Aurora Energy Project (AEP)

Application Number: **02784** Commencement Date: **18/02/2025** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Aurora Energy Project (AEP)

1.1.2 Project industry type *

Energy Generation and Supply (renewable)

1.1.3 Project industry sub-type

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1.1.4 Estimated start date *

01/04/2025

1.1.4 Estimated end date *

01/01/2060

1.2 Proposed Action details

1.2.1 Provide an overview of the proposed action, including all proposed activities. *

The proposed action is the development of the Aurora Energy Project (AEP). The purpose of the proposed action is to support the deployment of new renewable energy projects and their technologies.

In June 2022, Vast Renewables Ltd acquired 50% of Silicon Aurora Pty Ltd (SiliconAurora), forming a joint venture with 1414 Degrees Ltd (1414 Degrees). SiliconAurora holds the required agreements and approvals for the development of the AEP. The AEP is to be constructed over multiple stages and includes the construction, operation and decommissioning of:

- 140 megawatt (MW) battery energy storage system (BESS)
- 30 MW concentrated solar thermal power (CSP) plant (VS1)
- 7500 tonne/yr solar methanol plant (SM1)
- 70 MW of photovoltaic (PV) solar farm
- 150 MW CSP plant (VS3)

SiliconAurora is proposing to develop the AEP in stages, with the first stage (Stage 1) comprising the BESS, VS1 and SM1 (referred to as the Indicative Disturbance Footprint) (see **Attachment 1**), and Future stages comprising the PV and VS3.

The AEP is situated in the Aurora Energy Precinct, a 1585 ha parcel of land within the wider Carriewerloo Station, a pastoral lease that covers approximately 150,000 ha and runs up to 50,000 sheep. The Aurora Energy Precinct is located approximately 25 km north of Port Augusta up the Stuart Highway. The title details for the Aurora Energy Precinct are as follows:

Title / Land Tenure: Crown Lease

Volume: 6181

Folio: 119

Plan Type: Hundred

Hundred: Castine (540100)

Parcel Type: Section

Parcel Sub-Type: SE

Parcel: 2

CL6181/119 H540100 S2

Additional developments occurring as part of the proposed action include upgrades to the Stuart Highway intersection; the upgrade of the site access road and level crossings over ARTC's rail track and the Department of Defence Woomera pipeline; and the construction of a new substation on site that will connect the AEP projects to ElectraNet's Hill-to-Hill 275kV transmission line that runs adjacent to the eastern site boundary.

Construction activities

Pre-construction works will be undertaken where such activities will have no adverse impact on MNES or their habitat, including pre-clearance surveys and establishment of monitoring programs, mobilization of plant and equipment, materials, and machinery prior to the start of construction. Pre-construction works will occur post approval throughout development of the Proposed Action to inform the detailed design. These works would be undertaken without triggering commencement of the Proposed Action.

The construction phase of the Proposed Action is likely to occur over approximately 24-30 months. Works during construction would be in accordance with relevant environmental plans and management measures to ensure environmental impacts from construction are appropriately managed. Construction would

commence with site preparation and establishment, upgrade and/or construction of internal access tracks and all other civil works. All road upgrade works, and on-site construction would be managed in compliance with the relevant approvals and management plans.

A draft Construction Environmental Management Plan (CEMP) has been developed for Stage 1 (**Attachment 2**), which will be implemented prior to construction. A CEMP will also be developed and implemented for Future stages, that implements measures to minimise, rehabilitate and offset unavoidable impacts to native vegetation, and potential habitat to Matters of National Environmental Significance (MNES). Management strategies that may be undertaken to minimise impact to MNES are outlined in **Table 7.1** of the Significant Impact Assessment (Umwelt 2025b – **Attachment 3**).

Operation activities

During operation of the Proposed Action, solar arrays and supporting infrastructure would require regular inspection and maintenance. During the initial operating years, operator attendance may be more regular while the solar plant and BESS are being optimized. Regular scheduled maintenance is required generally at 6 and 12 monthly intervals. SiliconAurora are committed to developing and implementing an Operational Environmental Management Plan (OEMP) to reduce the AEP's impact to MNES. Management strategies that may be undertaken to minimise impact to MNES are outlined in **Table 7.1** of the Significant Impact Assessment (Umwelt 2025b – **Attachment 3**).

Decommission and rehabilitation activities

Decommissioning of the solar plant and BESS after the expected commercial life of 32 years would involve dismantling and removing the related infrastructure, covering and rehabilitating access roads and foundations. Decommissioning would involve reinstating similar road access arrangements to construction and may require access to cranes and transport vehicles to dismantle and remove solar arrays. Internal access roads may be retained where requested by landowners.

The decommissioning period is likely to be around 12 to 18 months, with significantly fewer truck movements than the construction phase. Rehabilitation activities at the end of the solar plant and BESS are designed to reintegrate any disturbed area with the surrounding land and existing vegetation to a condition similar to that existing prior to construction, to ensure it is safe, stable and non-polluting. A rehabilitation program will be implemented, and periodical site monitoring will be undertaken for up to 2 years following decommissioning to ensure rehabilitation is successful in the longer term.

The activity that will potentially impact on MNES under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is:

- Clearance of up to 1585 hectares of vegetation which is considered suitable habitat for two EPBC Act listed threatened species

A Significant Impact Assessment (SIA) document has been prepared to support the EPBC Referral and it summaries key findings from the Impact Assessment (**see Attachment 3**). A Flora and Fauna Assessment Report has been updated to support the EPBC Referral, and it incorporates results from work carried out to date including historical ecological assessment work from 2015 through to 2023 (**see Attachment 4**).

The project area = 1585 ha, including a disturbance footprint of 725 ha. The disturbance footprint is comprised of 116ha of the Stage 1 projects and an estimate of 609ha for future projects.

1.2.2 Is the project action part of a staged development or related to other actions or proposals in the region?

Yes

1.2.3 Is the proposed action the first stage of a staged development (or a larger project)?

Yes

1.2.5 Provide information about the staged development (or relevant larger project).

The AEP will be developed in stages, with planning approvals already issued for the development of the future stage projects, including the 70MW PV plant and 150MW CSP plant on the site. These projects are intended to be developed after the Stage 1 projects are completed and operational.

At the time of writing, Stage 1 is ready to be constructed pending EPBC approval, with both Development Approval (DA 010/V061/17) and Native Vegetation Clearance Approval (2023/3123/010 Silicon Aurora Pty Ltd), in place.

1.2.6 What Commonwealth or state legislation, planning frameworks or policy documents are relevant to the proposed action, and how are they relevant? *

Commonwealth legislation applicable to the Aurora Energy Project:

Environment Protection and Biodiversity Act 1999

An assessment of the direct and indirect impacts of the Proposed Action against the EPBC Act Significant Impact Guidelines 1.1 (Department of the Environment, Water, Heritage and the Arts 2013) determined that the construction and/or operation of the Proposed Action may have a possible significant impact on one out of two MNES. A detailed significant impact assessment was undertaken for the two species that are known or likely to occur within the Development Envelope, being the Southern Whiteface and the Blue-winged Parrot.

Refer to **Attachment 3, Section 5, pp 24-42** for the significant impact assessment.

State legislation applicable to the Aurora Energy Project:

Native Vegetation Act 1991 (NV Act)

The Proposed Action requires Native Vegetation Clearance approval to clear native vegetation. A Native Vegetation Clearance Application was prepared for Stage 1 by Umwelt (formerly EBS Ecology) and was approved in 2023 (2023/3123/010 Silicon Aurora Pty Ltd) (**see Attachment 5**).

