APPENDIX F: REVISED MNES SIGNIFICANT IMPACT TESTS FOR RESPONSE TO COMMENTS ON DRAFT EIS

MARINUS LINK

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

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Marinus Link Project - Revised MNES significant impact tests for Commonwealth listed species

Eco Logical Australia Pty Ltd (ELA) previously prepared a terrestrial ecology impact assessment for Marinus Link Pty. Ltd., which provided the findings of a detailed baseline ecological study and associated impact assessment for the proposed Marinus Link project (the project) (ELA, 2024). This document was submitted as Technical Appendix V within the combined Environmental Impact Statement (EIS) and Victorian Environment Effects Statement (EES), submitted to the Department of Transport and Planning (Referral number: 2021-R04).

Tetra Tech Coffey, on behalf of Marinus Link Pty. Ltd., has engaged ELA to identify any species included in the terrestrial ecology impact assessment which have been subject to listing changes under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), and update species assessments were necessary against the relevant significant impact criteria.

The following presents background information, methods and results of the updated assessments.

1. Background

Eco Logical Australia Pty Ltd (ELA) previously prepared a terrestrial ecology impact assessment (ELA, 2024) for of Marinus Link Pty. Ltd., to inform the combined EES and EIS prepared for the proposed project (Referral number 2021-R04). The project comprises a high voltage direct current (HVDC) electricity interconnector between Tasmania and Victoria, to allow for the continued trading and distribution of electricity within the National Energy Market (NEM). In Victoria, the shore crossing is proposed to be located at Waratah Bay with the projects terrestrial alignment extending underground for approximately 90 km before connecting with a converter station at Driffield or at Hazelwood. The terrestrial ecology impact assessment (ELA, 2024) was submitted to the Department of Transport and Planning (DTP) as Technical Appendix V of the EES/EIS and presents findings of a detailed baseline ecological study and associated impact assessment for the Victorian section of the project.

A public hearing was held in relation to the Marinus project on 25 September 2024. At the hearing, the Inquiry and Advisory Committee (IAC) raised a query and requested Marinus Link Pty. Ltd. to confirm the status of listed species throughout the terrestrial ecology impact assessment (ELA, 2024). This prompted a review to ensure species listings are current and consistent throughout the document. The desktop assessment which informs terrestrial ecology impact assessment was undertaken on the 26 May 2023 (ELA, 2024). Several updates to both Victorian state and Commonwealth listened flora and fauna have occurred since this time. On 7 October 2024, the IAC requested a revised species list to clearly identify species listings at the time of the initial desktop compared to their current status. In response, a spreadsheet summarising listing changes was issued to the IAC as document 140c – Appendix to Part C submission.

The objective of this document is to provide updates to the species assessments of significance against the relevant significance impact criteria for relevant species listed under the Commonwealth EPBC Act that have changed (upgraded) post the initial desktop (26 May 2023).

2. Methods

A review of species listings under the Commonwealth EPBC Act and Victorian FFG Act was completed on 4 October 2024 for all species included within Appendix 2 of the terrestrial ecology impact assessment (ELA, 2024). All species with outdated listings under either Act were noted, along with the date which the listing change became effective. For the purposes of this assessment, only species which has had listing update under the Commonwealth EPBC Act and which were assessed as having potential to occur within the study area by the terrestrial ecology impact assessment (ELA, 2024) are considered.

A detailed consideration of the threatened species identified in the above process was undertaken in accordance with the Significant Impact Guidelines 1.1 - Matters of National Environmental Significance (DEWHA, 2013). Species assessments of significance were completed against the relevant significant impact criteria as dictated by the species status.

3. Results

3.1. Summary of species listing changes

Since completion of the initial desktop assessment on the 26 May 2023 (ELA, 2024), several updates to both state and commonwealth listened flora and fauna have occurred. Only species with the potential to occur within the study area, which have had listing changes under the EPBC Act have been summarised below.

Table 1. Summary of relevant EPBC Act species listing changes

Scientific Name	Common Name	EPBC Act listing in Technical Appendix 5 (ELA, 2024).	EPBC Act listing (as of October 2024)	Updated significant impact test required?
Galaxiella pusilla	Dwarf Galaxias	VU	EN	Y
Gallinago hardwickii	Latham's Snipe	Ma, Mi (JAMBA, CAMBA, ROKAMBA)	VU, Ma, Mi (JAMBA, CAMBA, ROKAMBA)	Y
Myiagra cyanoleuca	Satin Flycatcher	Ma, Mi (Bonn)	Ma	N
Rhipidura rufifrons	Rufous Fantail	Ma, Mi (Bonn)	Ma	N

