## 1.1 Critically Endangered and Endangered species

The *Environment Protection and Biodiversity Conservation Act 1999* specifies factors to be considered in deciding whether a development is likely to significantly affect Endangered Ecological Communities, threatened species and migratory species, listed at the Commonwealth level. These assessments characterise the significance of likely impacts associated with the proposal on the following Critically Endangered and Endangered species.

### 1.1.1 Critically Endangered

**Birds**

- Regent Honeyeater *(Anthochaera phrygia)*
- Swift Parrot *(Lathamus discolor)*

**Flora**

- Eyebright *(Euphrasia arguta)*
- *Prasophyllum sp. Wybong*

| **Regent Honeyeater *(Anthochaera phrygia)*** |
|---|
| An action is likely to have a significant impact on a critically endangered or endangered species if there is a real chance or possibility that it will: |
| **a) Lead to a long-term decrease in the size of a population** |
| *The MNES Significant impact guidelines 1.1 states a 'population of a species' is defined under the EPBC Act as an occurrence of the species in a particular area. In relation to critically endangered, endangered or vulnerable threatened species, occurrences include but are not limited to:*<br>• *a geographically distinct regional population, or collection of local populations, or*<br>• *a population, or collection of local populations, that occurs within a particular bioregion.*<br><br>The presence of *Anthochaera phrygia* in the subject land has been assumed based on associated PCTs and the presence of potential habitat. There are no known records within the Subject Land however, associated PCTs; PCT 277 and PCT 76 are present as low condition grassland, moderate-high condition woodland with native dominated understorey, and moderate condition woodland with exotic understorey due to past and present land use and related agricultural activities. 1.85 ha of PCT 277 and 0.15 ha of PCT 76 occur within the development footprint, of which 0.33 ha of woodland is potential suitable habitat. No targeted surveys have been undertaken for this species; however the area of impact is adjacent to a current access track, which has previously been disturbed through track construction, edge effects and regular agricultural activities such as grazing and machinery movement.<br><br>*A. phrygia* has a patchy distribution between south-east Queensland and central Victoria. Known breeding areas include Bundarra-Barraba, Capertee Valley, Hunter Valley, and Chiltern (DOE, 2015). *A. phrygia* inhabits dry open forest and woodland, particularly Box-Ironbark woodland, and riparian forests of River Sheoak. It also inhabits woodlands that support a significantly high abundance and species richness of bird species, high numbers of mature trees, high canopy cover and abundance of mistletoes (DOE, 2015). The subject land lacked these features, therefore the likelihood of the species using the woodland as foraging habitat is low. |

*A. phrygia* feeds mainly on the nectar from a relatively small number of eucalypts that produce high volumes of nectar. Key eucalypt species include Mugga Ironbark, Yellow Box, White Box and Swamp Mahogany. Other tree species may be regionally important. Flowering of associated species such as Thin-leaved Stringybark (*Eucalyptus eugenioides*) and other Stringybark species, and Broad-leaved Ironbark (*E. fibrosa*). Nectar and fruit from the mistletoes (*Amyema miquelii*, *A. pendula and A. cambagei*) are also utilised (DOE, 2015).

As part of the proposal, the action would impact potential habitat including 0.33 ha of woodland as potential foraging habitat. Within the subject land, 1.82 ha of woodland would be retained, and approximately 30 ha retained within the locality. In addition, at least 100 ha of woodland within the locality would be retained. No targeted surveys have been undertaken for this species; however the area of impact is adjacent to a current access track, which has previously been disturbed through track construction, edge effects and regular agricultural activities such as grazing and machinery movement.

This species requires careful consideration as part of any works as it is critically endangered. There are no records of this species within the subject land or within 10 km of the subject land (BioNet, 2025). In consideration of the above factors, **it is unlikely the proposed works would lead to a long-term decrease in the size of an *A. phrygia* population**.

**b) Reduce the area of occupancy of the species**

In the subject land, 1.82 ha of woodland would be retained as part of the project, with an additional 30 ha in the locality. Woodland includes moderate-high condition areas with native dominated understorey, and moderate condition areas with exotic understorey due to past and present land use and related agricultural activities. In the study area (subject land), 1.29 ha of PCT 76 and 5.08 ha of PCT 277 are retained by the project.

The proposed action would reduce potential habitat by 0.33 ha. With the abundance of retained woodland in the locality, it is unlikely the reduction of 0.33 ha of potential habitat would significantly reduce the area of occupancy for the species. This also considers current land use which includes pastoral development and stock, resulting in grazing pressure, trampling and browsing. No individuals or population of this species have been observed in the subject land. **Considering these factors, the proposed project is not likely to significantly reduce the area of occupancy of the species.**

**c) Fragment an existing population into two or more populations**

Due to the lack of records of *A. phrygia* in the locality, it is unlikely that increasing the existing access track from eight metres to 23 m at the widest points would significantly impact any *A. phrygia* populations. This species is highly mobile and has a wide distribution area, and would not be likely to be impacted through the installation of a BESS. **Therefore, the project is unlikely to cause fragmentation of an existing population into two or more populations.**

**d) Adversely affect habitat critical to the survival of a species**

*The MNES Significant impact guidelines 1.1 states 'Habitat critical to the survival of a species or ecological community' refers to areas that are necessary:*

- *for activities such as foraging, breeding, roosting, or dispersal*
- *for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators)*
- *to maintain genetic diversity and long term evolutionary development, or*
- *for the reintroduction of populations or recovery of the species or ecological community.*

*Such habitat may be, but is not limited to: habitat identified in a recovery plan for the species or ecological community as habitat critical for that species or ecological community; and/or habitat listed on the Register of Critical Habitat maintained by the minister under the EPBC Act.*

According to the criteria in the *MNES Significant guidelines 1.1*, the proposed action would remove 0.33 ha of potential foraging habitat, however this is not classified as habitat critical to the survival of the species. However, approximately 30 ha of suitable foraging habitat would remain in the locality, if the species were to occupy the area. In addition, 20 Hollow-Bearing Trees (HBTs) would be retained within the subject land, while five would be removed as part of the proposed action.

Considering the above factors, **the proposed action is unlikely to adversely affect habitat critical to the survival of the species**. In addition, the extent is minor in the context of the locality. Due to the abundance of woodland retained within the locality, it is unlikely that this action would result in the decline of the species.

**e) Disrupt the breeding cycle of an population**

Breeding times for *A. phrygia* varies between regions, aligning with eucalypt flowering and mistletoe flowering. Breeding mostly occurs during spring and summer, from August to January. *A. phrygia* nests usually occur in the canopy of mature trees with rough bark (DOE, 2015). **The proposed project is not likely to disrupt the breeding cycle of a population of *A. phrygia*** as there are no existing records of the species within the subject land or within a 10 km radius of the subject land (BioNet, 2025).

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

The proposed action would remove 0.33 ha of habitat critical to the survival of the species in the form of foraging habitat. However, approximately 30 ha of suitable foraging habitat would remain in the locality, if the species were to occupy the area. The lack of diverse structure also indicate that the woodland area in the subject land is not preferred, therefore less likely for the species to occupy the area.

Considering the above factors and the abundance of woodland retained within the locality, it is unlikely that this action would result in the decline of the species. Given this, removal of 0.33 ha of potential habitat as a result of the **action is not likely to modify, destroy, remove or decrease the availability of habitat from the proposed development footprint to the extent that the species is likely to decline.**

**g) Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the critically endangered or endangered species' habitat**

*The MNES Significant impact guidelines 1.1 states an 'invasive species' is an introduced species, including an introduced (translocated) native species, which out-competes native species for space and resources or which is a predator of native species. Introducing an invasive species into an area may result in that species becoming established. An invasive species may harm listed threatened species or ecological communities by direct competition, modification of habitat or predation.*

The proposal has the potential to contribute to the spread of invasive species, mainly through the clearing of vegetation and transfer and introduction of plant material and soil on machinery. Standard biosecurity hygiene is recommended to prevent the spread of weeds on site. Recommendations include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through potential habitat in subject land

With these mitigation measures implemented, the **proposed action would therefore be unlikely to result in the introduction or spread of invasive species that are harmful to these species becoming established in their potential habitat.**

**h) Introduce disease that may cause the species to decline, or**

There are no listed diseases that threaten *A. phrygia*. The proposed action is considered unlikely to result in the likelihood of disease introduction within the subject land, such that the species is likely to decline. Mitigation measures including standard biosecurity hygiene practices, have been recommended to prevent the introduction and spread of diseases on site. With these mitigation measures in place, **the proposal would be unlikely to result in introducing diseases that are harmful to these species becoming established in their potential habitat.**

**i) Interfere with the recovery of the species.**

The proposed action would remove 0.33 ha of potential habitat for this species, and retain 1.82 ha in the subject land, with 30 ha of potential habitat remaining in the locality. The majority of this woodland is adjacent to existing and frequently utilised access tracks within an agricultural landscape.

There are four listed strategies to achieve the objectives in the species' Recovery Plan, including:

- Improve the extent and quality of species habitat
- Bolster the wild population with captive-bred birds until the wild population becomes self-sustaining
- Increase understanding of the size, structure, trajectory and viability of the wild population.
- Maintain and increase community awareness, understanding and involvement in the recovery program.

(DOE, 2016)

The action would reduce potential foraging habitat by 0.33 ha. **Therefore, the proposed action would interfere with the recovery of the *A. Phrygia*** through habitat removal. However, the extent is minor in the context of the locality

**j) Conclusion.**

The proposed action is not likely to lead to a long-term decrease in the size of an *A. phrygia* population, significantly reduce its area of occupancy, or fragment an existing population into two or more populations. It is not likely to adversely affect habitat critical to the survival of the species, but would interfere with the recovery of the species. The proposed action is not likely to disrupt the breeding cycle of a population. Due to the abundance of woodland being retained within the locality (30 ha) and lack of preferred feeding habitat (mistletoes) in the subject land, the proposed action is not likely to modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. With standard biosecurity protocols in place, the proposed action is not likely to introduce disease that may cause the species to decline, or result in invasive species becoming established in the species' habitat. Recommended mitigation measures include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation.

Considering the above factors, the **proposed action is not likely to have a significant impact on the *A. phrygia*.**

**Swift Parrot *(Lathamus discolor)***

An action is likely to have a significant impact on a critically endangered or endangered species if there is a real chance or possibility that it will:

**a) Lead to a long-term decrease in the size of a population**

*The MNES Significant impact guidelines 1.1 states a 'population of a species' is defined under the EPBC Act as an occurrence of the species in a particular area. In relation to critically endangered, endangered or vulnerable threatened species, occurrences include but are not limited to:*

- *a geographically distinct regional population, or collection of local populations, or*
- *a population, or collection of local populations, that occurs within a particular bioregion.*

*L. discolor* breeds in Tasmania during spring and summer, migrating in the autumn and winter months to south-eastern Australia from Victoria and the eastern parts of South Australia to south-east Queensland. In NSW mostly occurs on the coast and south-west slopes. On the mainland they occur in areas where eucalypts are flowering profusely or where there are abundant lerp (from sap-sucking bugs) infestations (Threatened Species Scientific Committee, 2016).

Favoured feed trees include winter flowering species such as Swamp Mahogany (*Eucalyptus robusta*), Spotted Gum (*Corymbia maculata*), Red Bloodwood (*C. gummifera*), Forest Red Gum (*E. tereticornis*), Mugga Ironbark (*E. sideroxylon*), and White Box (*E. albens*). Commonly used lerp infested trees include Inland Grey Box (*E. microcarpa*), Grey Box (*E. moluccana*), Blackbutt (*E. pilularis*), and Yellow Box (*E. melliodora*) (Threatened Species Scientific Committee, 2016).

The presence of *Lathamus discolor* in the subject land has been assumed based on associated PCTs and the presence of potential habitat. There are no known records within the Subject Land however, associated PCTs; PCT 277 and PCT 76 are present as low condition grassland, moderate-high condition woodland with native dominated understorey, and moderate condition woodland with exotic understorey due to past and present land use and related agricultural activities. Of this, 0.33 ha of woodland as potential habitat would be removed as part of the proposed action. Within the locality, 30 ha of potential habitat would remain in the locality and at least 100 ha within a 10 km radius of the subject land.

No targeted surveys have been undertaken for this species; however the area of impact is adjacent to a current access track, which has previously been disturbed through track construction, edge effects and regular agricultural activities such as grazing and machinery movement.

This species requires careful consideration as part of any works as it is critically endangered. There are no records of this species within the subject land, however there are two records of *L. discolor* within 10 km of the subject land (BioNet, 2025), The most recent record was observed in 2015 in Livingstone National Park, approximately 7.8 km northeast of the subject land. The vegetation in Livingstone National Park is more intact than the Subject land and contains favoured feed trees of Mugga Ironbark.

In consideration of the above factors, the **proposed works are not likely to lead to a long-term decrease in the size of an *L. discolor* population**.

**b) Reduce the area of occupancy of the species**

In the subject land, 1.82 ha of woodland would be retained as part of the project, with an additional 30 ha in the locality. Woodland includes moderate-high condition areas with native dominated understorey, and moderate condition areas with exotic understorey due to past and present land use and related agricultural

activities. In the study area (subject land), 1.29 ha of PCT 76 and 5.08 ha of PCT 277 are retained by the project.

The proposed action would reduce potential habitat by 0.33 ha. With the abundance of retained woodland in the locality, it is unlikely the reduction of 0.33 ha of potential habitat would significantly reduce the area of occupancy for the species. This also considers current land use which includes pastoral development and stock, resulting in grazing pressure, trampling and browsing. No individuals or population of this species have been observed in the subject land. **Considering these factors, the proposed project is not likely to significantly reduce the area of occupancy of the species.**

**c) Fragment an existing population into two or more populations**

It is unlikely that increasing the existing access track from eight metres to 23 m at the widest points would significantly impact any *L. discolor* populations. This species is also highly mobile and has a wide distribution across south-eastern Australia, migrating between Tasmania and mainland Australia (Threatened Species Scientific Committee, 2016). Therefore, it would be unlikely that the installation of a BESS and removal of 0.33 ha of woodland from the locality would **cause fragmentation of an existing population into two or more populations.** This is also considering that approximately 30 ha of woodland would be retained within the locality.

**d) Adversely affect habitat critical to the survival of a species**

*The MNES Significant impact guidelines 1.1 states 'Habitat critical to the survival of a species or ecological community' refers to areas that are necessary:*

- *for activities such as foraging, breeding, roosting, or dispersal*
- *for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators)*
- *to maintain genetic diversity and long-term evolutionary development, or*
- *for the reintroduction of populations or recovery of the species or ecological community.*

*Such habitat may be, but is not limited to: habitat identified in a recovery plan for the species or ecological community as habitat critical for that species or ecological community; and/or habitat listed on the Register of Critical Habitat maintained by the minister under the EPBC Act.*

According to the criteria in the *MNES Significant guidelines 1.1*, the proposed action would remove 0.33 ha of habitat critical to the survival of the species in the form of foraging habitat. This is due to the presence of favoured feed trees within the subject land, including: White Box, Yellow Box and Grey Box trees. In addition, 20 Hollow-Bearing Trees (HBTs) would be retained within the subject land, while five would be removed as part of the proposed action. However, approximately 30 ha of suitable foraging habitat would remain in the locality, if the species were to occupy the area.

Considering the above factors, **the proposed action is likely to adversely affect habitat critical to the survival of the species, however the extent is minor in the context of the locality.** Due to the abundance of woodland retained within the locality, it is unlikely that this action would result in the decline of the species.

**e) Disrupt the breeding cycle of an population**

*L. discolor* breeds in Tasmania, then move to mainland Australia in autumn. Therefore, the **proposed project is not likely to disrupt the breeding cycle of a population of *L. discolor.***

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

The proposed action would remove 0.33 ha of habitat critical to the survival of the species in the form of foraging habitat. However, approximately 30 ha of suitable foraging habitat would remain in the locality, if the species were to occupy the area.

Considering the above factors and the abundance of woodland retained within the locality, it is unlikely that this action would result in the decline of the species. Given this, removal of 0.33 ha of potential habitat as a result of the **action is not likely to modify, destroy, remove or decrease the availability of habitat from the proposed development footprint to the extent that the species is likely to decline.**

**g) Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the critically endangered or endangered species' habitat**

*The MNES Significant impact guidelines 1.1 states an 'invasive species' is an introduced species, including an introduced (translocated) native species, which out-competes native species for space and resources or which is a predator of native species. Introducing an invasive species into an area may result in that species becoming established. An invasive species may harm listed threatened species or ecological communities by direct competition, modification of habitat or predation.*

The proposal has the potential to contribute to the spread of invasive species, mainly through the clearing of vegetation and transfer and introduction of plant material and soil on machinery. *L. discolor* is also at risk of predation by feral cats. The proposed action is unlikely to increase the prevalence of feral cats within the agricultural landscape. Standard biosecurity hygiene is recommended to prevent the spread of weeds on site. Recommendations include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through potential habitat in subject land

With these mitigation measures implemented, the **proposed action would therefore be unlikely to result in the introduction or spread of invasive species that are harmful to these species becoming established in their potential habitat.**

**h) Introduce disease that may cause the species to decline, or**

*L. discolor* is at risk of Psittacine Beak and Feather Disease (PBFD), a potentially fatal disease caused by psittacine circovirus. It is a widespread disease that is known to occur in *L. discolor* (Threatened Species Scientific Committee, 2016).

The proposed action is considered unlikely to result in PBFD introduction within the subject land, such that the species is likely to decline. Mitigation measures including standard biosecurity hygiene practices, have been recommended to prevent the introduction and spread of diseases on site. With these mitigation measures in place, **the proposal would be unlikely to result in introducing diseases that are harmful to these species becoming established in their potential habitat.**

**i) Interfere with the recovery of the species.**

The proposed action would remove 0.33 ha of potential habitat for this species, and retain 1.82 ha in the subject land, with 30 ha of potential habitat remaining in the locality. The majority of this woodland is adjacent to existing and frequently utilised access tracks within an agricultural landscape.

The Recovery Plan for *L. discolor* lists the following objectives to achieve by 2032 for the species, including:

- Maintain or improve the extent, condition and connectivity of habitat
- Anthropogenic threats to the species are demonstrably reduced

- Measure and sustain a positive population trend.

(DCCEEW, 2024)

One of the strategies listed is to maintain known breeding and foraging habitat at the local, regional and landscape scales. The action would reduce potential foraging habitat by 0.33 ha, interfering with the species' recovery through habitat removal, **Therefore, the proposed action is likely to interfere with the recovery of *L. discolor*.** However, the extent is minor in the context of the locality.

**j) Conclusion.**

The proposed action is not likely to lead to a long-term decrease in the size of an *L. discolor* population, significantly reduce its area of occupancy, or fragment an existing population into two or more populations. It is likely to adversely affect habitat critical to the survival of the species and interfere with the recovery of the species through removal of foraging habitat. The proposed action is not likely to disrupt the breeding cycle of a population. Due to the abundance of woodland being retained within the locality (30 ha), the proposed action is not likely to modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. With standard biosecurity protocols in place, the proposed action is not likely to introduce disease that may cause the species to decline, or result in invasive species becoming established in the species' habitat. Recommended mitigation measures include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation.

Considering the above factors, overall the **proposed action is not likely to have a significant impact on the *L. discolor*.**

**Eyebright *(Euphrasia arguta)***

An action is likely to have a significant impact on a critically endangered or endangered species if there is a real chance or possibility that it will:

**a) Lead to a long-term decrease in the size of a population**

*The MNES Significant impact guidelines 1.1 states a 'population of a species' is defined under the EPBC Act as an occurrence of the species in a particular area. In relation to critically endangered, endangered or vulnerable threatened species, occurrences include but are not limited to:*

- *a geographically distinct regional population, or collection of local populations, or*
- *a population, or collection of local populations, that occurs within a particular bioregion.*

The presence of *Euphrasia arguta* in the subject land has been assumed based on associated PCTs and the presence of potential habitat. There are no known records within the Subject Land however, associated PCTS; PCT 277 and PCT 76 are present as low condition grassland, moderate-high condition woodland with native dominated understorey, and moderate condition woodland with exotic understorey due to past and present land use and related agricultural activities. Distribution for this species is considered to be from six sites that are up to 25 km apart, in the area of Nundle State Forest, within the Nandewar Bioregion. The closest site to the Subject Land is in Rylstone, approximately 500 km Northeast of the Subject Land. Prior to its rediscovery in the Nundle State Forest in 2008, the only available information about the species came from the type specimen. Previous habitat consisted of grassy areas near rivers at elevations of up to 700 m above sea level with an annual rainfall of 600 mm. Recently discovered populations have been found in grassy forests or regrowth vegetation (DSEWPC, 2011).

*E. arguta* is primarily threatened by road maintenance and clearing of roadside vegetation for firebreaks. The dominant potential threats include browsing by domestic stock, rabbits and macropods, in addition to land clearing. As the grasslands and woodlands within the development footprint have a current presence of domestic stock and are regularly grazed, it is unlikely that the development footprint would be ideal habitat for Eyebright.

As part of the proposal, the action would impact potential habitat including 1.85 ha of PCT 277 and 0.15 ha of PCT 76. The majority of this area (83.7 %) is low condition grassland, with 6.37 ha of potential habitat in the subject land not being impacted by the proposed project. No targeted surveys have been undertaken for this species; however the area of impact is adjacent to a current access track, which has previously been disturbed through track construction, edge effects and regular agricultural activities such as grazing and machinery movement. This combination of land use activity and threats result in low likelihood of this habitat supporting an *E. arguta* population.

This species requires careful consideration as part of any works as it is critically endangered. There are no records of this species within the subject land or within 10 km of the subject land (BioNet, 2025), In consideration of the above factors, and the absence of any known *E. arguta* populations within the entirety of the subject land, the **proposed works are not likely to lead to a long-term decrease in the size of an *E. arguta* population**.

**b) Reduce the area of occupancy of the species**

As part of the proposal, the area of impact of potential habitat for this species is 2.00 ha, including 1.85 ha of PCT 277 and 0.15 ha of PCT 76. The majority of this area (83.7 %) is low condition grassland (1.67 ha), adjacent to an existing and frequently utilised access track, that has undergone past disturbances from track construction, grazing and machinery movement. In the study area (subject land), 1.29 ha of PCT 76 and 5.08 ha of PCT 277 are retained by the project. Therefore, 23.89% of the native vegetation in the subject land is being impacted by the project. State Vegetation Type Mapping (NSW DCCEEW, 2020)

shows that there is 173.52 ha of native vegetation in the assessment area (1500 m locality), therefore 1.15% of native vegetation within the assessment area is proposed to be removed.

Due to the degraded condition of grassland in the development footprint and subject land, it is unlikely that suitable habitat would appropriately support the occupancy of this species. This also considers current land use which includes pastoral development and stock, resulting in grazing pressure, trampling and browsing. No individuals or population of this species have been observed in the subject land. **Considering these factors, the proposed project is not likely to significantly reduce the area of occupancy of the species.**

**c) Fragment an existing population into two or more populations**

There are no known or existing populations of this species within the subject land. Due to the degraded condition of vegetation along the existing track edge and current grazing pressure, it is unlikely that suitable habitat would appropriately support a population of this species. **Therefore, the project is unlikely to cause fragmentation of any populations of this species.**

**d) Adversely affect habitat critical to the survival of a species**

*The MNES Significant impact guidelines 1.1 states 'Habitat critical to the survival of a species or ecological community' refers to areas that are necessary:*

- *for activities such as foraging, breeding, roosting, or dispersal*
- *for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators)*
- *to maintain genetic diversity and long term evolutionary development, or*
- *for the reintroduction of populations or recovery of the species or ecological community.*

*Such habitat may be, but is not limited to: habitat identified in a recovery plan for the species or ecological community as habitat critical for that species or ecological community; and/or habitat listed on the Register of Critical Habitat maintained by the minister under the EPBC Act.*

The Subject Land is considered within the predicted distribution for *Euphrasia arguta* under the NSW threatened species profile (OEH, 2020) , however, the development footprint and wider subject land is not located in any of the known or predicted distribution areas under the federal threatened species profile (DCCEEW, 2025)) . Current and historic land use includes clearing, vehicle traffic, chemical drift, trampling, pastoral development and stock, resulting in grazing pressure and presence of exotic grasses and weeds. Considering these factors, the development footprint and surrounding subject land is not considered likely to be critical habitat for this species.

While the action proposes to remove 2.00 ha of potential habitat from the development footprint, 6.37 ha of potential habitat would be retained within the subject land. No habitat critical to the survival of this species is listed in its Approved Conservation Advice (DCCEEW, 2014), or on the Register of Critical Habitat. There is no existing recovery plan for this species (DCCEEW, 2025).

Considering the above factors, potential habitat within the development footprint is not considered critical habitat for Eyebright. Therefore, **the proposed action is unlikely to adversely affect habitat critical to the survival of the species.**

**e) Disrupt the breeding cycle of an population**

*Euphrasia arguta* is an annual herb. It has been observed to die off over winter, with active growth occurring between January and April (NSW OEH, 2020). **The proposed project is not likely to disrupt the breeding cycle of a population of *E. arguta*** as there are no existing or known populations of the species within the subject land or within a 10 km radius of the subject land (BioNet, 2025).

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

The proposed project includes removal of 2.00 ha potential habitat for this species, including 1.85 ha of PCT 277 and 0.15 ha of PCT 76. A lack of known records within 10 km of the Subject Land, the species' distribution and current land use indicate that the development footprint is not likely to support this species. This considers the presence of multiple threats that already exist within the subject land, including trampling, browsing, grazing and habitat loss, disturbance and modification. Given this, removal of 2.00 ha of potential habitat as a result of the **action is not likely to modify, destroy, remove or decrease the availability of habitat from the proposed development footprint to the extent that the species is likely to decline.**

**g) Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the critically endangered or endangered species' habitat**

*The MNES Significant impact guidelines 1.1 states an 'invasive species' is an introduced species, including an introduced (translocated) native species, which out-competes native species for space and resources or which is a predator of native species. Introducing an invasive species into an area may result in that species becoming established. An invasive species may harm listed threatened species or ecological communities by direct competition, modification of habitat or predation.*

The proposal has the potential to contribute to the spread of invasive species, mainly through the clearing of vegetation and transfer and introduction of plant material and soil on machinery. Standard biosecurity hygiene is recommended to prevent the spread of weeds on site. Recommendations include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through potential habitat in subject land

With these mitigation measures implemented, the **proposed action would therefore be unlikely to result in the introduction or spread of invasive species that are harmful to these species becoming established in their potential habitat.**

**h) Introduce disease that may cause the species to decline, or**

There are no listed diseases that threaten *E. arguta*. A general potential threat to flora is *Phytophthora cinnamomi* dieback (DCCEEW, 2021). The proposed action is considered unlikely to result in the likelihood of *P. cinnamomi* introduction within the subject land, such that the species is likely to decline. Mitigation measures including standard biosecurity hygiene practices, have been recommended to prevent the introduction and spread of diseases on site. With these mitigation measures in place, **the proposal would be unlikely to result in introducing diseases that are harmful to these species becoming established in their potential habitat.**

**i) Interfere with the recovery of the species.**

The proposed action would remove 2.00 ha of potential habitat for this species, including 1.85 ha of PCT 277 and 0.15 ha of PCT 76. The majority of this area (83.7 %) is low condition grassland (1.67 ha), adjacent to existing and frequently utilised access tracks. In the study area (subject land), 1.29 ha of PCT 76 and 5.08 ha of PCT 277 are retained by the project. Although there is currently no National Recovery Plan for Eyebright (DCCEEW, 2025), Approved Conservation Advice lists the following Priority Actions:

- Undertake appropriate seed collection and storage
- Investigate options for linking, enhancing or establishing additional populations

- Implement national translocation protocols if establishing additional populations is considered necessary and feasible (DSEWPC, 2011).

The proposed action would not impact the Priority Actions listed in Eyebright Conservation Advice. The development footprint and wider subject land is not located within any priority management sites or species occurrence areas (NSW DPE, 2025). **Therefore, the proposed action is not likely to interfere with the recovery of the *E. arguta*.**

**j) Conclusion.**

The proposed action is not likely to lead to a long-term decrease in the size of a *Euphrasia arguta* population, reduce its area of occupancy or fragment an existing population into two or more populations. It is not likely to adversely affect habitat critical to the survival of the species, disrupt the breeding cycle of a population or interfere with the recovery of the species. Due to the degraded condition of the landscape and that multiple key threats already impact the development footprint, the proposed action is not likely to modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. With standard biosecurity protocols in place, the proposed action is not likely to introduce disease that may cause the species to decline, or result in invasive species becoming established in the species' habitat. Recommended mitigation measures include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation.

Considering the above factors, the **proposed action is not likely to have a significant impact on the *Euphrasia arguta.***

| *Prasophyllum sp. Wybong* |
|---|
| An action is likely to have a significant impact on a critically endangered or endangered species if there is a real chance or possibility that it will: |
| **a) Lead to a long-term decrease in the size of a population** |
| *The MNES Significant impact guidelines 1.1 states a 'population of a species' is defined under the EPBC Act as an occurrence of the species in a particular area. In relation to critically endangered, endangered or vulnerable threatened species, occurrences include but are not limited to:*<br>• *a geographically distinct regional population, or collection of local populations, or*<br>• *a population, or collection of local populations, that occurs within a particular bioregion.*<br><br>The presence of *Prasophyllum sp. Wybong* in the subject land has been assumed based on associated PCTS and the presence of potential habitat. There are no known records within the Subject Land however, associated PCTs; PCT 277 and PCT 76 are present as low condition grassland, moderate-high condition woodland with native dominated understorey, and moderate condition woodland with exotic understorey due to past and present land use and related agricultural activities. Its distribution is known from seven populations in open eucalypt woodland and grassland in New South Wales, with an estimated 1.5km$^2$ occupancy area (DEWHA, 2009). It is an endemic species to NSW, known from near Ilford, Premer, Muswellbrook, Wybong, Yeoval, Inverell, Tenterfield, Currabubula and the Pilliga area. The closest known distribution is in Goulburn River National Park, located approximately 900 km northeast of the subject land (NSW OEH, 2025). The distribution of this species overlaps with *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* (DEWHA, 2009). This is a Critically Endangered Ecological Community (CEEC) under the EPBC Act and areas of this CEEC was confirmed in the western section of the subject land, including within the development footprint. Potential habitat for *Prasophyllum sp. Wybong* occurs within the development footprint in the White *Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* (Box-gum Woodland). *Prasophyllum sp. Wybong* is threatened by habitat clearance, weed invasion, vehicle traffic and inappropriate disturbance regimes. It is also potentially threatened by chemical drift from agriculture, illegal collection, trampling and climate change.<br><br>As part of the proposal, the action would impact potential habitat including 1.85 ha of PCT 277 and 0.15 ha of PCT 76. The majority of this area (83.7 %) is low condition grassland, with 0.33 ha of woodland proposed to be cleared. In the subject land, 1.82 ha of woodland would be retained (80%). The woodland to be impacted, includes 0.22 ha of the CEEC as part of the proposed action. However, the subject land contains 0.57 ha of this ecological community, with 7.36 ha of this community in the local patch; therefore, 7.14 ha (97%) of the local patch would be preserved.<br><br>No targeted surveys have been undertaken for this species; however the area of impact is adjacent to a current access track, which has previously been disturbed through track construction, edge effects and regular agricultural activities such as grazing and machinery movement. This combination of land use activity and threats result in low likelihood of this habitat supporting a *Prasophyllum sp.* Wybong population.<br><br>Given this, the proposed works are not predicted to lead to a long-term decrease in the size of its population. This species requires careful consideration as part of any works as it is critically endangered. Given there are no records on site or within 10 km of the subject land (BioNet, 2025), **it is unlikely that the proposed action would lead to a long-term decrease in the size of a *Prasophyllum sp. Wybong* population.** |

**b) Reduce the area of occupancy of the species**

The area of impact for this species is 2.00 ha, including 1.85 ha of PCT 277 and 0.15 ha of PCT 76. The majority of this area (83.7 %) is low condition grassland (1.67 ha), adjacent to existing and frequently utilised access tracks.

In the study area (subject land), 1.29 ha of PCT 76 and 5.08 ha of PCT 277 are not being impacted by the project. Therefore, 23.89% of the native vegetation in the subject land is being impacted by the project. State Vegetation Type Mapping (NSW DCCEEW, 2020) shows that there is 173.52 ha of native vegetation in the assessment area (1500 m locality), therefore 1.15% of native vegetation within the assessment area is proposed to be removed.

Conservation Advice notes that the area of occupancy for this species has a very restricted geographic distribution of 1.5km$^2$ (DEWHA, 2009). This species occurs within the Sydney Basin, New England Tablelands, Brigalow Belt South and NSW South Western Slopes IBRA Bioregions and the Border Rivers–Gwydir, Namoi, Hunter–Central Rivers and Central West Natural Resource Management Regions, in restricted, fragmented populations. The distribution of this species overlaps with the *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland EPBC Act*-listed threatened ecological community.

