Glastonbury State Forest (ALA, 2023). Distribution mapping shows the Survey area to be >20 km to the west of the nearest likely habitat, which is found within Mapleton National Park (TSSC, 2011).</p> <p>The species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during targeted field surveys, and no suitable habitat was present. As such, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>
Australian painted snipe	<i>Rostratula australis</i>	Endangered	Possible	<p>This species prefers ephemeral freshwater wetlands with a mosaic of aquatic and sub-aquatic vegetation to provide cover. The species can also occur in less complex wetlands including flooded grasslands and drainage features (Menkhorst, et al., 2017).</p> <p>Potentially suitable habitats occur in the Exploratory Works Survey area comprising drainage lines and seasonally inundated grasslands in cleared areas of the site.</p>	<p>The Exploratory Works Survey area is within the Australian Painted Snipe's known distribution; however, the species is inferred to have undergone a severe decline since the 1950s (DSEWPAC, 2013). Suitable habitat is present within the Exploratory Works Survey area and recent historical records (<10 years) occur within the region (<50 km). The latest record of the Australian Painted Snipe was made in November 2023, ~37 km east of the Survey area (ALA, 2023).</p> <p>This species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during targeted surveys. However, the species is considered possible to occur as suitable habitat is present in the Exploratory Works Survey area, and there are recent records of the species within 50 km.</p>
Black-breasted button-quail	<i>Turnix melanogaster</i>	Vulnerable	Known to occur	The black-breasted button-quail occurs primarily in rainforest and forests associated with rainforests, preferring relatively dry dense forests such as semi-evergreen vine thicket and softwood scrubs. In these areas it requires a layer of deep leaf litter to support invertebrate prey. The species can also be found in highly disturbed environments such as Hoop pine (<i>Araucaria cunninghamii</i>) plantations (TSSC, 2015).	<p>Suitable habitat is present within the Exploratory Works Survey area and historical records (<10 years) are present within the locality (<30 km).</p> <p>Additionally, the species was detected during field surveys in the Exploratory Works Survey area.</p> <p>The species is known to occur within the Exploratory Works Survey area.</p>
Coxen's fig-parrot	<i>Cyclopsitta diophthalma coxeni</i>	Critically endangered	Possible	This species was known to utilise Lowland Subtropical Rainforest TEC, dry rainforest, littoral and vine forest habitats, as well as riparian corridors in woodland and urbanised and agricultural areas that support fig trees (<i>Ficus</i> spp.) (DCCEEW, Conservation Advice for Cyclopsitta diophthalma coxeni (Coxen's fig-parrot), 2023).	Nominally suitable habitat is present within the Exploratory Works Survey area and historical records (>10 years) are present within the locality (<30 km). Unverified incidental sightings of the subspecies continue to be reported sporadically by members of the public including a series of reports of up to four individuals in 2001–2004 from SEQ at Montville, Main Range National Park, Imbil State Forest,

Common name	Scientific name	EPBC Act status ¹	Likelihood in Exploratory Works Survey area*	Habitat	Justification
				<p>Suitable habitat exists for this species within the Borumba PHES Survey area and the Exploratory Works Project Survey area (rainforest and vine forest, particularly alluvial areas containing <i>Ficus</i> spp.) mainly comprising patches of RE 12.11.3, 12.11.10 and 12.12.16.</p> <p>There have been less than 100 records of Coxen's fig-parrot in Queensland since 1970 (DOE, <i>Cyclopsitta diophthalma coxeni</i> in Species Profile and Threats Database, 2023), and none have been verified by a photograph, call recording or by physical evidence.</p>	<p>Lamington National Park, Beerwah Forest Reserve and Maleny (DCCEEW, Conservation Advice for <i>Cyclopsitta diophthalma coxeni</i> (Coxen's fig-parrot), 2023).</p> <p>The subspecies was not detected within the Exploratory Works Survey area or Borumba PHES Survey area during targeted surveys, but the presence of nearby historical records (though unverified) and suitable habitat within the Exploratory Works Survey area mean the subspecies is conservatively considered possible to occur.</p>
Glossy black-cockatoo (south-eastern)	<i>Calyptorhynchus lathamii lathamii</i>	Vulnerable	Known to occur	<p>This species feeds almost exclusively on the seeds of Casuarina and Allocasuarina species. As such, its occurrence is inherently linked to the presence of foraging trees which typically form a subcanopy in eucalypt woodlands and open forest habitats (Menkhorst, et al., 2017).</p> <p>Suitable habitat in the Exploratory Works Survey area comprises the following REs: 12.3.7, 12.11.3, 12.11.9, 12.11.14, 12.12.12, 12.12.15 and 12.12.23. These woodland and forest communities support <i>Allocasuarina torulosa</i>, which is an important foraging species for glossy black-cockatoos (DCCEEW, 2022). These areas also support an abundance of large, hollow-bearing trees, which provide suitable shelter and breeding habitat for the species (DCCEEW, 2022).</p>	<p>The species has been recorded within the Exploratory Works Survey area during recent surveys. The species was recorded in varying habitats including <i>Corymbia citriodora</i> and <i>Eucalyptus crebra</i> woodland on igneous rocks (RE 12.12.5), Eucalyptus woodland with vine forest species in gullies (RE 12.11.3), and notophyll vine forest with <i>Araucaria cunninghamii</i> on metamorphosed sediments and interbedded volcanics (RE 12.11.10).</p> <p>The species is known to occur within the Exploratory Works Survey area.</p>