Planning, Development and Infrastructure Act 2016 (PDI Act)

The PDI Act repealed the *Development Act 1993*. The Act, along with the *Planning, Development and Infrastructure (General) Regulations 2017* and *Planning and Design Code*, provide the legislative framework for carrying out planning and development works within the South Australia. The Planning and Design Code replace all council development plans to become the single source of planning policy for assessing development applications. No development can be undertaken without an appropriate Development Approval being obtained from the relevant authority after an application and assessment process.

National Parks and Wildlife Act 1972 (NPW Act)

Under the NPW Act it is an offence to take a native plant or protected animal without approval. Threatened plant and animal species are listed in Schedules 7 (Endangered species), 8 (Vulnerable species) and 9 (Rare species) of the Act. Four conservation rated fauna species listed on Schedules 7, 8, or 9 of the NPW Act are known to occur within the Development Envelope (**Att 4, Section 5.3.3, pp 52-53**). Persons must comply with the conditions imposed upon permits and approvals. Flora and fauna surveys conducted for the Proposed Action have been conducted under the required flora collection permit.

Landscape South Australia Act 2019 (LSA Act)

Several Declared Weeds exist within the Development Envelope (**see Att 4, Section 4.2.3, p 43**). As part of environmental management plans, Vast Renewables Ltd will employ standard weed hygiene procedures to ensure that Declared Weeds are not transported to or throughout the Development Envelope. Animal diseases are not present within the Development Envelope. Strict hygiene measures will continue to be employed and will be enforced through the construction and operational environmental management plans throughout the life of the Proposed Action to ensure that animal diseases are not spread due to the action.

1.2.7 Describe any public consultation that has been, is being or will be undertaken regarding the project area, including with Indigenous stakeholders. Attach any completed consultation documentations, if relevant. *

Native Title is extinguished throughout the AEP Development Envelope, but it has been identified that there is a high likelihood of sites of Aboriginal cultural heritage existing across the AEP Development Envelope. A heritage agreement thus exists with Barngarla Determination Aboriginal Corporation (BDAC), the Prescribed Body Corporate for the area encompassed by the Barngarla Native Title Determination Area. The BDAC Heritage agreement required that clearance surveys be undertaken to identify any potential sites of cultural heritage. Two independent survey reports were produced, one by BDAC and another by EBS Heritage, with the reports identifying sites of cultural significance. Clearance was approved for the AEP in the areas outside of these marked sites. The Indicative Disturbance Footprint for Stage 1 of the AEP has been specifically placed so as not to encroach on any such exclusion zones.

Refer to **Attachment 9** for the Heritage Agreement between SiliconAurora (formerly called SolarReserve Australia II) and BDAC.

Refer to **Attachment 10** for the cultural heritage clearance report for BDAC.

Refer to **Attachment 11** for the cultural heritage clearance report by EBS Heritage.

Attachments 9, 10 and 11 will not be made publicly available due to cultural sensitivity reasons

1.3.1 Identity: Referring party

Privacy Notice:

Personal information means information or an opinion about an identified individual, or an individual who is reasonably identifiable.

By completing and submitting this form, you consent to the collection of all personal information contained in this form. If you are providing the personal information of other individuals in this form, please ensure you have their consent before doing so.

The Department of Climate Change, Energy, the Environment and Water (the department) collects your personal information (as defined by the Privacy Act 1988) through this platform for the purposes of enabling the department to consider your submission and contact you in relation to your submission. If you fail to provide some or all of the personal information requested on this platform (name and email address), the department will be unable to contact you to seek further information (if required) and subsequently may impact the consideration given to your submission.

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1.3.1.1 Is Referring party an organisation or business? *

No

Referring party details

Name	Lachlan Roberts
Job title	lachlan.roberts@vast.energy
Phone	0421 343 871
Email	lachlan.roberts@vast.energy
Address	Level 7, Suite 02, 124 Walker St North Sydney NSW 2060

1.3.2 Identity: Person proposing to take the action

1.3.2.1 Are the Person proposing to take the action details the same as the Referring party details? *

No

1.3.2.2 Is Person proposing to take the action an organisation or business? *

Yes

Person proposing to take the action organisation details

ABN/ACN	14606360169
Organisation name	SILICONAURORA PTY LTD
Organisation address	Door 1 Western Plant, 1 Watts Road TONSLEY SA 5042

Person proposing to take the action details

Name	Marnie Robinson
Job title	Head of Legal
Phone	0477 016 550
Email	mrobinson@1414degrees.com.au
Address	Door 1 Western Plant, 1 Watts Road TONSLEY SA 5042

1.3.2.14 Are you proposing the action as part of a Joint Venture? *

No

1.3.2.15 Are you proposing the action as part of a Trust? *

No

1.3.2.17 Describe the Person proposing the action's history of responsible environmental management including details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against the Person proposing to take the action. *

The Aurora Energy Project site was originally intended for a 150MW CSP project developed by SolarReserve Australia II Pty Ltd. Following the abandonment of the project by SolarReserve in 2019, the assets associated with the development were consolidated into a corporate entity that was acquired by 1414Degrees Ltd in 2019, who renamed it as SiliconAurora Pty Ltd. SiliconAurora holds the required agreements and approvals for the development of the AEP. Vast acquired 50% of SiliconAurora in 2022, enabling Vast access to the site for the development of their VS1 and SM1 projects, and ownership of the existing development assets.

SiliconAurora is thus a relatively new company, with no history of past or ongoing proceedings, or previous referred actions. SiliconAurora has engaged Umwelt (previously EBS Ecology) to conduct a number of environmental surveys over recent years to prepare for Native Vegetation Clearance approval and EPBC referral determination.

1.3.2.18 If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework

SiliconAurora adheres to Vast's Environmental Policy, which has been attached as **Attachment 8 - Environmental Policy**.

1.3.3 Identity: Proposed designated proponent

1.3.3.1 Are the Proposed designated proponent details the same as the Person proposing to take the action? *

No

1.3.3.2 Is Proposed designated proponent an organisation or business? *

No

Proposed designated proponent details

Name	Lachlan Roberts
Job title	lachlan.roberts@vast.energy
Phone	0421 343 871
Email	lachlan.roberts@vast.energy
Address	Level 7, Suite 02, 124 Walker St North Sydney NSW 2060

1.3.4 Identity: Summary of allocation

Confirmed Referring party's identity

The Referring party is the person preparing the information in this referral.

Name	Lachlan Roberts
Job title	lachlan.roberts@vast.energy
Phone	0421 343 871
Email	lachlan.roberts@vast.energy
Address	Level 7, Suite 02, 124 Walker St North Sydney NSW 2060

Confirmed Person proposing to take the action's identity

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	14606360169
Organisation name	SILICONAURORA PTY LTD
Organisation address	Door 1 Western Plant, 1 Watts Road TONSLEY SA 5042
Representative's name	Marnie Robinson
Representative's job title	Head of Legal
Phone	0477 016 550
Email	mrobinson@1414degrees.com.au
Address	Door 1 Western Plant, 1 Watts Road TONSLEY SA 5042

Confirmed Proposed designated proponent's identity

The Person proposing to take the action is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Name	Lachlan Roberts
Job title	lachlan.roberts@vast.energy
Phone	0421 343 871
Email	lachlan.roberts@vast.energy