The development site is considered part of the extent of occurrence for the *Prasophyllum sp. Wybong;* however, the development footprint and wider subject land is not located in any of the known or predicted distribution areas under its federal threatened species profile (DCCEEW, 2025). Current and historic land use includes clearing, vehicle traffic, chemical drift, trampling, pastoral development and livestock resulting in grazing pressure and presence of exotic grasses and weeds. Therefore, the species is considered unlikely to colonise potential habitat in the development footprint and the removal of 2.00ha of potential habitat, including 0.22 ha of *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* **is not likely to reduce the area of occupancy of the species.**

**c) Fragment an existing population into two or more populations**

The *Prasophyllum sp. Wybong* occurs as fragmented populations. It is known from near Ilford, Premer, Muswellbrook, Wybong, Yeoval, Inverell, Tenterfield, Currabubula and the Pilliga area. There are no known existing populations of this species within the subject land or wider assessment area. The development footprint is primarily low condition grassland (1.67 ha), with 16.5% of woodland vegetation within the development footprint (0.33 ha). Given that this vegetation is located directly adjacent to an existing access track, **the proposed action is not likely to fragment any existing populations of these species into two or more populations.**

**d) Adversely affect habitat critical to the survival of a species**

*The MNES Significant impact guidelines 1.1 states 'Habitat critical to the survival of a species or ecological community' refers to areas that are necessary:*

- *for activities such as foraging, breeding, roosting, or dispersal*
- *for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators)*
- *to maintain genetic diversity and long term evolutionary development, or*
- *for the reintroduction of populations or recovery of the species or ecological community.*

*Such habitat may be, but is not limited to: habitat identified in a recovery plan for the species or ecological community as habitat critical for that species or ecological community; and/or habitat listed on the Register of Critical Habitat maintained by the minister under the EPBC Act.*

The development footprint is considered part of the extent of occurrence for the *Prasophyllum sp. Wybong;* however, the development footprint and wider subject land is not located in any of the known or predicted distribution areas under its federal threatened species profile (DCCEEW, 2025). Current and historic land use includes clearing, vehicle traffic, chemical drift, trampling, pastoral development and stock, resulting in grazing pressure and presence of exotic grasses and weeds. Considering these factors, the development footprint is not considered critical habitat for the *Prasophyllum sp. Wybong*.

No habitat critical to the survival of this species is listed in its Approved Conservation Advice (DEWHA, 2009), or on the Register of Critical Habitat (DCCEEW, 2025). There is no existing recovery plan for this species (DCCEEW, 2025). The development footprint is not considered critical habitat for this species; however, it does contain 0.22 ha of *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland, which is associated with the Small Purple-pea*. There is no known population of *Prasophyllum* sp. *Wybong* within the subject land and habitat is considered highly disturbed and unlikely to support a population of this species.

Therefore, the proposed action to remove 2.00 ha of potential habitat **is not likely to adversely affect habitat critical to the survival of the *Prasophyllum sp. Wybong*.**

**e) Disrupt the breeding cycle of an population**

*Prasophyllum sp. Wybong* actively grows in winter and spring, flowers in spring, and dies back to a dormant tuber over summer and autumn (NSW OEH, 2025). Removal of 2.00 ha of potential habitat within the development footprint would not disrupt the breeding cycle of this species as there are no known or existing populations within the subject land, or within 10 km of the subject land (BioNet, 2025). **Therefore, the proposed action is unlikely to disrupt the breeding cycle of a *Prasophyllum sp. Wybong*.**

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

There are no known records within 10 km of the subject land (BioNet, 2025), and the highly disturbed condition of the vegetation reduces the habitat value for *Prasophyllum sp. Wybong* in the Subject land Given this, the low proportion of vegetation removal as a result of the action, would not decrease the availability or quality of habitat to an extent that would cause the species to decline.

The proposal includes the removal of 2.00 ha potential habitat for this species, including 1.85 ha of PCT 277 and 0.15 ha of PCT 76. Due to the low condition of grassland in the development footprint as potential habitat, it is unlikely that this species would colonise the project area. This considers the current land use which includes pastoral development and livestock, resulting in grazing pressure and presence of exotic grasses and weeds. In combination with a lack of observations within 10 km of the subject land, **the species is not likely to decline as a result of modifying, destroying, removing or decreasing the availability of habitat from the proposed action.**

**g) Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the critically endangered or endangered species' habitat**

*The MNES Significant impact guidelines 1.1 states an 'invasive species' is an introduced species, including an introduced (translocated) native species, which out-competes native species for space and resources or which is a predator of native species. Introducing an invasive species into an area may result in that species becoming established. An invasive species may harm listed threatened species or ecological communities by direct competition, modification of habitat or predation.*

The proposal has the potential to contribute to the spread of invasive species, mainly through the clearing of vegetation and transfer and introduction of plant material and soil on machinery. Standard biosecurity hygiene is recommended to prevent the spread of weeds on site. Recommendations include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through potential habitat in subject land

With these mitigation measures implemented, the **proposed action would be unlikely to result in the introduction or spread of invasive species that are harmful to these species becoming established in their potential habitat.**

**h) Introduce disease that may cause the species to decline, or**

There are no listed diseases that threaten *Prasophyllum sp. Wybong*. A general potential threat to flora is *Phytophthora cinnamomi* dieback. The proposed action is considered unlikely to result in the likelihood of *P. cinnamomi* introduction within the subject land, such that the species is likely to decline. Mitigation measures including standard biosecurity hygiene practices, have been recommended to prevent the introduction and spread of diseases on site. With these mitigation measures in place, **the proposal would be unlikely to result in introducing diseases that are harmful to these species becoming established in their potential habitat.**

**i) Interfere with the recovery of the species.**

The proposed action would remove 2.00 ha of potential habitat for this species, including 0.22 ha of *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland*. Within the local patch, 7.14 ha of this CEEC would be retained and not impacted by the proposed project. Although the distribution of *Prasophyllum sp. Wybong* overlaps with this CEEC, the development footprint is not located within any known or predicted distribution areas under the federal threatened species profile (DCCEEW, 2025) or priority management sites for this species (DEWHA, 2009). There is currently no National Recovery Plan for *Prasophyllum sp. Wybong* (DCCEEW, 2025). Similar species (such as *Prasophyllum validum*) with recovery plans have the following objectives:

- Determine distribution, abundance and population structure
- Determine habitat requirements
- Ensure that all populations and their habitats are protected and managed
- Manage threats to populations
- Identify key biological characteristics
- Determine life history and viability of populations
- Establish an ex situ collection.
- Build community support for its conservation

(DCCEEW, 2010)

The proposed action would not interfere with these objectives; therefore, it is not likely to interfere with the recovery of this species.

**j) Conclusion.**

The proposed action is not likely to lead to a long-term decrease in the size of a *Prasophyllum sp. Wybong* population, reduce its area of occupancy or fragment an existing population into two or more populations. It is not likely to adversely affect habitat critical to the survival of the species, disrupt the breeding cycle of a population or interfere with the recovery of the species. Due to the degraded condition of the landscape and that multiple key threats already impact the development footprint, the proposed action is not likely to modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. With standard biosecurity protocols in place, the proposed action is not likely to

introduce disease that may cause the species to decline, or result in invasive species becoming established in the species' habitat. Recommended mitigation measures include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation.

Considering the above factors, the **proposed action is not likely to have a significant impact on the *Prasophyllum sp. Wybong.***

### 1.1.2 Endangered

**Amphibians**

- Sloane's Froglet *(Crinia sloanei)*

**Birds**

- Gang-gang Cockatoo *(Callocephalon fimbriatum)*
- Pink Cockatoo *(Lophochroa leadbeateri)*
- South-eastern Hooded Robin, Hooded Robin *(Melanodryas cucullata cucullata)*

**Flora**

- A spear-grass *(Austrostipa wakoolica)*
- Leafless Indigo *(Indigofera efoliata)*
- Sand-hill Spider Orchid *(Caladenia arenaria)*
- Small Purple-pea *(Swainsona recta)*
- Tarengo Leek Orchid *(Prasophyllum petilum)*

| **Sloane's Froglet *(Crinia sloanei)*** |
|---|
| An action is likely to have a significant impact on a critically endangered or endangered species if there is a real chance or possibility that it will: |
| **a) Lead to a long-term decrease in the size of a population** |
| *The MNES Significant impact guidelines 1.1 states a 'population of a species' is defined under the EPBC Act as an occurrence of the species in a particular area. In relation to critically endangered, endangered or vulnerable threatened species, occurrences include but are not limited to:*<br>• *a geographically distinct regional population, or collection of local populations, or*<br>• *a population, or collection of local populations, that occurs within a particular bioregion.*<br><br>The presence of the *Crinia sloanei* in the subject land has been assumed based on associated PCTs and the presence of suitable habitat. There are no known records within the Subject Land. Suitable habitat in the Involved Lots includes aquatic habitat consisting of multiple farm dams, in addition to adjacent grassland. *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* occurs within the development footprint and subject land of the project, which is one of the four primary ecological communities that provide habitat for *C. sloanei*. This species is also associated with PCT 76 Western Grey Box tall grassy woodland on alluvial loam and clay soils in the NSW South Western Slopes and Riverina Bioregions, which occurs throughout the subject land. Since multiple farm dams are scattered throughout the assessment area, this species may move throughout the landscape from dam to dam.<br><br>The nearest record of the species is approximately nine km east of subject land and was observed in 2001 (BioNet, 2025). *C. sloanei* may be directly impacted by the project due to reduction of potential habitat as a result of clearing. This species may also be impacted by the project increased fragmentation, in addition to indirect impacts from light and noise pollution during the clearing phase.<br><br>No farm dams are proposed to be filled in as a result of the project. The proposed development footprint is approximately 65 m upstream of the closest dam containing potential habitat for this species. Although |

impacts to water quality could occur during the construction phase of the project, standard erosion and sedimentation control measures would be implemented to minimise impacts on water quality. With these measures in place, it is unlikely that water pollution and sedimentation would impact the species.

Species polygons have been determined by applying a 100 m buffer to farm dams within the study area, resulting in an impact area of 0.15 ha of terrestrial habitat for *C. sloanei*. The impact area includes 0.15 ha of PCT 277 Blakely's Red Gum - Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion. One of the areas proposed to be cleared contains primarily low condition grassland (0.1 ha) of PCT 277, adjacent to an existing access track in the western area of the development footprint. In the northern section of the development footprint, the development footprint contains 0.05 ha of moderate condition woodland with exotic understorey due to past and present land use and related agricultural activities.PCT 277, adjacent to the existing access track.

As 5.08 ha of suitable adjoining habitat is being retained within the subject land, and there are no known populations of Sloane's Froglet within the assessment area, **it is unlikely that the proposed project would lead to a long-term decrease in the size of a *C. sloanei* population.**

**b) Reduce the area of occupancy of the species**

No farm dams are proposed to be filled in as part of the project, however the proposal includes removal of 0.15 ha of suitable terrestrial habitat for *C. sloanei*. Therefore, the proposal would reduce the potential area of occupancy within the development footprint for the species by 2.87%, through clearing of suitable habitat and movement through the landscape. The proposed habitat to be cleared consists of primarily degraded, low condition grassland. The development footprint is also adjacent to an existing access track; therefore, **it is not likely that the project would significantly reduce the area of occupancy for the species.**

**c) Fragment an existing population into two or more populations**

The proposed development footprint occurs on both sides of an existing access track, resulting in track widening from approximately eight metres to 23 metres, at the widest points. These impacts occur in locations that are already fragmented from tracks and agricultural activities and unlikely to further impede movement on *C. sloanei*, should a population occur in the Subject Land. Furthermore, the southern side of the access track is heavily disturbed, comprised of cropped paddocks and is unlikely to provide habitat for Sloane's Froglet, minimising the likelihood of movement across the new access track. **It is unlikely that the proposed project would fragment any existing populations into two or more populations.**

**d) Adversely affect habitat critical to the survival of a species**

*The MNES Significant impact guidelines 1.1 states 'Habitat critical to the survival of a species or ecological community' refers to areas that are necessary:*

- *for activities such as foraging, breeding, roosting, or dispersal*
- *for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators)*
- *to maintain genetic diversity and long term evolutionary development, or*
- *for the reintroduction of populations or recovery of the species or ecological community.*

*Such habitat may be, but is not limited to: habitat identified in a recovery plan for the species or ecological community as habitat critical for that species or ecological community; and/or habitat listed on the Register of Critical Habitat maintained by the minister under the EPBC Act.*

No habitat critical to the survival of this species is listed in its Approved Conservation Advice, or on the Register of Critical Habitat (Threatened Species Scientific Committee, 2019) (DCCEEW, 2025). There is no existing recovery plan for this species (DCCEEW, 2025).

This development footprint is not considered optimal habitat for this species as it is located directly adjacent to an existing access track, which has low condition vegetation as a result of land use activities such as cropping and stock grazing. **Therefore, the proposed project is unlikely to adversely affect habitat critical to the survival of this species.**

**e) Disrupt the breeding cycle of a population**

*C. sloanei* breeds from late winter to spring in temporary and permanent waterbodies. Aquatic and riparian vegetation is an essential feature of the species' breeding habitat, as they lay their eggs in the water by attaching it to vegetation (Threatened Species Scientific Committee, 2019). Aerial imagery shows that Paper Forest Creek is located 40 m east in proximity to the western section of the development footprint. However, this area was completely dry during all site visits and did not have permanent or long standing water that would be required for the breeding cycle of *C. sloanei*. All farm dams occur externally to the subject land and would not be impacted by the proposal therefore**, it is unlikely that the proposed project would significantly disrupt the breeding cycle of a population of the Sloane's Froglet.**

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

The proposed development would remove 0.15 ha of terrestrial habitat for the species, but all aquatic habitat would be retained. The terrestrial habitat is already disturbed from current agricultural use. An existing access track is directly adjacent to the proposed development footprint, and there would be minimal change in land use of the access track. Construction activities could increase sedimentation or pollution of aquatic habitats, however standard erosion and sedimentation control measures would be implemented. **Widening the current access track to the BESS site is unlikely to modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.**

**g) Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the critically endangered or endangered species' habitat**

*The MNES Significant impact guidelines 1.1 states an 'invasive species' is an introduced species, including an introduced (translocated) native species, which out-competes native species for space and resources or which is a predator of native species. Introducing an invasive species into an area may result in that species becoming established. An invasive species may harm listed threatened species or ecological communities by direct competition, modification of habitat or predation.*

As outlined above, the habitat in the development footprint is already in a disturbed state and can be accessed by people, vehicles, farm animals and pest animals. Invasive flora species, including Spear Thistle and Fleabane are also currently present throughout the subject land and development footprint. Pest species including the European Red Fox and Hog Deer were also observed throughout the subject land. The following mitigation measures are recommended to combat the potential introduction and spread of invasive species:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through vegetated areas
- Clear delineation of vegetation to be cleared or retained
- Avoid the use of herbicides and pesticides post-clearing

With appropriate biosecurity practices in place for vehicles and machinery traversing the site, **it is unlikely that the project would introduce or exacerbate invasive species that are harmful to *C. sloanei* habitat.**

**h) Introduce disease that may cause the species to decline, or**

*C. sloanei* is susceptible to Chytridiomycosis, which is an infectious disease caused by amphibian chytrid fungus (*Batrachochytrium dendrobatidis*) (Threatened Species Scientific Committee, 2019). The fungus can be transferred through soil, therefore, there is a risk of the fungus being carried onto the site through contaminated machinery and footwear. To prevent the spread of the amphibian chytrid fungus, standard biosecurity hygiene protocols as outlined above are recommended during all phases of the project. With these implementations in place, **the proposal is unlikely to introduce a disease to the subject land that would cause *C. sloanei* to decline.**

**i) Interfere with the recovery of the species.**

No recovery plan has been adopted for *C. sloanei* (DCCEEW, 2025). Approved Conservation Advice lists the key threats for this species as (Threatened Species Scientific Committee, 2019):

- Clearing, trampling, fragmentation, altered hydrology, salinity
- Climate change (temperature increase, extreme weather events e.g. cyclones, droughts)
- Chemicals
- Amphibian chytrid fungus
- Feral pigs.

The proposal would increase fragmentation by 0.15 ha, but would not substantially exacerbate the threats of fragmentation due to the location of the development footprint. The project is unlikely to alter hydrology or increase salinity within any of the subject land . With appropriate biosecurity measures in place, the proposed project is unlikely to introduce chemicals, amphibian chytrid fungus or feral pigs (see above). To prevent clearing, trampling, or polluting the species' terrestrial habitat, recommended mitigation measures include:

- Clear physical demarcation of boundary between retained and cleared areas
- Weed control and hygiene protocol
- Implementation of speed limits for vehicles moving through the project site
- Sediment and erosion controls.

With these mitigation measures in place, **the proposal is unlikely to interfere with the recovery of *C. sloanei* or to cause significant adverse impacts on the species**.

**j) Conclusion.**

The proposed development footprint includes impacts to 0.15 ha of potential *C. sloanei* terrestrial habitat, or 2.87% of suitable habitat within the subject land. The primary action includes vegetation clearing as part of the proposed access track widening. The project would slightly increase fragmentation as a result and there would be a loss of 0.15 ha of suitable habitat. Despite this habitat being 'suitable,' the condition of this vegetation is low, with the presence of invasive species and grazing pressures reducing the quality of habitat. The proposed project may cause exotic or invasive plants to spread, and may introduce new weeds to the area during clearing, construction and operational phases. If mitigation measures are followed and biosecurity practices are in place, the risk of weed spread is expected to be minimal.

The primary recommendation for *C. sloanei* is to identify important extant populations and ensure suitable habitat is being maintained and restored. Since clearing in the development footprint cannot be avoided, a number of mitigation measures are recommended to reduce additional impacts to this species, including:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Slow-moving vehicles (via speed limit implementation) to minimise the risk of incidental injuries or deaths to the species
- Brushing and cleaning boots if walking through native vegetation
- Clear delineation of vegetation to be cleared or retained

In consideration of the above factors, **it is not likely that the proposed project would have a significant impact on *C. sloanei*.**

| **Gang-gang Cockatoo *(Callocephalon fimbriatum)*** |
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| An action is likely to have a significant impact on a critically endangered or endangered species if there is a real chance or possibility that it will: |
| **a) Lead to a long-term decrease in the size of a population** |
| *The MNES Significant impact guidelines 1.1 states a 'population of a species' is defined under the EPBC Act as an occurrence of the species in a particular area. In relation to critically endangered, endangered or vulnerable threatened species, occurrences include but are not limited to:*<br>• *a geographically distinct regional population, or collection of local populations, or*<br>• *a population, or collection of local populations, that occurs within a particular bioregion.*<br><br>The presence of *Callocephalon fimbriatum* in the subject land has been assumed based on associated PCTs and the presence of suitable habitat. There are no known records within the subject land.<br><br>Suitable habitat in the Involved Lots includes habitat consisting of grassland and woodlands. *C. fimbriatum* is a species of parrot endemic to south-eastern Australia, primarily occurring within temperate eucalypt forests and woodlands of mainland. This species is rare at the extremities of its range, once widespread throughout Sydney and surrounds, with isolated records as far north as Coffs Harbour, and as far west as Mudgee. This species has adapted to cooler conditions, more common in higher elevations and southern latitudes (DAWE, 2022).<br><br>*C. fimbriatum* predominantly forages in eucalypt woodland canopies, relying heavily on eucalypts and acacias. They regularly feed on flower buds and seed pods, but also on blossoms, leaf buds, fruits, seeds and also insect larvae. The subject land resides within the western edge of the species' distribution, where habitat may occur. *C. fimbriatum* is associated with PCT 277, found throughout the subject land. Since there is unclear ecotone of grassland and woodland between PCT 277 and PCT 76 within the subject land, this analysis considers both PCTs as suitable habitat for this species. The impact to *C. fimbriatum* consists of vegetation directly adjacent to an existing access track, primarily of low condition grassland comprising 1.67 ha proposed to be removed. Woodland area of 0.33 ha, including five Hollow-Bearing Trees (HBTs), is proposed to be removed as part of the project. *C. fimbriatum* has not been previously recorded in the subject land or development footprint, and there are no BioNet records of the species within 10 km of the subject land (BioNet, 2025). Targeted surveys during the breeding season (October to January) did not detect *C. fimbriatum* utilising the Subject Land, thus the site is considered to contain foraging habitat only.<br><br>In consideration of the above factors**, the proposed action is not likely to result in a long-term decrease in the size of a *C. fimbriatum* population.** |
| **b) Reduce the area of occupancy of the species** |
| The proposed work would impact 0.33 ha of potential foraging habitat (woodland) for this species within the development footprint. In addition, the action proposes to remove 1.67 ha of low condition grassland from the entire development footprint. Three Hollow-Bearing Trees (HBTs) that meet the requirements for *C. fimbriatum* nesting habitat are proposed to be removed, within a total of five HBTs that are proposed to be removed. These HBTs are adjacent to an existing access track, in addition to low condition grassland. However, targeted surveys have not detected the species breeding in the Subject Land and are unlikely to be using the HBTs for nesting.<br><br>As part of the project, 20 HBTs would be retained within the subject land and could provide potential foraging habitat for this species. The location of the project site is predominantly surrounded by cleared land for agricultural use. This identifies the importance of woodland within the locality as providing |

potential foraging habitat for the species. Adjacent to the development footprint (locality), approximately 30 ha of woodland would be retained, along with at least 100 ha of woodland within a 1500 m radius of the development footprint (assessment area). As no observations of *C. fimbriatum* have been recorded within 10 km of the subject land, and there is approximately 30 ha of suitable adjacent potential foraging habitat being retained, **it is unlikely that the proposed work will significantly reduce the area of occupancy for the species.**

**c) Fragment an existing population into two or more populations**

There are no records of *C. fimbriatum* within the subject land, assessment area, or within 10 km of the subject land. The proposed impacts would create an increase of track widths from eight metres up to 23 m in width causing additional minor fragmentation. As the Gang-gang Cockatoo is highly mobile and there is minimal change in land use from the current access track **it is unlikely that the proposed project will fragment an existing population into two or more populations**. The retained vegetation provides a sufficient habitat corridor for the species to move throughout the landscape, in addition to providing foraging habitat.

**d) Adversely affect habitat critical to the survival of a species**

*The MNES Significant impact guidelines 1.1 states 'Habitat critical to the survival of a species or ecological community' refers to areas that are necessary:*

- *for activities such as foraging, breeding, roosting, or dispersal*
- *for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators)*
- *to maintain genetic diversity and long term evolutionary development, or*
- *for the reintroduction of populations or recovery of the species or ecological community.*

*Such habitat may be, but is not limited to: habitat identified in a recovery plan for the species or ecological community as habitat critical for that species or ecological community; and/or habitat listed on the Register of Critical Habitat maintained by the minister under the EPBC Act.*

No habitat critical to the survival of this species is listed on the Register of Critical Habitat (DCCEEW, 2025). There is no existing recovery plan for this species (DCCEEW, 2025).

In its approved Conservation Advice, habitat critical to the survival of *C. fimbriatum* includes all foraging habitat during both the breeding and non-breeding season, as well as stands of suitable HBTs for breeding (DAWE, 2022). Hollow-bearing trees suitable for nesting are largely restricted to remnant patches of woodland and individual trees within otherwise cleared sites (DAWE, 2022). Chamber dimensions of the HBTs in the development footprint or wider subject land have not been investigated, but the hollow entrances of three HBTs are suitable for *C. fimbriatum*. However, targeted surveys conducted during the breeding season (October – January) concluded that there were no nesting sites of *C. fimbriatum* present.

Multiple areas of the subject land and surrounding vegetation constitute open woodland assemblages at low altitudes, including open eucalypt assemblages suitable for foraging during winter months. Therefore, woodland in the development footprint (0.33 ha) is categorised as habitat critical to the survival of the species. This consists of 0.11 ha of moderate condition woodland with exotic understorey and 0.22 ha of moderate-high condition woodland with native dominated understorey. Within the locality, approximately 30 ha of adjacent suitable habitat (woodland) is being retained, including 20 HBTs. This would provide sufficient foraging and breeding habitat for *C. fimbriatum* if it were to occupy the area.

In consideration of the above factors, **the proposed action would adversely affect habitat critical to the survival of *C. fimbriatum*, however the extent is minor in the context of the locality**.

**e) Disrupt the breeding cycle of an population**

The proposed action includes clearing of three HBTs that meet the requirements of nesting trees for *C. fimbriatum*. Targeted surveys were undertaken during the breeding season for this species, with results concluding that the species was absent. Breeding for this species usually occurs between October and January, with clutch sizes of two eggs, but occasionally one or three are laid. The incubation period is 3-4 weeks, with a fledgling period of 7-8 weeks and feeding by parents for additional 4-6 weeks (DAWE, 2022).

Since *C. fimbriatum* prefers tall mountain forests and woodlands in summer months – within mature, wet sclerophyll forests often in secluded valleys, it is highly unlikely that the species would occupy the development footprint during its breeding and nesting period due to the non-preferred altitudes and vegetation type for their breeding cycle. **Therefore, it is unlikely that the proposed project would disrupt the breeding cycle of a *C. fimbriatum* population.**

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

While the proposed work would remove 0.33 ha of woodland as potential foraging habitat for *C. fimbriatum*, 84.65% of the total woodland in the subject land in moderate-good condition, would be retained (1.82 ha). Within the locality, approximately 30 ha of adjacent suitable habitat (woodland) is being retained, including 20 HBTs.

**Therefore, it is unlikely the that proposed work would modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.**

**g) Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the critically endangered or endangered species' habitat**

*The MNES Significant impact guidelines 1.1 states that an 'invasive species' is an introduced species, including an introduced (translocated) native species, which out-competes native species for space and resources or which is a predator of native species. Introducing an invasive species into an area may result in that species becoming established. An invasive species may harm listed threatened species or ecological communities by direct competition, modification of habitat or predation.*

The proposed action has the potential to contribute to the spread of invasive weed species in the subject land through the transfer and introduction of plant material and soil on machinery. Any removal of native plant species also presents opportunities for invasive species to establish where ground cover is exposed. The implementation of appropriate biosecurity practices will assist to prevent and control these impacts. With the implementation of these mitigation measures, the proposal is not considered likely to exacerbate this impact to the point that it would constitute a substantial reduction in the quality or integrity of the species habitat within the subject land.

The proposed project is considered unlikely to generate an increase in invasive fauna species harmful to the species, such as feral cats or foxes, above what is currently present. **The project is not considered likely to exacerbate this impact to the point that it would constitute a substantial reduction in the quality or integrity of the species habitat within the subject land.**

**h) Introduce disease that may cause the species to decline, or**

*C. fimbriatum* is at risk of Psittacine Beak and Feather Disease (PBFD), a potentially fatal disease caused my psittacine circovirus. The disease is transferred through feather dander, faeces and saliva (DAWE, 2022). It is unlikely that the proposed action would introduce PBFD and result in the decline of the species.

There is a risk that diseases could be introduced to the subject land via machinery, vehicles, and materials during clearing, construction and operation. With the implementation of the recommended mitigation

measures, **the proposal is unlikely to result in the introduction of any disease that may cause the species to decline.**

**i) Interfere with the recovery of the species.**

Approved Conservation Advice for the species describes that actions removing habitat critical to the survival of *C. fimbriatum* would interfere with the recovery of the species and reduce the area of occupancy of the species, and impacts must be avoided. It is also described that it is important to retain both breeding and foraging habitats (DAWE, 2022). Targeted surveys for *C. fimbriatum* resulted in an absence of this species nesting, therefore there would be no impacts to breeding habitat as a result of the proposed action.

Since the actions associated with the proposed project cannot be avoided, **the proposed action would therefore interfere with the recovery of *C. fimbriatum* through impacts to potential foraging habitat.** However, the impacts are minor (0.33 ha) in the context of the locality and unlikely to significantly impact the recovery of the species.

**j) Conclusion.**

Although the proposed action includes removal of habitat critical to the survival of *C. fimbriatum*, the clearing of 0.33 ha of woodland is not likely to reduce the area of occupancy of the species or fragment any existing populations into two or more populations. The 1.67 ha of low condition grassland in combination with woodland proposed to be cleared is unlikely to remove or decrease the availability of habitat to the extent that the species is likely to decline. With standard biosecurity measures in place, it is unlikely that the project would introduce disease or result in the introduction or spread of invasive species suitable habitat. The approximate 30 ha of adjacent suitable habitat being retained, including 20 HBTs, would be sufficient for foraging and breeding for *C. fimbriatum* if it were to occupy the area.

Mitigation measures are recommended to minimise impacts to this species and include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation
- Clear delineation of vegetation to be cleared or retained
- Marking of Tree Protection Zones (TPZs) during clearing phase of project

Considering the above factors, and with appropriate mitigation measures in place, **it is unlikely that the proposed action will have a significant impact on *C. fimbriatum***.

**Pink Cockatoo *(Lophochroa leadbeateri)***

An action is likely to have a significant impact on a critically endangered or endangered species if there is a real chance or possibility that it will:

**a) Lead to a long-term decrease in the size of a population**

*The MNES Significant impact guidelines 1.1 states a 'population of a species' is defined under the EPBC Act as an occurrence of the species in a particular area. In relation to critically endangered, endangered or vulnerable threatened species, occurrences include but are not limited to:*

- *a geographically distinct regional population, or collection of local populations, or*
- *a population, or collection of local populations, that occurs within a particular bioregion.*

The presence of the *Lopchochroa leadbeateri* in the subject land has been assumed based on the presence of associated PCTs and suitable habitat. There are no known records within the subject land. Targeted surveys during the breeding season have not yet been undertaken.

*L. leadbeateri* is a species of parrot found across the arid and semi-arid inland, from south-western Queensland to north-west Victoria, through most of South Australia, into the south-west Northern Territory and across to the west coast between Shark Bay and Jurien. In NSW it is found regularly as far east as about Bourke and Griffith, and sporadically further east (NSW OEH, 2024). The subject land resides outside of the species' known or predicted distribution areas under the federal threatened species profile (DCCEEW, 2025) however is included the NSW species profile distribution (NSW OEH, 2024). *L. leadbeateri* is associated with PCT 76, found within the subject land. Since there is unclear ecotone of grassland and woodland between PCT 277 and PCT 76 within the subject land, this analysis considers both PCTs as suitable habitat for this species. There are no BioNet records of the *L. leadbeateri* within 10 km of the subject land.

*L. leadbeateri* relies on large, tall trees with large hollow dimensions for nesting. The species is known to forage on seeds of native shrubs and trees, and sometimes forages on roots, bulbs, insect larvae, seeds of crops and weeds (DCCEEW, 2023). Foraging and breeding habitat is present within both the development footprint and the subject land in the form of woodland and grassland. Three Hollow-Bearing Trees (HBTs) containing suitable hollow dimensions (average diameter of 13.3 x 27.7 cm) and diameter at breast height range (34 – 149 cm) are located within the development footprint. However, as no individuals have previously been observed within a 10 km radius of the subject land, and there were no signs of hollow use, **it is unlikely that the proposed project will lead to a long-term decrease in the size of a population of this species**. Targeted surveys would be undertaken in Spring to ensure no inadvertent impacts would occur on a breeding hollow, should this species be breeding in the Subject Land.

**b) Reduce the area of occupancy of the species**

The proposed work will remove 2.00 ha of potential foraging and nesting habitat for this species within the development footprint. Three Hollow-bearing Trees (HBTs) that meet the requirements for Pink Cockatoo nesting habitat are proposed to be removed, out of a total of five that are proposed to be removed. These HBTs are adjacent to an existing access track, in addition to low condition grassland. 20 HBTs are retained within the Subject Land along with a further 1.82 ha of woodland containing a high number of mature trees likely to contain similar hollows.

The location of the Subject Land is predominantly surrounded by cleared land for agricultural use, highlighting the importance of woodland within the locality as habitat for this species. Although 0.33 ha of potential woodland habitat would be removed as part of the project, approximately 30 ha of woodland adjacent and connected to the development footprint (locality) would be retained, along with at least 100

ha of woodland within a 1500 m radius of the development footprint (assessment area). As no observations of Pink Cockatoos have been recorded within 10 km of the subject land (BioNet, 2025), **it is unlikely that the proposed work will significantly reduce the area of occupancy for the species**.

**c) Fragment an existing population into two or more populations**

There are no records of *L. leadbeateri* within the subject land, assessment area, or within 10 km of the subject land (BioNet, 2025). The proposed impacts would create an increase of track widths from eight metres to 23 m width causing additional fragmentation. As *L. leadbeateri* is highly mobile and there is minimal change in land use from the current access track , **it is unlikely that the proposed project will fragment an existing population into two or more populations.** The retained vegetation provides a sufficient habitat corridor for the species to move throughout the landscape, in addition to providing foraging habitat.

**d) Adversely affect habitat critical to the survival of a species**

*The MNES Significant impact guidelines 1.1 states 'Habitat critical to the survival of a species or ecological community' refers to areas that are necessary:*

- *for activities such as foraging, breeding, roosting, or dispersal*
- *for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators)*
- *to maintain genetic diversity and long term evolutionary development, or*
- *for the reintroduction of populations or recovery of the species or ecological community.*

*Such habitat may be, but is not limited to: habitat identified in a recovery plan for the species or ecological community as habitat critical for that species or ecological community; and/or habitat listed on the Register of Critical Habitat maintained by the minister under the EPBC Act.*

No Critical Habitat as defined under section 207A of the EPBC Act has been identified or included in the Register of Critical Habitat (DCCEEW, 2025).

Habitat critical to the survival of the *L. leadbeateri* listed in the Conservation Advice (DCCEEW, 2023) consist of:

- Arid and semi-arid woodlands dominated by mulga (*Acacia aneura*), mallee and box eucalypts, slender cypress pine (*Callitris gracilis*) or Belah (*Casuarina cristata*)
- Known habitat containing suitable attributes, including potential habitat for the subspecies, especially where there are large mature trees with suitable hollows; and
- Surrounding matrix of these areas for the role of providing movement corridors for dispersal across the landscape.