Grey falcon	<i>Falco hypoleucos</i>	Vulnerable	Unlikely	<p>The grey falcon is primarily associated with arid and semi-arid environments supporting habitats such as Acacia woodlands (e.g. Mulga (<i>Acacia aneura</i>)), hummock grasslands (<i>Triodia</i> spp.), chenopod shrublands and Mallee. In the eastern half of Australia, the species predominately occurs well west of the Great Dividing Range (GDR). Any verified records near the GDR are extralimital vagrants (Menkhorst, et al., 2017).</p> <p>There are no suitable habitats within the Exploratory Works Survey area.</p>	<p>Suitable habitat is not present in the Exploratory Works Survey area. Three records within 100 km of the Exploratory Works Survey area are not dated or supported by any evidence and the coordinate precision of these records is also unknown (ALA, 2023).</p> <p>This species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during targeted surveys. As such, and in light of the information above, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>
Painted honeyeater	<i>Grantiella picta</i>	Vulnerable	Unlikely	<p>The species inhabits mistletoes in eucalypt forests or woodlands, riparian woodlands of black box and river red gum, box-ironbark-yellow gum woodlands, acacia-dominated woodlands, paperbarks, casuarinas, callitris, and trees on farmland or gardens. The species prefers woodlands which contain a high proportion of mature trees, as these host more mistletoes (DOE, 2015).</p> <p>All areas of eucalypt woodland, especially those supporting mistletoes, are considered habitat for this species.</p>	<p>Some potential habitat for the species occurs in the Borumba PHES Survey area, but distribution mapping shows that the species is mostly restricted to areas associated with and west of the Great Dividing Range (DOE, 2023). As such, any records of the species east of the Great Dividing Range in south-east Queensland can be considered vagrant individuals. The nearest historical observation was made in 2006, >50 km south-west of the Survey area, near the township of Nanango (ALA, 2023).</p> <p>The species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during targeted surveys. The species may be an occasional visitor to the Survey area but will not have a resident population. As such, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>

Common name	Scientific name	EPBC Act status ¹	Likelihood in Exploratory Works Survey area*	Habitat	Justification
Red goshawk	<i>Erythroriorchis radiatus</i>	Vulnerable	Unlikely	<p>This species is primarily associated with coastal and sub-coastal forests and woodlands including savannah, preferring areas with a mosaic of habitats including thickets, wetlands and escarpments (DCCEEW, 2023).</p> <p>Most of the Exploratory Works Survey area, excluding dense rainforests, could be considered suitable habitat.</p>	<p>Nominally suitable habitat is present in the Exploratory Works Survey area. The nearest confirmed historical observation was made in 1992, in Jimna State Forest ~10 km to the south-east of the Survey area (ALA, 2023). The species has experienced rapid and recent range collapse (MacColl, Leseberg, Seaton, Murphy, & Watson, 2023), and recent extensive surveys throughout south-east Queensland failed to detect any evidence of the species (Seaton, 2014). The species distribution in Queensland is now mostly confined to savannah woodlands on Cape York Peninsula (MacColl, et al., 2021).</p> <p>The species was not detected within the Exploratory Woks Survey area or the Borumba PHES Survey area during targeted surveys. As such, and in light of the information above, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>
Regent honeyeater	<i>Anthochaera phrygia</i>	Critically endangered	Unlikely	<p>The species is most commonly associated with box-ironbark eucalypt woodland and dry sclerophyll forest, but also inhabits riparian vegetation such as <i>Casuarina</i> spp. where it feeds on needle-leaved mistletoe and sometimes breeds. It sometimes utilises lowland coastal forest, which may act as a refuge when its usual habitat is affected by drought. It also uses a range of other habitats including remnant patches in farmland and urban areas, roadside reserves and travelling stock routes (DOE, 2015). The species is prone to vagrancy, and individuals occur infrequently in South-east Queensland.</p> <p>Suitable habitat in the Exploratory Works Survey area comprises REs 12.11.3, 12.11.9, 12.11.14, 12.12.12, 12.12.15 and 12.12.23. These woodland and forest communities may provide foraging habitat (predominantly flowering eucalypts and mistletoe) but are unlikely to provide breeding habitat (DOE, 2015).</p>	<p>A recent record of the species (from 2020) exists in the ALA approximately 10.5 km east of the Exploratory Works Survey area at Moy's Pocket (ALA, 2023), and the species could presumably occur in any area of Eucalypt woodland within the Survey area as a vagrant.</p> <p>The species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during targeted surveys. The species may be an occasional visitor to the Survey area, as evidenced by the Moy's Pocket record and other records from south-east Queensland but will not have a resident population. As such, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>
Squatter pigeon (southern)	<i>Geophaps scripta scripta</i>	Vulnerable	Unlikely	<p>Suitable habitat for this species consists primarily of open eucalypt woodlands with a sparse and grassy understorey on sandy soils. It requires access to permanent surface water such as dams and creeks. The species often occurs in disturbed habitats such as road reserves and pastures (TSSC, 2015).</p> <p>No suitable habitat was identified within the Exploratory Works Survey area.</p>	<p>Suitable habitat is not present in the Exploratory Works Survey area. The nearest two historical observations were recorded ~30 km north-west of the Survey area in Wrattens National Park in 1981 and 1997, respectively (ALA, 2023). Distribution mapping shows the Exploratory Works Project Survey area is outside the extent of likely habitat (DOE, 2023).</p> <p>This species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during targeted surveys. As such, and in light of the information above, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>