Dwarf Galaxias (*Galaxiella pusilla*) was previously listed as vulnerable under the EPBC Act This initial listing under the EPBC Act having come into effect on the 12th March 2010. This species listing was re-assessed, and transferred to the endangered category, effective from 15 November 2023 (DCCEW 2023). The reasons for the change, includes a more advanced understanding of the limited and restricted distribution of the species and the continued decline in area, extent and/or quality of its habitat (DCCEW 2023). The number of subpopulations and number of mature individuals are also understood as having declined, largely due to impacts related to natural water resource use, climate change and invasive species (DCCEW 2023). In accordance with its listing at the time of the initial desktop assessment species Dwarf Galaxias was previously assessed under the vulnerable criteria (ELA, 2024). Based on assessment against the criteria for vulnerable species the project was determined as unlikely to have a significant impact on the species (ELA, 2024).

Latham's Snipe *(Gallinago hardwickii)* was previously only listed as migratory under the EPBC Act. The species afforded protection in accordance with the Japan –Australia Migratory Bird Agreement (JAMBA), Republic of Korea–Australia Migratory Bird Agreement (ROKAMBA) and included as one of 37 listed migratory species in the East Asian-Australasian Flyway (EAAF). Latham's Snipe was assessed to be eligible for listing under the vulnerable category of the EPBC Act, effective from 5 January 2024 (DCCEW 2024). This change in species status was prompted due to an estimated population decline of 30% over the last three generations (DCCEW 2024). Drought and fires within the Australian mainland is thought to have contributed to the sudden population declines within their Japanese breeding grounds (DCCEW 2024). This species also has been historically hunted in large numbers within Australia between 1900s and 1980s before the Japan- JAMBA entered into force. This species was previously grouped with other migratory species and assessed under the migratory criteria (ELA, 2024). Based on assessment against the criteria for migratory species the project was determined as unlikely to have a significant impact on the species (ELA, 2024).

The following five bird species in the bird family *Muscicapidae* (sensu lato) (including the sub-family *Sylviinae*), have been omitted from the list of Migratory species, effective 21 September 2024 (Commonwealth of Australia, 2024):

- Black-winged Monarch (*Monarcha frater*).
- Black-faced Monarch (*Monarcha melanopsis*).
- Satin Flycatcher (*Myiagra cyanoleuca*).
- Rufus Fantail (*Rhipidura rufifrons*).
- Spectacled Monarch (*Symposiachrus trivirgatus*).

These species were not determined to have an unfavourable conservation status according to the International Union for Conservation of Nature Red List, and there was also limited evidence for these species' migration across national boundaries (Commonwealth of Australia, 2024). BirdLife Australia also agreed that these species do not meet the listing requirements (Commonwealth of Australia, 2024). For these reasons these species were no longer eligible to be listed as migratory. Rufous Fantail and Satin Flycatcher were previously assessed under the migratory criteria (ELA, 2024), and this assessment is no longer relevant.

3.2. Revised MNES significant impact tests

As a result of the upgrade of their listing status an updated MNES significance impact assessment has been completed for Dwarf Galaxias and Latham's Snipe under the relevant significant impact criteria. These are provided in Appendix A. It is noted Dwarf Galaxias was not recorded during surveys undertaken as part of the Terrestrial Ecology Impact Assessment (ELA, 2024). Latham's Snipe was however recorded opportunistically using a waterbody at KP 78.8.

Based on the assessment against significant impact criteria for endangered species, Dwarf Galaxias are unlikely to be significantly impacted by the project. This species occurs in slow flowing and still, shallow, permanent, and temporary, freshwater habitats, which also includes wetlands and ephemeral wetlands (DCCEEW 2023). Removal of these aquatic habitats has largely been avoided, and no direct loss of breeding habitat is expected to occur. Indirect impacts such as the potential release of pollution/sediments into waterways, introduction of diseases or aquatic weeds, and light pollution have been appropriately addressed through proven construction controls (ELA, 2024).

Based on the assessment against significant impact criteria for vulnerable species it was determined that Latham's Snipe is also unlikely to be significantly impacted by the project. This determination was based on the minimal extent of wetland habitat to be impacted by the species and due to their extensive range and the availability of similar foraging habitat throughout the region. This species is a non-breeding visitor to Australia that occurs in small numbers from scattered locations across the east coast (DCCEEW 2024). They disperse to new locations in response to rainfall and food availability (DCCEEW 2024), and if disturbed due to construction noise and light, are likely to relocate to other nearby habitats.

After consideration of the significant impact criteria, it was determined that the upgrade of the listing status of Dwarf Galaxias and Latham's Snipe under the EPBC Act does not materially change the findings of the Terrestrial Ecology Impact Assessment (ELA, 2024).

4. References

Bamford, M., Watkins, D., Bancroft, W., Tischler, G., and Wahl, J. 2008 Migratory shorebirds of the East Asian- Australasian Fyway; Population Estimates and Internationally Important Sites. Wetlands International – Oceania. Canberra, Australia.