No habitat critical to the survival of *L. leadbeateri* occurs within the Subject Land. There are no Arid or Semi-Arid Woodlands, or known habitat present in the Subject Land. **Therefore, the proposed action would not adversely affect habitat critical to the survival of the species.**

**e) Disrupt the breeding cycle of a population**

*L. leadbeateri* relies on hollows with specific qualities for nesting and breeding. Suitable nesting hollows are found in trees that are large and tall with the following dimensions:

- average hollow entrance diameter of 13.3 x 27.7 cm (range 8-30 x 9-80 cm, horizontal x vertical diameter); average hollow depth of 53.9 cm (range 19 – 180 cm)
- average nest chamber floor diameter of 18 cm (range 9-34 cm)

- average nest tree diameter at breast height of 72.5 cm (range 34-149 cm)

(DCCEEW, 2023).

Additionally, the species does not prefer nests within close proximity to other *L. leadbeateri* breeding pairs. Although three trees within the development footprint contain suitable hollow entrances and meet DBH preferences, there were no signs of use in these trees. Within the subject land, 20 HBTs are being retained while five are proposed to be removed, therefore 80% of total HBTs within the subject land would be retained as part of the project. Due to the listed factors, **it is unlikely that the proposed project would disrupt the breeding cycle of a *L. leadbeateri* population.** Targeted surveys would be undertaken in Spring to ensure no inadvertent impacts would occur to potential breeding hollows for this species.

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

The proposed work will result in the clearance of 1.67 ha of low condition grassland within the development footprint. Within the subject land, 1.29 ha of PCT 76 would be retained and 5.08 ha of PCT 277 is being retained. In addition, 1.82 ha of woodland would be retained in the subject land and approximately 30 ha in the locality. This results in 2.00 ha of suitable habitat being removed, which is 23.89% of the total potential suitable habitat in the subject land being impacted by the project.

While the proposed work would remove a total of 2.00 ha of suitable habitat, there would be likely minimal impacts to approximately 30 ha of the retained potential habitat in the locality. Within 1500 m of the development footprint, at least 100 ha of woodland would also be retained. The development footprint and subject land have already been previously disturbed from past track construction, agricultural activities and current vehicle movements and the widening of the access track is unlikely to further impact the retained habitat. **It is unlikely the that proposed action would decrease the availability or quality of habitat to the extent that the species is likely to decline.**

**g) Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the critically endangered or endangered species' habitat**

*The MNES Significant impact guidelines 1.1 states that an 'invasive species' is an introduced species, including an introduced (translocated) native species, which out-competes native species for space and resources or which is a predator of native species. Introducing an invasive species into an area may result in that species becoming established. An invasive species may harm listed threatened species or ecological communities by direct competition, modification of habitat or predation.*

The proposed action has the potential to contribute to the spread of invasive weed species in the subject land through the transfer and introduction of plant material and soil on machinery. Any removal of native plant species also presents opportunities for invasive species to establish where ground cover is exposed. The implementation of appropriate biosecurity practices will assist to prevent and control these impacts. With the implementation of these mitigation measures, the proposal is not considered likely to exacerbate this impact to the point that it would constitute a substantial reduction in the quality or integrity of the species habitat within the subject land.

The proposed project is considered unlikely to generate an increase in invasive fauna species harmful to the species, such as feral cats or foxes, above what is currently present. The habitat in the locality is already disturbed from past track construction, agricultural activities and current vehicle movements and the proposal is unlikely to bring in new sources of habitat for feral species. **The project is not considered likely to exacerbate this impact to the point that it would constitute a substantial reduction in the quality or integrity of the species habitat within the subject land.**

**h) Introduce disease that may cause the species to decline, or**

*L. leadbeateri* is at risk of Psittacine Beak and Feather Disease (PBFD), a potentially fatal disease caused my psittacine circovirus. This is typically transferred between adults, nestlings and contaminated nest hollows, with most positive cases recorded in the eastern subspecies (DCCEEW, 2023).

There is a risk that diseases could be introduced to the subject land via machinery, vehicles, and materials during clearing, construction and operation. With the implementation of the recommended mitigation measures, **the proposal is unlikely to result in the introduction of any disease that may cause the species to decline.**

**i) Interfere with the recovery of the species.**

There is currently no nationally adopted or Recovery Plan made for this species. A Saving our Species (SoS) strategy exists for the *L. leadbeateri*, which aims to ensure that the species is secure in the wild in NSW (NSW DPE, 2025). This strategy aims to ensure that its NSW geographic range is extended or maintained, and that its conservation status under the BC Act is maintained, or improved. Actions for the species include:

- Encourage landholders with suitable breeding habitat to enter into covenants or stewardship agreements that promote the retention of large hollow-bearing trees, including paddock trees.
- Undertake revegetation focusing on planting hollow-bearing tree species in areas where particular age/size cohorts are missing from the landscape, to ensure a continual supply of breeding habitat, particularly in areas known to be used by the species.
- Raise awareness and encourage relevant landholders and land managers to implement sensitive grazing practices that minimise the removal of seeding grasses and recruiting feed plants (e.g. saltbush, wattles, cypress pine) and nesting (hollow-bearing) trees.
- Promote awareness among local communities of the impacts of illegally removing birds or nestlings from the wild as well as the threatened status of the species. Encourage the reporting of suspected nest robbing or trapping to Environment Line (131 555).

**The proposed project is unlikely to interfere with the above outlined actions to the degree in which the proposed works will interfere with the recovery of the species.**

**j) Conclusion.**

The proposed development footprint includes 2.00 ha of potential foraging and nesting habitat for *L. leadbeateri*. The primary action includes vegetation clearing as part of the proposed access track widening. The project would slightly increase fragmentation as a result, but is unlikely to impact movements of the species through the landscape.

Within the subject land, 20 HBTs are being retained while five are proposed to be removed from the development footprint, therefore at least 80% of HBTs would be retained as part of the project. There are numerous hollows in the wider patch of woodland in the locality. There is no habitat classified as habitat critical to the survival of the Pink Cockatoo, according to the criteria requirements listed in the species' Approved Conservation Advice (DCCEEW, 2023). Grassland within the development footprint is in low condition, likely due to the presence of invasive species and grazing pressures. Within the development footprint, there is 0.11 ha of moderate condition woodland and 0.22 ha of good condition woodland that would be impacted. Within the subject land, 6.37 ha of similar condition vegetation would be retained. Approximately 30 ha of woodland would be retained within the locality and at least 100 ha of woodland within 1500 m of the development footprint. In the adjacent subject land, 20 HBTs containing suitable nesting traits would be retained.

If mitigation measures are followed and biosecurity practices are in place, the risk of weed spread is expected to be minimal. It is not expected that the proposed project would interfere with the recovery of *L. leadbeateri* or introduce disease that would cause the species to decline.

The primary conservation objectives for *L. leadbeateri* are to stop the decline of the species, increase nesting habitat availability and improve woodland connectivity. Since clearing within the development footprint cannot be avoided, a number of mitigation measures are recommended minimise further impacts:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation
- Clear delineation of vegetation to be cleared or retained
- Marking of Tree Protection Zones (TPZs) during clearing phase of project

In consideration of the above factors, **it is not likely that the proposed project would have a significant impact on *L. leadbeateri*.**

**South-eastern Hooded Robin, Hooded Robin *(Melanodryas cucullata cucullata)***

An action is likely to have a significant impact on a critically endangered or endangered species if there is a real chance or possibility that it will:

**a) Lead to a long-term decrease in the size of a population**

*The MNES Significant impact guidelines 1.1 states a 'population of a species' is defined under the EPBC Act as an occurrence of the species in a particular area. In relation to critically endangered, endangered or vulnerable threatened species, occurrences include but are not limited to:*

- *a geographically distinct regional population, or collection of local populations, or*
- *a population, or collection of local populations, that occurs within a particular bioregion.*

*M. cucullata cucullata* occurs in south-eastern Australia from far south-east Queensland to the Yorke Peninsula in South Australia. The species prefers dry eucalypt and acacia woodlands and shrublands with an open understorey, some grassy areas and a complex ground layer. Woodlands with tall trees or dense tree cover are generally avoided by the species, however they may occur in tall, dense heaths with scattered open areas. They are considered a sedentary species, but local seasonal movements are possible. In agricultural landscapes they prefer patches of habitat greater than 10 ha with moderately deep to deep soils, however they can occur in patches as small as 2.9 ha (DCCEEW, 2023). They forage on insects and small lizards, hunting for invertebrates in grassy clearings. *M. cucullata cucullata* perches on low dead stumps and fallen timber or on low-hanging branches (DCCEEW, 2023).

The presence of *Melanodryas cucullata cucullata* in the subject land has been assumed based on associated PCT 277 and PCT 76, and the presence of potential habitat. Of the total 2.00 ha of potential habitat proposed to be removed, 0.33 ha is woodland, and 1.67 ha is grassland. 1.85 ha of PCT 277 is present as low condition grassland, moderate-high condition woodland with native dominated understorey, and moderate condition woodland with exotic understorey due to past and present land use and related agricultural activities. PCT 76 is present as 0.15 ha or low condition grassland. No targeted surveys have been undertaken for this species; however the area of impact is adjacent to a current access track, which has previously been disturbed through track construction, edge effects and regular agricultural activities such as grazing and machinery movement.

Territories range from around 10 ha during the breeding season (July – November), to 30 ha in the non-breeding. They typically nest in a small, neat cup of bark and grasses bound with webs, in a tree fork or crevice, from less than 1-5 m above the ground. They also usually return to the same breeding site (DCCEEW, 2023).

As part of the proposal, the action would impact potential habitat including 2.00 ha as potential foraging and breeding habitat. Within the subject land, 6.37 ha of potential habitat would be retained, and 171.52 ha of potential habitat retained within the locality. No targeted surveys have been undertaken for this species; however the area of impact is adjacent to a current access track, which has previously been disturbed through track construction, edge effects and regular agricultural activities such as grazing and machinery movement.

In consideration of the above factors**, the proposed action is not likely to result in a long-term decrease in the size of a *M. cucullata cucullata* population.**

**b) Reduce the area of occupancy of the species**

According to the Conservation Advice for *M. cucullata cucullata*, the area of occupancy for the subspecies is approximately 30,000 $km^{2.}$ This is based on the number of 2 x 2 km squares within which they have been recorded since 1990 (DCCEEW, 2023). The proposed work would impact 2 ha (0.02 $km^2$) of potential

habitat for this species across its area of occupancy. Therefore, impacting <0.01 % of its occupancy area. Within the subject land, 6.37 ha of potential habitat would be retained, and 171.52 ha of potential habitat retained within the locality. **it is unlikely that the proposed work will significantly reduce the area of occupancy for the species.**

**c) Fragment an existing population into two or more populations**

*M. cucullata cucullata* is a largely sedentary species, mostly seen in pairs or small groups. Due to widespread distribution of the subspecies, as well as the fragmentation of woodland habitat and low dispersal distances of the species, it is likely that many subpopulations of the species already occur throughout its distribution range (DCCEEW, 2023). There are five records of *M. cucullata cucullata* within 10 km of the subject land, all observed in Livingstone National Park. The most recent record was observed in 2007, approximately 7.4 km in proximity to subject land. Livingstone National Park has more intact and structurally diverse vegetation in comparison to the subject land.

The proposed impacts would create an increase of track widths from eight metres up to 23 m in width causing additional minor fragmentation. However, as the species has not been observed in the subject land or assessment area, **it is unlikely that the proposed project will fragment an existing population into two or more populations**. The retained vegetation provides a sufficient habitat corridor for the species to move throughout the landscape, in addition to providing foraging habitat.

**d) Adversely affect habitat critical to the survival of a species**

*The MNES Significant impact guidelines 1.1 states 'Habitat critical to the survival of a species or ecological community' refers to areas that are necessary:*

- *for activities such as foraging, breeding, roosting, or dispersal*
- *for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators)*
- *to maintain genetic diversity and long term evolutionary development, or*
- *for the reintroduction of populations or recovery of the species or ecological community.*

*Such habitat may be, but is not limited to: habitat identified in a recovery plan for the species or ecological community as habitat critical for that species or ecological community; and/or habitat listed on the Register of Critical Habitat maintained by the minister under the EPBC Act.*

No habitat critical to the survival of this species is listed on the Register of Critical Habitat (DCCEEW, 2025). There is no existing recovery plan for this species (DCCEEW, 2025).

However, Conservation Advice for *M. cucullata cucullata* (DCCEEW, 2023) lists the following as habitat critical to the survival of the species:

- Areas of dry eucalypt and acacia woodlands and shrublands remnants with an open understorey, some grassy areas and a complex ground layer, often in or near clearings or open areas
- Structurally diverse habitats featuring mature eucalypts, saplings, some small shrubs and a ground layer of moderately tall native grasses
- Standing dead or live trees and tree stumps are also essential for nesting, roosting and foraging
- Moderately deep to deep soils, rocks and fallen timber which provides essential foraging habitat.

Multiple areas of the subject land and surrounding vegetation constitute eucalypt woodland with an open understorey, standing dead of live trees and structurally diverse habitats. Therefore, the 2.00 ha of habitat to be removed is categorised as habitat critical to the survival of the species. This consists of low condition

grassland, moderate-high condition woodland with native dominated understorey, and moderate condition woodland with exotic understorey due to past and present land use and related agricultural activities.

In consideration of the above factors, **the proposed action would adversely affect habitat critical to the survival of *M. cucullata cucullata*, however the extent is minor in the context of the locality**.

**e) Disrupt the breeding cycle of an population**

The breeding season for *M. cucullata cucullata* occurs between July and November. Birds usually return to the same breeding sites each year, where they typically rear several broods each season. Nests are generally situated in a tree fork or crevice from less than 1-5 m above the ground, and are generally cups of bark and grasses bound with webs (DCCEEW, 2023).

Targeted surveys have not been undertaken for this species. Given the proposal would remove only five trees suitable for nesting out of a 30 ha patch of woodland **it is unlikely that the proposed project would disrupt the breeding cycle of a *M. cucullata cucullata* population.**

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

Habitat loss is a threat to *M. cucullata cucullata* (DCCEEW, 2023). While the proposed work would remove 0.33 ha of woodland (including five Hollow-Bearing Trees (HBTs)) and 1.67 ha of grassland, 6.37 ha of potential habitat would be retained in the subject land. Within the locality, approximately 30 ha of adjacent suitable habitat (woodland) is being retained, in addition to 20 HBTs within the subject land.

**Therefore, it is unlikely the that proposed work would modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.**

**g) Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the critically endangered or endangered species' habitat**

*The MNES Significant impact guidelines 1.1 states that an 'invasive species' is an introduced species, including an introduced (translocated) native species, which out-competes native species for space and resources or which is a predator of native species. Introducing an invasive species into an area may result in that species becoming established. An invasive species may harm listed threatened species or ecological communities by direct competition, modification of habitat or predation.*

Conservation Advice lists rabbits and feral deer as invasive species which threaten the *M. cucullata cucullata* (DCCEEW, 2023). This is through grazing and browsing pressure which has reduced the capacity of woodlands to regenerate, consequently reducing nesting, feeding and foraging sites. Additionally, feral deer also cause soil erosion due to their hard hooves. Feral deer are currently present within the subject land, having been observed during field surveys.

Introduced predatory fauna species such as cats (*Felis catus*) and foxes (*Vulpes vulpes*) are also a threat to *M. cucullata cucullata* as they are a ground foraging species. Additionally, invasive weeds are also considered a threat as they have the ability to change the floristic and structural characteristics of the habitat, which can change the availability of suitable habitat for the species (DCCEEW, 2023).

The proposed action has the potential to contribute to the spread of invasive weed species in the subject land through the transfer and introduction of plant material and soil on machinery. Any removal of native plant species also presents opportunities for invasive species to establish where ground cover is exposed. The implementation of appropriate biosecurity practices will assist to prevent and control these impacts. With the implementation of these mitigation measures, the proposal is not considered likely to exacerbate this impact to the point that it would constitute a substantial reduction in the quality or integrity of the species habitat within the subject land.

The proposed project is considered unlikely to generate an increase in invasive fauna species harmful to the species, such as feral cats, deer or foxes, above what is currently present. **The project is not considered likely to exacerbate this impact to the point that it would constitute a substantial reduction in the quality or integrity of the species habitat within the subject land.**

**h) Introduce disease that may cause the species to decline, or**

Conservation Advice for *M. cucullata cucullata* does not identify any diseases that may affect this species (DCCEEW, 2023). There is a risk that diseases could be introduced to the subject land via machinery, vehicles, and materials during clearing, construction and operation. With the implementation of the recommended mitigation measures, **the proposal is unlikely to result in the introduction of any disease that may cause the species to decline.**

**i) Interfere with the recovery of the species.**

There is currently no recovery plan for this species. However, there is a conservation and recovery action outlined within the Conservation Advice (DCCEEW, 2023). This is:

- Stabilise or increase populations across the range.

There are several conservation and management priorities to achieve this. One of the priorities is ceasing all land clearing of habitat critical to the survival of *M. cucullata cucullata* (DCCEEW, 2023).

However, another priority is to undertake revegetation, focussing on expanding and connecting areas of existing habitat (DCCEEW, 2023). Since the actions associated with the proposed project cannot be avoided, **the proposed action would therefore interfere with the recovery of *M. cucullata cucullata* through impacts to potential habitat.** However, the impacts are minor in the context of the locality and unlikely to significantly impact the recovery of the species.

**j) Conclusion.**

Although the proposed action includes removal of habitat critical to the survival of *M. cucullata cucullata* through clearing of 2.00 ha of potential foraging and breeding habitat, and interfere with the recovery of the species as a result, impacts are minor in the context of the locality. It is not likely to reduce the area of occupancy of the species, lead to a long-term decrease in the size of a population, or fragment any existing populations into two or more populations. The 1.67 ha of low condition grassland in combination with 0.33 ha of woodland proposed to be cleared is unlikely to remove or decrease the availability of habitat to the extent that the species is likely to decline. With standard biosecurity measures in place, it is unlikely that the project would introduce disease or result in the introduction or spread of invasive species suitable habitat. The approximate 6.37 ha of adjacent suitable habitat being retained within the subject land, including 20 HBTs, would be sufficient for foraging and breeding for *M. cucullata cucullata* if it were to occupy the area. In addition, approximately 30 ha of woodland would be retained within the locality, as well as a total native vegetation area of 171.52 ha as potential habitat.

Mitigation measures are recommended to minimise impacts to this species and include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation
- Clear delineation of vegetation to be cleared or retained
- Marking of Tree Protection Zones (TPZs) during clearing phase of project

Considering the above factors, and with appropriate mitigation measures in place, **it is unlikely that the proposed action will have a significant impact on *M. cucullata cucullata***.

**A spear-grass *(Austrostipa wakoolica)***

An action is likely to have a significant impact on a critically endangered or endangered species if there is a real chance or possibility that it will:

**a) Lead to a long-term decrease in the size of a population**

*The MNES Significant impact guidelines 1.1 states a 'population of a species' is defined under the EPBC Act as an occurrence of the species in a particular area. In relation to critically endangered, endangered or vulnerable threatened species, occurrences include but are not limited to:*

- *a geographically distinct regional population, or collection of local populations, or*
- *a population, or collection of local populations, that occurs within a particular bioregion.*

The presence of *Austrostipa wakoolica* in the subject land has been assumed based on the presence of associated PCTs in the BAM-C. There are no known records within the subject land. Targeted surveys have not yet been undertaken.

This species has a very limited distribution, confined to floodplains of Murray River tributaries, of central-western and south-western NSW. *Austrostipa wakoolica* grows in open woodland, on grey silty clay or sandy loam soils (DCCEEW, 2014).

Although there is partial suitable habitat in the development footprint, there are no known existing populations or records of this species observed within the subject land or within 10 km of the subject land (BioNet, 2025). Although no targeted surveys have been undertaken, the area of impact is adjacent to a current access track, which has previously been disturbed through track construction, edge effects and regular agricultural activities such as grazing and machinery movement. Therefore is unlikely to host a population of the species. **The proposed project is unlikely to lead to a long-term decrease in the size of an *Austrostipa wakoolica* population.** Targeted surveys would be undertaken in Spring to ensure no inadvertent impacts would occur to this species.

**b) Reduce the area of occupancy of the species**

As part of the proposal, the area of impact of potential habitat for this species is 2.00 ha, including 1.85 ha of PCT 277 and 0.15 ha of PCT 76. The majority of this area (83.7 %) is low condition grassland (1.67 ha), adjacent to existing and frequently utilised access tracks. State Vegetation Type Mapping (NSW DCCEEW, 2020) shows that there is 173.52 ha of native vegetation within a 1500 m radius of the subject land (assessment area), therefore only 1.15% of native vegetation within the assessment area is proposed to be removed.

In the adjacent areas of the development footprint (subject land), 1.29 ha of PCT 76 and 5.08 ha of PCT 277 are not being impacted by the project. Therefore, 23.89% of the native vegetation in the subject land is being impacted by the project. However, in the wider locality connected to the development footprint, approximately 30 ha of woodland would also be retained. Therefore, only reducing the area of woodland in the locality by less than 2 %.

Due to the degraded condition of grassland in the development footprint and subject land, it is unlikely that suitable habitat would appropriately support the occupancy of this species. This also considers current land use which includes pastoral development and stock, resulting in grazing pressure and presence of exotic grasses and weeds. This species does not tolerate disturbance, requiring sites that are protected from the impacts of herbivore grazing (DCCEEW, 2014). No individuals or population of this species have been observed in the subject land. **Considering these factors, the proposed project is not likely to significantly reduce the area of occupancy of the species.**

**c) Fragment an existing population into two or more populations**

There are no known or existing populations of this species within the subject land. Due to the degraded condition of vegetation along the existing track edge and current grazing pressure, it is unlikely that suitable habitat would appropriately support a population of this species. **Therefore, the project is unlikely to cause fragmentation of any populations of this species.**

**d) Adversely affect habitat critical to the survival of a species**

*The MNES Significant impact guidelines 1.1 states 'Habitat critical to the survival of a species or ecological community' refers to areas that are necessary:*

- *for activities such as foraging, breeding, roosting, or dispersal*
- *for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators)*
- *to maintain genetic diversity and long term evolutionary development, or*
- *for the reintroduction of populations or recovery of the species or ecological community.*

*Such habitat may be, but is not limited to: habitat identified in a recovery plan for the species or ecological community as habitat critical for that species or ecological community; and/or habitat listed on the Register of Critical Habitat maintained by the minister under the EPBC Act.*

No habitat critical to the survival of this species is listed in its Approved Conservation Advice, or on the Register of Critical Habitat (DCCEEW, 2014). There is no existing recovery plan for this species (DCCEEW, 2025).

Due to the degraded condition of vegetation along the existing track edge, current grazing pressure and general agricultural activities, it is unlikely that the Subject Land would appropriately support the occupancy of this species. This development footprint is not considered critical habitat for this species. **Therefore, the project would not adversely affect habitat critical to the survival of this species.**

**e) Disrupt the breeding cycle of an population**

There are no known or existing populations of this species within the subject land. *Austrostipa wakoolica* flowers in response to rain, and has been recorded flowering from October to December (DCCEEW, 2014). Dispersal of seed is predominantly via wind, rain and flood events, where the awn and sharp point of the floret enables the seed to be buried into the soil (DCCEEW, 2014). Due to the degraded condition of vegetation along the existing track edge and current grazing pressure, it is unlikely that suitable habitat would appropriately support a population of this species. **The project is unlikely to disrupt the breeding cycle of a population of *A. wakoolica*** .

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

The proposed project includes removal of 2.00 ha potential habitat for this species, including 1.85 ha of PCT 277 and 0.15 ha of PCT 76. This species prefers to inhabit open woodland, on grey silty clay or sandy loam soils (DCCEEW, 2014). The project proposes to remove 0.33 ha of woodland (PCT 277) from the development footprint, of which 0.11 ha is in moderate condition with exotic understorey due to past and present land use and agricultural activities. 0.22 ha is moderate-high condition woodland with native dominated understorey. Although the proposed project area contains open woodland, soils were predominantly red-brown clay, with brown silty clay in some areas.

Due to the degraded condition of grassland in the development footprint and subject land, in combination with partial presence of potential habitat, it is unlikely that this species would colonise the project area. This also considers current land use which includes pastoral development and stock, resulting in grazing

pressure and presence of exotic grasses and weeds. This species does not tolerate disturbance, requiring sites that are protected from the impacts of herbivore grazing (DCCEEW, 2014). Given that the project proposes removal of less than 2.00 ha of potentially suitable habitat that has been significantly modified and disturbed by land use, in combination with lack of records in the assessment area, **the species is not likely to decline as a result of modifying, destroying, removing or decreasing the availability of habitat.**

**g) Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the critically endangered or endangered species' habitat**

*The MNES Significant impact guidelines 1.1 states an 'invasive species' is an introduced species, including an introduced (translocated) native species, which out-competes native species for space and resources or which is a predator of native species. Introducing an invasive species into an area may result in that species becoming established. An invasive species may harm listed threatened species or ecological communities by direct competition, modification of habitat or predation.*

One of the listed threats to this species in the approved conservation advice is weed invasion and competition, particularly from exotic grasses (DCCEEW, 2014). Due to the absence of BioNet records, only partial presence of suitable habitat and degraded condition, it is unlikely this species would colonise in the subject land.

The proposed project has the potential to contribute to the spread of invasive species, mainly through the clearing of vegetation, in addition to potential transfer and introduction of both plant material and soil on machinery. Mitigation measures have been recommended in the BDAR to prevent the spread of weeds throughout the project area. **The proposed action would therefore be unlikely to result in invasive species that are harmful to this species becoming established in its potential habitat.**

**h) Introduce disease that may cause the species to decline, or**

This species is not susceptible to diseases that may cause it to decline (DCCEEW, 2014). **The proposed project is considered unlikely to result in the introduction of disease that may cause the species to decline**.

**i) Interfere with the recovery of the species.**

The proposed project would remove 2.00 ha of potential habitat for this species, of which 0.33 ha is woodland. Open woodland is preferred habitat for this species; however, the development footprint and surrounds is highly modified from grazing and cropping. There is no adopted or made Recovery Plan for this species (DCCEEW, 2025). Although no Recovery Plan exists for this species, the Saving our Species (SoS) program identifies priority actions for *Austrostipa wakoolica* and three priority management sites, none of which occur within the development footprint or wider subject land (NSW DPE, 2025).Considering these factors and the absence of observations within the development footprint and assessment area (BioNet, 2025), **the proposed project is highly unlikely to interfere with the recovery of this species due to these factors**.

**j) Conclusion.**

The proposed action is not likely to lead to a long-term decrease in the size of an *A. wakoolica* population, reduce its area of occupancy or fragment an existing population into two or more populations. It is not likely to adversely affect habitat critical to the survival of the species, disrupt the breeding cycle of a population or interfere with the recovery of the species. Due to the degraded condition of the landscape and that multiple key threats already impact the development footprint, the proposed action is not likely to modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. With standard biosecurity protocols in place, the proposed action is not likely to

introduce disease that may cause the species to decline, or result in invasive species becoming established in the species' habitat. Recommended mitigation measures include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation.

Considering the above factors, **the proposed action is not likely to have a significant impact on *Austrostipa wakoolica*.**

**Leafless Indigo *(Indigofera efoliata)***

An action is likely to have a significant impact on a critically endangered or endangered species if there is a real chance or possibility that it will:

**a) Lead to a long-term decrease in the size of a population**

*The MNES Significant impact guidelines 1.1 states a 'population of a species' is defined under the EPBC Act as an occurrence of the species in a particular area. In relation to critically endangered, endangered or vulnerable threatened species, occurrences include but are not limited to:*

- *a geographically distinct regional population, or collection of local populations, or*
- *a population, or collection of local populations, that occurs within a particular bioregion.*

The presence of *Indigofera efoliata* in the subject land has been assumed based on the presence of associated PCTs in the BAM-C. There are no known records within the subject land. Targeted surveys have not yet been undertaken.

The Leafless Indigo occurs in the central western slopes of NSW, within the Central West Natural Resources Management Regions. This species prefers stony ground in red-brown sandy loam on a slight rise, among ironstone formation, which was not the observed morphology or soil composition within the subject land (DCCEEW, 2008). However, it appears to inhabit Yellow Box woodland and overlaps with *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* EPBC act listed communities which occurs within the subject Land (DCCEEW, 2008). There are no known existing populations or records of this species observed within the subject land or immediately adjacent to this area (BioNet, 2025). Although no targeted surveys have been undertaken, the area of impact is adjacent to a current access track, which has previously been disturbed through track construction, edge effects and regular agricultural activities such as grazing and machinery movement therefore is unlikely to support a population of the species. **The proposed project is unlikely to lead to a long-term decrease in the size of an *Indigofera efoliata* population.** Targeted surveys would be undertaken in Spring to ensure no inadvertent impacts occur to this species.

**b) Reduce the area of occupancy of the species**

The area of impact for this species is 2.00 ha, including 1.85 ha of PCT 277 and 0.15 ha of PCT 76. The majority of this area (83.7 %) is low condition grassland (1.67 ha), adjacent to existing and frequently utilised access tracks.

In the surrounding area (subject land), 1.29 ha of PCT 76 and 5.01 ha of PCT 277 are not being impacted by the project. Therefore, only 31.67% of the native vegetation in the subject land is being impacted by the project. In addition, approximately 30 ha of woodland is not being impacted by the project within the locality. Therefore less than 2 % of woodland within the locality would be removed.

Due to the degraded condition of vegetation in the development footprint, it is unlikely that suitable habitat would appropriately support the occupancy of this species. This also considers current land use which includes pastoral development and livestock, resulting in grazing pressure and presence of exotic grasses and weeds. No individuals or population of this species have been observed in the subject land. **Considering these factors, the proposed project is not likely to significantly reduce the area of occupancy of the species.**

**c) Fragment an existing population into two or more populations**

There are no known existing populations of this species within the subject land. Due to the degraded condition of vegetation along the existing track edge and current grazing pressure, it is unlikely that suitable habitat would appropriately support a population of this species. **Therefore, the project is unlikely to cause fragmentation into two or more population of this species.**

**d) Adversely affect habitat critical to the survival of a species**

*The MNES Significant impact guidelines 1.1 states 'Habitat critical to the survival of a species or ecological community' refers to areas that are necessary:*

- *for activities such as foraging, breeding, roosting, or dispersal*
- *for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators)*
- *to maintain genetic diversity and long term evolutionary development, or*
- *for the reintroduction of populations or recovery of the species or ecological community.*

*Such habitat may be, but is not limited to: habitat identified in a recovery plan for the species or ecological community as habitat critical for that species or ecological community; and/or habitat listed on the Register of Critical Habitat maintained by the minister under the EPBC Act.*

No habitat critical to the survival of this species is listed in its Approved Conservation Advice (DCCEEW, 2008), or on the Register of Critical Habitat (DCCEEW, 2025). There is no existing recovery plan for this species (DCCEEW, 2025).

The development footprint is not considered critical habitat for this species; however, it does contain 0.22 ha of *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland*, which has been noted to overlap with *Indigofera efoliata* distribution.

Due to the degraded condition of the land within the subject land, and continuous agricultural-related activities within the land , it is unlikely that the development footprint would appropriately support the occupancy of this species. **Therefore the project is not likely to affect habitat critical to the survival of this species.**

**e) Disrupt the breeding cycle of a population**

There are no known or existing populations of this species within the subject land or within a 10 km radius of the subject land (BioNet, 2025). *Indigofera efoliata* is a perennial herb, flowering between August and October, with fruits maturing from November to February (DCCEEW, 2008). This species can die back to a substantial underground rootstock in unfavourable seasons, but due to the degraded condition of vegetation along the existing track edge, consistent trampling from stock, and current grazing pressure, it is unlikely that suitable habitat would appropriately support a population of this species. **The project is unlikely to disrupt the breeding cycle of a population of *I. efoliata.***

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

The proposed project includes removal of 2.00 ha potential habitat for this species, including 1.85 ha of PCT 277 and 0.15 ha of PCT 76. The project proposes to remove 0.33 ha of woodland (PCT 277) from the development footprint, of which 0.11 ha is moderate condition woodland with exotic understorey due to past and present land use and related agricultural activities and 0.22 ha is moderate-high condition woodland with native dominated understorey. Although the proposed project area contains open woodland, soils were predominantly red-brown clay, with brown silty clay in some areas. This species prefers stony ground in red-brown sandy loam on a slight rise, among ironstone formation (DCCEEW, 2008).

Due to the degraded condition of grassland in the development footprint and subject land, it is unlikely that this species would colonise the project area. This also considers the current land use which includes pastoral development and livestock, resulting in grazing pressure and presence of exotic grasses and weeds. Threatening processes to this species include clearing, habitat disturbance, altered hydrology due to salinity and grazing (DCCEEW, 2008). The proposed action includes the removal of less than 2.00 ha of potentially suitable habitat that has been significantly modified and disturbed by land use including clearing, grazing and altered hydrology. In combination with lack of observations within 10 km of the subject land, **the species is not likely to decline as a result of modifying, destroying, removing or decreasing the availability of habitat from the proposed action.**

**g) Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the critically endangered or endangered species' habitat**

*The MNES Significant impact guidelines 1.1 states an 'invasive species' is an introduced species, including an introduced (translocated) native species, which out-competes native species for space and resources or which is a predator of native species. Introducing an invasive species into an area may result in that species becoming established. An invasive species may harm listed threatened species or ecological communities by direct competition, modification of habitat or predation.*

The proposed project has the potential to contribute to the introduction and spread of invasive species, mainly through the clearing of vegetation, in addition to potential transfer and introduction of both plant material and soil on machinery and vehicles. Mitigation measures have been recommended in the BDAR to minimise the spread of existing weeds throughout the project area and avoid the introduction of new weeds. **The proposed action would therefore be unlikely to result in invasive species that are harmful to this species becoming established in its potential habitat.**

**h) Introduce disease that may cause the species to decline, or**

This species is not susceptible to diseases that may cause it to decline (DCCEEW, 2008). **The proposed project is considered unlikely to result in the introduction of disease that may cause the species to decline.**

**i) Interfere with the recovery of the species.**

The proposed project would remove 2.00 ha of potential habitat for this species, of which 0.22 ha is *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland*. Within the local patch, 7.14 ha of this CEEC would be retained and not impacted by the proposed project. Although no Recovery Plan exists for this species (DCCEEW, 2025), the Saving our Species (SoS) program identifies priority actions for *I. efoliata*, and shows species occurrence in a very small area from Dubbo to Bathurst (NSW DPE, 2025).