Swift parrot	<i>Lathamus discolor</i>	Critically Endangered	Unlikely	<p>The swift parrot breeds in Tasmania during summer and the entire population migrates to mainland Australia for the winter (TSSC, 2016). While on the mainland the Swift Parrot disperses widely to forage primarily on flowers and psyllid lerps provided by Eucalyptus species, with the majority of the population concentrated in Victoria and New South Wales (TSSC, 2016). Small numbers of Swift Parrot are observed infrequently in south-eastern Queensland (TSSC, 2016).</p> <p>Potentially suitable habitat is present within the Exploratory Works Survey area; this includes all areas of eucalypt dominated woodland and forest.</p>	<p>The species may be an occasional visitor to the Exploratory Works Survey area but will not have a sedentary population. The nearest historical observation was recorded >50 km to the south-east of the Survey area within Caloundra in 1992 (ALA, 2023). Distribution mapping shows the Exploratory Works Project Survey area to be toward the north-eastern extent of the species' range and outside of areas classified as likely habitat (TSSC, 2016).</p> <p>This species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during targeted surveys. As such, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>

Common name	Scientific name	EPBC Act status ¹	Likelihood in Exploratory Works Survey area*	Habitat	Justification
Fishes					
Australian lungfish, Queensland lungfish	<i>Neocерatodus forsteri</i>	Vulnerable	Known to occur	Suitable habitat for the species is common across the Exploratory Works Survey area and is comprised of specific habitat features including still or low flow waters, high riparian cover, large woody debris and undercut banks (DoE, 2014).	<p>The species has been recorded from watercourses in the Exploratory Works Survey area by a known source (Ecologist). This species was recorded both within Lake Borumba and downstream of the lake in Yabba Creek during targeted field surveys. There are also anecdotal records from upstream of the Lake within Yabba Creek.</p> <p>The species is known to occur within the Exploratory Works Survey area and the Borumba PHES Survey area.</p>
Mary River cod	<i>Maccullochella mariensis</i>	Endangered	Known to occur	Both foraging habitat (all instream habitats that provide predation opportunities) and breeding habitat (which is primarily associated with submerged hollow logs) are present within the Exploratory Works Project Survey area (TSSC, 2016).	<p>The species has been recorded from watercourses in the Exploratory Works Survey area by a known source (Ecologist). This species was detected during the targeted field surveys within the upper reaches of Yabba Creek, Kingaham Creek, Lake Borumba, and downstream of Borumba Dam in Yabba Creek.</p> <p>The species is known to occur within the Exploratory Works Survey area.</p>
Frogs					
Fleay's frog	<i>Mixophyes fleayi</i>	Endangered	Unlikely	<p>The species is associated with montane rainforest and open forest adjacent to rainforest, close to streams with a stream order of 1 to 3. Adults can be found in leaf litter near streams. Important habitat includes streams and semi-permanent streams at altitudes between 100 and 1000 m above sea level within the Conondale Ranges (TSSC, 2021).</p> <p>Preliminary field surveys indicate that potentially suitable habitat exists for this species within the Exploratory Works Survey area (higher elevation rainforest and adjoining wet sclerophyll forest and relies on permanent to semi-permanent streams). Suitable habitat in the Survey area is potentially available within the following REs: 12.11.3, 12.11.9, 12.11.10, 12.12.12, 12.12.15, 12.12.16 and 12.12.23.</p>	<p>The nearest historic observation was recorded in 1999, within 15 km of the Exploratory Works Survey area in Conondale National Park (ALA, 2023). The species has a known range restricted to discreet populations that do not occur within the Exploratory Works area. Currently, known populations of the species in Queensland occupy Conondale National Park, the Lamington Plateau, the northern section of Main Range, the Mt Barney area, and Currumbin and Tallegbudgera Creek below Springbrook Plateau (TSSC, 2021).</p> <p>This species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during targeted surveys. Additionally, this species has never been recorded within the Yabba Creek catchment and therefore is considered unlikely to occur within the Exploratory Works Survey area.</p>
Giant barred frog	<i>Mixophyes iteratus</i>	Vulnerable	Likely	<p>The species occurs in rainforests and wet sclerophyll forests in upper to lower catchment areas, typically in or near lower energy, permanent, meandering rainforest streams with sandy banks. In the Mary River Catchment, the species is strongly associated with RE 12.3.1. Populations have been found in cleared or disturbed areas, for example in cattle farms with vegetated riparian strips and regenerated logged areas. Many sites where the species is known to occur are the lower reaches of streams which have been affected by major disturbances such as clearing, timber harvesting and urban development in their headwaters.</p> <p>Field surveys to date indicate that potentially suitable foraging and breeding habitat exists within the Survey area (shallow rocky streams with permanent flow in rainforest and wet sclerophyll forest) (TSSC, 2021).</p> <p>Suitable habitat in the Exploratory Works Survey area is potentially available within the following REs: 12.11.10 and 12.12.16.</p>	<p>Recent observations of the species (in 2023 and 2024) have been made in Imbil State Forest and near Yabba Creek (iNaturalist, 2023). Additionally, there are several historical records of the species in the vicinity, made within Conondale National Park (ALA, 2023).</p> <p>This species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during targeted surveys, but due to the presence of suitable habitat within the Survey area and the recent records, the species is considered likely to occur within the Exploratory Works Survey area.</p>

Common name	Scientific name	EPBC Act status ¹	Likelihood in Exploratory Works Survey area*	Habitat	Justification
Insects					