DCCEEW. 2023. Conservation Advice for *Galaxiella pusilla* (Dwarf Galaxias). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/56790-conservation-advice-15112023.pdf.

DCCEEW. 2024. Conservation Advice for *Gallinago hardwickii* (Latham's snipe). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: https://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=863

DEWHA. 2013. Significant Impact Guidelines 1.1. *Environment Protection and Biodiversity Conservation Act 1999.* Commonwealth Department of the Environment, Water, Heritage and the Arts.

DoE. 2017. *Industry guidelines for avoiding, assessing and mitigating impacts on EPBC Act listed migratory shorebird species.* Canberra: Department of the Environment.

ELA. 2024. Terrestrial Ecology Impact Assessment – Marinus Link. Prepared for Marinus Link Pty. Ltd. By Eco Logical Australia, 26 November 2024

Commonwealth of Australia (2024). *List of Migratory Species Amendment (1) Instrument 2024*. F2024L01190. Canberra: Federal Register of Legislation. In effect under the EPBC Act from 21-Sep-2024. Available from: https://www.legislation.gov.au/F2024L01190/asmade/text

Appendix A: MNES significant impact tests

A1: Dwarf Galaxias

Species: *Galaxiella pusilla*
Listing: Endangered

Criterion	Question	Response
An action is likely to have a significant impact on a critically endangered or endangered species if there is a real chance or possibility of the following:		
1)	will the action lead to a long-term decrease in the size of a population	**No.** There are 12 identified populations that are considered to be 'important populations' to maintain the genetic diversity of these species, listed in the species Conservation Advice. In addition, any population found in a permanent water body is considered important for breeding and dispersal, as they act as a key source population for the reestablishment of populations in ephemeral or semi-permanent habitat. There are no known important populations/subpopulations of Dwarf Galaxias within the survey area. The project is unlikely to lead to a long-term decrease in the size of a population of this species. There will be no direct disturbance to habitat for this species. Indirect impacts include the potential release of pollution and/or sediment into waterways and potential light pollution. Trenchless technologies such as HDD will be utilised, including ensuring appropriate setbacks from aquatic habitat to minimise the release of sediments or pollutants into the water.
2)	will the action reduce the area of occupancy of the species	**No.** The project is unlikely to reduce the area of occupancy of a population of Dwarf Galaxias. There will be no direct disturbance to habitat for this species. Indirect impacts include the potential release of pollution and/or sediment into waterways and potential light pollution. Trenchless technologies such as HDD will be utilised, including ensuring appropriate setbacks from aquatic habitat to minimise the release of sediments or pollutants into the water.
3)	will the action fragment an existing population into two or more populations	**No.** The project is unlikely to fragment an existing population of Dwarf Galaxias into two or more populations. There will be no direct disturbance to habitat for this species, and therefore no fragmentation of habitat will occur.
4)	will the action adversely affect habitat critical to the survival of a species	**No.** Dwarf Galaxias occur in slow flowing and still, shallow, permanent, and temporary, freshwater habitats, which also includes wetlands and ephemeral wetlands. Habitat critical to the survival of this species includes: • All known freshwater habitats where the species is currently found or has previously been found, including translocated subpopulations. • Hydrologically connected waterways that have the required substrate, riparian vegetation, and water quality characteristics

Criterion	Question	Response
		within 25 km of known sites, which are suitable for natural migration during flooding events or future translocations. • Native riparian vegetation surrounding known and potential habitat, particularly native vegetation that provides shading and litter input to wetlands and streams. The project is unlikely to adversely affect habitat critical to the survival of this species. There will be no direct impact to habitat. Mitigation measures, including utilising trenchless technologies such as HDD and ensuring appropriate setbacks from aquatic habitat to minimise the release of sediments or pollutants into the water will be implemented to reduce indirect impacts.
5)	will the action disrupt the breeding cycle of a population	**No.** The project is unlikely to disrupt the breeding cycle of a population of Dwarf Galaxias. There will be no direct loss of breeding habitat. Mitigation measures to minimise the release of sediments or pollutants into the water will be utilised to reduce indirect impacts to aquatic habitats.
6) i	will the action modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	**No.** The project is unlikely to modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline. There will be no direct impact to habitat. Mitigation measures, including utilising trenchless technologies such as HDD and ensuring appropriate setbacks from aquatic habitat to minimise the release of sediments or pollutants into the water will be implemented to reduce indirect impacts.
6) ii	will the action result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat	**No.** The project is unlikely to result in invasive species that are harmful to this species becoming established within potential habitat. In particular, wash down procedures of machinery will be implemented to prevent the spread of weeds into areas of habitat.
7)	will the action introduce disease that may cause the species to decline	**No.** The project is unlikely to introduce disease that may cause these species to decline.
8)	will the action interfere with the recovery of the species	**No.** Key threats to the Dwarf Galaxias include wetland drainage, climate change, habitat damage through grazing and lack of regeneration, feral fish competitors and predators. There will be no direct impacts to habitat for this species, and mitigation measures will be implemented to reduce the indirect impacts such as the release of sediments or pollutants into the water. As such, the project is unlikely to interfere with the recovery of Dwarf Galaxias.
Conclusion	Is there likely to be a significant impact?	After considering the above statements, the project is unlikely to have a significant impact on the endangered Dwarf Galaxias.