Given that the development footprint is already impacted by clearing and habitat disturbance, grazing and altered hydrology, **the action is not likely to interfere with the recovery of the species.**

**j) Conclusion.**

The proposed action is not likely to lead to a long-term decrease in the size of an *I. efoliata* population, reduce its area of occupancy or fragment an existing population into two or more populations. It is not likely to adversely affect habitat critical to the survival of the species, disrupt the breeding cycle of a population or interfere with the recovery of the species. Due to the degraded condition of the landscape and that multiple key threats already impact the development footprint, the proposed action is not likely to modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. With standard biosecurity protocols in place, the proposed action is not likely to

introduce disease that may cause the species to decline, or result in invasive species becoming established in the species' habitat. Recommended mitigation measures include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation.

Considering the above factors, **the proposed action is not likely to have a significant impact on *Indigofera efoliata.***

**Sand-hill Spider Orchid *(Caladenia arenaria)***

An action is likely to have a significant impact on a critically endangered or endangered species if there is a real chance or possibility that it will:

**a) Lead to a long-term decrease in the size of a population**

*The MNES Significant impact guidelines 1.1 states a 'population of a species' is defined under the EPBC Act as an occurrence of the species in a particular area. In relation to critically endangered, endangered or vulnerable threatened species, occurrences include but are not limited to:*

- *a geographically distinct regional population, or collection of local populations, or*
- *a population, or collection of local populations, that occurs within a particular bioregion.*

The presence of *Caladenia arenaria* in the subject land has been assumed based on the presence of associated PCTs in the BAM-C. There are no known records within the subject land. Targeted surveys have not yet been undertaken.

*C. arenaria* has been found over a range of 500 km from Deniliquin to Bethungra, Murrumburrah, Yass and Mudgee in NSW. The species is now known to occur at five locations only, in the Riverina between Urana and Narrandera (Threatened Species Scientific Committee, 2015). None of these locations fall within the development footprint, subject land or wider assessment area. The closest priority management site is located approximately 80 km west of the subject land (NSW DPE, 2025).

There are no known existing populations or records of this species observed within the subject land or immediately adjacent to this area (BioNet, 2025), **therefore the proposed project would be unlikely to lead to a long-term decrease in the size of a *C. arenaria* population.** Targeted surveys would be undertaken in Spring to ensure no inadvertent impacts would occur to this species.

**b) Reduce the area of occupancy of the species**

The area of impact for this species is 2.00ha, including 1.85 ha of PCT 277 and 0.15 ha of PCT 76. The majority of this area (83.7 %) is low condition grassland (1.67 ha), adjacent to existing and frequently utilised access tracks.

In the surrounding area (subject land), 1.29 ha of PCT 76 and 5.08 ha of PCT 277 are not being impacted by the project. Therefore, only 23.89% of the total native vegetation in the subject land is being impacted by the project. In addition, approximately 30 ha of woodland is not being impacted by the project within the locality. Therefore less than 2 % of woodland within the locality would be removed. This species also has an extremely limited mapped distribution that does not occur within the locality of the subject land.

Due to the degraded condition of vegetation in the development footprint, it is unlikely that suitable habitat would appropriately support the occupancy of this species. This considers current land use within the subject land, which includes pastoral development and livestock, resulting in grazing pressure and presence of exotic grasses and weeds. No individuals or population of this species have been observed in the subject land. **Considering these factors, the proposed project is not likely to significantly reduce the area of occupancy of the species.**

**c) Fragment an existing population into two or more populations**

There are no existing populations of this species within the subject land. Due to the degraded condition of vegetation along the existing track edge and current grazing pressure, it is unlikely that suitable habitat would appropriately support a population of this species. The proposed action would widen the existing

access track from eight metres to 23 m at the widest point. **Therefore, the project is unlikely to cause fragmentation into two or more population of this species.**

**d) Adversely affect habitat critical to the survival of a species**

*The MNES Significant impact guidelines 1.1 states 'Habitat critical to the survival of a species or ecological community' refers to areas that are necessary:*

- *for activities such as foraging, breeding, roosting, or dispersal*
- *for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators)*
- *to maintain genetic diversity and long term evolutionary development, or*
- *for the reintroduction of populations or recovery of the species or ecological community.*

*Such habitat may be, but is not limited to: habitat identified in a recovery plan for the species or ecological community as habitat critical for that species or ecological community; and/or habitat listed on the Register of Critical Habitat maintained by the minister under the EPBC Act.*

No habitat critical to the survival of this species is listed in its Approved Conservation Advice (Threatened Species Scientific Committee, 2015), or on the Register of Critical Habitat (DCCEEW, 2025). There is no existing recovery plan for this species (DCCEEW, 2025).

The development footprint is not considered critical habitat for this species; however, it does contain 0.15 ha of PCT 76, which has been listed as associated vegetation with the Sand-hill Spider Orchid.

Due to the degraded condition of the land within the development footprint and surrounds, in addition to the presence of known threats including habitat clearance and disturbance, grazing pressure, weeds, chemical and fertilisers from agricultural land, **it is unlikely the proposed action would adversely affect habitat critical to the survival of this species** (Threatened Species Scientific Committee, 2015).

**e) Disrupt the breeding cycle of an population**

There are no records of this species or populations of this species within the subject land, or within a 10 km radius of the subject land (BioNet, 2025). *C. arenaria* flowers in spring between September and November (NSW OEH, 2022). Due to the degraded condition of vegetation along the existing track edge, consistent trampling from stock, and current grazing pressure, it is unlikely that suitable habitat would appropriately support a population of this species. **The project is unlikely to disrupt the breeding cycle of a population of *C. arenaria.***

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

The proposed project includes removal of 2.00 ha potential habitat for this species, including 1.85 ha of PCT 277 and 0.15 ha of PCT 76. The project proposes to remove 0.33 ha of woodland (PCT 277) from the development footprint, of which 0.11 ha is moderate condition woodland with exotic understorey due to past and present land use and related agricultural activities. 0.22 ha is moderate-high condition woodland with native dominated understorey. Approximately 30 ha of woodland is not being impacted by the project within the locality. Therefore, less than 2 % of woodland within the locality would be removed. Due to the low condition of grassland in the development footprint and subject land, it is unlikely that this species would colonise the project area. This also considers the current land use which includes pastoral development and livestock, resulting in grazing pressure and presence of exotic grasses and weeds. In combination with lack of observations within 10 km of the subject land, **the species is not likely to decline as a result of modifying, destroying, removing or decreasing the availability of habitat from the proposed action.**

**g) Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the critically endangered or endangered species' habitat**

*The MNES Significant impact guidelines 1.1 states an 'invasive species' is an introduced species, including an introduced (translocated) native species, which out-competes native species for space and resources or which is a predator of native species. Introducing an invasive species into an area may result in that species becoming established. An invasive species may harm listed threatened species or ecological communities by direct competition, modification of habitat or predation.*

The proposed project has the potential to contribute to the introduction and spread of invasive species, mainly through the clearing of vegetation, in addition to potential transfer and introduction of both plant material and soil on machinery and vehicles. Mitigation measures have been recommended in the BDAR to minimise the spread of existing weeds throughout the project area and avoid the introduction of new weeds. **The proposed action would therefore be unlikely to result in invasive species that are harmful to this species becoming established in its potential habitat.**

**h) Introduce disease that may cause the species to decline, or**

This species is not susceptible to any known diseases that may cause it to decline (Threatened Species Scientific Committee, 2015). **The proposed project is considered unlikely to result in the introduction of disease that may cause the species to decline.**

**i) Interfere with the recovery of the species.**

The proposed action would remove 2.00 ha of potential habitat for this species, of which 0.15 ha is PCT 76, associated vegetation with *C. arenaria* (BioNet, 2025). Although no Recovery Plan exists for this species (DCCEEW, 2025), the Saving our Species (SoS) program identifies priority actions for the Sand-hill Spider Orchid, and shows maps of priority management sites – none of which occur within the development footprint, subject land or wider assessment area. The closest priority management area is located approximately 80 km from the subject land (NSW DPE, 2025).

Given that the development footprint is already impacted by multiple known and potential threats including habitat disturbance, clearing, grazing and the presence of weeds, **the proposed action is not likely to interfere with the recovery of *C. arenaria*.**

**j) Conclusion.**

The proposed action is not likely to lead to a long-term decrease in the size of a *C. arenaria* population, reduce its area of occupancy or fragment an existing population into two or more populations. It is not likely to adversely affect habitat critical to the survival of the species, disrupt the breeding cycle of a population or interfere with the recovery of the species. Due to the degraded condition of the landscape and that multiple key threats already impact the development footprint, the proposed action is not likely to modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. With standard biosecurity protocols in place, the proposed action is not likely to introduce disease that may cause the species to decline, or result in invasive species becoming established in the species' habitat. Recommended mitigation measures include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation.

Considering the above factors, **the proposed action is not likely to have a significant impact on *Caladenia arenaria*.**

**Small Purple-pea *(Swainsona recta)***

An action is likely to have a significant impact on a critically endangered or endangered species if there is a real chance or possibility that it will:

**a) Lead to a long-term decrease in the size of a population**

*The MNES Significant impact guidelines 1.1 states a 'population of a species' is defined under the EPBC Act as an occurrence of the species in a particular area. In relation to critically endangered, endangered or vulnerable threatened species, occurrences include but are not limited to:*

- *a geographically distinct regional population, or collection of local populations, or*
- *a population, or collection of local populations, that occurs within a particular bioregion.*

The presence of *Swainsona recta* in the subject land has been assumed based on the presence of suitable habitat. There are no known records within the subject land. Targeted surveys have not yet been undertaken.

*Swainsona recta* has historically been relatively widespread across south-eastern Australia, with collections prior to 1939 suggesting a range extending from north-eastern Victoria and northwards along the NSW western slopes towards Gulargambone. All surviving non-translocated populations occur in NSW and the ACT; however, species' habitat persists in Victoria (DCCEEW, 2023). The closest known record to the subject land is approximately 30 km north of the subject land, in Wagga Wagga (NSW DPE, 2025).

This species occurs predominantly in grassy woodlands, sometimes extending to grassy open-forest. Tree cover usually includes one or more of the following:

- Blakely's Red Gum *(Eucalyptus blakelyi)*
- Long-leaved Ox *(Eucalyptus goniocalyx)*
- White Box *(Eucalyptus albens)*
- Yellow Box *(Eucalyptus melliodora)*

Native understorey at most sites is dominated by Kangaroo Grass *(Themeda triandra)*, Snow Grass *(Poa sieberiana)* and Speargrass *(Stipa spp.)*. *S. recta* occurs on both red-brown loams grey stony loams, generally on undulating morphology. The species occurs within, and is a component of *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* (DCCEEW, 2023). This is a Critically Endangered Ecological Community under the EPBC Act and was confirmed in the western section of the subject land, including within the development footprint. The development footprint contained multiple individuals of Yellow Box and Blakely's Red Gum trees.

There are no existing populations or records of this species observed within the subject land or immediately adjacent to this area (BioNet, 2025), **therefore the proposed project would be unlikely to lead to a long-term decrease in the size of a *Swainsona recta* population.** Targeted surveys would be undertaken in Spring to ensure no inadvertent impacts would occur to this species.

**b) Reduce the area of occupancy of the species**

The area of impact for this species is 2.00 ha, including 1.85 ha of PCT 277 and 0.15 ha of PCT 76. The majority of this area (83.7 %) is low condition grassland (1.67 ha), adjacent to existing and frequently utilised access tracks.

In the surrounding area (subject land), 1.29 ha of PCT 76 and 5.08 ha of PCT 277 are not being impacted by the project. Therefore, only 23.89% of the native vegetation in the subject land is being impacted by the project. In addition, approximately 30 ha of woodland is not being impacted by the project within the locality. Therefore, less than 2 % of woodland within the locality would be removed.

Although this species is associated with both PCT 277 and PCT 76, due to the degraded condition of vegetation in the development footprint, it is unlikely that suitable habitat would appropriately support the occupancy of this species. This also considers current land use which includes pastoral development and livestock, resulting in grazing pressure and presence of exotic grasses and weeds. No individuals or population of this species have been observed in the subject land. **Considering these factors, the proposed project is not likely to significantly reduce the area of occupancy of the species.**

**c) Fragment an existing population into two or more populations**

There are no existing populations of this species within the subject land. Due to the degraded condition of vegetation along the existing track edge and current grazing pressure, it is unlikely that suitable habitat would appropriately support a population of this species. The proposed action would widen the existing access track from eight metres to 23 m at the widest point. **Therefore, the project is unlikely to cause fragmentation into two or more population of this species.**

**d) Adversely affect habitat critical to the survival of a species**

*The MNES Significant impact guidelines 1.1 states 'Habitat critical to the survival of a species or ecological community' refers to areas that are necessary:*

- *for activities such as foraging, breeding, roosting, or dispersal*
- *for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators)*
- *to maintain genetic diversity and long term evolutionary development, or*
- *for the reintroduction of populations or recovery of the species or ecological community.*

*Such habitat may be, but is not limited to: habitat identified in a recovery plan for the species or ecological community as habitat critical for that species or ecological community; and/or habitat listed on the Register of Critical Habitat maintained by the minister under the EPBC Act.*

No habitat critical to the survival of this species is listed on the Register of Critical Habitat (DCCEEW, 2025). In its listed Approved Conservation Advice, all occupied habitat is considered critical to the survival of *S. recta* (DCCEEW, 2023).

The development footprint is not considered critical habitat for this species; however, it does contain 0.22 ha of *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland*, which is associated with *S. recta*.

Due to the degraded condition of the land within the development footprint, and that there are no existing known *S. recta* populations or individuals within the subject land, the project is not considered habitat critical to the survival of the species. Although it is unlikely that **the project would affect habitat critical to the survival of this species,** it should be noted that the Small Purple-pea is a component of the Critically Endangered *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* ecological community (CEEC). As part of the proposed action, 0.22 ha of this CEEC would be removed.

**e) Disrupt the breeding cycle of a population**

Due to the degraded condition of vegetation along the existing track edge, consistent trampling from stock, and current grazing pressure, it is unlikely that suitable habitat would appropriately support a population of this species. **The project is unlikely to disrupt the breeding cycle of a population of *Swainsona recta.***

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

The proposed project includes removal of 2.00 ha potential habitat for this species, including 1.85 ha of PCT 277 and 0.15 ha of PCT 76. The project proposes to remove 0.33 ha of woodland (PCT 277) from the development footprint, of which 0.11 ha is moderate condition woodland with exotic understorey due to past and present land use and related agricultural activities. 0.22 ha is moderate-high condition woodland with native dominated understorey. Approximately 30 ha of woodland is not being impacted by the project within the locality. Therefore, less than 2 % of woodland within the locality would be removed. Current land use includes pastoral development and stock, resulting in grazing pressure, loss of habitat, and presence of exotic grasses and weeds. These factors, in combination with lack of observations within 80 km of the subject land, **identify that the species is not likely to decline as a result of modifying, destroying, removing or decreasing the availability of habitat from the proposed action.**

**g) Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the critically endangered or endangered species' habitat**

*The MNES Significant impact guidelines 1.1 states an 'invasive species' is an introduced species, including an introduced (translocated) native species, which out-competes native species for space and resources or which is a predator of native species. Introducing an invasive species into an area may result in that species becoming established. An invasive species may harm listed threatened species or ecological communities by direct competition, modification of habitat or predation.*

The proposed project has the potential to contribute to the introduction and spread of invasive species, mainly through the clearing of vegetation, in addition to potential transfer and introduction of both plant material and soil on machinery and vehicles. Mitigation measures have been recommended in the BDAR to minimise the spread of existing weeds throughout the project area and avoid the introduction of new weeds. **The proposed action would therefore be unlikely to result in invasive species that are harmful to this species becoming established in its potential habitat.**

**h) Introduce disease that may cause the species to decline, or**

This species is not susceptible to any known diseases that may cause it to decline (DCCEEW, 2023). **The proposed project is considered unlikely to result in the introduction of disease that may cause the species to decline.**

**i) Interfere with the recovery of the species.**

The proposed project would remove 2.00 ha of potential habitat for this species, of which 0.22 ha is *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland*. Within the local patch, 7.14 ha of this CEEC would be retained and not impacted by the proposed project. The *S. recta* is listed under section 269A of the EPBC Act with a Recovery Plan, made by New South Wales (DCCEEW, 2012). A Saving our Species (SoS) program exists for this species and identifies priority actions for *S. recta*. The document visualises current population locations and maps of priority management sites – none of which occur within the development footprint, subject land or wider assessment area (NSW DPE, 2025).

Given that the development footprint is already impacted by multiple known threats including habitat loss, grazing and the presence of weeds, **the proposed action is not likely to interfere with the recovery of *S. recta*.**

**j) Conclusion.**

The proposed action is not likely to lead to a long-term decrease in the size of a Small Purple-pea population, reduce its area of occupancy or fragment an existing population into two or more populations. It is not likely to adversely affect habitat critical to the survival of the species, disrupt the breeding cycle of a population or interfere with the recovery of the species. Due to the degraded condition of the landscape and that multiple key threats already impact the development footprint, the proposed action is not likely to

modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. With standard biosecurity protocols in place, the proposed action is not likely to introduce disease that may cause the species to decline, or result in invasive species becoming established in the species' habitat. Recommended mitigation measures include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation.

Considering the above factors, **the proposed action is not likely to have a significant impact on *Swainsona recta*.**

**Tarengo Leek Orchid *(Prasophyllum petilum)***

An action is likely to have a significant impact on a critically endangered or endangered species if there is a real chance or possibility that it will:

**a) Lead to a long-term decrease in the size of a population**

*The MNES Significant impact guidelines 1.1 states a 'population of a species' is defined under the EPBC Act as an occurrence of the species in a particular area. In relation to critically endangered, endangered or vulnerable threatened species, occurrences include but are not limited to:*

- *a geographically distinct regional population, or collection of local populations, or*
- *a population, or collection of local populations, that occurs within a particular bioregion.*

The presence of *Prasophyllum petilum* in the subject land has been assumed based on the presence of associated PCTs and suitable habitat. There are no known records within the subject land. Targeted surveys have not yet been undertaken. *P. petilum* is known to occur in the grassy woodlands and grasslands of southern tablelands and western slopes of NSW and the ACT. At present, natural populations are only known from a total of five sites in NSW and one in the ACT – none of which occur within the subject land (DAWE, 2021). The closest known record is approximately 180 km east of the subject land (DAWE, 2021). This species grows among native and exotic grasses in grassy woodland or natural grassland occurring on fertile soils at flat or gently sloping sites, with sandy clay, clam loam or loam soils. The *Prasophyllum* genus is known to prefer moister soils in depressions and swamps (DAWE, 2021). This landscape morphology was not present within the development footprint.

There are no existing populations or records of this species observed within the subject land or immediately adjacent to this area (BioNet, 2025), **therefore the proposed project would be unlikely to lead to a long-term decrease in the size of a *P. petilum* population.** Targeted surveys would be undertaken in Spring to ensure no inadvertent impacts would occur to this species.

**b) Reduce the area of occupancy of the species**

As part of the proposal, the area of impact of potential habitat for this species is 2.00 ha, including 1.85 ha of PCT 277 and 0.15 ha of PCT 76. The majority of this area (83.7 %) is low condition grassland (1.67 ha), adjacent to an existing and frequently utilised access track. In addition, approximately 30 ha of woodland is not being impacted by the project within the locality. Therefore, less than 2 % of woodland within the locality would be removed. State Vegetation Type Mapping (NSW DCCEEW, 2020) shows that there is 173.52 ha of native vegetation in the 1500 m boundary of the subject land (assessment area), therefore only 1.15% of native vegetation within the assessment area is proposed to be removed.

Due to the degraded condition of grassland in the development footprint and subject land, it is unlikely that suitable habitat would appropriately support the occupancy of this species. This also considers current land use which includes pastoral development and stock, resulting in grazing pressure and presence of exotic grasses and weeds. No individuals or population of this species have been observed in the subject land. **Considering these factors, the proposed project is not likely to significantly reduce the area of occupancy of the species.**

**c) Fragment an existing population into two or more populations**

There are no existing populations of this species within the subject land. Due to the degraded condition of vegetation along the existing track edge and current grazing pressure, it is unlikely that suitable habitat would appropriately support a population of this species. The proposed action would widen the existing

access track from eight metres to 23 m at the widest point. **Therefore, the project is unlikely to cause fragmentation into two or more population of this species.**

**d) Adversely affect habitat critical to the survival of a species**

*The MNES Significant impact guidelines 1.1 states 'Habitat critical to the survival of a species or ecological community' refers to areas that are necessary:*

- *for activities such as foraging, breeding, roosting, or dispersal*
- *for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators)*
- *to maintain genetic diversity and long term evolutionary development, or*
- *for the reintroduction of populations or recovery of the species or ecological community.*

*Such habitat may be, but is not limited to: habitat identified in a recovery plan for the species or ecological community as habitat critical for that species or ecological community; and/or habitat listed on the Register of Critical Habitat maintained by the minister under the EPBC Act.*

No habitat critical to the survival of this species is listed in its Approved Conservation Advice (DAWE, 2021), or on the Register of Critical Habitat (DCCEEW, 2025). There is no existing recovery plan for this species (DCCEEW, 2025).

Conservation Advice lists that all habitat for this species is considered as habitat critical to the survival of the species, including all areas of potential habitat throughout its geographic and ecological range (DAWE, 2021). The development footprint is not considered critical habitat for this species; however, it does contain 1.85 ha of PCT 277, which has been listed as associated vegetation with *P. petilum*.

The current degraded condition of the soils, vegetation and general landscape within the development footprint and surrounding subject land signifies that it is unlikely the habitat would support this species. This is in addition to the presence of known threats including habitat clearance and disturbance, grazing pressure, and competition with both native species and invasive weeds. Therefore, **it is unlikely the proposed action would adversely affect habitat critical to the survival of this species** (DAWE, 2021).

**e) Disrupt the breeding cycle of an population**

This species usually flowers in late October to mid-December, depending on its location. There are no studies on pollinators for this species (DCCEEW, 2025). Due to the degraded condition of vegetation along the existing track edge, consistent trampling from stock, and current grazing pressure, it is unlikely that suitable habitat would appropriately support a population of this species. **The project is unlikely to disrupt the breeding cycle of a population of *P. petilum*.**

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

The proposed project includes removal of 2.00 ha potential habitat for this species, including 1.85 ha of PCT 277 and 0.15 ha of PCT 76. The project proposes to remove 0.33 ha of woodland (PCT 277) from the development footprint, of which 0.11 ha is moderate condition woodland with exotic understorey due to past and present land use and agricultural activities. 0.22 ha is moderate-high condition woodland with native dominated understorey. Approximately 30 ha of woodland is not being impacted by the project within the locality. Therefore, less than 2 % of woodland within the locality would be removed. Due to the low condition of grassland in the development footprint and subject land, it is unlikely that this species would colonise the project area. This also considers current land use which includes pastoral development and stock, resulting in grazing pressure and presence of exotic grasses and weeds. In combination with

lack of observations within 10 km of the subject land, **the species is not likely to decline as a result of modifying, destroying, removing or decreasing the availability of habitat from the proposed action.**

**g) Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the critically endangered or endangered species' habitat**

*The MNES Significant impact guidelines 1.1 states an 'invasive species' is an introduced species, including an introduced (translocated) native species, which out-competes native species for space and resources or which is a predator of native species. Introducing an invasive species into an area may result in that species becoming established. An invasive species may harm listed threatened species or ecological communities by direct competition, modification of habitat or predation.*

The proposed project has the potential to contribute to the introduction and spread of invasive species, mainly through the clearing of vegetation, in addition to potential transfer and introduction of both plant material and soil on machinery and vehicles. Mitigation measures have been recommended in the BDAR to minimise the spread of existing weeds throughout the project area and avoid the introduction of new weeds. **The proposed action would therefore be unlikely to result in invasive species that are harmful to this species becoming established in its potential habitat.**

**h) Introduce disease that may cause the species to decline, or**

This species is not susceptible to diseases that may cause it to decline (DAWE, 2021). **The proposed project is considered unlikely to result in the introduction of disease that may cause the species to decline.**

**i) Interfere with the recovery of the species.**

The proposed action would remove 2.00 ha of potential habitat for this species, of which 1.85 ha is PCT 277, associated vegetation with *P. petilum* (BioNet, 2025). Although no Recovery Plan exists for this species (DCCEEW, 2025), the Saving our Species (SoS) program identifies priority actions for *P. petilum*, and shows maps of priority management sites – none of which occur within the development footprint, subject land or wider assessment area (NSW DPE, 2025).

Given that the development footprint is already impacted by multiple known and potential threats including habitat disturbance, clearing, grazing and the presence of weeds, **the proposed action is not likely to interfere with the recovery of *P. petilum*.**

**j) Conclusion.**

The proposed action is not likely to lead to a long-term decrease in the size of a *Prasophyllum petilum* population, reduce its area of occupancy or fragment an existing population into two or more populations. It is not likely to adversely affect habitat critical to the survival of the species, disrupt the breeding cycle of a population or interfere with the recovery of the species. Due to the degraded condition of the landscape and that multiple key threats already impact the development footprint, the proposed action is not likely to modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. With standard biosecurity protocols in place, the proposed action is not likely to introduce disease that may cause the species to decline, or result in invasive species becoming established in the species' habitat. Targeted surveys would be undertaken in Spring to ensure no inadvertent impacts would occur to this species. Recommended mitigation measures include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation.

Considering the above factors, the **proposed action is not likely to have a significant impact on the *P. petilum*.**

## 1.2 Vulnerable species

The *Environment Protection and Biodiversity Conservation Act 1999* specifies factors to be considered in deciding whether a development is likely to significantly affect Endangered Ecological Communities, threatened species and migratory species, listed at the Commonwealth level. These assessments characterise the significance of likely impacts associated with the development on the following Vulnerable species:

**Birds**

- Brown Treecreeper (eastern subspecies) *(Climacteris picumnus victoriae)*
- Diamond Firetail *(Stagonopleura guttata)*
- South-eastern Glossy Black Cockatoo *(Calyptorhynchus lathami lathami)*
- Southern Whiteface *(Aphelocephala leucopsis)*
- Superb Parrot *(Polytelis swainsonii)*
- White-throated Needletail *(Hirundapus caudacutus)*

**Flora**

- Yass Daisy *(Ammobium craspedioides)*

**Insects**

- Golden Sun Moth *(Synemon plana)*

**Mammals**

- Corben's Long-Eared Bat (*Nyctophilus corbeni)*

**Reptiles**

- Pink-tailed Legless Lizard *(Aprasia parapulchella)*
- Striped Legless Lizard *(Delma impar)*

**Brown Treecreeper (eastern subspecies) *(Climacteris picumnus victoriae)***

An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:

**a) Lead to a long-term decrease in the size of an important population of a species**

*The MNES Significant impact guidelines 1.1 states that an 'important population' is a population that is necessary for a species' long-term survival and recovery. This may include populations identified as such in recovery plans, and/or that are:*

- *key source populations either for breeding or dispersal*
- *populations that are necessary for maintaining genetic diversity, and/or*
- *populations that are near the limit of the species range*.

*Climacteris picumnus victoriae* is endemic to south-eastern Australia from the Grampians in western Victoria, through central NSW to the Bunya Mountains in Queensland, and from the coast to the inland slopes of Great Dividing Range. In NSW the western boundary of the range runs approximately through Corowa, Wagga Wagga, Temora, Forbes, Dubbo and Inverell (DCCEEW, 2023). It is found in eucalypt woodlands (including Box-Gum, stringybarks or other rough-barked eucalypts) and dry open forest of the inland slopes and plains inland of the Great Dividing Range. It mainly inhabits woodlands dominated with an open grassy understorey, sometimes with one or more shrub species. The species is also found in mallee and River Red Gum (*Eucalyptus camaldulensis*). They are also found in forest bordering wetlands with an open understorey of acacias, saltbush, lignum, cumbungi and grasses. They are usually not found in woodlands with a dense shrub layer (DCCEEW, 2023).

Fallen timber is an important habitat component for foraging. They spend much more time foraging on the ground and fallen logs than other treecreepers, and nest and roost in naturally occurring tree cavities of eucalypts (DCCEEW, 2023).

The presence of *Climacteris picumnus victoriae* in the subject land has been assumed based on associated PCT 277 and PCT 76, and the presence of potential habitat. Of the total 2.00 ha of potential habitat proposed to be removed, 0.33 ha is woodland, and 1.67 ha is grassland. 1.85 ha of PCT 277 is present as low condition grassland, moderate-high condition woodland with native dominated understorey, and moderate condition woodland with exotic understorey due to past and present land use and related agricultural activities. PCT 76 is present as 0.15 ha or low condition grassland. No targeted surveys have been undertaken for this species; however the area of impact is adjacent to a current access track, which has previously been disturbed through track construction, edge effects and regular agricultural activities such as grazing and machinery movement. There is very little retained fallen timber within the subject land, minimising good quality foraging habitat within the subject land.

The most recent record of this species was observed in 2007 in Livingstone National Park, approximately 6.5 km from the subject land. There are 114 records of this species observed within 10 km of the subject land (in Livingstone National Park) from 1993 to 2007.

An important population is not considered to occur in the subject land, however it is important to note that an important population is likely present within 7.5 km in Livingstone National Park, based on the number of observed records. Livingstone National Park contains more intact and structurally diverse vegetation unlike the vegetation in the Subject Land.

**Therefore, it is unlikely that the proposed action would lead to a long-term decrease in the size of an important population of the species.**

**b) Reduce the area of occupancy of an important population**

In the subject land, 1.82 ha of woodland would be retained as part of the project, with an additional 30 ha in the locality. Woodland includes moderate-high condition areas with native dominated understorey, and moderate condition areas with exotic understorey due to past and present land use and related agricultural activities. In the study area (subject land), 1.29 ha of PCT 76 and 5.08 ha of PCT 277 are retained by the project.

The proposed action would reduce potential woodland habitat by 0.33 ha and grassland habitat by 1.67 ha. With the abundance of retained woodland in the locality, it is unlikely the reduction of 0.33 ha of potential habitat would significantly reduce the area of occupancy for the species. This also considers current land use which includes pastoral development and stock, resulting in grazing pressure, trampling and browsing. No individuals or population of this species have been observed in the subject land. **Considering these factors, the proposed project is not likely to reduce the area of occupancy of an important population.**

**c) Fragment an existing important population into two or more populations**

This species is highly mobile and has a wide distribution, and its movement would not likely be impacted through the installation of a BESS. It has not been recorded within the subject land and no known important populations are considered to occur within the subject land or assessment area. It is unlikely that increasing the existing access track from eight metres to 23 m at the widest points would significantly impact any important *C. picumnus victoriae* populations. In addition, potential retained habitat within the subject land consists of 4.55 ha of grassland and 1.82 ha of woodland. Therefore, **it is unlikely that the proposed action will fragment an existing important population into two or more populations.**

**d) Adversely affect habitat critical to the survival of a species**

Habitat critical to the survival of the *C. picumnus victoriae* includes areas that have:

- Relatively undisturbed grassy woodland with native understorey
    - Habitat structure should be quite open at ground level so that birds are able to feed on or near the ground and maintain vigilance against predators.
    - The required degree of openness is mostly likely to be created by moderate levels of disturbance by fire and/or grazing.
- large living and dead trees which are essential for roosting and nesting sites and for foraging;
- fallen timber which provides essential foraging habitat and;
- hollows in standing dead or live trees and tree stumps are also essential for nesting.

(DCCEEW, 2023)

Habitat critical to the survival should not be cleared, fragmented or degraded. No critical habitat for this species is listed on the Register of Critical Habitat (DCCEEW, 2014). However, based on the above, habitat critical to the survival of the species is present and would be removed as part of the proposed action. Therefore, **the proposed action is likely to adversely affect 2.00 ha of habitat critical to the survival of the species, however the extent is minor in the context of the locality.**

**e) Disrupt the breeding cycle of an important population**

Breeding for this species occurs from July to February across its range, however there is not considered to be an important population within the subject land. **Therefore, it is unlikely the proposed action would disrupt the breeding cycle of an important population.**

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

Habitat loss is a key threat to *C. picumnus victoriae* (DCCEEW, 2023). While the proposed work would remove 0.33 ha of woodland (including five Hollow-Bearing Trees (HBTs)) and 1.67 ha of grassland, 6.37 ha of potential habitat would be retained in the subject land. Within the locality, approximately 30 ha of adjacent suitable habitat (woodland) is being retained, in addition to 20 HBTs within the subject land.

**Therefore, it is unlikely the that proposed work would modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.**

**g) Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat**

The proposed action has the potential to contribute to the spread of invasive weed species in the subject land through the transfer and introduction of plant material and soil on machinery. Any removal of native plant species also presents opportunities for invasive species to establish where ground cover is exposed. The implementation of appropriate biosecurity practices will assist to prevent and control these impacts. With the implementation of these mitigation measures, the proposal is not considered likely to exacerbate this impact to the point that it would constitute a substantial reduction in the quality or integrity of the species habitat within the subject land.