Address Level 7, Suite 02, 124 Walker St North Sydney NSW 2060

1.4 Payment details: Payment exemption and fee waiver

1.4.1 Do you qualify for an exemption from fees under EPBC Regulation 5.23 (1) (a)? *

No

1.4.3 Have you applied for or been granted a waiver for full or partial fees under Regulation 5.21A? *

No

1.4.5 Are you going to apply for a waiver of full or partial fees under EPBC Regulation 5.21A?

No

1.4.7 Has the department issued you with a credit note? *

No

1.4.9 Would you like to add a purchase order number to your invoice? *

No

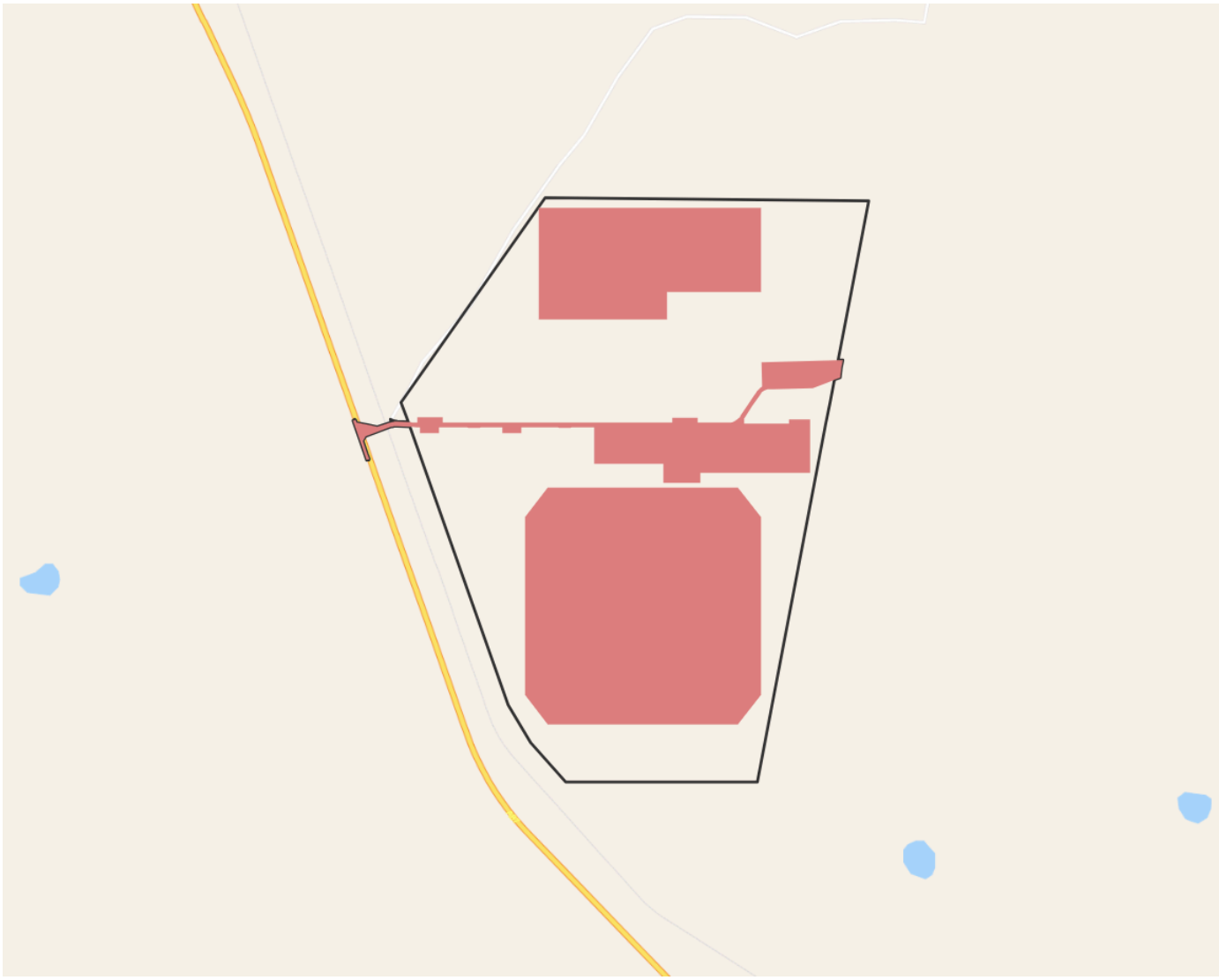
1.4 Payment details: Payment allocation

1.4.11 Who would you like to allocate as the entity responsible for payment? *

Proposed designated proponent

2. Location

2.1 Project footprint



Project Area: 1586.15 Ha **Disturbance Footprint:** 725.75 Ha

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

2153 Stuart Highway, Carriewerloo, SA 5715

2.2.2 Where is the primary jurisdiction of the proposed action? *

South Australia

2.2.3 Is there a secondary jurisdiction for this proposed action? *

No

2.2.5 What is the tenure of the action area relevant to the project area? *

The land for the Aurora Energy Precinct has historically been held under pastoral lease by the local pastoralist, Buckleboo Nominees Pty Ltd. A Tripartite Agreement exists between SiliconAurora, Buckleboo Nominees and Crown, which details the surrender of the pastoral lease back to Crown and allows for a new Crown lease to be issued to SiliconAurora.

3. Existing environment

3.1 Physical description

3.1.1 Describe the current condition of the project area's environment.

The Development Envelope is situated within the Gawler IBRA bioregion and falls within the Gawler Lakes subregions. The Gawler Lakes subregion has approximately 62% remnant vegetation cover (**Att 4, Section 2.1.1., p 11)**.

The Development Envelope is largely undeveloped, with only one main dirt access road circling around the parcel of land and other minor tracks leading off it into the centre of the site (Stage 1 of the Indicative Disturbance Footprint). Field surveys indicate that vegetation is in good condition, although grazing occurs throughout. While overstorey and taller midstorey are generally not impacted by grazing activities, smaller shrubs and understorey vegetation is modified by grazing, with little to no grass, low shrub and forb cover present. Highly palatable shrubs were heavily utilised by stock.

There is evidence of overstorey recruitment occurring in woodlands, with young *Acacia papyrocarpa* present throughout the Indicative Disturbance Footprint. These are generally heavily grazed however, with young plants eaten to near ground level.

A total of 168 plant species, including 140 indigenous and 28 introduced species, were recorded in the Development Envelope across all surveys undertaken. Vegetation association descriptions are summarised in **Att 4, Section 4.2.2, pp 36-41**. The Development Envelope supported vast areas of *Acacia papyrocarpa* woodland *Acacia papyrocarpa* woodland and *Maireana pyramidata* / *Maireana sedifolia* shrubland. The condition over most of the Development Envelope was determined to be moderate to good. One species, *Gratwickia monochaeta*, listed as rare under the NPW Act, was recorded in the Development Envelope. No species identified were listed under the EPBC Act. No state threatened ecosystems under the *Provisional List of State Threatened Ecosystems in South Australia* were recorded in the Development Envelope.

Weeds were scattered at varying densities over the Development Envelope. High densities of weeds were recorded in disturbance areas, such as access tracks, locations of high grazing intensity, rail line, low lying areas and dunes. The most common weed species observed was Burr-medic, which occurred in high densities in areas of high grazing. Three weed species, which are declared under the *Natural Resources Management Act 2004*, Salvation Jane, Horehound, and three-corner Jack. Salvation Jane *was* observed near the rail line in low densities. Horehound was observed at low to medium densities, around the perimeter of low-lying areas which have been subjected to seasonal water logging. *Emex australis* was observed scattered around the edge of vehicle access tracks. None of the weeds recorded within the Development Envelope are Weeds of National Significance (WoNs).

None of the vegetation associations mapped forms the whole or part of a Threatened Ecological Community (TEC) listed under the Department for Environment and Water's *Provisional list of threatened ecosystems*.

The Development Envelope has not suffered any recent effects from bushfires, floods or other major events.

3.1.2 Describe any existing or proposed uses for the project area.

The existing use for the Development Envelope is the grazing of livestock. The proposed use for the Development Envelope is for the development of industrial renewable energy technology projects, such as the BESS or CSP power plant. The zoning or use of the land is not proposed to change due to the Proposed Action and it is expected that the current land uses will coexist with the Proposed Action, consistent with other contemporary energy developments in Australia.