A2: Latham's Snipe

Species: *Gallinago hardwickii*
Listing: Vulnerable, Marine, Migratory

Criterion	Question	Response
An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:		
1)	lead to a long-term decrease in the size of an important population of a species	**No.** The project is unlikely to lead to a long-term decrease in the size of an important population of the Latham's snipe. No important populations are described for this species in Australia, and this species does not breed in Australia. Records of Latham's Snipe in Australia tend to be in small numbers from scattered locations across the east coast (DCCEEW 2024). Further, there will be no direct disturbance to habitat for this species. Indirect impacts include the potential release of pollution and/or sediment into waterways and potential light pollution. Potential light pollution will be short term, and will only occur during the construction phase, and therefore will unlikely lead to a long-term decrease in the size of the population.
2)	reduce the area of occupancy of an important population	**No.** The project is unlikely to reduce the area of occupancy of an important population of Latham's Snipe. No important populations within Australia have been described. Records of Latham's Snipe in Australia tend to be in small numbers from scattered locations across the east coast (DCCEEW 2024). Individuals also move according to rainfall patterns and food availability (DCCEEW 2024). Further, there will be no direct disturbance to habitat for this species.
3)	fragment an existing important population into two or more populations	**No.** No important populations are described for this species in Australia. Records of Latham's Snipe in Australia tend to be in small numbers from scattered locations across the east coast (DCCEEW 2024). Individuals are dispersive whilst overwintering in Australia and move in response to rainfall and food availability (DCCEEW 2024). Further, there will be no direct disturbance to habitat for this species. it is therefore unlikely that this project i would fragment an existing important population into two or more populations.
4)	adversely affect habitat critical to the survival of a species	**No.** Important habitat for Latham's snipe is described as areas that have previously been identified as internationally important for the species or areas that support at least 18 individuals of the species (DoEE, 2017). No internationally important habitat for the species occurs within the study area (Bamford 2008). However, an individual Latham's snipe was recorded opportunistically utilising a waterbody near KP 78.8. According to listed conservation advice for this species (DCCEEW 2024). Habitat critical to the survival of this species includes areas that are necessary: • For activities such as foraging, breeding, roosting, or dispersal. • For the long-term maintenance of the species (including the maintenance of species essential to the survival of the Latham's snipe, such as macrobenthos); • To maintain genetic diversity and long-term evolutionary development; or

Criterion	Question	Response
		• For the re-introduction of populations or recovery of the species There will be no direct disturbance to habitat for this species. Indirect impacts include the potential release of pollution and/or sediment into waterways and potential light pollution. Trenchless technologies such as HDD will be utilised, including ensuring appropriate setbacks from aquatic habitat to minimise the release of sediments or pollutants into the water. **As such, the project is unlikely to substantially modify, destroy or isolate an area of important habitat or critical habitat for these migratory species.**
5)	disrupt the breeding cycle of an important population	**No**. Latham's Snipe does not breed in Australia, and therefore breeding will not be disturbed for this species (DCCEEW 2024). Latham's Snipe breed in Hokkaido and highland areas of Honshu in Japan, as well as in parts of far eastern Russia (DCCEEW 2024). They are a non-breeding visitor to Australia and have been recorded along the east coast of Australia (DCCEEW 2024). They remain in Australia for the duration of the boreal winter, typically arriving to Australia in September and departing by mid-April.
6)	modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	**No**. The project is unlikely to modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the Latham's Snipe are likely to decline. This species does not breed within Australia. and there will be no direct disturbance to habitat for this species.
7)	result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	**No**. No invasive species that are harmful to Latham's Snipe are expected to become established within the survey area as a result of the project.
8)	introduce disease that may cause the species to decline, or	**No**. The project is unlikely to introduce disease that may cause the Latham's Snipe to decline.
9)	interfere substantially with the recovery of the species.	**No**. The project is not expected to interfere with the recovery of these species. The Latham's Snipe does not breed within Australia, and there will be no direct disturbance to habitat for this species.
Conclusion	**Is there likely to be a significant impact?**	**After considering the above statements, the project is unlikely to have a significant impact on Latham's Snipe.**