A key threat to this species is predation from feral cats *(Felis catus)* and the European Red Fox *(Vulpes vulpes)* (DCCEEW, 2023). The European Red Fox is currently present within the subject land. The proposed project is considered unlikely to generate an increase in invasive fauna species harmful to the species, such as feral cats or foxes, above what is currently present. **The project is not considered likely to result in invasive species becoming established in potential *C. picumnus victoriae* habitat.** Additionally, *C. picumnus victoriae* has not been recorded within the subject land or wider locality (BioNet, 2025).

**h) Introduce disease that may cause the species to decline, or**

*C. picumnus victoriae* is not at risk of any known diseases (DCCEEW, 2023). There is a risk that diseases could be introduced to the subject land via machinery, vehicles, and materials during construction and operation. With the implementation of the recommended mitigation measures, **the proposal is unlikely to result in the introduction of any disease that may cause these species to decline.**

**i) Interfere substantially with the recovery of the species.**

Although no Recovery Plan currently exists for *C. picumnus victoriae*, its Conservation Advice lists a range of conservation and management priorities, including the following:

- *Cease all land clearing of habitat critical of the survival of the species*
- *Undertake revegetation, using a diverse mix of locally appropriate native species, focussing on expanding and connecting areas of existing habitat or widening wildlife corridors wherever possible. Where appropriate:*
    - *Replace cohorts of trees where they have been removed from the landscape, particularly in areas adjacent to and connecting woodland remnants.*
    - *Establish new habitat patches in areas where native vegetation cover is lacking.*
    - *Ensure ground cover is patchy with open areas for ground foraging*
    - *Target the productive lower parts of the landscape, especially areas adjacent to streams, which may provide important drought refuges. To maximise these benefits, riparian plantings should be at least 50 m wide.*
- *Promote ecological management and connectivity of woodland remnants on public and private land.*

- *Ensure populations remain connected. Avoid gaps greater than 100 m between trees (either between scattered paddock trees or in linear corridors). Eliminate gaps through revegetation, either corridors or stepping stone plantings, focusing on important movement pathways.*
- *Promote appropriate management of flow regimes in floodplains including initiatives to deliver water to icon sites on the Murray River, some of which may benefit this subspecies.*

(DCCEEW, 2023)

In addition, 6.37 ha of potential habitat would remain within the subject land, as well as approximately 30 ha of woodland within the locality (including 20 HBTs). Total potential habitat retained within the locality is 171.52 ha, therefore removing 1.15% of potential habitat within the locality. This also considers that there are no species records within the subject land (BioNet, 2025). Considering these factors**, it is unlikely the impacts from the proposed action will substantially interfere with the recovery of the species.**

**j) Conclusion.**

Although the proposed action includes removal of habitat critical to the survival of *C. picumnus victoriae* through clearing of 2.00 ha of potential foraging and breeding habitat, impacts are minor in the context of the locality. It is not likely to reduce the area of occupancy of an important population, lead to a long-term decrease in the size of a population, or fragment an existing important population into two or more populations. The 1.67 ha of low condition grassland in combination with 0.33 ha of woodland proposed to be cleared is unlikely to remove or decrease the availability of habitat to the extent that the species is likely to decline. The proposed action is not likely to disrupt the breeding cycle of an important population or interfere substantially with the recovery of the species. With standard biosecurity measures in place, it is unlikely that the project would introduce disease or result in the introduction or spread of invasive species suitable habitat. The approximate 6.37 ha of adjacent suitable habitat being retained within the subject land, including 20 HBTs, would be sufficient for foraging and breeding for *C. picumnus victoriae* if it were to occupy the area. In addition, approximately 30 ha of woodland would be retained within the locality, as well as a total native vegetation area of 171.52 ha as potential habitat.

Mitigation measures are recommended to minimise impacts to this species and include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation
- Clear delineation of vegetation to be cleared or retained
- Marking of Tree Protection Zones (TPZs) during clearing phase of project

Considering the above factors, and with appropriate mitigation measures in place, **it is unlikely that the proposed action will have a significant impact on *C. picumnus victoriae***.

**Diamond Firetail *(Stagonopleura guttata)***

An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:

**a) Lead to a long-term decrease in the size of an important population of a species**

*The MNES Significant impact guidelines 1.1 states that an 'important population' is a population that is necessary for a species' long-term survival and recovery. This may include populations identified as such in recovery plans, and/or that are:*

- *key source populations either for breeding or dispersal*
- *populations that are necessary for maintaining genetic diversity, and/or*
- *populations that are near the limit of the species range*.

The presence of *Stagnopleura guttata* in the subject land has been assumed based on the presence of associated PCTs and suitable habitat. There are no known records within the Subject Land however targeted surveys during the breeding season have not been undertaken.

*S. guttata* occurs from south-east Queensland to the Eyre Peninsula in South Australia, and about 300 km inland from the sea. They occur in eucalypt, acacia or casuarina woodlands, open forests and other lightly timbered habitats, including farmland and grassland with scattered trees, preferring areas with very low tree density, few large logs, and little litter cover but high grass cover (DCCEEW, 2023). The species appears to be sedentary, however may move locally, and flocks are usually between 5 to 40 individuals. *S. guttata* is predominantly a ground forager, feeding on ripe and partly-ripe grass and herb seeds and green leaves, and on insects (particularly during the breeding season) (DCCEEW, 2023).

The presence of *S. guttata* in the subject land has been assumed based on associated PCT 277 and PCT 76, and the presence of potential habitat. Of the total 2.00 ha of potential habitat proposed to be removed, 0.33 ha is woodland, and 1.67 ha is low condition grassland. 1.85 ha of PCT 277 is present as low condition grassland, moderate-high condition woodland with native dominated understorey, and moderate condition woodland with exotic understorey due to past and present land use and related agricultural activities. PCT 76 is present as 0.15 ha of low condition grassland. No targeted surveys have been undertaken for this species; however the area of impact is adjacent to a current access track, which has previously been disturbed through track construction, edge effects and regular agricultural activities such as grazing and machinery movement.

As part of the proposal, the action would impact potential habitat including 2.00 ha as potential foraging and breeding habitat. Within the subject land, 6.37 ha of potential habitat would be retained, and 171.52 ha of potential habitat retained within the locality. There are no records of this species within the subject land or within 10 km of the subject land (BioNet, 2025).

In consideration of the above factors**, an important population is not considered to occur in the subject land and the proposed action is not likely to result in a long-term decrease in the size of an important *S. guttata* population.**

**b) Reduce the area of occupancy of an important population**

One of the key attributes that classifies a population as being important and necessary for a species' long-term survival and recovery include 'key source populations either for breeding or dispersal'.

According to the Conservation Advice for *S. guttata* (DCCEEW, 2023), the area of occupancy for the whole population of the species is approximately 25,000km$^2$. This is based on the number of 2 x 2km squares within which they have been recorded since 1990 (DCCEEW, 2023). The proposed action will impact 2.00 ha of potential suitable habitat for the species, which is approximately 0.02km$^2$, therefore reducing its

potential area of occupancy by < 0.001 %. An important population is also not considered to occur within the subject land. Therefore, the proposed action is unlikely to reduce the area of occupancy of an important population.

**c) Fragment an existing important population into two or more populations**

An important population of *S. guttata* is not considered to occur within the Subject Land and therefore is unlikely to be fragmented into two or more populations. This species is generally sedentary and has a wide distribution, and would not be likely to be impacted through the installation of a BESS. It is unlikely that increasing the existing access track from eight metres to 23 m at the widest points would significantly impact the species. In addition, potential retained habitat within the subject land consists of 4.55 ha of grassland and 1.82 ha of woodland. Therefore, **it is unlikely that the proposed action will fragment an existing important population into two or more populations.**

**d) Adversely affect habitat critical to the survival of a species**

Conservation Advice for *S. guttata* lists the following as habitat critical to the survival of the species:

- Areas of eucalypt, acacia or casuarina woodlands, open forests and other lightly timbered habitats
- Areas of low tree density, few large logs, and little litter cover but high grass cover for foraging, roosting and breeding
- Drooping she-oak (*Allocasuarina verticillata*) within the Mt Lofty Ranges.

(DCCEEW, 2023)

No habitat critical to the survival of this species is listed on the Register of Critical Habitat (DCCEEW, 2014).

Habitat critical to the survival should not be cleared, fragmented or degraded. No critical habitat for this species is listed on the Register of Critical Habitat (DCCEEW, 2014). However, based on the above description, habitat critical to the survival of the species is present and would be removed as part of the proposed action. Therefore, the proposed action is likely to adversely affect 2.00 ha of habitat critical to the survival of the species, however the extent is minor in the context of the locality.

**e) Disrupt the breeding cycle of an important population**

An important population of *S. guttata* is not considered to occur within the Subject Land and therefore the proposal is unlikely to have a disruption to the breeding cycle.

*S. guttata* breeds between August and January, in nests that are bottle shaped and made of green grass blades and stems lined with fine grasses and feathers. Nests are often built into the base of a large stick-nest of a bird of prey such as a Wedge-tailed Eagle (*Aquila audax*) to safeguard the eggs. Nests are also built among the prickly foliage of shrubs such as hakeas, rose bushes and boxthorn. One clutch per season is laid, comprising of 4-5 eggs, and are incubated by both the male and female (DCCEEW, 2023). None of these features, large stick nests or shrubs occur within the subject land.

**Therefore, the proposed action is unlikely to disrupt the breeding cycle of an important population.**

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

Habitat loss is a key threat to *S. guttata* (DCCEEW, 2023). While the proposed work would remove 0.33 ha of woodland (including five Hollow-Bearing Trees (HBTs)) and 1.67 ha of grassland, 6.37 ha of potential

habitat would be retained in the subject land. Within the locality, approximately 30 ha of adjacent suitable habitat (woodland) is being retained, in addition to 20 HBTs within the subject land.

**Therefore, it is unlikely the that proposed work would modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.**

**g) Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat**

The Conservation Advice for *S. guttata* (DCCEEW, 2023) lists habitat degradation by overgrazing from rabbits (*Oryctolagus cuniculus*) as a threat to the species. Additionally, introduced predatory fauna species such as cats (*Felis catus*) and foxes (*Vulpes vulpes*) which may opportunistically prey on this species already occur within the locality. Foxes are currently present within the subject land.

An additional threat to the species is invasive weed species, specifically exotic annual grasses, which have the ability to change the floristic and structural characteristics of habitat. It is not predicted that the proposed action would result in an increase of the presence of these invasive species.

The proposed project has the potential to contribute to the spread of invasive species, mainly through the clearing of vegetation, in addition to potential transfer and introduction of both plant material and soil on machinery. Mitigation measures have been recommended in the BDAR to prevent the spread of weeds throughout the project area. With these biosecurity measures in place, **the proposed action is not likely to result in invasive species that are harmful to *S. guttata* becoming established in its habitat.**

**h) Introduce disease that may cause the species to decline, or**

Conservation Advice for *S. guttata* does not identify any diseases that may affect this species (DCCEEW, 2023). There is a risk that diseases could be introduced to the subject land via machinery, vehicles, and materials during construction and operation. With the implementation of the recommended mitigation measures, the **proposal is unlikely to result in the introduction of any disease that may cause these species to decline.**

**i) Interfere substantially with the recovery of the species.**

A recovery plan has been determined to be required for *S. guttata*, however has not been released at the time of this assessment (DCCEEW, 2023). In the interim, Conservation Advice for (DCCEEW, 2023) lists a primary conservation and recovery outcome for the species being:

- Maintain or increase current abundance and distribution.

There are several conservation and management priorities to achieve this. Once of these priorities is to retain and protect woodland, open forest, grassland and mallee habitat from clearing, fragmentation and disturbance (DCCEEW, 2023).However, another priority is to undertake revegetation using a diverse mix of locally appropriate native species, which will produce high quality habitat (DCCEEW, 2023). Although the proposed action would remove 2.00 ha of suitable habitat, 6.37 ha of would remain within the subject land, as well as approximately 30 ha of woodland within the locality (including 20 HBTs). Total potential habitat retained within the locality is 171.52 ha, therefore removing 1.15% of potential habitat within the locality. This also considers that there are no species records within the subject land (BioNet, 2025). **Therefore, the action is unlikely to interfere substantially with the recovery of the species.**

**j) Conclusion.**

Although the proposed action includes removal of habitat critical to the survival of *S. guttata* through clearing of 2.00 ha of potential foraging and breeding habitat, impacts are minor in the context of the

locality. It is not likely to reduce the area of occupancy of an important population, lead to a long-term decrease in the size of a population, or fragment an existing important population into two or more populations. The 1.67 ha of low condition grassland in combination with 0.33 ha of woodland proposed to be cleared is unlikely to remove or decrease the availability of habitat to the extent that the species is likely to decline. The proposed action is not likely to disrupt the breeding cycle of an important population or interfere substantially with the recovery of the species. With standard biosecurity measures in place, it is unlikely that the project would introduce disease or result in the introduction or spread of invasive species suitable habitat. The approximate 6.37 ha of adjacent suitable habitat being retained within the subject land, including 20 HBTs, would be sufficient for foraging and breeding for *S. guttata* if it were to occupy the area. In addition, approximately 30 ha of woodland would be retained within the locality, as well as a total native vegetation area of 171.52 ha as potential habitat.

Mitigation measures are recommended to minimise impacts to this species and include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation
- Clear delineation of vegetation to be cleared or retained
- Marking of Tree Protection Zones (TPZs) during clearing phase of project

Considering the above factors, and with appropriate mitigation measures in place, **it is unlikely that the proposed action will have a significant impact on *Stagnopleura guttata***.

**South-eastern Glossy Black Cockatoo *(Calyptorhynchus lathami lathami)***

An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:

**a) Lead to a long-term decrease in the size of an important population of a species**

*The MNES Significant impact guidelines 1.1 states that an 'important population' is a population that is necessary for a species' long-term survival and recovery. This may include populations identified as such in recovery plans, and/or that are:*

- *key source populations either for breeding or dispersal*
- *populations that are necessary for maintaining genetic diversity, and/or*
- *populations that are near the limit of the species range*.

The presence of *Calyptorhynchus lathami lathami* in the subject land has been assumed based on the presence of associated PCTs and suitable habitat. There are no known records within the subject land. Targeted surveys have not yet been undertaken.

Suitable habitat in the Involved Lots includes habitat consisting of woodland in PCT 277 and PCT 76. *C. lathami lathami* is a species of parrot endemic to south-eastern Australia. They are uncommon but widespread, and can be found from Mitchell (QLD) through eastern NSW and down to East Gippsland (VIC). Distribution is continuous through forested areas of the Great Dividing Range, becoming scattered inland and as far west as the NSW Riverina. Bird in the Riverina region were previously thought to be an isolated population, but are now considered connected to the main population (DCCEEW, 2022).

*C. lathami lathami* almost exclusively feeds on Sheoak seeds (*Allocasuarina* spp. and *Casuarina* spp.), often relying on one or two species within a region (DCCEEW, 2022). No *Casuarina* spp. or *Allocasuarina* spp. were observed within the development footprint or subject land. They nest in large hollows in living and dead eucalypts, with a clutch size of one per breeding season (DCCEEW, 2022). In the subject land, 20 Hollow-Bearing Trees (HBTs) would be retained as part of the project, each containing various hollow sizes. Two hollow-bearing Blakely's Red Gum *(Eucalyptus blakelyi)* trees were identified within the development footprint, with six retained HBTs of *E. blakelyi* in the subject land. Blakely's Red Gum is known to be utilised by the species for nesting (DCCEEW, 2022). Preferred hollows include an entrance diameter of >15 cm with the hollow located at least 8 m above ground level (DCCEEW, 2022). Only one HBT proposed to be removed meets these requirements. Similarly, only one HBT to be retained also meets these nesting requirements.

This species usually breeds in the locality of its foraging habitat and have hollow preference for nesting. There is no foraging habitat identified in the locality or assessment area surrounding the Subject Land. The closest vegetation containing Casuarina feed trees would likely be in Livingstone National Park, around 7.5 km to the Northeast.

*C. lathami lathami* is associated with PCT 277 and PCT 76, found throughout the subject land. *C. lathami lathami* has not been previously recorded in the subject land or development footprint, and there are no BioNet records of the species within 10 km of the subject land (BioNet, 2025).

Based on these factors discussed above, an important population is **not** considered to occur within the Subject Land. There are no recorded sightings within 10 km, and the development footprint and wider subject land is not located in any of the known or predicted distribution areas under its federal threatened species profile (DCCEEW, 2025), there are no key feed trees within or surrounding the Subject Land and breeding habitat is not within the locality of feed trees. The habitat within the Subject land is unlikely to

support a key source population for breeding or dispersal or genetic diversity. The habitat within the Subject Land, if they were to occur is not near the limit of the species range.

In consideration of the above factors**, the proposed action is not likely to result in a long-term decrease in the size of an important population of the *C. lathami lathami*.**

**b) Reduce the area of occupancy of an important population**

The proposed work will remove the potential area of habitat by 0.33 ha through vegetation clearing PCT 277, including one suitable HBT with preferred nesting requirements. *C. lathami lathami* nests close to, or within foraging habitat, and therefore unlikely to occupy the subject land (DCCEEW, 2022). The development footprint and locality is also outside of the known or predicted distribution areas under its federal threatened species profile (DCCEEW, 2025).

As no important population of *C. lathami lathami* is considered to occur within the Subject Land, **it is unlikely that the proposed work will reduce the area of occupancy of an important population.**

**c) Fragment an existing important population into two or more populations**

As no important population of *C. lathami lathami* is considered to occur within the Subject Land, **it is unlikely that the proposed project will fragment an existing important population into two or more populations**.

**d) Adversely affect habitat critical to the survival of a species**

No habitat critical to the survival of this species is listed on the Register of Critical Habitat (DCCEEW, 2025). There is no existing recovery plan for this species (DCCEEW, 2025).

In its Approved Conservation Advice, habitat critical to the survival of *C. lathami lathami* includes all foraging and breeding habitat (DCCEEW, 2022). This species almost exclusively feeds on Sheoak seeds (*Allocasuarina* spp. and *Casuarina* spp.), which were not observed within the development footprint or subject land. It has been concluded that the development footprint contains habitat critical to the survival of the species in the form of nesting habitat. Blakely's Red Gum is known to be utilised by *C. lathami lathami* for nesting (DCCEEW, 2022), which occurs throughout the subject land. One hollow-bearing Blakely's Red Gum *(Eucalyptus blakelyi)* tree was identified within the development footprint, with six trees of the same species in the subject land. However, due to the minimum hollow entrance diameter of >15 cm and the hollow located at least 8 m above ground level, only one HBT proposed to be removed meets these requirements. Similarly, only one HBT to be retained also meets these requirements. As there is no foraging habitat nearby, nesting habitat within the subject land would be of low quality.

Habitat loss is listed as a Key Threatening Process for this species, specifically from clearing. In consideration of the above factors, **the proposed action would adversely affect habitat critical to the survival of the *C. lathami lathami.*** Due to the degraded condition of the land as a result of agricultural use, this habitat is of low quality and is unlikely to be relied upon by the species. In addition, no foraging habitat is nearby. Targeted surveys would be undertaken in Spring to ensure no inadvertent impacts would occur to potential breeding hollows for this species.

**e) Disrupt the breeding cycle of an important population**

The proposed action includes clearing of one HBT that meet the requirements of nesting trees for *C. lathami lathami*. Breeding for this species usually occurs between April and August, with a clutch size of one per breeding season (DCCEEW, 2022).

*C. lathami lathami* prefers Hollow-Bearing Trees (HBTs) that are located in close proximity to *Allocasuarina* spp. or *Casuarina* spp., which are absent from the subject land.

As no important population of *C. lathami lathami* is considered to occur within the Subject Land, **it is unlikely that the proposed project would disrupt the breeding cycle of an important population.**

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

The proposed work will result in the clearance of 0.33 ha of woodland as potential suitable habitat within the development footprint including one suitable HBT. This is comprised of 0.11 ha of moderate condition woodland with an exotic understorey and 0.22 ha of moderate-high condition woodland with a native dominated understory. Grassland areas are not considered suitable habitat as they do not provide any foraging or breeding habitat.

While the proposed work would remove 0.33 ha of woodland, 86.7% of the total woodland in the subject land would be retained (1.82 ha avoided). In addition, approximately 30 ha of woodland in the locality would not be impacted, including multiple HBTs within the retained vegetation that have the potential to support *C. lathami lathami*. **Therefore, it is unlikely the that proposed work would modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.**

**g) Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat**

The proposed action has the potential to contribute to the spread of invasive weed species in the subject land through the transfer and introduction of plant material and soil on machinery. Any removal of native plant species also presents opportunities for invasive species to establish where ground cover is exposed. The implementation of appropriate biosecurity practices will assist to prevent and control these impacts. With the implementation of these mitigation measures, the proposal is not considered likely to exacerbate this impact to the point that it would constitute a substantial reduction in the quality or integrity of the species habitat within the subject land.

The proposed project is considered unlikely to generate an increase in invasive fauna species harmful to the species, such as feral cats *(Felis catus)* and the European Red Fox *(Vulpes vulpes),* above what is currently present. The subject land is currently used for agricultural activities, with the existing track, storage facilities and livestock currently providing opportunities for movement, refuge, and food in the Subject Land. **The project is not considered likely to exacerbate this impact to the point that it would constitute a substantial reduction in the quality or integrity of the South-eastern Glossy Black species habitat within the subject land.**

**h) Introduce disease that may cause the species to decline, or**

*C. lathami lathami* is at risk of Psittacine Beak and Feather Disease (PBFD), a potentially fatal disease caused my psittacine circovirus. The disease is typically transferred between adults, nestlings and contaminated nest hollows. Despite this, the threat of PBFD is low for this species in comparison to other threats it faces.

There is a risk that diseases could be introduced to the subject land via machinery, vehicles, and materials during clearing, construction and operation. With the implementation of the recommended mitigation measures such as standard biosecurity controls and vehicle wash downs prior to entering and departing site, **the proposal is unlikely to result in the introduction of any disease that may cause the species to decline.**

**i) Interfere substantially with the recovery of the species.**

Approved Conservation Advice for the species describes that actions removing habitat critical to the survival of *C. lathami lathami* would interfere with the recovery of the species and reduce the area of

occupancy of the species, and impacts must be avoided. It is also described that it is important to retain both breeding and foraging habitats.

Since the actions associated with the proposed project cannot be avoided, **the proposed action would therefore interfere with the recovery of *C. lathami lathami.*** Although there is no Recovery Plan for this species (DCCEEW, 2025), the NSW Government have adopted a strategy to save the species by specifying priority management areas across the state and creating a list of actions to combat key threats (NSW DPE, 2023).

**j) Conclusion.**

Although the proposed action includes removal of habitat critical to the survival of *C. lathami lathami*, the clearing of 0.33 ha of woodland is not likely to reduce the area of occupancy of an important population or fragment any existing important populations into two or more populations. The proposal is unlikely to remove or decrease the availability of habitat to the extent that the species is likely to decline. Of the 20 HBTs being retained, there are multiple HBTs with potential to support the species with growth over time. At present, one HBT to be retained meets the criteria for suitable breeding habitat, while one HBT proposed to be removed also meets the criteria.

With standard biosecurity measures in place, it is unlikely that the project would introduce disease or result in the introduction or spread of invasive species suitable habitat. Mitigation measures include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation
- Clear delineation of vegetation to be cleared or retained
- Marking of Tree Protection Zones (TPZs) during clearing phase of project

Considering the above factors, and with appropriate mitigation measures in place, **it is unlikely that the proposed action will have a significant impact on *C. lathami lathami***.

**Southern Whiteface *(Aphelocephala leucopsis)***

An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:

**a) Lead to a long-term decrease in the size of an important population of a species**

*The MNES Significant impact guidelines 1.1 states that an 'important population' is a population that is necessary for a species' long-term survival and recovery. This may include populations identified as such in recovery plans, and/or that are:*

- *key source populations either for breeding or dispersal*
- *populations that are necessary for maintaining genetic diversity, and/or*
- *populations that are near the limit of the species range*.

The presence of *Aphelocephala leucopsis* in the subject land has been assumed based on the presence of potential suitable habitat. There is one record of this species within the locality, observed approximately 7.8 km in proximity from the Subject Land in 2007, in Livingstone National Park. There are no known records within the Subject Land however targeted surveys during the breeding season have not been undertaken.

*A. leucopsis* is known to occur across most of mainland Australia south of the tropics and is considered a sedentary species. Within NSW, the species occurs west of the Great Dividing Range (DCCEEW, 2023). *A leucopsis* usually occur in habitat dominated by acacias or eucalypts on ranges, foothills and lowlands, and plains. They forage almost exclusively on the ground, favouring habitat with low tree densities and an herbaceous understorey litter cover (DCCEEW, 2023).

The presence of *A. leucopsis* in the subject land has been assumed based on associated PCT 277 and PCT 76, and the presence of potential habitat. Of the total 2.00 ha of potential habitat proposed to be removed, 0.33 ha is woodland, and 1.67 ha is grassland. 1.85 ha of PCT 277 is present as low condition grassland, moderate-high condition woodland with native dominated understorey, and moderate condition woodland with exotic understorey due to past and present land use and related agricultural activities. PCT 76 is present as 0.15 ha or low condition grassland. No targeted surveys have been undertaken for this species; however the area of impact is adjacent to a current access track, which has previously been disturbed through track construction, edge effects and regular agricultural activities such as grazing and machinery movement. There are no records of this species within the subject land or within 10 km of the subject land (BioNet, 2025)

As part of the proposal, the action would impact potential habitat including 2.00 ha as potential foraging and breeding habitat. Within the subject land, 6.37 ha of potential habitat would be retained, and 171.52 ha of potential habitat retained within the locality.

In consideration of the above factors**, an important population is not considered to occur and the proposed action is not likely to result in a long-term decrease in the size of an important *A. leucopsis* population.**

**b) Reduce the area of occupancy of an important population**

According to Conservation Advice for *A. leucopsis*, the area of occupancy for the whole population of the species is approximately 80,000km$^{2.}$ This is based on the number of 2 x 2 km squares within which they have been recorded since 1990 (DCCEEW, 2023). No important populations are considered to occur within the subject land. Therefore, the removal of 2.00 ha of potential habitat would reduce its area of occupancy by less than 0.01%. **Therefore, the proposed action is unlikely to reduce the area of occupancy of an important population.**

**c) Fragment an existing important population into two or more populations**

An important population of *A. leucopsis* is not considered to occur within the Subject Land and therefore is unlikely to be fragmented into two or more populations. This species is generally sedentary and has a wide distribution, and would not be likely to be impacted through the installation of a BESS. It is unlikely that increasing the existing access track from eight metres to 23 m at the widest points would significantly impact on movement of the species. In addition, potential retained habitat within the subject land consists of 4.55 ha of grassland and 1.82 ha of woodland. Therefore, **it is unlikely that the proposed action will fragment an existing important population into two or more populations.**

**d) Adversely affect habitat critical to the survival of a species**

Conservation Advice for *A. leucopsis* (DCCEEW, 2023) lists the following as habitat critical to the survival of the species:

- Relatively undisturbed open woodlands and shrublands with an understorey of grasses or shrubs or both
- Habitat with low tree densities and an herbaceous understorey little cover which provides essential foraging habitat
- Living and dead trees with hollows and crevices which are essential for roosting and nesting.

Habitat critical to the survival should not be cleared, fragmented or degraded. No critical habitat for this species is listed on the Register of Critical Habitat (DCCEEW, 2014). However, based on the above description, habitat critical to the survival of the species is present and would be removed as part of the proposed action. Therefore, the proposed action is likely to adversely affect 2.00 ha of habitat critical to the survival of the species, however the extent is minor in the context of the locality.

**e) Disrupt the breeding cycle of an important population**

*A. leucopsis* breeds from July to October, however this timing can be affected by climatic conditions in certain areas. The species builds large, bulky domed nests of grass, bark and roots within a hollow or crevice, although sometimes a low bush may be used. Nesting is often observed to involve pairs, however, there have been occurrences of co-operative breeding with up to four adults participating in chick rearing (DCCEEW, 2023). An important population is not considered to occur within the subject land, **therefore the proposed action is not likely to disrupt the breeding cycle of an important population.**

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

Habitat loss is a key threat to *A. leucopsis* (DCCEEW, 2023). While the proposed work would remove 0.33 ha of woodland (including five Hollow-Bearing Trees (HBTs)) and 1.67 ha of grassland, 6.37 ha of potential habitat would be retained in the subject land. Within the locality, approximately 30 ha of adjacent suitable habitat (woodland) is being retained, in addition to 20 HBTs within the subject land.

**Therefore, it is unlikely the that proposed work would modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.**

**g) Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat**

Conservation Advice (DCCEEW, 2023) for *A. leucopsis* does not list any invasive species as a key threat. The proposed project has the potential to contribute to the spread of invasive species, mainly through the

clearing of vegetation, in addition to potential transfer and introduction of both plant material and soil on machinery. Mitigation measures have been recommended in the BDAR to prevent the spread of weeds throughout the project area. With these biosecurity measures in place, **the proposed action is not likely to result in invasive species that are harmful to *A. leucopsis* becoming established in its habitat.**

**h) Introduce disease that may cause the species to decline, or**

Conservation Advice for *A. leucopsis* does not identify any diseases that may affect the species (DCCEEW, 2023). There is a risk that diseases could be introduced to the subject land via machinery, vehicles, and materials during construction and operation. With the implementation of the recommended mitigation measures, the **proposal is unlikely to result in the introduction of any disease that may cause these species to decline.**

**i) Interfere substantially with the recovery of the species.**

There is currently no recovery plan for this species, however there are several conservation and recovery actions outlined within the Conservation Advice including (DCCEEW, 2023):

- Cease all land clearing of habitat critical to the survival of *A. leucopsis*.
- Secure occupied habitat patches in areas where the birds have a patchy distribution from further degradation and loss.
- Undertake revegetation, using a diverse mix of locally appropriate native species, focussing on expanding and connecting areas of existing habitat or widening wildlife corridors wherever possible. Where appropriate:
  - Establish new habitat patches in areas where native vegetation cover is lacking.
  - Target the productive lower parts of the landscape which may provide important drought refuges. To maximise these benefits, riparian plantings should be at least 50m wide.
- Promote ecological management and connectivity of woodland remnants on public and private land.
- Promote the uptake of agriculture and biodiversity stewardship programs to retain Southern Whiteface habitat.

Although the proposed action would remove 2.00 ha of suitable habitat, 6.37 ha of would remain within the subject land, as well as approximately 30 ha of woodland within the locality (including 20 HBTs). Total potential habitat retained within the locality is 171.52 ha, therefore removing 1.15% of potential habitat within the locality. This also considers that there are no species records within the subject land (BioNet, 2025). **Therefore, the action is unlikely to interfere substantially with the recovery of the species.**

**j) Conclusion.**

Although the proposed action includes removal of habitat critical to the survival of *A. leucopsis* through clearing of 2.00 ha of potential foraging and breeding habitat, impacts are minor in the context of the locality. It is not likely to reduce the area of occupancy of an important population, lead to a long-term decrease in the size of a population, or fragment an existing important population into two or more populations. The 1.67 ha of low condition grassland in combination with 0.33 ha of woodland proposed to be cleared is unlikely to remove or decrease the availability of habitat to the extent that the species is likely to decline. The proposed action is not likely to disrupt the breeding cycle of an important population or interfere substantially with the recovery of the species. With standard biosecurity measures in place, it is unlikely that the project would introduce disease or result in the introduction or spread of invasive species suitable habitat. The approximate 6.37 ha of adjacent suitable habitat being retained within the subject

land, including 20 HBTs, would be sufficient for foraging and breeding for *S. guttata* if it were to occupy the area. In addition, approximately 30 ha of woodland would be retained within the locality, as well as a total native vegetation area of 171.52 ha as potential habitat.

Mitigation measures are recommended to minimise impacts to this species and include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation
- Clear delineation of vegetation to be cleared or retained
- Marking of Tree Protection Zones (TPZs) during clearing phase of project

Considering the above factors, and with appropriate mitigation measures in place, **it is unlikely that the proposed action will have a significant impact on *A. leucopsis***.

**Superb Parrot *(Polytelis swainsonii)***

An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:

**a) Lead to a long-term decrease in the size of an important population of a species**

*The MNES Significant impact guidelines 1.1 states that an 'important population' is a population that is necessary for a species' long-term survival and recovery. This may include populations identified as such in recovery plans, and/or that are:*

- *key source populations either for breeding or dispersal*
- *populations that are necessary for maintaining genetic diversity, and/or*
- *populations that are near the limit of the species range*.

The presence of *Polytelis swainsonii* in the subject land has been assumed based on the presence of associated PCTs and suitable habitat. There are no known records within the Subject Land however targeted surveys during the breeding season have not yet been undertaken.

Potential suitable habitat in the Involved Lots includes habitat consisting of grassland and woodland. *P. swainsonii* is associated with PCT 76 and PCT 277, which was identified within the subject land.

Within the development footprint, 0.33 ha of potential woodland habitat for this species is proposed to be removed as part of the project. This includes five hollow-bearing trees, of which three are Yellow Box and two are Blakely's Red Gum. Within the subject land, five hollow-bearing Yellow Box and six Blakely's Red Gum trees would be retained. *P. swainsonii* nests in trees with an average tree height ranging from 12 to 24 m, and a diameter at breast height of 113 cm (DAWE, 2022). They have also been observed to utilise hollows with the following hollow measurements:

- Minimum entrance diameter of eight to 12 cm
- Depth of 59-112 cm
- Floor diameter of 15-22 cm
- Branch or stem diameter of 36-49 cm

(Stojanovic, et al., 2020)

Due to the hollow requirements of *P. swainsonii*, potential nesting and breeding habitat is minimal within the subject land. Although internal chambers of hollows in the subject land were not explored, woodland areas were primarily regenerating, with most trees < 113 cm in diameter at breast height.