3.1.3 Describe any outstanding natural features and/or any other important or unique values that applies to the project area.

No outstanding natural features are located within or proximal to the Proposed Action (**see Att 3 Appendix A for a summary of the Protected Matters Report**). The Upper Spencer Gulf (identified within the PMST) with a buffer area only status, will not be impacted by the Proposed Action.

3.1.4 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.

The Development Envelope consists mainly of undulating plains, flatter in the west with some higher, sandy rises in the south-east. While there are no watercourses or floodouts, some low-lying, run-on areas with clay soils form swamp depressions. These areas were dry at the time of the field surveys by Umwelt.

Two landform types were therefore recognised in the Development Envelope – undulating plains and swamps. The Indicative Disturbance Footprint mostly consists of undulating plains, although there is one small swamp area (**see Att 5, Figure 3, p9**).

3.2 Flora and fauna

3.2.1 Describe the flora and fauna within the affected area and attach any investigations of surveys if applicable.

Flora

A total of 168 flora species were identified within the Development Envelope, including 140 indigenous species and 28 introduced species. One species, *Gratwickia monochaeta*, listed as rare under the NPW Act, was recorded in the Development Envelope. No EPBC Act listed species were identified through surveys, and the desktop assessment determined that all the flora species identified by the PMST were unlikely to occur within the Development Envelope.

The Development Envelope supports vast areas of *Acacia papyrocarpa* woodland and *Maireana pyramidata* / *Maireana sedifolia* shrubland. The condition of most of the Development Envelope was determined to be moderate to good. No state threatened ecosystems under the Provisional List of State Threatened Ecosystems in South Australia were recorded in the Development Envelope.

Weeds were scattered at varying densities over the Development Envelope. High densities of weeds were recorded in disturbance areas, such as access tracks, locations of high grazing intensity, rail line, low lying areas and dunes. Three weed species, which are declared under the Natural Resources Management Act 2004, Salvation Jane, Horehound, and three-corner Jack. Salvation Jane was observed near the rail line in low densities. Horehound was observed at low to medium densities, around the perimeter of low-lying areas which have been subjected to seasonal water logging.

Ecological communities recorded on site included *Acacia papyrocarpa* Open Woodland over *Maireana pyramidata* / *Maireana sedifolia*, *Maireana pyramidata* / *Maireana sedifolia* Shrubland, *Acacia aneura* Open Woodland, *Casuarina pauper* Woodland over *Atriplex vesicaria* +/- *Maireana sedifolia* and *Duma florulenta* / *Maireana pyramidata* Open Shrubland over *Teucrium racemosum*, *Setaria constricta* and *Marsilea drummondii*.

None of the Vegetation Associations mapped forms the whole or part of a Threatened Ecological Community listed under the Department for Environment and Water's *Provisional list of Threatened Ecosystems* (Department for Environment and Heritage, 2005)

Fauna

Birds

A total of 64 bird species were recorded over the Development Envelope. Four threatened bird species have been recorded within the Development Envelope including the Blue-winged Parrot (*Neophema chrysostoma*) (EPBC Act Vulnerable), Southern Whiteface (*Aphelocephala leucopsis*), (EPBC Act Vulnerable), Elegant Parrot (*Neophema elegans*) (NPW Act rare) and Slender-billed Thornbill (*Acanthiza iredalei iredalei*) (NPW Act Rare).

The most species rich families within the Development Envelope were Acanthizidae (Australasian warblers) and Meliphagidae (honeyeaters), followed by Artamidae (Woodswallows, Magpies) and Psittacidae (Parrots). The most abundant species within the Development Envelope were the Masked Woodswallow (*Artamus personatus*), Southern Whiteface, White-browed Babbler (*Pomatostomus superciliosus*) and the White-winged Fairywren (*Malurus leucopterus*).

Mammals

Three native mammal species have been observed across various surveys within the Development Envelope; Western Grey Kangaroo (*Macropus fuliginosus),* Red Kangaroo (*Macropus rufus*); and Euros (*Macropus robustus*). Western Grey Kangaroos were abundant across the Development Envelope while Red Kangaroos were irregularly observed. Both macropod species were also observed in spring 2015 and winter 2017 surveys. Two Euros (*Macropus robustus*) were observed in spring 2015; however, were not recorded in winter 2017 or spring 2022. None of the native mammal species observed are listed under the EPBC Act or the NPW Act.

Introduced grazers, both feral and domestic, are present within the Development Envelope including domestic sheep (*Ovis aries*), feral goats (*Capra hircus*), the European rabbit (*Oryctolagus cuniculus*) and the Red Fox (*Vulpes vulpes*).

Reptiles

One reptile species, the Sleepy Lizard (*Tiliqua rugosa*) was observed during the winter 2017 survey. An additional three species were observed in spring 2015 and spring 2022: Central Bearded Dragon (*Pogona vitticeps),* Crested Dragon (*Ctenophorus cristatus*) and Gould's Goanna (*Varanus gouldii*). One additional species, the Lined Earless Dragon (*Tympanocryptis lineata*), was recorded in 2022 only. None of the reptile species observed are listed under the EPBC Act or NPW Act.

Surveys

Five ecological surveys have been conducted over the Development Envelope since 2015. The surveys included:

- Vegetation association and condition mapping.
- Fauna and flora surveying.
- Vegetation association mapping consistent with methods required to prepare a Native Vegetation Clearance Application.
- Targeted survey for threatened plant species, *Santalum spicatum* and Desert Lime (*Citrus glauca*).
- Targeted bird surveys, including call playback surveys for Western Grasswren (*Amytornis textilis myall*).

The fauna survey focused on birds, as no threatened species from other fauna taxa were identified in the desktop assessment. Within the Development Envelope, birds were surveyed systematically via point count sites and were also recorded opportunistically. Mammals and reptiles were recorded opportunistically over the Development Envelope, through direct observation of individuals and signs of their presence, i.e. scats and tracks.

- Point Counts

Six-point count locations were established over the Development Envelope, and each point count site was surveyed for 20 minutes in the morning (before 10:30 am) and 20 minutes in the afternoon (after 2pm). The observer recorded all birds heard and observed within a 100 m radius of the centre of the site. Bird activity (e.g. flying overhead, flying over circling, resting or foraging on tree/shrub/ground), number of individuals observed, distance from observer, and any other notable observations were recorded.

- Area Surveys

Dedicated bird surveys were undertaken at each Rangeland Assessment Methodology (RAM) site during the survey. The area search method was used, with a 2-ha search area surveyed for 20 minutes by one observer. Each site was surveyed only once. While undertaking the vegetation survey, observers opportunistically recorded fauna observed on the site, including scats, tracks and other signs.

- Targeted Western Grasswren Surveys

Targeted surveys for Western Grasswren (*Amytornis textilis myall*) were undertaken at four locations near Stage 1 Development Area, although habitat for this species was deemed marginal at best. Call broadcast methods were used, since this species is well-known to respond quickly to this method, being consistently detected if present. Surveys occurred once only, prior to 10 am and were undertaken according to the *Survey Guidelines for Australia's Threatened Birds* (Magrath, Weston, Olsen, & Antos, 2010).

- Wedge-tailed Eagle Nest Survey

Searches for Wedge-tailed Eagle (*Aquila audax*) nests were conducted over the Development Envelope. For each nest observed, the following information was recorded: location, size and condition of nest, active status (whitewash, nest material) and nest success (number of fledglings).

3.2.2 Describe the vegetation (including the status of native vegetation and soil) within the project area.

Field surveys indicated that vegetation is in good condition, although grazing occurs throughout. While overstorey and taller midstorey is generally not impacted by grazing activities, smaller shrubs and under storey vegetation is modified by grazing, with little to no grass, low shrub and forb cover present. Highly palatable shrubs were heavily utilised by stock.