Australian fritillary	<i>Argynnis hyperbius inconstans</i>	Critically Endangered	Unlikely	<p>This species mostly occupies coastal environs around swampy areas and estuarine systems. In these areas it requires moderate densities of the larval food plant, <i>Viola betonicifolia</i>, to maintain a sustainable breeding population (TSSC, 2017).</p> <p>Potentially suitable habitat exists in the Exploratory Works Survey area, including low numbers of the larval food plant.</p>	<p>The species is restricted to areas where its larval food plant, <i>Viola betonicifolia</i> (the arrowhead violet), occurs (TSSC, 2017). <i>V. betonicifolia</i> was recorded during field surveys in the Exploratory Works Survey area, albeit in low densities insufficient to sustain a breeding population (Sands & New, 2002). The closest historic observation of the species was made in 1977, some 30 km north of the Survey area in Gympie (ALA, 2023).</p> <p>There have been very few verified records of the species made since 2000, and none in Queensland. This species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during targeted surveys. As such, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>
Pink underwing moth	<i>Phyllodes imperialis smithersi</i>	Endangered	Unlikely	<p>This species prefers remnant, high quality subtropical rainforests on nutrient rich volcanic or alluvial soils below 600 m in elevation. Its occurrence is inherently tied to the presence of the species' only known larval food plant – <i>Carronia multiseppalea</i> (DEWHA, 2008).</p> <p>Nominally suitable habitat has been identified in the Exploratory Works Survey area, but the larval host plant has not.</p>	<p>Distribution mapping shows the subspecies to range from Kin Kin Creek south-east of Gympie in Queensland to Bellingen in northern New South Wales (Sands D. , 2012). An observation of the subspecies was made in 2021, >30 km south-east of the Survey area near Maleny (ALA, 2023).</p> <p>This species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during targeted surveys, and neither was the larval food plant (<i>Carronia multiseppalea</i>). As such, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>
Mammals					
Brush-tailed rock wallaby	<i>Petrogale penicillata</i>	Vulnerable	Unlikely	<p>The species inhabits rocky outcrops, steep rocky slopes, boulder piles, cliffs, gorges and isolated rock stacks. Dense vegetation cover above or below rock features provides important habitat for foraging, shelter and protection from predators (DAWE, 2021).</p> <p>Given the species' fidelity to rocky habitat features, it is possible that suitable habitat could occur within REs on land zone 11 (hills and lowlands on metamorphic rocks) and 12 (hills and lowlands on granitic rocks) in the Exploratory Works Survey area, such as the REs 12.11.9, 12.11.14, 12.12.12, 12.12.15 and 12.12.23.</p>	<p>The known range of the species does not overlap with the Exploratory Works Project. Distribution mapping shows the Exploratory Works Project and adjacent areas are toward the northern extent of the species' known distribution (DOE, 2023). Historically, the species has never resided within the area and based on current knowledge, the Exploratory Works Project and adjacent areas are well outside of areas with known important populations of the brush-tailed rock-wallaby (DOE, 2023). One unverified observation of the species was made in 2018 within Yabba State Forest (<10 km from the Survey area) (ALA, 2023).</p> <p>This species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during the field surveys. As such, and given the information above, it is considered unlikely to occur within the Exploratory Works Survey area.</p>
Corben's long-eared bat	<i>Nyctophilus corbeni</i>	Vulnerable	Unlikely	<p>Corben's long-eared bat occurs in a range of woodland vegetation types including ironbark, box, brigalow and belah associations (TSSC, 2015).</p> <p>Suitable habitat is not present within the Exploratory Works Survey area, as the species does not occur in high rainfall near-coastal environments.</p>	<p>The known range of the species does not overlap with the Exploratory Works Survey area or the Borumba PHES Survey area. The nearest known record of this species is from the Bunya Mountains, ~100 km west of the Exploratory Works Survey area; this record is the most easterly record in south-east Queensland (ALA, 2023). This species is not known to occur in high rainfall near-coastal environments such as those in the Survey area.</p> <p>This species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during targeted field surveys. As such, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>

Common name	Scientific name	EPBC Act status ¹	Likelihood in Exploratory Works Survey area*	Habitat	Justification
Ghost bat	<i>Macroderma gigas</i>	Vulnerable	Unlikely	<p>This species can occur in a range of forest and woodland habitats in proximity to suitable roosting sites. Suitable roost sites typically include caves, rock crevices and disused mine shafts (TSSC, 2016).</p> <p>No suitable known roost sites are supported in the Exploratory Works Survey area despite large areas of potentially suitable foraging habitat.</p>	<p>The species currently occurs in isolated populations within Queensland, including north-western Queensland south of the Gulf of Carpentaria, Cape York peninsula, and the central Queensland coastal and hinterland regions (TSSC, 2016). The presence of this species in the Borumba PHES Survey area would be considered extralimital and, furthermore, no suitable roosting sites are known in the Borumba PHES Survey area. The nearest historical observations were made in 1985, >300 km north of the Survey area (ALA, 2023).</p> <p>This species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during targeted field surveys. As such, and given the information above, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>