There are three main breeding areas for *P. swainsonii*, none of which occur within a 10 km radius of the subject land. In the Riverina, this species nests in loose colonies in large, living or dead trees with many hollow branches, typically near a watercourse. On the inland slopes, they use at least six species of eucalypts. They also have an assumed reliance on White Box and Yellow Box trees. Most nest sites are within 10 km of Box-Gum Woodland, and are sometimes within it. After breeding, they use a variety of woodland types and other habitat types, and mostly feed on the ground (Threatened Species Scientific Committee, 2016).

The core breeding areas of *P. swainsonii* are found along the Murray and Edward Rivers, Murrumbidgee River and in a triangular area bounded by Molong, Yass and Young (DCCEEW, 2025). The closest core breeding area is located along the Murrumbidgee River, where the closest possible breeding point is approximately 30 km North from the subject land. There are no records of this species within the subject land, or within 10 km of the subject land (BioNet, 2025).

An important population is not considered to occur in the subject land based on its 30 km distance to the nearest core breeding area and lack of records within 10 km of the subject land. It is important to note that there are multiple records of this species occurring as close as 14 km from the subject land, recorded in 2021 (BioNet, 2025).

**Therefore, it is unlikely that the proposed action would lead to a long-term decrease in the size of an important population of the species.**

**b) Reduce the area of occupancy of an important population**

One of the key attributes that classifies a population as being important and necessary for a species' long-term survival and recovery include 'key source populations either for breeding or dispersal'.

The core breeding areas of *P. swainsonii* are found along the Murray and Edward Rivers, Murrumbidgee River and in a triangular area bounded by Molong, Yass and Young (DCCEEW, 2025). The closest core breeding area is located along the Murrumbidgee River, approximately 30 km North from the subject land. Birds may forage up to 10 km from nesting sites, primarily in Box-Gum Grassy Woodland (Threatened Species Scientific Committee, 2016).

In addition, SVTM shows that there is approximately 61.25 ha of PCT 79 within 1500 m of the subject land, providing good connectivity along the creek (NSW DCCEEW, 2020). This is located north of the subject land, with the PCT comprising River Red Gum shrub/grass riparian tall woodland or open forest wetland. In the Riverina, this species breeds in River Red Gum forests and woodland, typically close to watercourses (DCCEEW, 2025).As the subject land falls outside of core breeding areas and over-wintering areas, with an abundance of preferred habitat in the wider locality, **it is unlikely that the proposed works would reduce the area of occupancy of an important population.**

**c) Fragment an existing important population into two or more populations**

*P. swainsonii* has not been recorded within the subject land and no known important populations are considered to occur within the subject land or assessment area. Potential retained habitat within the subject land consists of 5.08 ha of PCT 277 and 1.29 ha of PCT 76. 0.33 ha of woodland and 1.67 ha of low condition grassland suitable for this species is proposed to be removed. The existing vegetation within 1500 m buffer is primarily made up of 61.25 ha of PCT 79, which could provide potential habitat for the species. Since this species is highly mobile and has the ability to fly over gaps in woodland canopies, **it is unlikely that the proposed action will fragment an existing important population into two or more populations.**

**d) Adversely affect habitat critical to the survival of a species**

Critical habitat for the Superb Parrot is divided into breeding and foraging habitat. Breeding habitat consists of Riverine forests in the Riverina and Box-gum woodlands in the tablelands and slopes and relies on mature or dead eucalypts, including River Red Gum, Blakely's Red Gum, Grey Box, Red Box and Inland Red Box, with hollows. Foraging habitat critical to the species survival includes Weeping Myall *Acacia pendula* woodlands between the Murrumbidgee and Murray Rivers, River Red Gum forest and box-pine woodland in north-central NSW and River Red Gum, box-pine, box, pine and Boree woodland in the Riverina (Threatened Species Scientific Committee, 2016).

No habitat critical to the survival of this species is listed in its Approved Conservation Advice (Threatened Species Scientific Committee, 2016), or on the Register of Critical Habitat (DCCEEW, 2014).

Although five trees proposed to be removed could provide habitat for the Superb Parrot, the degraded condition of the woodland and surround grassland is not likely to support the permanent occupancy of this species. Therefore, the vegetation within the subject land is not considered habitat critical to the survival of the species. Potential retained habitat within the subject land consists of 5.08 ha of PCT 277 and 1.29 ha of

PCT 76.Within the locality, there is approximately 30 ha of woodland as potential habitat. Therefore, 90% of potential suitable habitat within the locality would be retained**. As a result, it is unlikely that the proposed work would adversely affect habitat critical to the survival of this species.**

**e) Disrupt the breeding cycle of an important population**

Key Biodiversity Areas (KBAs) for this species includes an area of 2,451 km$^2$, with two stretches of core breeding areas along the Murrumbidgee River. One extends from Central Wagga Wagga to about 60 km downstream to around the west end of Berry Jerry State Forest. The other is from Narrandera, downstream to Cumbungi Creek and Lagoon, about 20 km downstream from Benerembah State Forest and also including Cuba, Wilbriggie and Yarradda State Forests. Both components of the KBA include a 10 km buffer zone on either side (DAWE, 2022). The closest core breeding area is approximately 30 km north of the subject land.

The subject land is not within the core breeding area of the species and contains low condition vegetation, with general degradation across the area as a result of agricultural activities. With consideration of these factors, **the proposal is unlikely to disrupt the breeding cycle of an important population.**

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

2.00 ha of potential habitat for *P. swainsonii* occurs within the development footprint. This vegetation, and the surrounding vegetation in the subject land, is in poor to low condition as a result of land use including agricultural related activities. The main identified threats to this species are loss and degradation of habitat, competition for nest hollows, road kills due to vehicle collision, illegal removal of wild birds, psittacine beak and feather disease (PBFD) and climate change (Threatened Species Scientific Committee, 2016). Considering these factors, the potential habitat overall is not likely to support *P. swainsonii*. Given that the project proposes removal of 2.00 ha of potentially suitable habitat that has been significantly modified and disturbed by land use, in combination with lack of records in the assessment area, **the species is not likely to decline as a result of modifying, destroying, removing or decreasing the availability of habitat.**

**g) Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat**

Invasive species that are harmful to *P. swainsonii* becoming established in its habitat include invasive species such as the Common Starling *Sturnus vulgaris* and the introduced Honeybee *Apis mellifera* which compete for hollows as roosting and / or breeding habitat (Threatened Species Scientific Committee, 2016). It is not predicted that the proposed action would result in an increase of the presence of these invasive species.

The proposed project has the potential to contribute to the spread of invasive species, mainly through the clearing of vegetation, in addition to potential transfer and introduction of both plant material and soil on machinery. Mitigation measures have been recommended in the BDAR to prevent the spread of weeds throughout the project area.

Additionally, *P. swainsonii* has not been recorded within the subject land or wider locality and therefore it is unlikely that the proposed work will result in invasive species that are harmful to *P. swainsonii* becoming established in its suitable habitat (BioNet, 2025).

**h) Introduce disease that may cause the species to decline, or**

*P. swainsonii* is at risk of Psittacine Beak and Feather Disease (PBFD), a potentially fatal disease caused by psittacine circovirus. The disease is typically transferred between adults and nestling. The ongoing loss of

nest hollows is likely to intensify competition and use of nest trees, and increase the transmission likelihood of the disease (Threatened Species Scientific Committee, 2016). Despite this, the removal of five Hollow-Bearing Trees (HBTs) within the development footprint, and retaining of 20 HBTs within the subject land, result in a low likelihood of increasing competition, and PBFD.

There is a risk that diseases could be introduced to the subject land via machinery, vehicles, and materials during construction and operation. With the implementation of the recommended mitigation measures, the proposal is unlikely to result in the introduction of any disease that may cause these species to decline.

**i) Interfere substantially with the recovery of the species.**

A Recovery Plan currently exists for *P. swainsonii*. Key objectives in the recovery plan are conservation-focussed, in addition to reducing the effects of climate change and anthropogenic threats on this species (DAWE, 2022).

The conservation actions under Strategy 1 in the Federal Recovery Plan include:

- Identify areas of high conservation significance and habitat critical to the survival of *P. swainsonii*
- Protect and manage critical habitat areas that are not currently managed for nature conservation
- Restore existing and future habitat in strategic locations close to, and within key sites and known movement corridors
- Review and review management priorities, recommendations, planning tools and procedures (as appropriate) as new information becomes available
- Develop agreements with priority local government and government agencies that aim to maintain and/or improve breeding and foraging habitat
- Incorporate *P. swainsonii* conservation priorities into agreements and private land conservation programs
- Examine use of known *P. swainsonii* hollow nests by other species to understand species competition and potential impacts
- Conduct research to evaluate nest box and artificial hollow effectiveness, and strategic hollow enhancement.

(DAWE, 2022)

Considering these factors**, it is unlikely the impacts from the proposed action will substantially interfere with the recovery of the species.** This is due to not only the proposed development footprint being of low condition due to current and historic land use activities, but also due to the abundance of HBTs being retained within the subject land (20 HBTs) that could provide potential habitat. This also considers that there are no species records within the subject land, or within 10 km of the subject land (BioNet, 2025).

**j) Conclusion.**

The proposed action is not likely to lead to a long-term decrease in the size of an important *P. swainsonii* population, reduce its area of occupancy or fragment an existing important population into two or more populations. It is not likely to adversely affect habitat critical to the survival of the species, disrupt the breeding cycle of a population or interfere with the recovery of the species. Due to the degraded condition of the landscape and that multiple key threats already impact the development footprint, the proposed action is not likely to modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. With standard biosecurity protocols in place, the proposed action is not likely to introduce disease that may cause the species to decline, or result in invasive species becoming established in the species' habitat. Recommended mitigation measures include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation.

Considering the above factors, **the proposed action is not likely to have a significant impact on *Polytelis swainsonii*.**

**White-throated Needletail *(Hirundapus caudacutus)***

An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:

**a) Lead to a long-term decrease in the size of an important population of a species**

*The MNES Significant impact guidelines 1.1 states that an 'important population' is a population that is necessary for a species' long-term survival and recovery. This may include populations identified as such in recovery plans, and/or that are:*

- *key source populations either for breeding or dispersal*
- *populations that are necessary for maintaining genetic diversity, and/or*
- *populations that are near the limit of the species range*.

The presence of *Hirundapus caudacutus* in the subject land has been assumed based on the presence of suitable habitat. There are no known records within the Subject Land however targeted surveys during the breeding season have not yet been undertaken.

Approved Conservation Advice for this species states '*In Australia, the White-throated Needletail is mostly aerial, from heights of less than 1 m up to more than 1,000 m above the ground. Although they occur over most types of habitat, they are recorded most often above wooded areas, including open forest and rainforest, and may also fly below the canopy between trees or in clearings. When flying above farmland, they are more often recorded above partly cleared pasture, plantations or remnant vegetation at the edge of paddocks.'* (Threatened Species Scientific Committee, 2019). Potential suitable habitat in the Involved Lots includes habitat consisting of grassland and woodland. *H. caudacutus* is associated with PCT 76 and PCT 277, which was identified within the subject land.

Within the development footprint, 0.33 ha of potential woodland habitat and 1.67 ha of potential grassland habitat for this species is proposed to be removed as part of the project. This includes five Hollow-Bearing Trees (HBTs). While a total of 2.00 ha of potential habitat would be removed, 1.82 ha of woodland (including 20 HBTs) and 4.55 ha of grassland would be retained within the subject land. In addition, approximately 30 ha of woodland would be retained within the locality. 171.52 ha of native vegetation as potential habitat would remain in the locality, thereby reducing its potential habitat in the locality by 1.15%

Important habitat for this species is defined as non-breeding habitat only, in wooded areas (Threatened Species Scientific Committee, 2019). The habitat within the Subject Land is therefore considered important habitat for the species. However, the 1.67 ha of grassland to be removed is in low condition, and 0.33 ha of woodland is in moderate to high conditions.

The species' total population is not known; they do not occur as smaller populations in Australia (DCCEEW, 2025). An important population may occur in the subject land when migrating and foraging. However, due to the small area of potential habitat being cleared in proximity to the wider locality (1.15%) and lack of records within 10 km of the subject land (BioNet, 2025), **it is unlikely that the proposed action would lead to a long-term decrease in the size of an important population of the species.**

**b) Reduce the area of occupancy of an important population**

Within Australia, the population of *H. caudacutus* has not been quantified since meeting the criteria for Vulnerable listing under the EPBC Act <10,000 mature individuals (Threatened Species Scientific Committee, 2019). The species is migratory and is therefore likely to be considered a single population with the Australian distribution estimated to have an area of occupancy of around 126,200km$^2$ (DCCEEW, 2025). Therefore, all occurrences of this species are considered to be part of an important habitat. However, the proposed action would reduce the potential area of occupancy by less than 0.0001%, and there are no known observations within the subject land (BioNet, 2025).

The proposal is likely to impact 2.00 ha of potential foraging habitat, although 171.52 ha would remain within the locality. As the subject land falls outside of core breeding areas and that 98.85% of potential foraging habitat would be retained within the locality, **it is unlikely that the proposed works would reduce the area of occupancy of an important population.**

**c) Fragment an existing important population into two or more populations**

*H. caudacutus* has not been recorded within the subject land or within 10 km of the subject land. Since this species is highly mobile, it is unlikely that the construction of a BESS and associated track widening would further increase fragmentation of the species. Therefore, **it is unlikely that the proposed action will fragment an existing important population into two or more populations.**

**d) Adversely affect habitat critical to the survival of a species**

Critical habitat has not been defined for this species. Therefore, all habitat is considered to be important. Important habitat for this species is associated with generally associated with large tracts of native vegetation, particularly forests (Threatened Species Scientific Committee, 2019).

No habitat critical to the survival of this species is listed in its Approved Conservation Advice (Threatened Species Scientific Committee, 2019), or on the Register of Critical Habitat (DCCEEW, 2014).

Potential retained habitat within the subject land consists of 5.08 ha of PCT 277 and 1.29 ha of PCT 76. 0.33 ha of woodland and 1.67 ha of low condition grassland suitable for this species is proposed to be removed. In the wider locality, 171.52 ha of potential habitat would remain in the landscape. **Therefore, the proposed action is likely to adversely affect habitat critical to the survival of this species.** However, this is considered to be minor in the context of the locality.

**e) Disrupt the breeding cycle of an important population**

This species does not breed within Australia, migrating to and breeding within Asia (Threatened Species Scientific Committee, 2019). No impact to the breeding cycle would occur as a result of the proposed action. The subject land is not within the breeding area of the species. With consideration of these factors, **the proposal is unlikely to disrupt the breeding cycle of an important population.**

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

The proposal is likely to impact 2.00 ha of potential habitat for this species resulting in a long-term decrease in the availability and quality of potential foraging and roosting habitat for this species, however, due to the largely aerial nature of this species and the habitat present not being considered important habitat, it is not expected that the proposal would result in the decline of this species. There would also be 171.52 ha of potential habitat retained within a 1500 m radius of the subject land. Given that the project proposes removal of 2.00 ha of potentially suitable habitat that has been significantly modified and disturbed by land use, in combination with lack of records within the subject land or within 10 km of the subject land, **the species is not likely to decline as a result of modifying, destroying, removing or decreasing the availability of habitat.**

**g) Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat**

Invasive species that are harmful to *H. caudacutus* becoming established in its habitat include the Common Starling (*Sturnus vulgaris)* and Noisy Miner *(Manorina melanocephala)* which compete for roosting habitat, becoming more present and reduce the ability of *H. caudacutus* to become established

within the potential suitable habitat (Threatened Species Scientific Committee, 2019). Likewise, the proposed work is unlikely to increase the presence of feral cats.

The proposed project has the potential to contribute to the spread of invasive species, mainly through the clearing of vegetation, in addition to potential transfer and introduction of both plant material and soil on machinery. Mitigation measures have been recommended in the BDAR to prevent the spread of weeds throughout the project area.

Additionally, *H. caudacutus* has not been recorded within the subject land or wider locality and therefore it is unlikely that the proposed work will result in invasive species that are harmful to *H. caudacutus* becoming established in its suitable habitat (BioNet, 2025).

**h) Introduce disease that may cause the species to decline, or**

There is a risk that diseases could be introduced to the subject land via machinery, vehicles, and materials during construction and operation. With the implementation of the recommended mitigation measures, the proposal is unlikely to result in the introduction of any disease that may cause these species to decline.

**i) Interfere substantially with the recovery of the species.**

No recovery plan has been completed for this species. The following conservation actions are provided within its Approved Conservation Advice (Threatened Species Scientific Committee, 2019):

*Primary conservation actions*

*Work with governments in East Asia to minimise destruction of key breeding habitats. Important habitats in Australia are identified and protected*.

*Conservation and Management priorities*

- *Habitat loss and modifications*
    - *Seek the support of governments in East Asia to protect remaining old growth forests within the breeding range of the species.*
    - *Identify requirements of important habitat in Australia*
    - *Support initiatives to improve habitat management at key sites in Australia.*

*Stakeholder Engagement*

- *Through the bilateral migratory bird consultative meetings with the Governments of Japan, China and the Republic of Korea, raise awareness of the conservation of White-throated Needletail.*
- *Promote the conservation, and raise the profile, of White-throated Needletail through strategic programs and educational products.*
- *Promote the exchange of information between governments, NGOs and communities through use of networks, publications and websites.*

*Survey and Monitoring priorities*

- *Enhance existing White-throated Needletail monitoring programs, such as BirdLife Australia's Swift Monitoring Sites, particularly to improve coverage in under surveyed parts of Australia.*

*Information and Research priorities*

- *Use remote sensing to assess the extent of habitat loss at the breeding grounds.*
- *Undertake work to more precisely assess White-throated Needletail life history, population size, distribution and ecological requirements in Australia.*
- *Improve knowledge about potential threatening processes including the impacts of infrastructure (i.e. wind turbines and overhead wires).*
- *Quantify levels of organochlorines in individuals and prey species.*

The proposal will result in the reduction of potential foraging habitat for this species, which is unlikely to interfere with the recovery of *H. caudacutus* if present within the locality, due to the abundance of suitable potential habitat (171.52 ha) in the locality. The proposal is not likely to interfere substantially with the overall recovery objectives for this species outlined within the Approved Conservation Advice (Threatened Species Scientific Committee, 2019).

This species is highly mobile, and unlikely to be significantly impacted by the reduction of 2.00 ha of potential habitat from the edges of an existing access track. Considering these factors, it is unlikely the impacts from the proposed action will substantially interfere with the recovery of the species. This is due to not only due to the adjacent vegetation as potential habitat, but also considers that there are no species records within the subject land, or within 10 km of the subject land (BioNet, 2025). **Therefore, the proposed action is not likely to substantially interfere with the recovery of the species.**

**j) Conclusion.**

The proposed action is not likely to lead to a long-term decrease in the size of an important *H. caudacutus* population, reduce its area of occupancy or fragment an existing important population into two or more populations. It is not likely to adversely affect habitat critical to the survival of the species, disrupt the breeding cycle of a population or interfere with the recovery of the species. Due to the degraded condition of the landscape and that multiple key threats already impact the development footprint, the proposed action is not likely to modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. With standard biosecurity protocols in place, the proposed action is not likely to introduce disease that may cause the species to decline, or result in invasive species becoming established in the species' habitat. Recommended mitigation measures include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation.

Considering the above factors, **the proposed action is not likely to have a significant impact on *Hirundapus caudacutus*.**

**Yass Daisy *(Ammobium craspedioides)***

An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:

**a) Lead to a long-term decrease in the size of an important population of a species**

*The MNES Significant impact guidelines 1.1 states that an 'important population' is a population that is necessary for a species' long-term survival and recovery. This may include populations identified as such in recovery plans, and/or that are:*

- *key source populations either for breeding or dispersal*
- *populations that are necessary for maintaining genetic diversity, and/or*
- *populations that are near the limit of the species range*.

The presence of *Ammobium craspedioides* in the subject land has been assumed based on the presence of associated PCTs and local records. No known records occur within the subject land, although no targeted surveys have yet been undertaken.

*A. craspedioides* occurs within the Murrumbidgee and Lachlan Natural Resource Management Regions within NSW. It is known from localities in NSW near Crookwell on the southern tablelands, to Wagga Wagga on the south western slopes (DEWHA, 2008). The closest record is a small population that exists in Livingstone National Park, approximately 7.5 km northeast of the subject land. BioNet records show four sightings of individuals – in 1992, 1998, 1999 and 2005 (BioNet, 2025) in Livingstone National Park.

*A. craspedioides* inhabits dry forest, Box-Gum Woodland and secondary grassland derived from clearing of these communities. It grows in association with a range of eucalypts, including: *(Eucalyptus blakelyi, E. bridgesiana, E. dives, E. goniocalyx, E. macrorhyncha, E. mannifera, E. melliodora, E. polyanthemos and E. rubida)*. Two associated eucalypts were observed within the subject land including *E. blakelyi* and *E. melliodora*.

Distribution of this species overlaps with the *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* ecological community, of which 0.22 ha is proposed to be removed from the western area of the subject land.

Although there are existing records of this species observed within 10 km of the subject land (BioNet, 2025), it is unlikely the proposed action would impact the *A. craspedioides* population in Livingstone National Park. The four records are approximately 7.5 km northeast from the subject land, in Livingstone National Park. No targeted surveys have been undertaken for this species; however the area of impact is adjacent to a current access track, which has previously been disturbed through track construction, edge effects and regular agricultural activities such as grazing and machinery movement. This combination of land use activity and threats result in low likelihood of this habitat supporting an *A. craspedioides* population.

Based on these factors discussed above, an important population is **not** considered to occur within the Subject Land. This is due to the absence of key source populations for breeding or dispersal and general absence of population that are necessary for maintaining genetic diversity or near the limit of its range.

**Therefore, the proposed project would not lead to a long-term decrease in the size of an *Ammobium craspedioides* important population.**

**b) Reduce the area of occupancy of an important population**

As part of the proposal, the area of impact of potential habitat for this species is 2.00 ha, including 1.85 ha of PCT 277 and 0.15 ha of PCT 76. The majority of this area (83.7 %) is low condition grassland (1.67 ha), adjacent to existing and frequently utilised access tracks. Approximately 30 ha of woodland would remain within the locality, therefore reducing the extent of woodland by less than two percent.

Due to the degraded condition of grassland in the development footprint and lack of known records within the locality, it is unlikely that an important population occurs within the subject land. **Considering these factors, the proposed project is not likely to significantly reduce the area of occupancy of an important population.**

**c) Fragment an existing important population into two or more populations**

There are no known or existing populations of this species within the subject land, however there is a known important population in the Livingstone National Park, approximately 7.5 km northeast of the subject land (BioNet, 2025). Due to the degraded condition of vegetation along the existing track edge and current grazing pressure, it is unlikely that suitable habitat would appropriately support an important population of this species. **Therefore, the project is unlikely to cause fragmentation of an existing important population into two or more populations of this species.**

**d) Adversely affect habitat critical to the survival of a species**

*The MNES Significant impact guidelines 1.1 states 'Habitat critical to the survival of a species or ecological community' refers to areas that are necessary:*

- *for activities such as foraging, breeding, roosting, or dispersal*
- *for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators)*
- *to maintain genetic diversity and long term evolutionary development, or*
- *for the reintroduction of populations or recovery of the species or ecological community.*

*Such habitat may be, but is not limited to: habitat identified in a recovery plan for the species or ecological community as habitat critical for that species or ecological community; and/or habitat listed on the Register of Critical Habitat maintained by the minister under the EPBC Act*

No habitat critical to the survival of this species is listed in its Approved Conservation Advice (DEWHA, 2008), or on the Register of Critical Habitat (DCCEEW, 2014). There is no existing recovery plan for this species (DCCEEW, 2025).

This development footprint is not considered critical habitat for this species as it is highly disturbed by grazing, herbicides, historic clearing, trampling and other agricultural activities. It is highly unlikely to support any populations of this species due to the nature of its associated land use and degraded condition, therefore is not classified as habitat critical to the survival of the species.

Due to the degraded condition of vegetation along the existing track edge, current grazing pressure and agricultural activities, it is unlikely that the Subject Land would appropriately support the occupancy of this species. **Therefore, the project would not adversely affect habitat critical to the survival of this species.**

**e) Disrupt the breeding cycle of an important population**

There are no known or existing populations or important populations of this species within the subject land. The important population in Livingstone National Park is 7.5 km northeast of the subject land, and is unlikely to be affected by the proposed action. This species flowers during spring, from September to November (BioNet, 2025). Due to the degraded condition of vegetation along the existing track edge and current grazing pressure, it is unlikely that suitable habitat would appropriately support an important

population of this species. **The project is unlikely to disrupt the breeding cycle of an important population of *Ammobium craspedioides*.**

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

The proposed project includes removal of 2.00 ha potential habitat for this species, including 1.85 ha of PCT 277 and 0.15 ha of PCT 76. This species occurs in dry forest, Box-Gum Woodland and secondary grassland derived from clearing of these communities (DEWHA, 2008). The project proposes to remove 0.33 ha of woodland (PCT 277) from the development footprint, of which 0.22 ha is confirmed as the *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* (Box-Gum Woodland) ecological community.

Due to the disturbed condition of the of the grassland in the development footprint and subject land, in combination, it is unlikely that this species would colonise the project area. This considers current land use which includes pastoral development and livestock, resulting in grazing pressure and presence of exotic grasses and weeds. The main identified threats to this species are related to agricultural development and related activities. With the development footprint currently being used for agriculture, resulting in trampling, weed invasion, grazing, mowing and slashing, the potential habitat overall is not likely of suitable quality for the Yass Daisy to colonise. Given that the project proposes removal of less than 2.00 ha of potentially suitable habitat that has been significantly modified and disturbed by past land use, in combination with lack of records in the assessment area, **the species is not likely to decline as a result of modifying, destroying, removing or decreasing the availability of habitat.**

**g) Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat**

One of the listed threats to this species in the approved conservation advice is weed invasion, particularly by Serrated Tussock *(Nassella trichotoma)*, Scotch Thistle *(Onopordum acanthium)* and St John's Wort *(Hypericum perforatum)* (DEWHA, 2008). St John's Wort is common throughout the Subject Land.

The closest known record of this species is 7.5 km northeast of the subject land (BioNet, 2025). With previous disturbance of grassland areas and current presence of weeds such as St John's Wort throughout the subject land, it is unlikely *A. craspedioides* would colonise the area.

The proposed project has the potential to contribute to the spread of further invasive species, mainly through the clearing of vegetation, in addition to potential transfer and introduction of both plant material and soil on machinery. Mitigation measures have been recommended in the BDAR to prevent the spread of weeds throughout the project area. **The proposed action would therefore be unlikely to result in invasive species that are harmful to this species becoming established in its potential habitat.**

**h) Introduce disease that may cause the species to decline, or**

This species is not susceptible to any known diseases that may cause it to decline (DEWHA, 2008). **The proposal is considered unlikely to result in the introduction of disease that may cause the species to decline**.

**i) Interfere substantially with the recovery of the species.**

The proposal would remove 2.00 ha of potential habitat for this species, of which 0.33 ha is woodland. Open woodland is preferred habitat for this species; however, the development footprint and surrounds is highly modified from grazing and cropping. There is no adopted or made Recovery Plan for this species (DCCEEW, 2025). Although no Recovery Plan exists for this species, the Saving our Species (SoS) program identifies three priority actions for *A. craspedioides* and species occurrence across NSW, none of which occur within the development footprint or subject land (NSW DPE, 2025). Considering these factors

and the absence of observations within the development footprint and wider assessment area (BioNet, 2025), **the proposed project is unlikely to interfere with the recovery of this species**.

**j) Conclusion.**

The proposed action is not likely to lead to a long-term decrease in the size of an important *Ammobium craspedioides* population, reduce its area of occupancy or fragment an existing important population into two or more populations. It is not likely to adversely affect habitat critical to the survival of the species, disrupt the breeding cycle of a population or interfere with the recovery of the species. Due to the degraded condition of the landscape and that multiple key threats already impact the development footprint, the proposed action is not likely to modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. With standard biosecurity protocols in place, the proposed action is not likely to introduce disease that may cause the species to decline, or result in invasive species becoming established in the species' habitat. Recommended mitigation measures include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation.

Considering the above factors, **the proposed action is not likely to have a significant impact on *Ammobium craspedioides*.**

**Corben's Long-eared Bat *(Nyctophilus corbeni)***

An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:

**a) Lead to a long-term decrease in the size of an important population of a species**

*The MNES Significant impact guidelines 1.1 states that an 'important population' is a population that is necessary for a species' long-term survival and recovery. This may include populations identified as such in recovery plans, and/or that are:*

- *key source populations either for breeding or dispersal*
- *populations that are necessary for maintaining genetic diversity, and/or*
- *populations that are near the limit of the species range*.

*Nyctophilus corbeni* was determined to be 'potentially present' within the subject land through Anabat detectors placed at five farm dam locations.

*Nyctophilus corbeni* is distributed in south-eastern Australia around the Murray-Darling Basin. Key populations are known from the Pillaga scrub (Threatened Species Scientific Committee, 2015), with no known records of the species within at least 10 km of the subject land (BioNet, 2025).

No important populations are known within the subject land or within a 1500 m radius of the subject land (Threatened Species Scientific Committee, 2015). The subject land falls within the distribution of this species, where species or species habitat may occur (DCCEEW, 2025). It is possible that the species could be using the subject land and surrounds, however this could not be confirmed through ultrasonic call analysis.

Preferred woodland habitat includes extensive stands of vegetation, as opposed to smaller patches of woodland (NSW DPE, 2025). In NSW, this species is distinctly more common in Box / Ironbark / Cypress-pine vegetation that occurs in a north-south belt along the western slopes and plains (NSW DPE, 2025). This vegetation is not present within the Subject Land. Non preferred habitat, - 0.32 ha of Grey Box Woodland (PCT 76) was confirmed within the subject land and is directly adjacent to the development footprint. This potential foraging and roosting habitat is part of a wider patch of PCT 76, with approximately 5.53 ha of this retained within 1500 m of the subject land.

Based on these factors discussed above, an important population is **not** considered to occur within the Subject Land. The subject land falls where species or species habitat may occur, under its federally listed distribution, with its known distribution approximately 30 km north of the subject land (DCCEEW, 2025).

In addition, the subject land is not a key source population for breeding or dispersal, it is unlikely to be providing populations to maintain genetic diversity. Given the above factors, **it is unlikely that the proposed action would lead to a long-term decrease in the size of an important *N. corbeni* population.**

**b) Reduce the area of occupancy of an important population**

This species can be found in a wide range of inland woodland vegetation types. These include:

- Box / Ironbark / Cypress Pine woodlands
- Buloke woodlands
- Brigalow woodland
- Belah woodland
- Smooth-barked Apple woodland

- River Red Gum forest
- Black Box woodland
- Various types of tree mallee.

(Threatened Species Scientific Committee, 2015)

In NSW, it is distinctly more common in Box / Ironbark / Cypress-Pine vegetation that occurs along the western slopes and plains. The species is also more abundant in extensive stands of vegetation in comparison to smaller woodland patches. Corben's Long-eared Bat can be found under bark and dry fissures in branches and utilises tree hollows as maternity sites (Threatened Species Scientific Committee, 2015). Although preferred woodland habitat was not found within the development footprint, 0.32 ha of Grey Box Woodland (PCT 76) was confirmed within the subject land and is directly adjacent to the development footprint, however, would not be impacted by the proposal.

Potential habitat to be impacted is associated with 0.15 ha of low condition derived grassland of PCT 76 within the development footprint. There are five Hollow-Bearing Trees (HBTs) found within the development footprint that are associated with PCT 277, with two being Yellow Box trees. Within the subject land, 20 HBTs are being retained as part of the project, of which six are Grey Box and five are Yellow Box. Within the wider 1500 m radius of the subject land, approximately 5.53 ha of PCT 76 would remain. Therefore, only removing 2.6% of grassland within this PCT in the locality. Although the potential area of occupancy would be reduced, the action would remove 0.15 ha of grassland from PCT 76 in low condition. In addition, no important populations is considered to occur within the subject land. **Therefore, the proposed actioned is not likely to reduce the area of occupancy of any important populations.**

**c) Fragment an existing important population into two or more populations**

*N. corbeni* is a highly mobile species with a scattered distribution. The removal of 0.15 ha of PCT 76 would be unlikely to impede movement of *N. corbeni* across its distribution range. There are no known or important populations of this species considered to occur within the subject land, **therefore it is unlikely the project would fragment an important populations of this species into two or more populations**.

**d) Adversely affect habitat critical to the survival of a species**

No habitat critical to the survival of this species is listed in its Approved Conservation Advice (DCCEEW, 2014), or on the Register of Critical Habitat (DCCEEW, 2025). There is no existing recovery plan for this species (DCCEEW, 2025). No habitat critical to the survival of *N. corbeni* has been declared. Therefore, the development footprint and subject land is not considered critical habitat for this species.

The proposal is unlikely to significantly fragment vegetation patches of woody vegetation required by the species, as the vegetation associated with the species to be removed, is a low condition grassland. Additionally, 5.53 ha of Grey Box Woodland is found within the locality and would be retained as part of the project. Therefore, the project is not likely to adversely affect habitat critical to the survival of this species.

**e) Disrupt the breeding cycle of an important population**

The species is a nomadic species that inhabits a variety of vegetation types, including mallee, Buloke (*Allocasuarina luehmannii*) and box eucalypt dominated communities. It utilises tree-hollows as maternity sites and mating takes place in autumn with one or two young born in late spring to early summer. Studies in NSW found maternity roosting sites in Ironbark, Buloke and Cypress Pine trees, which are not found within the Assessment Area (Threatened Species Scientific Committee, 2015).