There is evidence of overstorey recruitment occurring in woodlands, with young *Acacia papyrocarpa* present throughout the Impact Area. These are generally heavily grazed however, with young plants eaten to near ground level

Five Vegetation Associations were recorded within the entire Development Envelope, totaling 1585 ha (**see Att 5** – Native Vegetation Data Report (EBS 2023). These included:

- *Acacia papyrocarpa* Open Woodland over *Maireana pyramidata* / *Maireana sedifolia.*

Sparse to open woodland dominated by an overstorey of *Acacia papyrocarpa* with *Myoporum platycarpum* and *Alectryon oleifolius* also present in some areas. The midstorey consists of an open Chenopod shrub layer consisting of mainly *Maireana pyramidata* and *Maireana sedifolia* but also with low shrubs of *Rhagodia* spp., *Lycium australe* and *Atriplex vesicaria*. Understorey is sparse, mainly consisting of annual forbs such as *Tetragonia implexicoma* and *Rhodanthe* spp. and sparse tussock of *Austrostipa nitida*.

The association occurs on clay loam to loamy red soils of undulating plains, including low lying areas subject to infrequent flooding. Grazing impacts are high in some areas, with stock over utilising highly palatable midstorey shrubs and grasses.

Weeds are sparse but widespread, including species such as *Schismus barbata*, *Carrichtera annua*, Medicago polymorpha, Tribulus terrestris and *Sisymbrium* sp.

Larger, old trees contain small hollows, dead timber and mistletoes that provide important fauna habitat. Regeneration of overstorey species is present, although impacted by grazing, but regeneration of midstorey shrubs was observed at only some of the survey sites.

- *Maireana pyramidata* / *Maireana sedifolia Shrubland*.

Shrubland to open shrubland dominated by *Maireana* spp. on clay loam to loam soils of undulating plains. An open midstorey of low shrubs such as *Ptilotus obovatus*, *Dissocarpus paradoxus* and *Sclerolaena* spp. is present over a sparse grass/forb understorey. This includes species such as *Austrostipa nitida*, *Portulaca oleracea* and annual forbs, such as *Rhodanthe* spp.

Weeds are sparse but widespread, including species such as *Schismus barbata* and *Carrichtera annua*.

Palatable shrubs are heavily impacted by grazing at some sites, although there is some regeneration of chenopod shrubs in the mid and overstorey.

- *Acacia aneura* Open Woodland.

This vegetation association occurred on sandy, low dune rises in the south of the Development Envelope. Vegetation was considered in good condition. Weeds present included *Medicago polymorpha* which occurred commonly; and *Carthamus lanatus*, which were scattered over the extent of the association.

- *Casuarina pauper* Woodland over *Atriplex vesicaria* +/- *Maireana sedifolia*.

The vegetation association occurred on calcareous clay/loam soils in the south-east of the Development Envelope. It consists of a woodland overstorey dominated by *Casuarina pauper* at varying densities with occasional *Alectryon oleifolius*. Dominant midstorey species altered between *Atriplex vesicaria* and

Maireana sedifolia.

The association was in good condition, except for a small (3.3 ha) area adjacent to a livestock water point which was in poor condition due to over-grazing, tramping and soil compaction. Weed invasion was relatively low.

- *Duma florulenta* / *Maireana pyramidata* Open Shrubland over *Teucrium racemosum*, *Setaria constricta* and *Marsilea drummondii*.

Located in low-lying, run on areas that hold surface water following significant rainfall events, this association occurs on heavy clay to clay-loam soils. Dry at the time of the field surveys, the association was in good condition with a high diversity of grass and forb species.

Overstorey consists of a mid-shrub layer, although emergent tall shrubs and low trees, such *as Eremophila longifolia*, occur in areas of higher relief fringing the low-lying areas of the swamp.

This vegetation is impacted by weeds and grazing and is probably heavily utilised by livestock when surface water is present.

3.3 Heritage

3.3.1 Describe any Commonwealth Heritage Places Overseas or other places recognised as having heritage values that apply to the project area.

Indigenous cultural heritage exclusion zones have been identified throughout the site. All Development Areas to be constructed within the Aurora Energy Precinct have and will be located so as not to encroach on any heritage exclusion zones.

3.3.2 Describe any Indigenous heritage values that apply to the project area.

Indigenous cultural heritage exclusion zones have been identified throughout the site. All Development Areas to be constructed within the Aurora Energy Precinct have and will be located so as not to encroach on any heritage exclusion zones.

3.4 Hydrology

3.4.1 Describe the hydrology characteristics that apply to the project area and attach any hydrological investigations or surveys if applicable. *

Advisian has undertaken a hydrological study of the proposed Port Augusta Reference Plant, South Australia. The assessment has used nearby loss data and soil information to inform appropriate design loss parameterisation for rain on grid modelling to determine flood flow characteristics across the site. The events analysed included 20%, 10%, 5%, and 1% AEP with durations ranging from 6 to 24 hours. An ensemble approach, as recommended by ARR19 (i.e. 10 temporal patterns for each duration) was undertaken.

It can be concluded from the analysis that:

- There is no streamflow gauging in the catchment or similar nearby catchments assessment of rainfall-runoff relationship. The site located in the Arid Zone, with no loss parameters available through the ARR datahub. Loss parameters have been estimated based on the soil characteristics and nearby loss estimates.
- The Development Envelope is in the Mambray Coast Basin, comprising of unconnected catchments and salinas (salt lakes). LiDAR data for the site shows localised depressions, which collect runoff following heavier rainfall.
- A TUFLOW rain on grid model has been developed for the site to estimate the extent of flooding for design storm events. There are some minor catchment areas that may contribute to runoff on the site, however they are not considered significant.
- Some areas of proposed infrastructure are potentially flooded during rare events, up to a depth of 1.0m. Flow velocity is generally low, however given the depth of flooding, high flood hazard may be experienced in some locations, where there are depressions in the natural topography.

Sensitivity analysis showed that given the uncertainty in the loss parameterisation, expected flooding in the areas of proposed infrastructure could increase by up to 200 mm. It is expected that the uncertainties and associated risks relating to the exact loss parameters could be mitigated by adoption of a standard design freeboard of 300 mm.

4. Impacts and mitigation

4.1 Impact details

Potential Matters of National Environmental Significance (MNES) relevant to your proposed action area.

EPBC Act section	Controlling provision	Impacted	Reviewed
S12	World Heritage	No	Yes
S15B	National Heritage	No	Yes
S16	Ramsar Wetland	No	Yes
S18	Threatened Species and Ecological Communities	Yes	Yes
S20	Migratory Species	No	Yes
S21	Nuclear	No	Yes
S23	Commonwealth Marine Area	No	Yes
S24B	Great Barrier Reef	No	Yes
S24D	Water resource in relation to large coal mining development or coal seam gas	No	Yes
S26	Commonwealth Land	No	Yes
S27B	Commonwealth Heritage Places Overseas	No	Yes
S28	Commonwealth or Commonwealth Agency	No	Yes

4.1.1 World Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.1.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.1.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Proposed action is not expected to directly or indirectly impact any World Heritage protected matters, as none have been identified within the Development Envelope.

4.1.2 National Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.2.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.2.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Proposed action is not expected to directly or indirectly impact any National Heritage protected matters, as none have been identified within the Development Envelope.

4.1.3 Ramsar Wetland

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.3.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.3.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Proposed action is not expected to directly or indirectly impact any Ramsar Wetlands protected matters, as none have been identified within the Development Envelope.