Greater glider (southern and central)	<i>Petauroides volans</i>	Endangered	Known to occur	<p>The species is largely restricted to eucalypt forests and woodlands; it is typically found in highest abundance in taller, montane, moist eucalypt forests with relatively old trees and abundant hollows (DCCEEW, 2022).</p> <p>Suitable habitat was found across the Exploratory Works Survey area in the following REs: 12.3.7, 12.11.3, 12.11.9, 12.11.14, 12.12.12, 12.12.15 and 12.12.23.</p>	<p>Suitable habitat for the species is present within the Exploratory Works Survey area, and the species has been recorded within Survey area by a known source (Ecologist). This species has been detected in Eucalyptus woodland with vine forest species in gullies.</p> <p>The species is known to occur within the Exploratory Works Survey area.</p>
Grey-headed flying-fox	<i>Pteropus poliocephalus</i>	Vulnerable	Known to occur	<p>The species utilises an extremely broad range of habitat types for foraging including rainforests, eucalypt woodlands, exotic and native gardens, commercial crops and parklands. In these habitats, it primarily forages on fruit and nectar (particularly eucalypt nectar). It is nocturnal and roosts communally by day (aggregations are known as camps), often with other flying-fox species. Most of the reproductive cycle also occurs at camps which can be occupied continuously by flying foxes for decades with some seasonal fluctuations in population size. Habitat features associated with camps typically include a dense tree canopy, often occurring near water sources such as creeks, rivers and lakes (DAWE, 2021).</p> <p>Suitable habitat for the species includes all eucalypt woodland and rainforests in the Exploratory Works Survey area.</p>	<p>The species has been recorded within the Exploratory Works Survey area by a known source (Ecologist). The species has been found within <i>E. tereticornis</i>, <i>Casuarina cunninghamiana</i> and <i>Melaleuca</i> spp. fringing woodland (RE 12.3.7), <i>Eucalyptus crebra</i>, <i>E. tereticornis</i> and <i>Corymbia intermedia</i> woodland (RE 12.11.14), in mixed Eucalypt open forest with vine forest species often present in the understorey (RE 12.12.15) and in Eucalyptus woodland with vine forest species in gullies (RE 12.11.3).</p> <p>This species was detected during targeted field surveys within the Exploratory Works Survey area. No flying-fox camps were identified within or adjacent to the Survey area.</p> <p>The species is known to occur within the Exploratory Works Survey area.</p>
Koala (combined pop. of QLD, New South Wales, ACT)	<i>Phascolarctos cinereus</i>	Endangered	Known to occur	<p>The species inhabits a range of temperate, sub-tropical and tropical forest, woodland and semi-arid communities dominated by eucalypt species (DAWE, 2022).</p> <p>Suitable habitat was found across the Exploratory Works Survey area, and was comprised of REs 12.3.7, 12.11.3, 12.11.9, 12.11.14, 12.12.12, 12.12.15, and 12.12.23.</p>	<p>Suitable habitat for the species occurs within the Exploratory Works Survey area, and the species has been recorded in multiple communities within the Exploratory Works Survey area by a known source (Ecologist). So far, the species has been recorded in Eucalyptus woodland with vine forest species in gullies (RE 12.11.3), <i>Eucalyptus crebra</i>, <i>E. tereticornis</i> and <i>Corymbia intermedia</i> woodland associated with REs 12.11.14 and 12.12.12, in mixed Eucalypt open forest with vine forest species (RE 12.12.15), in notophyll vine forest on alluvial plains, foothills and ranges associated with REs 12.11.10 and 12.12.16, and in <i>E. tereticornis</i>, <i>Casuarina cunninghamiana</i> and <i>Melaleuca</i> spp. fringing woodland (RE 12.3.7).</p> <p>The species is known to occur within the Exploratory Works Survey area.</p>

Common name	Scientific name	EPBC Act status ¹	Likelihood in Exploratory Works Survey area*	Habitat	Justification
Large-eared pied bat	<i>Chalinolobus dwyeri</i>	Vulnerable	Unlikely	<p>The species favours areas with extensive sandstone cliffs and caves (Thomson 2008). In south-east Queensland, high elevation rainforest and moist eucalypt forest on rocky substrates including rhyolite, trachyte and basalt also provide suitable habitat for the species. Preferred roosting habitat includes arched caves with a domed roof, particularly in proximity to woodlands.</p> <p>There is no suitable roosting habitat for the species in the Exploratory Works Survey area.</p>	<p>The Exploratory Works Survey area and Borumba PHES Survey area is outside of the species' known distribution, which may be considered severely fragmented given that most individuals occur in small and relatively isolated subpopulations (DAWE, Conservation Advice for <i>Chalinolobus dwyeri</i> (Large-eared Pied Bat), 2021). The modelled distribution of the large-eared pied bat indicates a close association with sandstone escarpment (for roosts) and fertile valleys (for foraging), particularly where the valleys support box gum woodland (DAWE, Conservation Advice for <i>Chalinolobus dwyeri</i> (Large-eared Pied Bat), 2021). Physical features of roosting habitat (i.e. extensive sandstone cliffs and caves) are uncommon in the local landscape (including in the Exploratory Works Survey area). The scarcity of roosting habitat is a limiting factor in the distribution of the species (DAWE, Conservation Advice for <i>Chalinolobus dwyeri</i> (Large-eared Pied Bat), 2021). The nearest historic records of the species were made in 1994 and 1996, >100 km south of the Survey area in Main Range National Park (ALA, 2023).</p> <p>This species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during targeted field surveys. As such, and given the information above, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>