There is little available information on the species' reproductive biology, however breeding is likely to be seasonal, with previously trapped pregnant and lactating females caught in November (Threatened Species Scientific Committee, 2015). As no preferred roosting habitat is present within the subject land, it

is **unlikely that there will be a disruption to the breeding cycle of an important population of Corben's Long-eared Bat.**

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

Within the proposed development footprint, 0.15 ha of PCT 76 was identified as low condition grassland as potential foraging habitat for the species. There is, however, 0.32 ha of Grey Box Woodland outside of the development footprint that would be suitable roosting and foraging habitat for the *N. corbeni*. Within the wider 1500 m radius of the project, 5.53 ha of PCT 76 would remain within the landscape.

Additionally, multiple key threatening processes already impact the potential habitat due to grazing, presence of feral animals and exposure to agrichemicals. Given that the project proposes removal of 0.15 ha of PCT 76, in which the habitat is low condition grassland that has been significantly modified and disturbed by land use, ,**the species is not likely to decline as a result of modifying, destroying, removing or decreasing the availability of habitat.**

**g) Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat**

*N. corbeni* may be subject to predation by feral species, and competition for hollows by invasive species such as the Common Starling (*Sturnus vulgaris)* and the introduced Honeybee (*Apis mellifera)*, although impacts are not well known (Threatened Species Scientific Committee, 2015).

The proposed project has the potential to contribute to the spread of invasive species, mainly through the clearing of vegetation, in addition to potential transfer and introduction of both plant material and soil on machinery. Mitigation measures have been recommended in the BDAR to prevent the spread of weeds throughout the project area. **The proposed action would therefore be unlikely to result in invasive species that are harmful to this species becoming established in its potential habitat.**

**h) Introduce disease that may cause the species to decline, or**

There is a risk that the proposal may introduce diseases into the subject land via machinery, vehicles, and materials during construction and operation. However, with the effective implementation of the mitigation measures detailed in the BDAR, the risk to *N. corbeni* habitat as a result of introduced diseases are not considered significant. **Therefore, the proposed action is not likely to introduce disease that may cause the species to decline.**

**i) Interfere substantially with the recovery of the species.**

There is no Recovery Plan for this species (DCCEEW, 2025), however Saving Our Species (SoS) program in NSW lists priority actions and management actions for the species across the state (Threatened Species Scientific Committee, 2015). This SoS strategy aims to manage conservation for this species primarily at the landscape scale and recognises that the occurrence of this species is aligns with the availability of hollow-bearing trees and specific vegetation communities, such as box / ironbark and cypress pine.

Actions for the species in the recovery plan include:

A Saving our Species (SoS) strategy exists for Corben's Long-eared Bat which aims to ensure that the species is secure in the wild in NSW, that its NSW geographic range is extended or maintained, and that its conservation status under the BC Act is maintained. Actions for the species include:

- Encourage land managers to enter into land management agreements that protect and restore key areas.
- Raise awareness among landholders about the importance of retaining large living and standing dead hollow-bearing trees in the landscape as habitat for the species.

- Raise awareness amongst landholders in close proximity (approximately 15 km radius) to maternity or roost sites, of the potential impacts of using harmful pesticides, herbicides, and other chemicals and discourage their use in or adjacent to foraging habitat.
- Liaise with relevant authorities or land managers to ensure that the location and sensitivity of roosts/overwintering sites (such as hollow-bearing trees and under bark) and key foraging areas are known prior to any hazard reduction burns. Ensure that areas immediately surrounding maternity and roost sites are identified as an important biodiversity asset in any relevant fire planning and have a 100m buffer zone applied. Planned fires near maternity or roosting sites should not be undertaken during the breeding season, i.e., October to January, or during winter when bats are in residence. Hazard reduction burns in box/ironbark/cypress pine vegetation communities where the bats are known or suspected of using should not occur more than once every 20–50 years. Liaise with the Rural Fire Service, National Parks and Wildlife Service, or relevant land manager, to ensure that prescribed burns that may affect habitat are cool burns and/or do not kill hollow-bearing trees or remove cohorts of smaller hollow-bearing species over large areas.
- Liaise with relevant authorities and/or land managers to ensure that the location and sensitivity of roosting and key foraging areas are known and encourage that existing lighting and noise impacting on these areas be modified and that any future lighting or noise avoid spilling onto these areas where possible.
- Raise public awareness of the damage caused to habitat by thinning, slashing, under scrubbing and inappropriate grazing, and firewood collection. Encourage land managers to retain tree density and a floristically and structurally diverse and spatially variable mid and understory.

(NSW DPE, 2025)

The development footprint contains only five hollow-bearing trees, of which two are Yellow Boxes. Within the wider subject land 20 HBTs are being retained, of which six are Grey Box and five are Yellow Box. Within the subject land, 0.32 ha of Grey Box Woodland would be retained, with 5.53 ha of the associated PCT 76 also retained within 1500 m of the project area. In consideration of these factors, it is unlikely that the proposed action will substantially interfere with the recovery of the species.

Noise and light pollution may also be temporary impacts during construction; however, these are not considered to cause substantial interference if conducted during daytime hours.

**j) Conclusion.**

The proposed action is not likely to lead to a long-term decrease in the size of an important *N. corbeni* population, reduce the area of occupancy an important population or fragment an existing important population into two or more populations. It is not likely to adversely affect habitat critical to the survival of the species, disrupt the breeding cycle of an important population or substantially interfere with the recovery of the species. Due to the degraded condition of the grassland and that multiple key threats already impact the development footprint, the proposed action is not likely to modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. This also considers that 0.32 ha of Grey Box Woodland would remain within the subject land, and 5.53 ha of associated PCT 76 would be available to *N. corbeni* within a 1500 m radius of the site. With standard biosecurity protocols in place, the proposed action is not likely to introduce disease that may cause the species to decline. Recommended mitigation measures to prevent the introduction of new weeds and spread of existing weeds include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation

Considering the above factors, **the proposed action is not likely to have a significant impact on *Nyctophilus corbeni*.**

**Golden Sun Moth *(Synemon plana)***

An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:

**a) Lead to a long-term decrease in the size of an important population of a species**

*The MNES Significant impact guidelines 1.1 states that an 'important population' is a population that is necessary for a species' long-term survival and recovery. This may include populations identified as such in recovery plans, and/or that are:*

- *key source populations either for breeding or dispersal*
- *populations that are necessary for maintaining genetic diversity, and/or*
- *populations that are near the limit of the species range*.

The presence of *Synemon plana* in the subject land has been assumed based on associated PCTs and the presence of potential habitat. Distribution mapping shows the development footprint and subject land occurs just outside where this species or species habitat may occur (DCCEEW, 2025). There are no known records within the subject land, or within 10 km of the subject land for this species (BioNet, 2025). While the location of the development footprint and wider subject land is not listed on the 'important population' list in the species' Approved Conservation Advice (DAWE, 2021) further research may determine additional important populations.

Many of the known subpopulations are often confined to small grassland remnants of <5 ha. The species is often restricted to discrete areas within grassy sites and breeding areas. In these areas, females are likely to be highly specialised and dependent on the presence of food plants and varied bare ground cover (DAWE, 2021).

There have been no observations of any *S. plana* individuals, populations or important populations within the entirety of the subject land, or within 10 km of the subject land (BioNet, 2025). No targeted surveys have been undertaken for this species; however, the area of impact is adjacent to a current access track, in which the vegetation is highly disturbed through past track construction, vehicular movements, edge effects and regular agricultural activities such as grazing and machinery movement. There are few larval food plants such as Spear Grass (*Austrostipa* spp.) or Wallaby Grass (*Rytidosperma* spp.) species present within the subject land. This combination of land use activity, low vegetation condition and threat presence result in low likelihood of this habitat appropriately supporting an *S. plana* population.

Given the above factors, **it is unlikely that the proposed action would lead to a long-term decrease in the size of an important *S. plana* population.**

**b) Reduce the area of occupancy of an important population**

*S. plana* was historically widespread across south-eastern Australia and was relatively continuous throughout its range. The species extended from central NSW, through the NSW Southern Tablelands, down to central and western VIC and into eastern SA. Species distribution shows a close correlation to temperate grassland dominated by *Rytidosperma* spp. (DAWE, 2021).

Survey effort in recent years has shown that the species is known from approximately 104 sites in Victoria and 78 sites in the ACT. Survey effort in NSW is considered to be insufficient, with the majority of habitat occurring on private land. However, extant site localities have been discovered in NSW, to the north of the ACT (DAWE, 2021). This species inhabits native grasslands, open grassy woodlands and secondary grasslands, that retain a component of larval food species. This includes degraded habitats that retain a component of native larval food species, or that have been invaded by Chilean *Needlegrass (Nassella*

*neesiana)*. Sites where *S. plana* is found are generally flat or gently sloping, with full sun exposure. Shading, including in the form of trees or buildings, can negatively affect ideal characteristics of a potential site (DAWE, 2021). A total of 1.67 ha of low condition grassland as potential habitat for *S. plana* is proposed to be removed as part of the action. In addition, *S. plana* is associated with PCT 277 which occurs throughout the development footprint. Although 1.85 ha of PCT 277 within the development footprint is proposed to be removed, 1.52 ha is made up of low condition grassland and 0.33 ha is woodland, unsuitable for *S. plana*. The low condition grassland could potentially be suitable habitat for this species, however due to the general degradation of the vegetation and past disturbance of land within the project site, it is unlikely that the potential habitat would appropriately support its occupancy. The lack of larval food plants also suggests that *S. plana* is unlikely to occupy the general project area.

In addition, no individuals, populations or important populations of this species have been observed in the development footprint or within 10 km of the subject land (BioNet, 2025). **Considering the above factors, the proposed project is not likely to significantly reduce the area of occupancy of an important population of this species.**

**c) Fragment an existing important population into two or more populations**

The development footprint primarily includes an existing access track, in which the action proposes to widen the track to access the BESS site. Given the degraded condition of vegetation along the existing track edge, low condition of vegetation across the site as a result of land use and current grazing pressure, and lack of larval food plants, it is unlikely that suitable habitat would appropriately support a population of this species. **Therefore, the project is unlikely to cause fragmentation of an existing important population into two or more populations of this species.**

**d) Adversely affect habitat critical to the survival of a species**

Habitat critical to the survival of this species has yet to be identified, but likely includes all native grassland and open grassy woodland habitat occupied by the species across its range. Since the species has specialised habitat requirements, all occupied habitat is important for breeding activity of the associated subpopulation and recovery of the species. Large subpopulations or smaller well-connected subpopulations occurring in high quality habitat would classify as habitat critical to the species' survival. High quality habitat is defined at medium to large sites containing native grassland with an abundant component of larval food species (*Rytidosperma* spp. and / or *Austrostipa* spp.), low weed cover, inter-tussock spaces and land use resulting in high ecological site value (DAWE, 2021). With these factors in consideration, no habitat critical to the survival of the species occurs within the project area.

There is no critical habitat defined on the Register of Critical Habitat (DCCEEW, 2025). There is no existing recovery plan for this species (DCCEEW, 2025). This development footprint and wider subject land is not considered critical habitat for this species.

While 1.67 ha of grassland habitat for *S. plana* is proposed to be removed, it is not its preferred habitat. This is due to low quality vegetation, degradation as a result of agricultural related activities, consistent grazing and trampling, and lack of larval food plants to support the species. In the subject land, 4.55 ha of grassland would be retained. Within a 1500 m radius of the subject land, approximately 19.17 ha of its associated PCT 277 would be retained and has the potential to provide suitable habitat for *S. plana*.

In consideration of the above factors, **it is unlikely that the project would adversely affect habitat critical to the survival of this species.**

**e) Disrupt the breeding cycle of an important population**

Adult moths emerge from the ground during breeding season (also known as flying season), which falls between mid-October and early January. Breeding season typically lasts from six to eight weeks, withing varied timing between localities across its range. After emergence, male moths spend their few short days

patrolling habitat for females by flying over grassland in short bursts, in warm weather. Females are semi-flightless, displaying themselves from sedentary positions. After mating, females lay eggs (approximately 74 eggs each) within the base of grass tussocks of *Rytidosperma* spp., *Austrostipa* spp. and Chilean Needlegrass. At the end of the larval period, they tunnel to the surface and pupation occurs underground in spring. Once adult features have developed within the case, the pupa rises to the surface and the adult emerges (DAWE, 2021).

While the development site is not mentioned on the 'important population' list in the Conservation Advice, more research may determine more areas (DAWE, 2021). There are no records of any important *S. plana* populations within the development footprint, subject land, or within 10 km of the subject land (BioNet, 2025).

There are no known or existing populations or important populations of this species within the subject land. Due to the degraded condition of vegetation, lack of larval food plants and current heavy grazing pressure, it is unlikely that suitable habitat would appropriately support a population of this species. **The project is unlikely to disrupt the breeding cycle of an important population of *Synemon plana.***

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

As part of the proposal, 1.67 ha of low condition grassland as potential habitat would be removed, adjacent to existing and frequently utilised access tracks. 4.55 ha of grassland is being retained within the subject land, therefore removing 26.85% of grassland from the subject land.

With consideration that *S. plana* is associated with PCT 277, 5.08 ha of this PCT being retained within the subject land, and approximately 19.17 ha being retained within 1500 m of the subject land (assessment area). Therefore approximately 91.2% of potential habitat for *S. plana* is being retained within the overall assessment area.

The main identified threats to this species are related to land clearing for agriculture and urban development, soil disturbance, lack of biomass removal, intensification of grazing and/or mowing, application of chemicals (such as herbicides, pesticides and fertilisers), planting and/or regeneration of shrubs and trees, weed invasion, habitat degradation by the introduced Rabbit *(Oryctolagus cuniculus)*, increasing predation by birds, inappropriate fire regimes and climate change. The development footprint is currently being used for agriculture, with high disturbance, grazing, trampling and multiple other threatening processes to *S. plana*. Considering these factors, the potential habitat overall is not likely to support *S. plana*. Given that the project proposes removal of 1.67 ha of potentially suitable habitat that has been significantly modified and disturbed by land use, in combination with lack of records in the assessment area, **the species is not likely to decline as a result of modifying, destroying, removing or decreasing the availability of habitat.**

**g) Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat**

Weed invasion is a listed threat to *S. plana*. The proposal has the potential to contribute to the spread of invasive species, mainly through the clearing of vegetation and transfer and introduction of plant material and soil on machinery. Spear Thistle and other weeds are currently present throughout the site. Mitigation measures have been recommended to prevent the spread of weeds on site through implementation of biosecurity practices. With these in place, the proposal would therefore be unlikely to result in invasive species that are harmful to these species becoming established in potential *S. plana* habitat.

Due to the project site and surrounds being heavily cleared and utilised for agriculture, it is highly likely that the introduced Rabbit occupies the area. The proposed project is not likely to increase the numbers of this pest.

**The proposed action would therefore be unlikely to result in invasive species that are harmful to this species becoming established in its potential habitat.**

**h) Introduce disease that may cause the species to decline, or**

*S. plana* is not known to be susceptible to diseases that may cause it to decline (DAWE, 2021). **The proposed project is considered unlikely to result in the introduction of disease that may cause the species to decline**.

**i) Interfere substantially with the recovery of the species.**

The proposed project would remove 1.67 ha of grassland as potential habitat for this species, while 4.55 ha of grassland and 19.17 ha of its associated PCT 277 is being retained within the 1500 m buffer. Despite this, the development footprint and surrounds is highly modified from intensive grazing, cropping and other agricultural activities. There is no adopted or made Recovery Plan for this species (DCCEEW, 2025). Although no Recovery Plan exists for this species, the Saving our Species (SoS) program identifies priority actions for *Synemon plana* and priority management sites, none of which occur within the project area (NSW DPE, 2025). Considering these factors and the absence of observations within the development footprint and assessment area (BioNet, 2025), **the proposed project is unlikely to substantially interfere with the recovery of this species**.

**j) Conclusion.**

The proposed action is not likely to lead to a long-term decrease in the size of an important *S. plana* population, reduce the area of occupancy an important population or fragment an existing important population into two or more populations. It is not likely to adversely affect habitat critical to the survival of the species, disrupt the breeding cycle of an important population or substantially interfere with the recovery of the species. Due to the degraded condition of the landscape and that multiple key threats already impact the development footprint, the proposed action is not likely to modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. With standard biosecurity protocols in place, the proposed action is not likely to introduce disease that may cause the species to decline. Recommended mitigation measures to prevent the introduction of new weeds and spread of existing weeds include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation

Considering the above factors, **the proposed action is not likely to have a significant impact on *Synemon plana*.**

| **Pink-tailed Legless Lizard *(Aprasia parapulchella)*** |
|---|
| An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will: |
| **a) Lead to a long-term decrease in the size of an important population of a species** |
| *The MNES Significant impact guidelines 1.1 states that an 'important population' is a population that is necessary for a species' long-term survival and recovery. This may include populations identified as such in recovery plans, and/or that are:*<br>• *key source populations either for breeding or dispersal*<br>• *populations that are necessary for maintaining genetic diversity, and/or*<br>• *populations that are near the limit of the species range*.<br><br>The presence of *Aprasia parapulchella* in the subject land has been assumed based on associated PCTs and the presence of potential habitat. Distribution mapping shows the development footprint occurs within the area where this species or species habitat is likely to occur (DCCEEW, 2025). There are no BioNet records within the development footprint, subject land, or within 10 km of the subject land for this species (BioNet, 2025). While the location of the development footprint and wider subject land is not listed on the 'important population' list in the species' Approved Conservation Advice (NSW DPE, 2025) further research may determine additional important populations.<br><br>Key source populations and populations necessary for maintaining genetic diversity have not been identified in the Conservation Advice (Threatened Species Scientific Committee, 2015). This species is known to occur in isolated habitats in NSW and Victoria. However, further research is required to guide the criteria of an important population/s across the extent of occurrence of the species. *A. parapulchella* lives underground and highly cryptic making the species difficult to detect and to ascertain movement in the landscape. The development footprint is located within a priority management area under the NSW Saving our Species program (NSW DPE, 2025). These priority management areas are vast, east of Griffith and as north as Moree and along the southern border of NSW, located where federal distribution of the species or species habitat is likely to occur (DCCEEW, 2025)<br><br>There are no observations of any *A. parapulchella* individuals, populations or important populations within the development footprint, subject land, or within 10 km of the subject land (BioNet, 2025). No targeted surveys have been undertaken for this species; however the area of impact is adjacent to a current access track, which has previously been disturbed through track construction, edge effects and regular agricultural activities such as grazing and machinery movement. There are no surface rocks within the native vegetation and grassland understory lacks a high diversity or key tussock grasses such as Kangaroo Grass. This combination of land use activity, lack of rock cover and threat presence result in low likelihood of this habitat appropriately supporting an *A. parapulchella* population.<br><br>Given the above factors, **it is unlikely that the proposed action would lead to a long-term decrease in the size of an important *A. parapulchella* population.** |
| **b) Reduce the area of occupancy of an important population** |
| *A. parapulchella* occurs in Victoria, the Australian Capital Territory (ACT) and New South Wales (NSW), where it is widely but patchily distributed. It is found along the foothills of the western slopes of the Great Dividing Range, between Bendigo (VIC) and Gunnedah (NSW). It is known in widespread but isolated locations in the South Western Slopes, Central and Southern Tablelands and the South Western Slopes (Threatened Species Scientific Committee, 2015). |

This species inhabits grassy woodland and woodland communities, primary and secondary grassland, and generally found in sloping sites that contain rocky outcrops or scattered, partially buried rocks (Threatened Species Scientific Committee, 2015). As part of the proposed action, 2.00 ha of potential habitat for *A. parapulchella* would be removed, while 6.37 ha would be retained in the subject land. Individuals are most commonly found sheltering under these rocks and spend considerable time in ant burrows below these rocks, which are considered important foraging and shelter. Rocks and ground-layer presence with native grasses such as Kangaroo Grass, are their favoured habitat and principal determinants of occurrence (Threatened Species Scientific Committee, 2015).

No surface rocks were identified in the subject land. Grassland vegetation lacks diversity of native grasses or forbs, dominated by a few common grass species such as couch (*Cynodon dactylon*) and Curly Windmill Grass (*Enteropogon acicularis*). There are no key tussock grasses such as Kangaroo Grass. Due to the lack of rocks and degraded condition of the vegetation within the project site, including low condition grassland, it is unlikely that the potential habitat would appropriately support the occupancy of this species. This also considers current land use which includes pastoral development and livestock, resulting in grazing pressure and presence of exotic grasses and weeds. This species is susceptible to habitat loss, fragmentation and degradation. It is also threatened by rock removal, predation by pests and inappropriate fire regimes. No individuals, populations or important populations of this species have been observed in the development footprint or within 10 km of the subject land.

The proposed action would remove 1.85 ha of its associated PCT 277 as potential habitat for this species. However, within a 1500 m radius of the subject land, approximately 19.17 ha of this PCT would be retained and has the potential to provide suitable habitat for *A. parapulchella*. **Considering the above factors, the proposed project is not likely to significantly reduce the area of occupancy of an important population of this species.**

**c) Fragment an existing important population into two or more populations**

The development footprint primarily includes an existing access track, in which the action proposes to widen the track to access the BESS site. Given the degraded condition of vegetation along the existing track edge, low condition of vegetation across the site as a result of land use and current grazing pressure, it is unlikely that suitable habitat would appropriately support a population of this species. **Therefore, the project is unlikely to cause fragmentation of an existing important population into two or more populations of this species.**

**d) Adversely affect habitat critical to the survival of a species**

No habitat critical to the survival of this species is listed in its Approved Conservation Advice (DCCEEW, 2014), or on the Register of Critical Habitat. There is no existing recovery plan for this species (DCCEEW, 2025)..

PCT 277 provides grassy woodland and derived grassland habitat for *A. parapulchella*. The proposed action would impact 2.00 ha of potential habitat for this species. Within a 1500 m radius of the subject land, approximately 19.17 ha of its associated PCT 277 would be retained and has the potential to provide suitable habitat for *A. parapulchella.* Considering that the entire subject land is located within a priority management area under the NSW Saving our Species program, this habitat is considered critical to the survival of the species (NSW DPE, 2025). However, this critical habitat is in degraded condition due to current and historic land use for agricultural-related activities. In addition, there is 19.17 ha of PCT 277 being avoided within a 1500 m radius of the development footprint.

In consideration of the above factors, **it is likely that the project would adversely affect habitat critical to the survival of this species.** However, the habitat being impacted is in degraded condition as a result of clearing, grazing, trampling and invasion of exotic species.

**e) Disrupt the breeding cycle of an important population**

This species likely lays its' eggs in ant nests; they have two eggs per breeding time and eggs are laid in summer. Eggs hatch and young appear in March (Threatened Species Scientific Committee, 2015). The proposed works involve impact to approximately 2.00 ha of potential habitat for this species. While the development site is not mentioned on the 'important population' list in the Conservation Advice, more research may determine more areas. There are no records of any important *A. parapulchella* populations within the subject land, or within 10 km of the subject land (Threatened Species Scientific Committee, 2015).

There are no known or existing populations or important populations of this species within the subject land. Due to the degraded condition of vegetation and current heavy grazing pressure, it is unlikely that suitable habitat would appropriately support a population of this species. **The project is unlikely to disrupt the breeding cycle of an important population of *Aprasia parapulchella.***

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

As part of the proposal, the area of impact of potential habitat for this species is 2.00 ha, consisting of 1.85 ha of PCT 277. The majority of this area is low condition grassland (1.67 ha), adjacent to existing and frequently utilised access tracks.

The proposed action would remove 1.85 ha of PCT 277, however there is 5.08 ha of this PCT is being retained within the subject land, and approximately 19.17 ha being retained within 1500 m of the subject land (assessment area). Therefore approximately 90.35% of its associated PCT is being retained within the locality.

The main identified threats to this species are related to agricultural development and related activities. This includes urban development, high intensity grazing, ploughing and pasture improvement, herbicide use, spread of exotic grasses, predation by pests and inappropriate fire regimes. The subject land is currently being used for agriculture, resulting in trampling, grazing, herbicide use and the presence of pests including the European Red Fox *(Vulpes vulpes)* (Threatened Species Scientific Committee, 2016). Considering these factors, the potential habitat overall is not likely to support *A. parapulchella* occupancy. Given that the project proposes removal of 2.00 ha of potentially suitable habitat that has been significantly modified and disturbed by land use, in combination with lack of records in the assessment area, **the species is not likely to decline as a result of modifying, destroying, removing or decreasing the availability of habitat.**

**g) Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat**

The proposal has the potential to contribute to the spread of invasive species, mainly through the clearing of vegetation and transfer and introduction of plant material and soil on machinery. Spear Thistle and other weeds are currently present throughout the site. Mitigation measures have been recommended to prevent the spread of weeds on site through implementation of biosecurity practices. With these in place, the proposal would therefore be unlikely to result in invasive species that are harmful to these species becoming established in potential *A. parapulchella* habitat.

Feral cats and the European Red Fox are threats to *A. parapulchella*. The European Red Fox has been incidentally observed on site, therefore at least one of these predators is already established in potential habitat for *A. parapulchella*. The proposed project is not likely to increase the numbers of these predators.

**The proposed action would therefore be unlikely to result in invasive species that are harmful to this species becoming established in its potential habitat.**

**h) Introduce disease that may cause the species to decline, or**

*A. parapulchella* is not known to be susceptible to diseases that may cause it to decline (Threatened Species Scientific Committee, 2015). **The proposed project is considered unlikely to result in the introduction of disease that may cause the species to decline**.

**i) Interfere substantially with the recovery of the species.**

The following conservation actions are listed in Approved Conservation Advice for *Aprasia parapulchella*:

Habitat loss, disturbance and modifications

- Identify sites not protected in conservation reserves and seek to secure the protection and conservation management of sites on which long-term conservation relies.
- Identify and implement approaches to avoid/reduce the removal of rocks in order to preserve habitat integrity (e.g., erect signage, manage access to habitat).
- Implement management actions that reduce the modification of vegetation (e.g., prohibit slashing, ploughing and pasture improvement).
- Ensure that the disturbance of habitat by recreational activities is minimised through a combination of education, on-site advisory signs, and the restriction of certain activities.

Invasive species

- Develop and implement predator control programmes in line with the Department of the Environment's *Threat abatement plan for predation by feral cats* (Department of the Environment 2015) and the *Threat abatement plan for predation by European red fox* (DEWHA 2008). Programmes should address feral animal control on and adjacent to known sites and responsible pet ownership. Programmes should consider the potential for an amplified rate of predation from these species following fire.
- Implement or improve weed control, including for escaped pasture species.

Impact of domestic species

- If livestock grazing occurs in the area, ensure landowners/managers use an appropriate management regime and density that does not detrimentally affect this species and manage total grazing pressure at important sites through exclusion fencing or other barriers.

Fire

- If, as a result of research, fire and certain fire regimes are found to be a threat, incorporate this information into fire management plans across the species' range.

Stakeholder engagement

- Ensure land managers are aware of the species' occurrence and encourage implementation of threat reduction measures.
- Provide landholders with information on minimising adverse impacts as a result of grazing and reducing the modification of native vegetation.

- Promote community understanding and support through public education and the provision of advice.

(Threatened Species Scientific Committee, 2015)

The proposed project would remove 2.00 ha of potential habitat for this species, while 19.17 ha of its associated PCT 277 is being retained within the 1500 m buffer. Despite this, the development footprint and surrounds is highly modified from intensive grazing, cropping and other agricultural activities. There is no adopted or made Recovery Plan for this species (DCCEEW, 2025). Although no Recovery Plan exists for this species, the Saving our Species (SoS) program identifies three priority actions for *Aprasia parapulchella* (NSW DPE, 2025). Considering these factors and the absence of observations within the development footprint and assessment area (BioNet, 2025), **the proposed project is unlikely to substantially interfere with the recovery of this species**.

**j) Conclusion.**

The proposed action is not likely to lead to a long-term decrease in the size of an important *A. parapulchella* population, reduce the area of occupancy an important population or fragment an existing important population into two or more populations. It is not likely to adversely affect habitat critical to the survival of the species, disrupt the breeding cycle of an important population or substantially interfere with the recovery of the species. Due to the degraded condition of the landscape and that multiple key threats already impact the development footprint, the proposed action is not likely to modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. With standard biosecurity protocols in place, the proposed action is not likely to introduce disease that may cause the species to decline. The European Red Fox has previously been observed within the subject land, with a high likelihood of feral cat presence. The proposed project is not likely to increase the presence of these pests. Recommended mitigation measures include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation

Considering the above factors, **the proposed action is not likely to have a significant impact on *Aprasia parapulchella*.**

| **Striped Legless Lizard *(Delma impar)*** |
|---|
| An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will: |
| **a) Lead to a long-term decrease in the size of an important population of a species** |
| *The MNES Significant impact guidelines 1.1 states that an 'important population' is a population that is necessary for a species' long-term survival and recovery. This may include populations identified as such in recovery plans, and/or that are:*<br>• *key source populations either for breeding or dispersal*<br>• *populations that are necessary for maintaining genetic diversity, and/or*<br>• *populations that are near the limit of the species range*.<br>Conservation Advice (2016) for *Delma impar* states:<br>*The understanding of fine scale population structure is limited and difficult to assess given the fragmented and disturbed nature of the species habitat and the difficulty in detecting the species due to its cryptic nature. For these reasons it is considered that when one or more individuals are found on a site that they are a member/s of an important population.*<br>The presence of *D. impar* in the subject land has been assumed based on associated PCTs and the presence of potential habitat. No known populations occur within the Subject Land.<br>Striped Legless Lizard are known to occur in the *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* ecological community. This species is a grassland specialist "*found only in areas of native grassland and nearby grassy woodland and exotic pasture"* (Threatened Species Scientific Committee, 2016). The subject land contains moderate-high condition woodland with native dominated understorey, and moderate condition woodland with exotic understorey due to past and present land use and related agricultural activities. *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* is a Critically Endangered Ecological Community (CEEC) and was confirmed within the subject land, with 0.22 ha proposed to be removed as part of the project.<br>Distribution mapping shows the development footprint occurs within the subregion where this species is known to occur or its habitat is likely to occur (DCCEEW, 2025). There are no BioNet records within the subject land, or within 10 km of the subject land for this species (BioNet, 2025). While the location of the development footprint and wider subject land is not listed on the 'important population' list in the species' Approved Conservation Advice (Threatened Species Scientific Committee, 2016) further research may determine additional important populations. Its Conservation Advice (2016) states that all populations of *D. impar* are likely to be important for the species recovery (Threatened Species Scientific Committee, 2016).<br>No targeted surveys have been undertaken for this species; however the area of impact is adjacent to a current access track, which has previously been disturbed through track construction, edge effects and regular agricultural activities such as grazing and machinery movement. This combination of land use activity and threats result in low likelihood of this habitat supporting a *D. impar* population.<br>Given the above factors, **it is unlikely that the proposed action would lead to a long-term decrease in the size of an important *D. impar* population.** |
| **b) Reduce the area of occupancy of an important population** |

*D. impar* is a grassland specialist, only found in areas of native grassland and nearby grassy woodland and exotic pasture (DCCEEW, 2025). Its primary habitat is encompassed by four nationally threatened ecological communities, including:

- *Natural Temperate Grassland of the Victorian Volcanic Plain*
- *Grassy Eucalypt Woodland of the Victorian Volcanic Plain*
- *Natural Temperate Grassland of the South Eastern Highland, and*
- *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland*

(Threatened Species Scientific Committee, 2016).

As part of the proposal, the area of impact of potential habitat for this species is 2.00 ha, including 1.85 ha of its associated PCT 277. The majority of potential habitat is low condition grassland (1.67 ha), adjacent to existing and frequently utilised access tracks. This species is also associated with the *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* CEEC, of which 0.22 ha occurs within the development footprint. State Vegetation Type Mapping (NSW DCCEEW, 2020) shows that there is 173.52 ha of native vegetation within a 1500 m radius of the subject land (assessment area), therefore only 1.15% of native vegetation within the assessment area is proposed to be removed.

The total area of occupancy of *D. impar* is unknown (DCCEEW, 2025), however it is known to occur in isolated populations throughout the Australian Capital Territory (ACT), north-eastern, central and south-western Victoria (VIC), south-eastern South Australia (SA), and south-eastern New South Wales (NSW) (Threatened Species Scientific Committee, 2016).

Due to the degraded condition of the CEEC, and low condition grassland throughout the subject land, it is unlikely that suitable habitat would appropriately support the occupancy of this species. This also considers current land use which includes pastoral development and stock, resulting in grazing pressure and presence of exotic grasses and weeds. This species is susceptible to urban development, high intensity grazing, ploughing and pasture improvement, herbicide use, spread of exotic grasses, predation by pests and inappropriate fire regimes (Threatened Species Scientific Committee, 2016). No individuals, populations or important populations of this species have been observed in the development footprint or within 10 km of the subject land (BioNet, 2025). Habitat within the project site is unlikely to support a population due to current land use. **Considering these factors, the proposed project is not likely to significantly reduce the area of occupancy of an important population of this species.**

**c) Fragment an existing important population into two or more populations**

The development footprint primarily includes an existing access track, in which the action proposes to widen the track to access the BESS site. *D. impar* is a mobile species and would be unlikely to be affected from widening an existing access track by 15 metres. Given the degraded condition of vegetation along the existing track edge, low condition of vegetation across the site as a result of land use and current grazing pressure, it is unlikely that suitable habitat would appropriately support a population of this species. **Therefore, the project is unlikely to cause fragmentation of an existing important population into two or more populations of this species.**

**d) Adversely affect habitat critical to the survival of a species**

Approved Conservation Advice for *D. impar* states that habitat critical to the survival of the species must possess more than one of a range of characteristics (Threatened Species Scientific Committee, 2016). Based on its Approved Conservation Advice and assessment of this species as part of this AoS, the development footprint and wider subject land does not provide critical habitat required for the survival of the species. This assessment was based on the analysis that the development footprint and subject land:

- Does not provide foraging habitat due to lack of tussock grasses and low diversity of groundcover species
- Does not provide refuge (including surface rocks) from disturbance events,
- Does not provide long term protection from development due to current agricultural land use and lack of burrows,
- Does not contain connectivity value or contribute to the evolutionary potential of the species in the wild across its natural geographical range.