4.1.4 Threatened Species and Ecological Communities

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Threatened species

Direct impact	Indirect impact	Species	Common name
No	No	Amytornis textilis myall	Western Grasswren (Gawler Ranges)
Yes	Yes	Aphelocephala leucopsis	Southern Whiteface
No	No	Aprasia pseudopulchella	Flinders Ranges Worm-lizard
No	No	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris ferruginea	Curlew Sandpiper
No	No	Falco hypoleucos	Grey Falcon
No	No	Frankenia plicata	
No	No	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	No	Leipoa ocellata	Malleefowl
No	No	Melanodryas cucullata cucullata	South-eastern Hooded Robin, Hooded Robin (south-eastern)
Yes	Yes	Neophema chrysostoma	Blue-winged Parrot
No	No	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
No	No	Pedionomus torquatus	Plains-wanderer
No	No	Pterostylis xerophila	Desert Greenhood
No	No	Rostratula australis	Australian Painted Snipe

Ecological communities

—

4.1.4.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.4.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

Southern Whiteface

Out of 1585 ha of native vegetation mapped within the Development Envelope, 1585 ha (100 %) is likely to be suitable habitat for Southern Whiteface. Out of 1585 ha of suitable habitat within the Development Envelope, it is estimated that approximately 759 ha (48 %) is likely to be impacted by the proposed Indicative Disturbance Footprint. This would include the known footprint for Stage 1 as well as an underestimate of the footprint required for Future stages.

Minimal access roads will be constructed as part of the Project. While long, linear features such as roads have the potential to fragment habitat, the Southern Whiteface is thought to undertake some movements beyond its normal range due to climatic factors. It is likely that the birds can cross intervening areas of unsuitable habitat and that access roads are not an impediment to dispersal.

The Development Envelope is currently surrounded by stock fencing, with fence lines cleared of vegetation from a width of between 5 and 10 m (L. Roberts, pers.com.2024). The Southern Whiteface has been recorded throughout the Development Envelope and surrounding landscape and there is no suggestion that these cleared corridors prevent dispersal between the Development Envelope and surrounding landscape. The AEP requires clearing a block of vegetation in the centre of the Development Envelope (as part of Stage 1). It does not include any actions that further impact connectivity between habitat inside and outside of the Development Envelope.

SiliconAurora are committed to implementing an already drafted Construction Environmental Management Plan (CEMP) for Stage 1 (Vast 2024) (**see Att 2**) and Operational Environmental Management Plan (OEMP) to reduce the AEP's impact to this species. While these documents will include several standard management strategies to reduce environmental impacts, strategies specific to the Southern Whiteface are yet to be developed.

Refer to Attachment 3 – Significant Impact Assessment addresses the direct and indirect impacts on SWF.

Refer to Attachment 6 – Southern Whiteface Regional Assessment addresses the direct and indirect impact on SWF as they relate to the Gawler IBRA Bioregion and Gawler Lakes Subregion.

Blue-winged Parrot

The Development Envelope, encompassing Stage 1 and Future stages of the Project, will involve clearing 1585 ha (100%) of Blue-winged Parrot habitat. It is possible that birds may occur anywhere in the Development Envelope and are not dependant on a specific site.

Minimal access roads will be constructed as part of the AEP Stage 1. It is currently unknown the types of access roads that will be required for Future stages. While long, linear features such as roads have the potential to fragment habitat, the Blue-winged Parrot is non-breeding migrant to the area that can cross areas of unsuitable habitat or cleared land. Access roads are unlikely to be a barrier to dispersal.

SiliconAurora are committed to implementing a pre-existing draft CEMP for Stage 1 (**see Att 2**) and OEMP to reduce the AEP's impact to this threatened species. SiliconAurora are also committed to development and implementing a CEMP and OEMP for Future stages. While these documents will include several standard management strategies to reduce environmental impacts, strategies specific to the Blue-winged Parrot are yet to be developed.

Refer to Attachment 3 – Significant Impact Assessment addresses the direct and indirect impacts on BWP.

Threatened Ecological Communities

No Threatened Ecological Communities occur within the Development Envelope.

4.1.4.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

No

4.1.4.6 Describe why you do not consider this to be a Significant Impact. *

Southern Whiteface – the action may have an indirect impact on Southern Whiteface, however the indirect impact was deemed not to be a Significant Impact.

Assessment of impact to the Southern Whiteface against the significant impact guidelines is summarised in **Attachment 3 – Significant Impact Assessment**. The main assessment table is attached below – two criterions scored a ***possible rating*** which is defined as *there is some opportunity, reason or means of the impact occurring as a result of the Proposal*. **Attachment 6 – SWF Regional Assessment** explores the likelihood of the action having a direct and/or indirect impact, when considering the Project in relation to the Gawler IBRA Bioregion and Gawler Lakes Subregion.

Significant Impact Criterion

Lead to a long-term decrease in the size of an important population.

No impact

There are no important populations defined under the EPBC Act for the Southern Whiteface, and the species has a continuous distribution throughout its range. This assessment has therefore considered that the species exists as a single population.

While construction of the AEP may impact some individual Southern Whiteface in the Development Envelope, 95.92 % of habitat within 5 km will remain unimpacted. This level of impact is unlikely to cause a long-term decrease in the size of the Southern Whiteface population.

Reduce the area of occupancy of an important population.

No impact

The Southern Whiteface is widespread throughout semi-arid southern Australia with an EOO of 6,286,400 ha. The habitat clearance for the AOO represents only 0.037%.

The AEP is therefore not likely to reduce the AOO of the Southern Whiteface.

Fragment an existing population into two or more populations.

No impact

Suitable intact habitat is extensive surrounding the Development Envelope and will remain unimpacted in the landscape surrounding the AEP.

While an access road will be constructed for the Stage 1 and Future stages, it is not of a sufficient width to impede the movement of Southern Whiteface. The Development Envelope is currently surrounded by a fence line, cleared to between 5 and 10 m, which Southern Whiteface can easily disperse across.

Connectivity of habitat within and outside the Development Envelope will not be altered by the AEP proposal.

The AEP will therefore not fragment the Southern Whiteface population.

Adversely affect habitat critical to the survival of a species.

Possible

1565 ha (100%) of Southern Whiteface habitat may be cleared during construction of the AEP. This habitat meets the definition of critical habitat as defined in the conservation advice for the species.

However, given that similar habitat is extensive in the Gawler IBRA Region, it is unlikely that the proposed clearance would cause the species to decline.

Disrupt the breeding cycle of an important population.

No impact

If they occur during the species' breeding season, disturbance from construction activities may disrupt the breeding cycle of local birds in the Development Envelope. However, given the species extensive EOO and its occurrence in unimpacted parts of the Development Envelope, it is unlikely to disrupt the breeding cycle at a population level.

Modify, destroy, remove and isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.

Possible

The AEP project may destroy or remove 1585 ha of suitable Southern Whiteface habitat. Given the species is largely sedentary, this may cause the population within the Development Envelope to decline.

Construction and operation of the AEP does not include any actions that is likely to decrease the quality of remaining habitat in the Development Envelope or the surrounding landscape. At a landscape level, any decline in the population caused by the AEP is likely negligible.

Result in an invasive species that is harmful to a vulnerable species becoming established in the vulnerable species' habitat.

No impact

Habitat loss and degradation caused by land clearing and grazing by livestock and feral herbivores is thought to be a contributing factor in the decline of the species (DCCEEW, 2023c). The Project has a long history of sheep grazing, with livestock and feral herbivores such as goats and rabbits already established in the Development Envelope.

Construction and operation of the AEP does not include any actions that would lead to additional invasive species becoming established in the Development Envelope.

Construction and operation contractors will follow measures outlined in the CEMP and OEMP to limit and prevent the introduction and spread of introduced plants and pathogens.