Long-nosed potoroo (northern)	<i>Potorous tridactylus tridactylus</i>	Vulnerable	Known to occur	<p>This species utilises a range of habitat types including rainforest, wet sclerophyll forest, heathy woodland, and coastal thickets. The species is omnivorous and forages primarily on fungi, with plant matter (leaves, roots and flowers) and invertebrates making up a smaller proportion of the species diet. It typically requires a low dense understorey layer with sufficient open space to facilitate foraging. Reproductive habitat requirements are poorly known but high-quality foraging habitat with plentiful resources and suitable cover are expected to provide suitable breeding habitat requirements.</p> <p>Habitat critical to the survival of the species (i.e. a patch of occupied habitat larger than 0.1 km²) is present within the Exploratory Works Project Survey area and in the Borumba PHES Survey area. This is comprised of rainforest gullies with dense vegetation cover (DAWE, 2022).</p>	<p>Suitable habitat for the species occurs within the Exploratory Works Survey area, and the species has been recorded within the Exploratory Works Survey area by a known source (Ecologist). These records were made in mixed Eucalypt open forest with vine forest species present in the understorey (RE 12.12.15) and in Eucalyptus woodland with vine forest species in gullies (RE 12.11.3).</p> <p>The species is known to occur within the Exploratory Works Survey area.</p>
New Holland mouse	<i>Pseudomys novaehollandiae</i>	Vulnerable	Unlikely	<p>Across the species' range, the New Holland Mouse is known to inhabit the following types of habitats: open heathland, open woodland with a heathland understorey and vegetated sand dunes (DEWHA, 2010).</p> <p>The habitat types do not occur in the Exploratory Works Survey area.</p>	<p>Suitable habitat is not present within the Exploratory Works Survey area and the known range of the species does not overlap with the Survey area. The Project is well outside the current known distribution of the species, with the nearest known records of the species occurring near Crow's Nest, ~100 km south-west of the Survey area (ALA, 2023).</p> <p>This species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during the field surveys. As such, it is considered unlikely to occur within the Exploratory Works Survey area.</p>

Common name	Scientific name	EPBC Act status ¹	Likelihood in Exploratory Works Survey area*	Habitat	Justification
Northern quoll	<i>Dasyurus hallucatus</i>	Endangered	Possible	<p>The species utilises a wide variety of habitats including rocky outcrops, eucalypt woodland, rainforest, sandy lowlands and beaches, shrubland, grassland and desert. Habitat typically includes some form of rocky structure for denning; surrounding vegetation is utilised for foraging and dispersal.</p> <p>Suitable habitat within the Survey area comprises REs 12.11.3, 12.11.9, 12.11.14, 12.12.12, 12.12.15 and 12.12.23.</p>	<p>The Borumba PHES Survey area is located near the southern extent of the species' distribution, which has significantly retracted over the past century. Suitable habitat is present within the Exploratory Works Survey area and historical records (>10 years) are present within the locality (<30 km). The nearest historic record of the species was made in 1991, ~25 km to the south of the Survey area near the Mary River (ALA, 2023).</p> <p>This species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during targeted field surveys. However, due to the extensive areas of potentially suitable habitat, and nearby historical records, it is considered possible for the species to occur within the Exploratory Works Survey area.</p>
Spotted-tail quoll	<i>Dasyurus maculatus maculatus</i> (SE mainland population)	Endangered	Possible	<p>The species occurs in a wide variety of habitats including closed forests (including temperate and sub-tropical rainforest), tall eucalypt forests, open woodlands, open forests, drier rain shadow woodlands and coastal heathlands. During the day they shelter in fallen logs, boulder piles, burrows, tree hollows and occasionally under dwellings.</p> <p>Suitable habitat within the Exploratory Works Survey area is comprised of REs 12.11.3, 12.11.9, 12.11.14, 12.12.12, 12.12.15 and 12.12.23. These woodland and forest communities support a dense understorey and complex log matrices, necessary for shelter and breeding habitat.</p>	<p>Suitable habitat is present within the Exploratory Works area and historical records (>10 years) are present within the locality (<30 km). All historic records within a 20 km radius of the Survey area were made over 20 years ago; the closest confirmed sighting of the species (15 km south-east of the Exploratory Works Survey area) was made in 2003 (ALA, 2023). The threshold densities of critical habitat components (large patches of forest with adequate denning resources and high densities of medium-sized mammalian prey) required to support quoll populations are unknown (TSSC, 2020)</p> <p>This species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during targeted field surveys. However, due to the extensive areas of potentially suitable habitat, and nearby historical records, it is considered possible for the species to occur within the Exploratory Works Survey area.</p>
Yellow-bellied glider (south-eastern)	<i>Petaurus australis australis</i>	Vulnerable	Known to occur	<p>The species occurs in eucalypt-dominated woodlands and forests, including both wet and dry sclerophyll forests. Abundance is highly dependent on habitat suitability, which is in turn determined by forest age and floristics. The subspecies shows a preference for large patches of mature old growth forest that provide suitable trees for foraging and shelter (DAWE, 2022).</p> <p>Suitable habitat was found across the Exploratory Works Survey area in the following REs: 12.11.3, 12.11.9, 12.11.14, 12.12.12, 12.12.15 and 12.12.23.</p>	<p>Suitable habitat for the species is present within the Exploratory Works Survey area, and the species has been recorded within Survey area by a known source (Ecologist). The species has been recorded in Eucalyptus woodland with vine forest species in gullies (RE 12.11.3), and in mixed Eucalypt open forest with vine forest species often present in the understorey (RE 12.12.15).</p> <p>The species is known to occur within the Exploratory Works Survey area.</p>

Common name	Scientific name	EPBC Act status ¹	Likelihood in Exploratory Works Survey area*	Habitat	Justification
Reptiles					