(Threatened Species Scientific Committee, 2016)

There is no habitat critical to the survival for *D. impar* on the Register of Critical Habitat (DCCEEW, 2014). There is no existing recovery plan for this species (DCCEEW, 2025).

In consideration of the above factors, it is unlikely that the Subject Land would appropriately support the occupancy of this species. **Therefore, the project would not adversely affect habitat critical to the survival of this species.**

**e) Disrupt the breeding cycle of an important population**

In *D. impar* females, two eggs are typically laid in December and January, hatching in January and February. November and December are thought to be when mating and other activities in preparation for egg-laying occur (DCCEEW, 2025). While the development site is not mentioned on the 'important population' list in the Conservation Advice, more research may determine more areas. The Conservation Advice (2016) states 'All populations of *D. impar* are likely to be important for the species recovery' (Threatened Species Scientific Committee, 2016).

There are no known or existing populations or important populations of this species within the subject land. Due to the degraded condition of vegetation and current heavy grazing pressure, it is unlikely that suitable habitat would appropriately support a population of this species. **The project is unlikely to disrupt the breeding cycle of an important population of *Delma impar.***

**f) Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline**

As part of the proposal, the area of impact of potential habitat for this species is 2.00 ha, including 1.85 of its associated PCT 277. The majority of this area is low condition grassland (1.67 ha), adjacent to existing and frequently utilised access tracks. This species is also associated with the *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* CEEC, of which 0.22 ha has been confirmed within the development footprint. 7.14 ha of this CEEC is being retained with the locality. As part of the project, 5.08 ha of PCT 277 is being retained within the subject land and 6.37 ha of total potential habitat retained.

The main identified threats to this species are related to agricultural development and related activities. This includes urban development, high intensity grazing, ploughing and pasture improvement, herbicide use, spread of exotic grasses, predation by pests and inappropriate fire regimes. The subject land is currently being used for agriculture, resulting in trampling, grazing, herbicide use and the presence of pests including the European Red Fox *(Vulpes vulpes)* (Threatened Species Scientific Committee, 2016). Considering these factors, the potential habitat overall is not likely to support the occupancy of *D. impar*. Given that the project proposes removal of 1.85 ha of potentially suitable habitat that has been significantly modified and disturbed by land use, in combination with lack of records in the assessment area, **the species is not likely to decline as a result of modifying, destroying, removing or decreasing the availability of habitat.**

**g) Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat**

The proposal has the potential to contribute to the spread of invasive species, mainly through the clearing of vegetation and transfer and introduction of plant material and soil on machinery. Spear Thistle and other weeds are currently present throughout the site. Mitigation measures have been recommended to prevent the spread of further weeds on site through implementation of biosecurity practices. With these in place, the proposal would therefore be unlikely to result in invasive species that are harmful to these species becoming established in potential *D. impar* habitat.

Feral cats and the European Red Fox are threats to *D. impar* . The European Red Fox has been incidentally observed on site, therefore at least one of these predators is already established in potential habitat for *D. impar*. The proposed project is not likely to increase the numbers of these predators.

**The proposed action would therefore be unlikely to result in invasive species that are harmful to this species becoming established in its potential habitat.**

**h) Introduce disease that may cause the species to decline, or**

*D. impar* is not known to be susceptible to diseases that may cause it to decline (Threatened Species Scientific Committee, 2016). **The proposal is considered unlikely to result in the introduction of disease that may cause the species to decline**.

**i) Interfere substantially with the recovery of the species.**

The following conservation and management priorities for *D. impar* are listed in its Approved Conservation Advice:

<u>*Habitat loss, disturbance and modifications*</u>

*Protect and prevent impacts to habitat critical to the survival of the species in the planning, construction and post construction phases of developments.*

*Negotiate and implement conservation agreements or reserves for striped legless lizard on privately owned land which do not allow high intensity grazing, cropping and pasture improvement activities and involve ongoing management.*

*Improve the quality and condition of reserves which have been set aside for the species.*

*If after an extensive and rigorous scientific assessment of translocation is found to be feasible and beneficial to the species and if suitable recipient sites can be identified, implement the translocation of animals to appropriate recipient locations.*

<u>*Invasive species*</u>

- *Control feral cats and foxes in areas where striped legless lizards occur within or adjacent to urban areas or other areas harbouring these species (i.e. waste facility depots, golf courses etc).*
- *Identify, control and reduce the spread of invasive grasses including escaped pasture species.*

<u>*Fire*</u>

- *Work with fire authorities and private landholders to plan and undertake any burns proposed in areas of habitat critical to the survival of the species in a way that will maintain or improve the habitat for the species.*

<u>*Stakeholder engagement*</u>

- *Support and improve collaboration amongst stakeholders who are managing grassland reserves or are involved in surveying or monitoring populations on private land. Stakeholders include but are not limited to: private landholders, state and local governments, the Department of Defence,*

*Friends of Grasslands, Cairnlea Conservation Reserves Committee of Management, Nature Glenelg Trust, Bush Heritage Australia and Zoos South Australia.*

- *Engage with local Indigenous communities to better understand pre European temperate grassland management practices relating to fire. This includes but is not limited to the Wurundjeri people of Victoria, Ngunnawal and Ngambri people of the ACT and NSW.*
- *Educate public in areas adjacent to striped legless lizard habitat about the predation risk posed by domestic cats, and the principles of responsible cat ownership.*

(Threatened Species Scientific Committee, 2016)

The proposed project would remove 2.00 ha of potential habitat (including 1.85 ha of its associated PCT 277) for this species, of which 0.22 ha is classified as *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland*. However, 7.14 ha of this CEEC would be retained. This ecological community is one of the four ecological communities where this species is known to inhabit; however, the development footprint and surrounds is highly modified from intensive grazing, cropping and other agricultural activities. There is no adopted or made Recovery Plan for this species (DCCEEW, 2025). Although no Recovery Plan exists for this species, the Saving our Species (SoS) program identifies two priority actions for *Delma impar* (NSW DPE, 2025). Considering these factors and the absence of observations within the development footprint and assessment area (BioNet, 2025), **the proposed project is unlikely to substantially interfere with the recovery of this species**.

**j) Conclusion.**

The proposed action is not likely to lead to a long-term decrease in the size of an important *D. impar* population, reduce the area of occupancy an important population or fragment an existing important population into two or more populations. It is not likely to adversely affect habitat critical to the survival of the species, disrupt the breeding cycle of an important population or substantially interfere with the recovery of the species. Due to the degraded condition of the landscape and that multiple key threats already impact the development footprint, the proposed action is not likely to modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. With standard biosecurity protocols in place, the proposed action is not likely to introduce disease that may cause the species to decline. The European Red Fox has previously been observed within the subject land, with a high likelihood of feral cat presence. The proposed project is not likely to increase the presence of these pests. Recommended mitigation measures include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through native vegetation.

Considering the above factors, **the proposed action is not likely to have a significant impact on *Delma impar*.**

## 1.3 Migratory species

The *Environment Protection and Biodiversity Conservation Act 1999* specifies factors to be considered in deciding whether a development is likely to significantly affect Endangered Ecological Communities, threatened species and migratory species, listed at the Commonwealth level. These assessments characterise the significance of likely impacts associated with the development on the following Migratory species:

**Birds**

- Fork-tailed Swift *(Apus pacificus)*
- White-throated Needletail *(Hirundapus caudacutus)*
- Yellow Wagtail *(Motacilla flava)*

| **Fork-tailed Swift *(Apus pacificus)*** |
|---|
| An action is likely to have a significant impact on a migratory species if there is a real chance of possibility that it will: |
| **a) Substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species** |
| *The MNES Significant impact guidelines 1.1 states that an area of 'important habitat' for a migratory species is:*<br>• *habitat utilised by a migratory species occasionally or periodically within a region that supports an ecologically significant proportion of the population of the species, and/or*<br>• *habitat that is of critical importance to the species at particular life-cycle stages, and/or*<br>• *habitat utilised by a migratory species which is at the limit of the species range, and/or*<br>• *habitat within an area where the species is declining.*<br>*Apus pacificus* is a non-breeding visitor to Australia. They are almost exclusively aerial, flying from less than 1 m to at least 300 m above ground, and likely much higher. In NSW, *A. pacificus* has been recorded in all regions (DCCEEW, 2025). There are no observed records within 10km of the subject land (BioNet, 2025).<br>In Australia, they mostly occur over inland plains but sometimes above foothills or in coastal areas, often over cliffs, beaches, islands and sometimes well out to sea. *A. pacificus* also occurs over settled areas, including towns, urban areas and cities, but mostly occur over dry or open habitats. They are also found at treeless grassland and sandplains covered with spinifex, open farmland and inland and coastal sand-dunes (DCCEEW, 2025).<br>Important habitat for *A. pacificus* is defined as "Non-breeding habitat  Found across a range of habitats, from inland open plains to wooded areas, where it is exclusively aerial" (DOE, 2015) . The modelled distribution for its core range is across the whole of the Australian continent.<br>The presence of *A. pacificus* in the subject land has been assumed based on the presence of potential habitat. Of the total 2.00 ha of potential habitat proposed to be removed, 0.33 ha is woodland, and 1.67 ha is grassland. In addition, potential retained habitat within the subject land consists of 4.55 ha of grassland and 1.82 ha of woodland. Grassland in the subject land is in low condition, with woodland areas of moderate condition containing an exotic dominated understorey, and moderate-high condition with a native dominated understorey. The proposed action would remove HBTs from a highly disturbed area, with |

at least 20 HBTs retained within the subject land. It would also retain 30 ha of woodland within the locality and 171.52 ha of native vegetation.

Based on the broad definition and location of important habitat for *A. pacificus*, important habitat does occur with the subject land. This species is highly mobile and has a wide distribution, and it would not be likely to be impacted through the installation of a BESS. It is unlikely that increasing the existing access track from eight metres to 23 m at the widest points would impact movement of *A. pacificus.*

Therefore, the proposed action would impact on 2.00ha of important habitat for *A. pacificus* however in the context of its core range, the impacts are minor in the context of the locality and unlikely to substantially modify, destroy or isolate an area of important habitat.

**b) Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species, or**

Potential threats to *A. pacificus* includes predation by feral animals (DCCEEW, 2025). The proposed action is not likely to increase the presence of pest fauna species or exacerbate the number of pests that are already present on site.

The proposed action also has the potential to contribute to the spread of invasive weed species in the subject land through the transfer and introduction of plant material and soil on machinery. The implementation of appropriate biosecurity practices will assist to prevent and control these impacts.

**Therefore, the proposed action is not likely to result in invasive species that are harmful to *A. pacificus* becoming established in an area of important habitat for the migratory species.**

**c) Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.**

*A. pacificus* is an aerial eater, flying above the ground to forage to forage for insects. They feed in flocks ranging from 10 – 1000 individuals. *A. pacificus* does not breed in Australia, therefore the proposal will not impact its breeding cycle. An ecologically significant proportion of a population of *A. pacificus* is considered to be 100 individuals at the national level, and 1,000 at the international level (DOE, 2015). Since no individuals have been observed within the subject land or locality, there is not considered to be an ecologically significant proportion of an *A. pacificus* population and the project would not impact any.

This migratory species is highly mobile and has a wide distribution, and would not likely be impacted through the installation of a BESS. It is unlikely that increasing the existing access track from eight metres to 23 m at the widest points would impact *A. pacificus.* There are also no observed records of the species within 10 km of the subject land (BioNet, 2025). Of the total 2.00 ha of potential habitat proposed to be removed, 0.33 ha is woodland, and 1.67 ha is grassland. In addition, potential retained habitat within the subject land consists of 4.55 ha of grassland and 1.82 ha of woodland. Grassland in the subject land is in low condition, with woodland areas of moderate condition containing an exotic dominated understorey, and moderate-high condition with a native dominated understorey. The proposed action would remove HBTs from a highly disturbed area, with at least 20 HBTs retained within the subject land. It would also retain 30 ha of woodland within the locality and 171.52 ha of native vegetation.

Considering these factors, it is unlikely the proposed action would seriously disrupt the lifecycle of an ecologically significant proportion of the population of *A. pacificus*.

**d) Conclusion.**

The proposed action is not likely to substantially modify, destroy or isolate an area of important habitat for a migratory species, or result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species. It is not likely to seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.

**Therefore, the proposed action is not likely to have a significant impact on *A. pacificus*.**

**White-throated Needletail *(Hirundapus caudacutus)***

An action is likely to have a significant impact on a migratory species if there is a real chance of possibility that it will:

**a) Substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species**

*The MNES Significant impact guidelines 1.1 states that an area of 'important habitat' for a migratory species is:*

- *habitat utilised by a migratory species occasionally or periodically within a region that supports an ecologically significant proportion of the population of the species, and/or*
- *habitat that is of critical importance to the species at particular life-cycle stages, and/or*
- *habitat utilised by a migratory species which is at the limit of the species range, and/or*
- *habitat within an area where the species is declining.*

*Hirundapus caudacutus* is mostly aerial in Australia, occurring from heights of less than one metre to over 1,000 m above ground level. They occur throughout most habitat types, but are most often observed above wooded areas, including open forest and rainforest, but may also fly below canopies. When flying above farmland, they are often recorded above partly cleared pastures, remnant vegetation, plantations or paddock edges (Threatened Species Scientific Committee, 2019).

Important habitat for this species is defined as non-breeding habitat only, in wooded areas (Threatened Species Scientific Committee, 2019). Therefore, habitat within the Subject Land is considered important for the species. However, the 1.67 ha of grassland to be removed is in low condition, and 0.33 ha of woodland is in moderate to high conditions.

There are no observed records of *H. caudacutus* utilising the subject land or locality (BioNet, 2025). It's core distribution occurs across Eastern Australia from Tasmania to Queensland (DOE, 2015). The presence of *H. caudacutus* in the subject land has been assumed based on the presence of potential habitat and its core distribution range. Of the total 2.00 ha of potential habitat proposed to be removed, 0.33 ha is woodland, and 1.67 ha is low condition grassland. In addition, potential retained habitat within the subject land consists of 4.55 ha of grassland and 1.82 ha of woodland.

Grassland in the subject land is in low condition, with woodland areas of moderate condition containing an exotic dominated understorey, and moderate-high condition with a native dominated understorey. The proposed action would remove five HBTs from a highly disturbed area, with at least 20 HBTs retained within the subject land. It would also retain 30 ha of woodland within the locality and 171.52 ha of native vegetation. Considering that this species is highly mobile and has a wide distribution range, the removal of 2.00ha of potential habitat is minor in the context of the locality **and unlikely to substantially modify, destroy or isolate an area of important habitat.**

**b) Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species, or**

Invasive species that are harmful to *H. caudacutus* becoming established in its habitat include the Common Starling (*Sturnus vulgaris)* and Noisy Miner *(Manorina melanocephala)* which compete for roosting habitat, and reduce the ability of *H. caudacutus* to become established within the potential suitable habitat (Threatened Species Scientific Committee, 2019). These invasive species occupy fragmented landscapes. The subject land is already fragmented from current access tracks and agricultural activities and the proposal is unlikely to exacerbate presence of feral bird species.

In addition, the proposed action is not likely to increase the presence of pest fauna species such as feral cats or foxes or exacerbate the number of pests that are already present on site.

The proposed action has the potential to contribute to the spread of invasive weed species in the subject land through the transfer and introduction of plant material and soil on machinery. The implementation of appropriate biosecurity practices outlined in the BDAR will assist to prevent and control these impacts.

**Therefore, the proposed action is not likely to result in invasive species that are harmful to *H. caudacutus* becoming established in an area of important habitat for the migratory species.**

**c) Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.**

*H. caudacutus* does not breed within Australia, migrating to and breeding within Asia (Threatened Species Scientific Committee, 2019). This migratory species is highly mobile with a wide distribution range, and would not likely be impacted through the installation of a BESS. Therefore, it is unlikely that increasing the existing access track from eight metres to 23 m at the widest points would impact *H. caudacutus.* There are also no observed records of the species within 10 km of the subject land (BioNet, 2025). Of the total 2.00 ha of potential habitat proposed to be removed, 0.33 ha is woodland, and 1.67 ha is grassland. In addition, potential retained habitat within the subject land consists of 4.55 ha of grassland and 1.82 ha of woodland. Grassland in the subject land is in low condition, with woodland areas of moderate condition containing an exotic dominated understorey, and moderate-high condition with a native dominated understorey. The proposed action would remove HBTs from a highly disturbed area, with at least 20 HBTs retained within the subject land. It would also retain 30 ha of woodland within the locality and 171.52 ha of native vegetation.

An ecologically significant proportion of *H. caudacutus* is defined as 100 (internationally) and 10 (nationally) (DOE, 2015). Based on a lack of observed records within 10 km of the subject land, it is unlikely there would be an ecologically significant proportion of an *A. pacificus* population in the Subject Land. In addition, due to the minimal vegetation to be cleared, no impacts to the population are considered to occur.

Considering these factors, it is unlikely the proposed action would seriously disrupt the lifecycle of an ecologically significant proportion of the population of *H. caudacutus*.

**d) Conclusion.**

The proposed action is not likely to substantially modify, destroy or isolate an area of important habitat for a migratory species, or result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species. It is not likely to seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.

Therefore, the proposed action is not likely to have a significant impact on *H. caudacutus*.

**Yellow Wagtail *(Motacilla flava)***

An action is likely to have a significant impact on a migratory species if there is a real chance of possibility that it will:

**a) Substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species**

*The MNES Significant impact guidelines 1.1 states that an area of 'important habitat' for a migratory species is:*

- *habitat utilised by a migratory species occasionally or periodically within a region that supports an ecologically significant proportion of the population of the species, and/or*
- *habitat that is of critical importance to the species at particular life-cycle stages, and/or*
- *habitat utilised by a migratory species which is at the limit of the species range, and/or*
- *habitat within an area where the species is declining.*

In Australia, *Motacilla flava* has a widespread distribution, with likely or potential habitat occurring throughout most of the country (DCCEEW, 2025). It favours damp or wet habitats with low vegetation, such as marshes, damp meadows, bogs and waterside pastures. It is also found in sewage farms, grassy tundra and damp steppe, and found in large forest clearings in the north of its range. It is a wholly migratory species, with an occurrence extent of 40,900,000 $km^2$ (BirdLife, 2025).

Important habitat for this species is defined as "Non-breeding habitat of mostly well-watered open grasslands and the fringes of wetlands. Roosts in mangroves and other dense vegetation" (DOE, 2015). None of these habitats occur within the Subject Land and important habitat is not considered to occur.

The presence of *M. flava* in the subject land has been assumed based on the presence of potential habitat. Of the total 2.00 ha of potential habitat proposed to be removed, 0.33 ha is woodland, and 1.67 ha is grassland. In addition, potential retained habitat within the subject land consists of 4.55 ha of grassland and 1.82 ha of woodland. Grassland in the subject land is in low condition, with woodland areas of moderate condition containing an exotic dominated understorey, and moderate-high condition with a native dominated understorey. The proposed action would remove HBTs from a highly disturbed area, with at least 20 HBTs retained within the subject land. It would also retain 30 ha of woodland within the locality and 171.52 ha of native vegetation.

*M. flava* is not known to utilise the subject land or locality. This species is highly mobile and has a wide distribution, and would not likely be impacted through the installation of a BESS. It is unlikely that increasing the existing access track from eight metres to 23 m at the widest points would impact movement of *M. flava.*

Incorporating these factors, and lack of observed records within 10 km of the subject land, important habitat is considered absent. Therefore, the proposed action would not substantially modify, destroy or isolate an area of important for *M. flava*.

**b) Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species, or**

Important habitat is not considered to be present within the subject land.

The proposed action has the potential to contribute to the spread of invasive weed species in the subject land through the transfer and introduction of plant material and soil on machinery. The implementation of appropriate biosecurity practices will assist to prevent and control these impacts. In addition, the proposed action is not likely to increase the presence of pest fauna species or exacerbate the number of pests that are already present on site.

**Therefore, the proposed action is not likely to result in invasive species that are harmful to *M. flava* becoming established in an area of important habitat for the migratory species.**

**c) Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.**

*M. flava* breeds from April to August, but varies with latitude (BirdLife, 2025). This migratory species is highly mobile and has a wide distribution, and would not be likely to be impacted through the installation of a BESS. It is unlikely that increasing the existing access track from eight metres to 23 m at the widest points would impact movement of *A. pacificus.* There are also no observed records of the species within 10 km of the subject land (BioNet, 2025). Of the total 2.00 ha of potential habitat proposed to be removed, 0.33 ha is woodland, and 1.67 ha is grassland. In addition, potential retained habitat within the subject land consists of 4.55 ha of grassland and 1.82 ha of woodland. Grassland in the subject land is in low condition, with woodland areas of moderate condition containing an exotic dominated understorey, and moderate-high condition with a native dominated understorey. The proposed action would remove HBTs from a highly disturbed area, with at least 20 HBTs retained within the subject land. It would also retain 30 ha of woodland within the locality and 171.52 ha of native vegetation.

An ecologically significant proportion of *M. flava* is defined as 10000 (internationally) and 1000 (nationally) (DOE, 2015) . Known records occur on the coastal areas of NSW (DOE, 2015). Based on a lack of observed records within 10 km of the subject land, and lack of important habitat it is unlikely the species would occur in numbers over 1000 across the Subject Land.

Considering these factors, it is unlikely the proposed action would seriously disrupt the lifecycle of an ecologically significant proportion of the population of *M. flava*.

**d) Conclusion.**

The proposed action is not likely to substantially modify, destroy or isolate an area of important habitat for a migratory species, or result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species. It is not likely to seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.

Therefore, the proposed action is not likely to have a significant impact on *M. flava*.

## 1.4 Critically Endangered and Endangered Ecological Communities

The *Environment Protection and Biodiversity Conservation Act 1999* specifies factors to be considered in deciding whether a development is likely to significantly affect Endangered Ecological Communities, threatened species and migratory species, listed at the Commonwealth level. These assessments characterise the significance of likely impacts associated with the proposal on the following Critically Endangered and Endangered Ecological Communities:

**Critically Endangered**

- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland

| **White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland** |
|---|
| An action is likely to have a significant impact on a critically endangered or endangered ecological community if there is a real chance or possibility that it will: |
| **a) Reduce the extent of an ecological community** |
| The proposed development footprint is located in the NSW South Western Slopes Bioregion and features PCT 277 Blakely's Red Gum - Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion. Some areas of this PCT on site matches the description for *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland*, a Critically Endangered Ecological Community (CEEC) under the *Environment Protection and Biodiversity Conservation Act 1999.* These areas occur on the western portion of the site, adjacent to the existing access track. This CEEC patch meets the Commonwealth listed TEC criteria, based on a predominantly native understory, a patch size of more than 2 ha, at least 20 mature trees per hectare and natural regeneration of *Eucalyptus blakelyi*.<br><br>A desktop review of State Vegetation Type Mapping (SVTM) shows that PCT 277 is mapped within the assessment area (NSW DCCEEW, 2020). In addition, confirmation of presence for this PCT and CEEC was made by a BAM-accredited senior ecologist during a site investigation. This CEEC was mapped within the subject land using site observations and LiDAR imagery.<br><br>The overall patch of *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* within the proposed development footprint is 0.22 ha and comprises only one canopy tree (Blakely's Red Gum). This is located between two existing access tracks, therefore has been previously fragmented of this clearing. Within the subject land, there is 0.57 ha of this CEEC, which has the potential to be indirectly impacted through construction-related activities including potential weed spread through trampling and vehicular movements. This patch extends outside the subject land, totalling approximately 7.36 ha patch of woodland within the locality.<br><br>The proposed project would reduce the extent of this CEEC by 0.22 ha from the local patch of 7.36 ha through vegetation removal inside the development footprint. Therefore, there would be a loss of approximately 3% of *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* within the subject land. Towards the west where the CEEC occurs, SVTM shows that there is approximately 7.14 ha of PCT 277 being retained. Therefore, the local patch is approximately 7.36 ha in size and the proposed project would reduce the extent of the local patch by approximately 3%. Due to the small clearing area, low condition vegetation and current land use, it is not likely that the proposed action would significantly reduce the extent of this CEEC. |
| **b) fragment or increase fragmentation of an ecological community, for example by clearing vegetation for roads or transmission lines** |

The disturbance of *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* would be unavoidable due to vegetation clearing widening the existing access track in the western section of the development footprint. This area is 0.22 ha in size and currently exists in the in a small fragmented patch between two access tracks, on the edge of a larger patch of *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland*.

According to Conservation Advice, land clearance of this CEEC should be avoided, as it is a Key Threatening Process (DCCEEW, 2023). At each widest point, the area to be cleared is 170 m in length and 20 m wide. This section is directly adjacent to an existing access track on the northern side, and adjacent to existing access tracks on the southern side. The proposed action would increase fragmentation of the woodland, which could impact on fauna species that rely on woodland for movement. The proposed impacts would create an increase of track widths from eight metres up to 23 m in width causing additional minor fragmentation but still allow for movement of fauna species reliant on this CEEC. Since the project proposes to clear vegetation on the edge of an existing patch which has been degraded through grazing, land use and general farming activities, it is not likely that the action would cause significant fragmentation. This patch has previously been fragmented on both the north and south sides as a result of clearing for the existing access track. Therefore, it is not considered likely that this action would have a significant impact on increasing fragmentation of this ecological community.

**c) adversely affect habitat critical to the survival of an ecological community**

No habitat critical to the survival of this species has been identified as per section 207A of the EPBC Act, or on the Register of Critical Habitat (DCCEEW, 2023). Since this ecological community is considered highly fragmented and degraded, all areas of the ecological community that meet the minimum condition criteria outlined in section 2.3 of its Approved Conservation Advice should be considered habitat critical to the survival of this CEEC (DCCEEW, 2023). Applying this criteria to the project, it is considered that the 0.22 ha of the CEEC proposed to be removed is classified as habitat critical to the survival of this ecological community.

Since removal of this CEEC patch cannot be avoided, mitigation measures to minimise and offset impacts are stated under the conclusion section and should be adhered to.

**d) modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns**

The project proposes to remove 0.22 ha of this CEEC to widen an existing access track, which would substantially modify abiotic factors in this particular area. Nutrients would be stripped from the soil, while the soil would be modified to accommodate the access track extension. It is also noted that this patch is disturbed from historic and current land use as a result of construction of the existing access track. Assessing the action against hydrology, the patch of vegetation proposed to be removed contains two streams that flow from north to south, through the middle of the area. One stream is a 4$^{th}$ Order Strahler stream, and the other is Paper Forest Creek, a 5$^{th}$ Order Strahler stream. Soil disturbance may impact vegetation including woodland, downstream of the development footprint, but this is not classified as the CEEC. The proposed clearing would not reduce groundwater levels as the project does not include excavation. Mitigation measures are recommended and would be implemented to prevent sedimentation and erosion downstream of the development footprint.

Considering the above factors, it is not considered likely that the proposed action would significantly modify or destroy abiotic factors necessary for the survival of this ecological community.

**e) cause a substantial change in the species composition of an occurrence of an ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting**

The area of vegetation to be removed is directly adjacent to an existing access track and contains one hollow-bearing *Eucalyptus blakelyi*. The project would cause permanent disturbance via clearing of this hollow-bearing tree, which contains two hollows – diameters of approximately 11-20 cm and 20-40 cm, with a DBH of 151 cm. Although there were no signs of use at time of observation, multiple threatened fauna species have the potential to be utilising this tree and the 0.22 ha patch.

Nationally threatened fauna that may utilise this CEEC include the following species:

- Superb Parrot *(Polytelis swainsonii)*
- Striped Legless Lizard *(Delma impar)*
- Sloane's Froglet *(Crinia sloanei)*
- Pink-tailed Legless Lizard *(Aprasia parapulchella)*
- Golden Sun Moth *(Synemon plana)*
- South-eastern Glossy Black Cockatoo *(Calyptorhynchus lathami lathami)*
- Gang-gang Cockatoo *(Callocephalon fimbriatum)*
- Pink Cockatoo *(Lophochroa leadbeateri)*

Since the action proposes to clear this area of CEEC, the species composition would be reduced to zero and replaced with suitable materials to extend the existing access track. Considering the listed factors, the action is likely to substantially change the species composition of this ecological community in the development footprint.

However, the species composition of the retained CEEC within the subject land and wider locality is not likely to be significantly altered, with minimal indirect impacts. This is due to the surrounding patch already being disturbed by current grazing, vehicle and machinery disturbance, as well as previous disturbance from clearing for the existing access track.

**f) cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to:**

- **assisting invasive species, that are harmful to the listed ecological community, to become established, or**
- **causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community which kill or inhibit the growth of species in the ecological community, or**

The CEEC within the development footprint and subject land is in moderate condition, with evidence of regeneration by a BAM-accredited senior ecologist. It is important to note that observations through site visits indicate the CEEC is in a highly disturbed state, as a result of grazing, trampling, vehicle movements and other agricultural activities. The project includes proposed clearing of 3% ha of this CEEC within the local patch, therefore reducing the quality and integrity by a minimal amount in comparison to the retained CEEC area (7.14 ha).

The proposed action is not likely to utilise fertilizers or use herbicides beyond what would already occur on the subject land for general maintenance. Unclean vehicles and machinery on site have the potential to introduce new weed seeds or spread existing weeds, leading to new weed outbreaks. These impacts can be easily mitigated through standard biosecurity practices, including vehicle and machinery checks for soil and plant matter. These should be cleaned prior to entering the project site to avoid introducing new weeds or pathogens.

Considering the listed factors, the proposed action is likely to cause a substantial reduction in the quality and integrity of the 0.22 ha to be cleared, but it is not likely to have a significant impact on 97% of the retained local patch of CEEC if biosecurity practices are adhered to.

**g) interfere with the recovery of an ecological community.**

This CEEC has been primarily impacted by changes to soil nutrient levels, land clearing, inappropriate grazing and weed invasion.

The main threats to this CEEC associated with the proposed action include:

- Permanent impact through 0.22 ha of CEEC vegetation clearing
- Potential for contamination, colonisation/spread of invasive flora during clearing, affecting the long-term health of the adjacent retained CEEC

The subject land contains 0.57 ha of this ecological community, with 7.36 ha of this community in the local patch; therefore, 7.14 ha (97%) of the local patch would be retained. No clearing is proposed outside of the development footprint. Where impacts cannot be completely avoided, they should be minimised through the following methods:

- Protecting large mature trees and trees with hollows
- Retaining and avoiding damage to high quality patches

Mitigation measures include:

- Delineation of clearing (impact) areas to avoid inadvertent impacts upon adjacent (retained) vegetation
- Avoid use of herbicides, pesticides and fertilizers
- Reduce impacts of grazing and agricultural effects
- Minimise spread of invasive weeds through standard biosecurity practices
- Offsetting and revegetation of cleared CEEC

The recovery plan lists a range of objectives to minimise the risk of extinction of this ecological community. Applicable objectives to the proposed project include:

- Increasing protection of sites with high recovery potential
- Achieving no net loss in extent and condition of the ecological community throughout its geographic distribution

Due to the proposed clearing of 0.22 ha of confirmed CEEC (3% of the local patch), and in consideration of the above factors, the proposed action is not likely to interfere with the recovery of this ecological community.

**h) Conclusion.**

The proposed works for this project include clearing of 0.22 ha of *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland.* Inside the subject land and development footprint, this CEEC is in moderate condition, with stock grazing, weed presence, trampling and vehicular movements contributing to the degradation of the landscape.

The proposed development footprint is 0.22 ha, or 3% of the local patch of this CEEC, occurring as a result of vegetation clearing as part of the project. The proposed project is not likely to significantly increase fragmentation and edge effects of this CEEC. The proposed works are expected to modify or destroy abiotic factors affecting habitat structures and potential faunal movements within the development footprint only (0.22 ha). This is primarily due to the proposed clearing of a large HBT that is likely over 200 years old, in addition to the other native vegetation in this CEEC that would be removed. The proposed project

may cause exotic or invasive plants to spread, and may introduce new weeds to the area during clearing, construction and operational phases. However, If mitigation measures are followed and biosecurity practices are in place, the risk of weed introduction and spread is expected to be minimal.

The primary recommendation for *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* is to avoid further clearing of this CEEC and preserve vegetation communities that meet the criteria for this ecological community (DCCEEW, 2023). Since impacts cannot be avoided to 0.22 ha inside the development footprint, a number of mitigation measures are recommended to minimise impacts to the retained CEEC area (7.14 ha). Recommendations include:

- Vehicles and machinery to be checked for soil and plant matter and washed-down prior to entering the site
- Brushing and cleaning boots if walking through CEEC area
- Clear delineation of vegetation to be cleared or retained
- Avoid the use of herbicides and pesticides post-clearing
- Revegetation of cleared vegetation
- Offsetting 0.22 ha of cleared CEEC

Although there is a small area (3%) of the local patch being directly impacted by the proposal through clearing, it is unlikely that the action would significantly impact the local patch of *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland,* or the wider ecological community.

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