Introduce disease that may cause the species to decline.

No impact

There are no known disease or pathogens that may impact the species.

Construction contractors will follow measures outlined in the CEMP to limit and prevent the introduction and spread of introduced plants and pathogens.

Interfere with the recovery of the species.

No impact

The AEP construction does not interfere with any proposed recovery actions for the species and does not exacerbate threatening processes that have been identified for the species, listed below:

Habitat loss caused by clearance for agriculture.

Habitat degradation caused by domestic livestock grazing.

Increased frequency or length of droughts caused by climate change.

Increased likelihood of extreme events caused by climate change.

Overall:

An assessment of impact to the Southern Whiteface against the significant impact guidelines has concluded that the proposed action will not have 'a significant impact'.

Blue-winged Parrot – the action is unlikely to have a direct and / or indirect impact.

Assessment of impact to the Blue-winged Parrot against the significant impact guidelines is summarised in **Attachment 3 – Significant Impact Assessment**. The main assessment table is attached below. Criterion scored No Impact or Unlikely.

Significant Impact Criterion:

Lead to a long-term decrease in the size of an important population.

No impact

There have been few historical records of the Blue-winged Parrot within 50 km of the Development Envelope since 1995.

It is likely that the birds only occur in the Development Envelope as non-breeding vagrants, with no permanent population present.

The clearance would not therefore cause a long-term decrease in the size of a population.

Reduce the area of occupancy of an important population.

No impact

The EOO of the Blue-winged parrot has been estimated at 236,424,400 ha. The clearance represents 0 % of this extent.

It is likely that the birds only occur in the Development Envelope as non-breeding vagrants, with no permanent population present.

The clearance would not therefore reduce the AOO of the species.

Fragment an existing population into two or more populations.

No impact

The Blue-winged Parrot undertakes annual movement from southern breeding habitat to the northern parts of its distribution. It can cross large areas of cleared land and unsuitable habitat to do this.

The Disturbance Footprint is surrounded by intact suitable habitat. While some access roads will be constructed, it is not expected that these would act as a sufficient barrier to prevent dispersal between the Development Envelope and the surrounding landscape.

Adversely affect habitat critical to the survival of a species.

Unlikely

1585 ha of critical Blue-winged Parrot foraging and staging habitat may be cleared during construction of the AEP. The full clearance to construct Stage 1 and Future stages is unlikely to constitute the entire 1585 ha.

Considering that no breeding habitat is impacted and the large extent of similar habitat in the surrounding area at a landscape scale, it is unlikely that the clearance of 1585 ha would impact the survival of the species.

Disrupt the breeding cycle of an important population.

No impact

The Blue-winged Parrot does not breed in the Development Envelope and occurs as a non-breeding migrant only.

Modify, destroy, remove and isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.

No impact

In the context of the wider landscape, the clearance impacts only 4.08% of potential habitat in a 5 km radius, in which the species is only likely to occur as a non-breeding vagrant.

This level of habitat removal and modification is unlikely to cause the species to decline.

Result in an invasive species that is harmful to a vulnerable species becoming established in the vulnerable species' habitat.

No impact

Grazing by livestock and feral herbivores is thought to be a contributing factor in the decline of the species (DEW 2023b). The Project has a long history of sheep grazing, with livestock and feral herbivores such as goats and rabbits already established in the Development Envelope.

The construction of the AEP does not include any actions that would lead to additional invasive species becoming established in the Development Envelope.

Construction and operational contractors will follow measures outlined in the CEMP and OEMP to limit and prevent the introduction and spread of introduced plants and pathogens.

Introduce disease that may cause the species to decline.

No impact

There are no known disease or pathogens that may impact the species.

Construction contractors will follow measures outlined in the CEMP to limit and prevent the introduction and spread of introduced plants and pathogens.

Interfere with the recovery of the species.

No impact

Habitat loss, degradation and fragmentation is recognised as a threat to the species. While some habitat will be lost through clearance for the AEP, the extent is negligible in relation to the overall habitat in the surrounding landscape. The action is therefore not likely to significantly interfere with the recovery of the species.

Overall:

An assessment of impact to the Blue-winged Parrot against the significant impact guidelines has concluded that the proposed action will have a 'Unlikely significant impact' on the species.

4.1.4.7 Do you think your proposed action is a controlled action? *

No

4.1.4.9 Please elaborate why you do not think your proposed action is a controlled action. *

The proposed action is unlikely to result in a controlled action, as it is not expected to result in a significant impact on any Threatened Species or Ecological Communities. Refer to the following documents for additional information:

Attachment 3 – Significant Impact Assessment

Attachment 4 – Flora and Fauna Report

Attachment 4a - Rolling Native Vegetation

Attachment 5 – Native Vegetation Data Report

Attachment 6 – Southern Whiteface Regional Assessment

4.1.4.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

SiliconAurora will minimise the impact to native vegetation as far as is possible by the following elements of planning and design:

- Minimum possible buffer zones between facility and surrounding undisturbed areas 10 m.
- Infrastructure has been positioned to minimise the number of access roads required, minimising vegetation clearance and fragmentation.
- Where possible, existing access tracks will be utilised. Where access roads are required, they will be constructed to a maximum width of 10 m, including batters.
- Common user infrastructure where possible, i.e. single shared access road for substation, BESS and VS1.
- Construction will occur on flat ground to reduce the need to cut and fill.
- All construction laydown areas will be located within the operational footprint of the development.
- The BESS and substations will be located adjacent to the existing Hill to Hill 275 kV transmission line to limit the length of transmission line construction required.
- Internal transmission lines between solar arrays and plants will be laid underground to reduce the requirement of maintaining permanent clearance corridors for cables. Cable corridors will be cleared to a maximum width of 5 m.
- The CEMP and OEMP will be prepared and implemented prior to any clearance occurring.
- The CEMP and OEMP will include management strategies and actions that seek to minimise direct and indirect impacts to flora and fauna. This may include, as a minimum, the measures summarised the table below. The table does not include measures specific to the Southern Whiteface or the Blue-winged Parrot. A CEMP has been drafted by Vast (2024) for Stage 1 and is attached as **Attachment 2** of this EPBC referral.

4.1.4.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

SiliconAurora believes the Project will be deemed “not a controlled” action. Umwelt has used the EPBC Offsets calculator to present potential offset figures to SiliconAurora.

SiliconAurora is committed to working with DCCEEW to develop the most appropriate offset documentation, to facilitate a beneficial offset that will improve environmental outcomes. SiliconAurora is committed to provide transparency and clarity about what information if required to assess and manage offsets under the EPBC Act Environmental Offsets Policy 2012. This may be in the form of an Offset Proposal, Offset Management Plan or Offset Strategy.

4.1.5 Migratory Species

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Species	Common name
No	No	Actitis hypoleucos	Common Sandpiper
No	No	Apus pacificus	Fork-tailed Swift
No	No	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris ferruginea	Curlew Sandpiper
No	No	Calidris melanotos	Pectoral Sandpiper
No	No	Charadrius veredus	Oriental Plover, Oriental Dotterel
No	No	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	No	Motacilla cinerea	Grey Wagtail
No	No	Motacilla flava	Yellow Wagtail
No	No	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew

4.1.5.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.5.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Fork-tailed Swifts are nearly exclusively aerial in Australia and fly over a wide range of habitats, including open plains, forests and cities (Pizzey and Knight 2014; ALA 2018; DotEE 2018). As such, the location of the Development Envelope matched with the habitats present within it, meaning that the Fork-tailed Swift could potentially occur. However, this species has not been recorded within the Development Envelope and is almost exclusively aerial. It is unlikely to be directly or indirectly impacted by the Project

Six migratory species identified in the PMST as potentially occurring within 10 km of the Development Envelope are considered unlikely to occur within the Development Envelope and are therefore unlikely to be directly or indirectly impacted by the Project according to the following criteria:

- Species that were not observed during field surveys conducted by Umwelt.
- Species that have not been recorded within 10 km of the Development Envelope within the last 10 years; and/or

Species whose habitat requirements are not met by the Development Envelope.