Collared delma	<i>Delma torquata</i>	Vulnerable	Unlikely	<p>The species inhabits open-forests, woodlands, and adjacent exposed rocky areas in Queensland RE Land Zones 3, 9 and 10 (DEWHA, 2008); recent records of the species have also been made from Land Zones 11 and 12 in the vicinity of Kroombit Tops National Park.</p> <p>Potentially suitable habitat for the species occurs within the Exploratory Works Survey area.</p>	<p>The nearest historical record of the species, from 1956, was made >30 km to the east of the Exploratory Works Survey area in Pomona from 1956 (ALA, 2023). The nearest known populations of the species occur in Bunya Mountains National Park (>90 km west of the Survey area) and Crongah National Park (>60 km north of the Survey area) (DEWHA, 2008). Distribution mapping shows the species habitat may occur within the Survey area and adjacent areas, however, due to specific habitat requirements, the species' distribution is highly fragmented (Peck, 2003).</p> <p>This species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during field surveys to date, though targeted surveys have not been undertaken. As such and considering the known distribution of the species in south-east Queensland, it is considered unlikely to occur within the Exploratory Works Survey area.</p>
Dunmall's snake	<i>Furina dunmalli</i>	Vulnerable	Unlikely	<p>Dunmall's snake occurs primarily in the Brigalow Belt region in the south-eastern interior of Queensland (DCCEEW 2023q), and occupies Brigalow, Belah and Cypress Pine communities on heavy soils (Wilson, 2022).</p> <p>Suitable habitat for the species is not present in the Exploratory Works Survey area.</p>	<p>Suitable habitat is not present within the Exploratory Works Survey area. The nearest historical observation of the species, from 1995, was made >60 km west of the Survey area in Tarong State Forest (ALA, 2023). Distribution mapping shows the Survey area to be located outside of the likely habitat for the species (DOE, 2014).</p> <p>This species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during the field surveys. As such, it is considered unlikely to occur within the Exploratory Works Survey area.</p>
Grey snake	<i>Hemiaspis damelii</i>	Vulnerable	Unlikely	<p>Within Queensland, grey snake habitat is represented by Brigalow (<i>Acacia harpophylla</i>) and Belah (<i>Casuarina cristata</i>) woodlands on heavy, dark brown to black cracking clay soils, particularly in association with water bodies, areas with small gullies and ditches, and floodplain environments where the species shelters beneath logs, rocks and soil cracks (DCCEEW, 2022).</p> <p>Suitable habitat for the species is not present in the Exploratory Works Survey area.</p>	<p>Suitable habitat is not present within the Exploratory Works Survey area. The nearest historical observation was recorded in 1997 approximately 100 km north-west of the Survey area in Proston.</p> <p>This species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during the field surveys. As such, it is considered unlikely to occur within the Exploratory Works Survey area.</p>
Mary River turtle	<i>Elusor macrurus</i>	Endangered	Known to occur	<p>Suitable foraging and breeding habitat for this species is characterised by riparian and terrestrial vegetation supporting multiple plant and macrophyte species, benthic areas (foraging juveniles), permanent water, riffles, undercut banks, large woody debris and sand/gravel substrate with crevices (DEWHA, 2008).</p> <p>Suitable habitat for the species is present in the Exploratory Works Survey area.</p>	<p>The species has been recorded within the Exploratory Works Survey area. This species was detected during targeted field surveys immediately downstream of the existing Borumba dam wall, and upstream of Lake Borumba in Sandy Creek and Yabba Creek.</p> <p>The species is known to occur within the Exploratory Works Survey area.</p>

Common name	Scientific name	EPBC Act status ¹	Likelihood in Exploratory Works Survey area*	Habitat	Justification
Nangur spiny skink	<i>Nangura spinosa</i>	Critically Endangered	Unlikely	<p>The Nangur spiny skink is confined to remnant dry rainforests including semi-evergreen vine thickets, hoop pine plantations and clay slopes (DERM, 2010). The species is currently only found within two locations; Oakview National Park (NP) and Nangur NP (located approximately 45 km and 70 km northwest of the Exploratory Works Survey area respectively) (DCCEEW, 2024). Individuals found at these sites are considered an important population (DERM, 2010). The species has been found at altitudes of 315m to 600m above sea level, in black, hard basaltic soil (DERM, 2010). The skink lives in well-concealed burrows typically situated at the base of rocks, on open ground, along road embankments, or beneath exposed tree roots (DERM, 2010). The preferred burrow location for the species is within rainforests of high plant diversity and where vegetation cover is 1.8m high with little vegetation at ground level (DERM, 2010).</p> <p>The following REs are known to provide habitat for the Nangur spiny skink: 12.12.13, 12.12.16, and 12.12.17 (DERM, 2010).</p> <p>Only RE 12.12.16 is known to occur in the Exploratory Works Survey area.</p>	<p>Nominally suitable habitat (RE 12.12.16) is present within the Exploratory Works Survey area. However, the species has a range restricted to discreet populations that do not occur within the Exploratory Works area (see habitat section). Both the Oakview NP and Nangur NP populations have suffered sharp declines (State of Queensland, 2024). There have been extensive surveys for this species in the region and no new populations have been discovered (State of Queensland, 2024). There has been a successful and well-publicised captive breeding program for the species which has released captive-bred individuals into controlled release sites within its historical distribution (The State of Queensland, 2024). There is no evidence that this species occurs (or historically occurred) within 30 km of the Exploratory Works Survey area or the Borumba PHES Survey area.</p> <p>This species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during the field surveys. As such, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>
Three-toed snake-tooth skink	<i>Coeranoscincus reticulatus</i>	Vulnerable	Unlikely	<p>The three-toed snake-tooth skink is known to inhabit rainforest and occasionally moist eucalypt forest, on loamy or sandy soils (TSSC, 2008).</p> <p>Suitable habitat includes all rainforests and wet sclerophyll forests within the Exploratory Works Survey area.</p>	<p>The Exploratory Works Survey area is located near the western extent of the species' mapped distribution, and populations in Queensland are thought to have a disjunct north-south distribution, including a disjuncture between the lowland areas of occupancy (Fraser Island and Cooloola) and upland areas of occupancy (the Blackall Range and Conondale Range) (DOE, 2023). The closest known records of the species were made in 2022 and 2024 and are located between 30 and 50 km south-east of the Exploratory Works Project near Witta and Maleny, respectively (iNaturalist, 2024).</p> <p>This species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area. However, given the extensive areas of suitable habitat available, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>
White-throated snapping turtle	<i>Elseya albagula</i>	Critically endangered	Known to occur	<p>Suitable foraging and breeding habitat for this species is characterised by permanent water, riffles, large boulders, large woody debris, low flow waters and unconsolidated banks (DoE, 2014).</p> <p>Suitable habitat for the species is present in the Exploratory Works Survey area.</p>	<p>The species has been recorded within the Exploratory Works Survey area by a known source (Ecologist). This species was detected during targeted field surveys in Lake Borumba and downstream in Yabba Creek. Suitable foraging and breeding habitat was confirmed present within the Exploratory Works Project Survey area and the Borumba PHES Survey area. The species is known to occur within the Exploratory Works Survey area.</p>
Yakka skink	<i>Egernia rugosa</i>	Vulnerable	Unlikely	<p>The yakka skink is known to occur in open dry sclerophyll forest, woodland and scrub. The core habitat of this species is within the Mulga Lands and Brigalow Belt South Bioregions (DOE, 2014).</p> <p>Suitable habitat for the species is not present in the Exploratory Works Survey area.</p>	<p>Suitable habitat is not present within the Exploratory Works Survey area and the known range of the species does not overlap with the Exploratory Works area. The nearest historical records of the species were made in 2000 in Bunya Mountains National Park, >90 km west of the Survey area (ALA, 2023). Distribution mapping shows the Survey area lies within the far south-eastern extent of the species' range and the nearest patch of likely habitat is >10 km north-west in Wratten National Park (DOE, 2014). No known colony of the species has been recorded within the Survey area, therefore no 'known important habitat' lies within the Exploratory Works Project Survey area (DOE, 2014).</p>

Common name	Scientific name	EPBC Act status ¹	Likelihood in Exploratory Works Survey area*	Habitat	Justification
					The species was not detected within the Exploratory Works Survey area or the Borumba PHES Survey area during field surveys to date though targeted surveys have not been undertaken. As such, and given the information above, the species is considered unlikely to occur within the Exploratory Works Survey area.
Ecological communities					
Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland	-	Endangered	Unlikely	This community is analogous with REs 12.2.7, 12.3.4/12.3.4a, 12.3.5, 12.3.6 12.3.20. These communities are not present within the Survey area.	Based on the Commonwealth mapping for this TEC parts of Yabba Creek and Lake Borumba may support this community (i.e. TEC may occur). This community is analogous with RE 12.2.7, 12.3.4/12.3.4a, 12.3.5, 12.3.6 12.3.20. These communities are not present within the Survey area based on the Queensland Government mapping and targeted field surveys. Further, the community is mainly associated with areas below 30 m ASL, with the Exploratory Works Survey area located above 120 m ASL. It is noted that the community can occur up to 220 m ASL where the groundwater table is high or perched; there is no evidence of this occurring in the Survey area. As such, and given the information above, the species is considered unlikely to occur within the Exploratory Works Survey area.
Lowland Rainforest of Subtropical Australia TEC	-	Critically endangered	Known to occur	Patches of vegetation meeting key diagnostic criteria for this TEC are present in the Survey area (Threatened Species Scientific Committee, 2011).	<p>Patches of Lowland Rainforest TEC have been recorded within and surrounding the Exploratory Works Survey area.</p> <p>The species is known to occur within the Exploratory Works Survey area.</p>
Subtropical eucalypt floodplain TEC	-	Endangered	Known to occur	Patches of vegetation meeting key diagnostic criteria for this TEC are present in the Survey area (DCCEEW, 2022).	<p>Patches of Subtropical eucalypt floodplain TEC have been recorded within and surrounding the Exploratory Works Survey area.</p> <p>The species is known to occur within the Exploratory Works Survey area.</p>
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	-	Critically endangered	Unlikely	In the south-east Queensland bioregion (12), this community is only known to be analogous to one RE: 12.8.16. This reflects the fact that the primary distribution of this TEC in south-east Queensland occurs to the west of the Great Dividing Range.	<p>The White Box-Yellow Box-Blakely's Red Gum TEC does not occur within the Survey area. While it is not known to occur within the Exploratory Works Survey area based on the Queensland Government mapping and targeted field surveys, The only RE analogous with this community in Bioregion 12, RE 12.8.16, is not known to occur within the Exploratory Works Survey area based on the Queensland Government mapping and targeted field surveys. The White Box-Yellow Box-Blakely's Red Gum TEC does not occur within the Survey area.</p> <p>As such, and given the information above, the species is considered unlikely to occur within the Exploratory Works Survey area.</p>