4.1.6 Nuclear

4.1.6.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.6.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Proposed action is not expected to directly or indirectly impact any Nuclear matters, as none have been identified within the Development Envelope.

4.1.7 Commonwealth Marine Area

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.7.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.7.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Proposed action is not expected to directly or indirectly impact any Commonwealth Marine Area protected matters, as none have been identified within the Development Envelope. As Commonwealth Marine Areas commence three nautical miles from shore, marine species are not relevant to this Project and have been excluded from further assessment. Further, fauna that complete their life cycle in marine habitats, such as sharks and whales, have also been excluded from further assessment.

4.1.8 Great Barrier Reef

4.1.8.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.8.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Proposed action is not expected to directly or indirectly impact any Great Barrier Reef matters, as none have been identified within the Development Envelope.

4.1.9 Water resource in relation to large coal mining development or coal seam gas

4.1.9.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.9.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Proposed action is not expected to directly or indirectly impact any such matters, as none have been identified within the Development Envelope.

4.1.10 Commonwealth Land

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Commonwealth land area
No	No	Commonwealth Land - Australian National Railways Commission

4.1.10.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.10.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

Land title searches and engagement with relevant bodies (Department for Energy and Water, Department of Defence, and ARTC) has consistently revealed that the land surrounding the project is not Commonwealth Land. See **Attachment 4 Flora and Fauna Report** – Section 4.1.1. Commonwealth Lands (p21) and Appendix D, and direct correspondence with ARTC regarding tenure of the short rail crossing that must be crossed to access the AEP site, **Attachment 7 ARTC Rail Corridor - Land Tenure Confirmation.**

4.1.11 Commonwealth Heritage Places Overseas

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.11.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.11.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The Proposed action is not expected to directly or indirectly impact any Commonwealth Heritage Places Overseas matters, as none have been identified within the Development Envelope.

4.1.12 Commonwealth or Commonwealth Agency

4.1.12.1 Is the proposed action to be taken by the Commonwealth or a Commonwealth Agency? *

No

4.2 Impact summary

Conclusion on the likelihood of significant impacts

You have indicated that the proposed action will likely have a significant impact on the following Matters of National Environmental Significance:

None

Conclusion on the likelihood of unlikely significant impacts

You have indicated that the proposed action will unlikely have a significant impact on the following Matters of National Environmental Significance:

- World Heritage (S12)
- National Heritage (S15B)
- Ramsar Wetland (S16)
- Threatened Species and Ecological Communities (S18)
- Migratory Species (S20)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Water resource in relation to large coal mining development or coal seam gas (S24D)
- Commonwealth Land (S26)
- Commonwealth Heritage Places Overseas (S27B)
- Commonwealth or Commonwealth Agency (S28)

4.3 Alternatives

4.3.1 Do you have any possible alternatives for your proposed action to be considered as part of your referral? *

No

4.3.8 Describe why alternatives for your proposed action were not possible. *

An alternative activity for the proposed action was not possible due to:

- The unique advantages of this specific site, including its status as having Native Title extinguished and being adjacent to a major transmission line with capacity to support connection of the project.
- The financial constraints relating to how and what the funding is used for.
- An alternate timeline for Stage 1 is not possible due to the project's financial constraints imposed by investors and funding agreements.

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 1_Project Infrastructure.pdf Project infrastructure layout, including the AEP Development Envelope and Indicative Disturbance Footprint.	03/02/2025	No	High
#2.	Document	Attachment 2_CEMP.pdf Construction environmental management plan (CEMP) for the VS1 project, which will be used as the base CEMP for all Stage 1 projects.	11/09/2024	No	High
#3.	Document	Attachment 3_Significant Impact Assessment_Final.pdf Significant Impact Assessment for the Aurora Energy Project.	14/02/2025	No	High
#4.	Document	Attachment 4_Flora and Fauna Report.pdf Flora and Fauna Report for the Aurora Energy Project.	14/02/2025	No	High

1.2.6 Commonwealth or state legislation, planning frameworks or policy documents that are relevant to the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 5_ Native Veg Data Report.pdf Native Vegetation Clearance Data Report for the Aurora Energy Project.	21/04/2023	No	High

1.2.7 Public consultation regarding the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 10_BDAC Heritage Report.pdf Cultural heritage clearance report for BDAC	09/11/2017	Yes	High
#2.	Document	Attachment 11_EBS Heritage Report.pdf Cultural heritage clearance report by EBS Heritage	07/11/2017	Yes	High
#3.	Document	Attachment 9_Heritage Agreement SolareReserve Australia II Pty Ltd and BDAC.pdf Heritage agreement between SiliconAurora (formerly SolarReserve) and BDAC	22/10/2017	Yes	High

1.3.2.18 (Person proposing to take the action) If the person proposing to take the action is a corporation, provide details of the corporation’s environmental policy and planning framework

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 8_Environmental Policy.pdf Environmental Policy.	02/05/2024	No	High

4.1.4.6 (Threatened Species and Ecological Communities) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 6_Southern Whiteface Regional Assessment.pdf Regional Assessment of the Southern Whiteface for the Aurora Energy Project	17/02/2025	No	High

4.1.4.9 (Threatened Species and Ecological Communities) Why you do not think your proposed action is a controlled action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 4a_Rolling Native Vegetation.pdf Rolling Native Vegetation report, as ground is intended to be rolled not cleared for the solar fields for the CSP plants in the Aurora Energy Project.	23/08/2023	No	High

4.1.10.3 (Commonwealth Land) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment 7_ARTC Rail Corridor - Land Tenure Confirmation.pdf Email correspondence with Land Specialist at ARTC regarding tenure of the ARTC rail corridor as being SA Crown Land not Commonwealth Land, a small portion of which is included within the Development Envelope as the ARTC rail track must be crossed to access the site. The existing level crossing will be upgraded as part of the Stage 1 works.	18/02/2025	No	High

5.2 Declarations

Completed Referring party's declaration

The Referring party is the person preparing the information in this referral.

Name	Lachlan Roberts
Job title	lachlan.roberts@vast.energy
Phone	0421 343 871
Email	lachlan.roberts@vast.energy
Address	Level 7, Suite 02, 124 Walker St North Sydney NSW 2060

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ By checking this box, I, **Lachlan Roberts**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

Completed Person proposing to take the action's declaration

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	14606360169
Organisation name	SILICONAURORA PTY LTD
Organisation address	Door 1 Western Plant, 1 Watts Road TONSLEY SA 5042
Representative's name	Marnie Robinson
Representative's job title	Head of Legal
Phone	0477 016 550
Email	mrobinson@1414degrees.com.au
Address	Door 1 Western Plant, 1 Watts Road TONSLEY SA 5042

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ I, **Marnie Robinson of SILICONAURORA PTY LTD**, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. *

☑ I, **Marnie Robinson of SILICONAURORA PTY LTD**, the Person proposing the action, consent to the designation of **Lachlan Roberts** as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. *

☐ I would like to receive notifications and track the referral progress through the EPBC portal. *

✔ Completed Proposed designated proponent's declaration

The Proposed designated proponent is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Name	Lachlan Roberts
Job title	lachlan.roberts@vast.energy
Phone	0421 343 871
Email	lachlan.roberts@vast.energy
Address	Level 7, Suite 02, 124 Walker St North Sydney NSW 2060

☑ Check this box to indicate you have read the referral form. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ I, **Lachlan Roberts**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *