

# Collie Solar Photovoltaic and Battery Energy Storage System

Application Number: **03211**

Commencement Date:

Status: **Locked****06/11/2025**

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## 1. About the project

### 1.1 Project details

#### 1.1.1 Project title \*

Collie Solar Photovoltaic and Battery Energy Storage System

#### 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 \*

31/10/2026

#### 1.1.4 Estimated end date \*

31/03/2028

## 1.2 Proposed Action details

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

Palmer Renewable Energy Pty Ltd as trustee for the Palmer Renewable Trust (the proponent) intends to develop a solar photovoltaic (PV) and battery energy storage system (BESS) facility in Palmer, within Lots 788, 787, 102 and 100 Collie-Williams Road and a section of unconstructed road easement in the Shire of Collie, Western Australia (WA) (herein referred to as 'the project area'). The project area extends over 179.37 hectares (ha), as shown in **Attachment (Att.) A - Figures, Figure 1**.

The solar PV and BESS construction will be in accordance with the development approval (DA) granted in 2025 by the Regional Development Assessment Panel. The DA relates to the following relevant infrastructure components as illustrated on the design layout plan (refer to **Att. B - Layout Plan**):

#### Solar PV component

- Solar panels and inverters with up to 66 megawatts alternating current.
- Internal access roads for construction and ongoing maintenance.

#### BESS component

- A 200 MW BESS facility.
- A 3 metres (m) tall fence surrounding the BESS facility.
- Building and maintenance sheds, construction laydown areas and evaporation pond.
- A facility collector substation integrated into the BESS facility, featuring two 330/33kV power transformers with associated switchgear, a control building and multiple 33 kV switch rooms designed for the solar PVs and BESS systems.
- A 330 kV underground cable system to establish connection between the BESS and the Western Power Palmer Terminal Station currently under construction. The cable will be approximately 2 km in length buried directly within a 10 m wide easement (the transmission cable route).

The design layout plan (refer to **Att. B - Layout Plan**) provides for the location and extent of the infrastructure components across the project area including solar PV arrays, access roads, transmission cable easements, fencing, laydown areas and other components.

The proponent's intention to progress construction of the proposed Solar PV and BESS across the project area in accordance with the DA would involve the following activities that are necessary to deliver the project, which collectively define the proposed action:

- The clearing of existing scattered native trees over paddock grasses within the project area (where not proposed for retention).
- Earthworks including cutting and filling (where required) limited to the BESS construction only.
- Construction works for supporting service infrastructure (such as access roads, sewer, water, electricity, communications) and all other associated construction works to establish the Solar PV and BESS, to the point that the components are fully operational.
- Directional drilling and trenching to install the underground transmission cable system within the transmission cable route (south of Collie-Williams Road).
- Vegetation screen planting adjacent to neighbouring lots within the project area in accordance with the DA conditions to screen potential visual impacts resulting from the proposed action on neighbouring rural residences.

The above activities forming the proposed action define the 'disturbance footprint' extending over 98.47 ha (54% of the project area), as shown in **Att. A - Figures, Figure 2**. Within this disturbance footprint, the following direct impacts on Matters of National Environmental Significance (MNES) are anticipated:

- *Zanda latirostris* (*Carnaby's black cockatoo (CBC)*): the permanent removal of 4.54 ha of 'high quality' primary native foraging habitat, including 184 potential nesting trees (none with suitable hollows for breeding). Primary native foraging habitat comprises food plants that are defined as those with historical and contemporary records of regular consumption by a black cockatoo species.

- *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo (FRTBC)): the permanent removal of approximately 4.54 ha of 'high quality' primary native foraging habitat, including 184 potential nesting trees (none with suitable hollows for breeding).
- *Zanda baudinii* (Baudin's black cockatoo (BBC)): the permanent removal of approximately 2.99 ha of 'high quality' primary native foraging habitat and 1.54 ha 'high quality' secondary native foraging habitat, including 184 potential nesting trees (none with suitable hollows). Secondary native foraging habitat comprises food plants that are defined as plants that black cockatoo species have been recorded consuming occasionally or that, based on their limited extent or agricultural origin, should not be considered a sustaining resource.

It is noted that the portion of the project area within the disturbance footprint south of Collie-Williams Road that will accommodate the transmission cable route (underground cable system) will be constructed utilising horizontal directional drilling techniques to avoid any potential impacts on environmental values (above ground). Notwithstanding, the transmission route has been conservatively included as part of the broader disturbance footprint (refer to **Att. A - Figures, Figure 2**) for the purposes of the environmental impact assessment.

Indirect impacts on MNES associated with the proposed action such as dust, noise and potential edge effects (including unauthorised or accidental vegetation clearing) throughout the construction phase of the solar PV and BESS will be avoided and/or mitigated through conditions of the DA and through the implementation of standard best-practice construction management mitigation measures, as further detailed in **Section 4**. There are no indirect impacts anticipated post-construction of the solar PV and BESS i.e. throughout the ongoing operation phase of the solar PV and BESS such as from dust, noise and edge effects that would adversely impact MNES.

Strategical avoidance of key environmental values across the project area was considered throughout the planning and design process of the proposed action. A primary consideration in the project area selection was to find a suitable site in proximity to key transformer infrastructure that is already largely cleared and would have limited MNES values and not require extensive vegetation clearing. The project area was considered optimal in this regard. Following the project area selection, a key principle guiding the planning and design of the proposed action, including the design and placement of the solar PV and BESS infrastructure, was to maximise the retention of existing discrete patches of native vegetation throughout the project area. The infrastructure associated with the proposed action is positioned to avoid approximately 43 ha of native vegetation (based on vegetation canopy cover) occurring within the project area (approximately 89%), with this vegetation accommodated within the 80.90 ha avoidance footprint, as illustrated on **Att. A - Figures, Figure 2**.

Impact avoidance will be undertaken in accordance with relevant management plans and protocols conditioned under the DA which will be outlined in a Construction Environmental Management Plan (CEMP) or a Fauna Management Plan (FMP) (further discussed in **Section 4**).

Impact avoidance within the project area will result in the following in respect to MNES:

- CBC: the retention of 32.75 ha of foraging habitat, all of which comprises 'high quality' primary native foraging habitat, including in excess of 697 potential nesting trees and 14 suitable nesting trees (with suitable hollows for black cockatoo breeding).
- FRTBC: the retention of 32.75 ha of foraging habitat, all of which comprises 'high quality' primary native foraging habitat, including in excess of 697 potential nesting trees and 14 suitable nesting trees (with suitable hollows for black cockatoo breeding).
- BBC: the retention of 32.74 ha of foraging habitat, of which 32.63 ha comprises 'high quality' primary native foraging habitat and 0.11 ha secondary foraging habitat, including in excess of 697 potential nesting trees and 14 suitable nesting trees (with suitable hollows for black cockatoo breeding).

It is important to note that the eastern most patch of identified 'eucalypt woodland' habitat within the project area comprising approximately 13 ha of 'high' quality primary native foraging habitat for black cockatoo (all of which is accommodated within the avoidance area), was not included in the black cockatoo habitat tree survey area. Therefore, formal assessment of the tree's suitability for black cockatoo breeding was not undertaken within this approximately 13 ha patch. This is because of the large number of trees that would require assessment, but would not be impacted from the proposed action within this portion of the avoidance area. This means that the avoidance of black cockatoo habitat trees will significantly exceed the avoidance of the 697 potential habitat trees that have been formally assessed in the balance of the project area and that are referenced in this referral and relevant environmental survey and assessment reports attached.

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

No

**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

The proposed action is being referred for consideration by the Commonwealth Minister for the Environment under the EPBC Act. This referral pertains to consideration of impacts to MNES in the project area with particular consideration to the three species of black cockatoo in accordance with the *Environment Protection and Biodiversity Conservation Act black cockatoo referral guidelines* (DAWE 2022) and the *Significant impact Guidelines 1.1 - Matters of National Environmental Significance* (significant impact guidelines) (DEWHA 2013).

## Western Australia

### State Planning Strategy 2025

The State Planning Strategy 2050 (WAPC 2014) provides high level strategic planning context for WA as part of its broader economic, social and environmental context. In particular, the growing demand for renewable energies and the need for improvement of the south-west interconnected system and electricity network infrastructure is a critical component of the strategy.

In this respect, the proposed action being a renewable energy development (solar PV and BESS) is consistent with the strategic goals of State Planning Strategy 2050.

### State Planning Policy No. 2 - Environmental and Natural Resources Policy

The State Planning Policy No.2 – Environmental and Natural Resources Policy (WAPC 2003) (SPP 2) objectives are to integrate the environment and natural resources management with broader land use planning and decision-making, to protect, conserve and enhance the natural environment and to promote and assist in the wise and sustainable use and management of natural resources. Particularly, SPP 2 highlights that planning strategies, schemes and decision making should support the use of alternative energy generation including renewable energy. It further includes measures relating to the protection of the environment, mitigation of impacts and management of natural resources.

With regard to SPP 2, the proposed action has considered the policy's objectives through the design, location and management process and by undertaking environmental studies across multiple disciplines to achieve acceptable environmental outcomes.

### State Planning Policy No. 2.5 – Rural Planning

State Planning Policy No. 2.5 – Rural Planning (WAPC 2016) (SPP 2.5) refers to the planning objectives relating to land zoned for rural purposes as defined in the relevant planning schemes. Its aim is to protect rural land uses and avoid land use conflicts supporting sustainable economic growth. Importantly, SPP 2.5 refers to retaining rural land identified as 'priority agricultural land'.

Based on the Shire of Collie Local Planning Strategy (SoC 2020), the project area is not within an area identified as 'agricultural priority management area'. It is identified as 'potential/developing agricultural area (subject to investigation)' and is not considered significant in terms of rural land use. In respect to SPP 2.5, the proposed action will maintain the rural character of the project area by retaining and protecting existing biodiversity values (where possible), by utilising largely cleared and degraded land, whilst preserving surrounding patches of remnant native vegetation. It is noted that the current land use of the project area for pastoral sheep grazing will continue during the ongoing operation of the proposed action.

### State Planning Policy No. 3.7 – Bushfire

The intent of SPP 3.7 is to implement effective, risk-based land use planning and development which in the first instance avoids the bushfire risk, but where unavoidable, manages and/or mitigates the risk to people, property and infrastructure to an acceptable level (WAPC 2024b).

The proposed action is located within an area considered bushfire prone and a Bushfire Management Plan has therefore been prepared in accordance with SPP 3.7 and the Planning for Bushfire Guidelines, demonstrating bushfire risk is appropriately addressed.

#### Shire of Collie Local Planning Strategy

The Shire of Collie Local Planning Strategy (SoC 2020) (the local planning strategy) outlines the Shire's planning direction and objectives highlighting critical planning considerations including but not limited to bushfire management and developments within floodplains. The local planning strategy does highlight the importance of retaining rural land; however, the project area is not within an area identified as 'agricultural priority management area'. The project area is instead identified as 'potential/developing agricultural area (subject to investigation)' in the local planning strategy and is not considered significant in terms of rural land use.

In respect to the local planning strategy, the location of the proposed action was identified as suitable given its proximity to the already existing Western Power energy infrastructure including the Collie Power Station to the south-west, NEOEN Collie BESS directly to the south and the Shotts terminal further to the south-west. Furthermore, environmental studies and assessments have been undertaken across multiple disciplines including bushfire and hydrological considerations. Therefore, the proposal aligns with the objectives of the local planning strategy.

#### Development Approvals

Development of the project area will be progressed in accordance with the DA granted by the Regional Development Assessment Panel. The DA provides for a number of conditions, some of which relate to environmental matters and has been issued with consideration of the relevant planning framework and policies identified in this Section.

#### Environmental Protection Act 1986 (EP Act)

Under the WA EP Act, where clearing of native vegetation is undertaken in accordance with a development approval for the lawful construction of a building or other structure, it is exempt from requiring a clearing permit under Schedule 6 of the EP Act through the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*.

The proponent acknowledges that clearing exemptions under the WA EP Act does not mean Commonwealth environmental considerations (e.g. significant impacts on MNES pursuant to the EPBC Act) are not relevant.

#### Country Areas Water Supply Act 1947 (CAWS Act)

The CAWS Act proclaims clearing control catchments in the South West of WA for the protection of important water resources from salinity caused by the removal of native vegetation (WA Government 2025). It applies to six controlled catchment areas. The project area is located within the Bingham River Catchment, which is a tributary of the Upper Collie River and part of the Upper Collie Catchment. In accordance with the CAWS Act, the entire Upper Collie Catchment is mapped within one of the six controlled catchment areas, namely the Wellington Dam Catchment area.

In accordance with the *Clearing Regulation Fact Sheet – Clearing in Controlled Catchments* (DER 2015) ('the catchment clearing fact sheet'), a licence to clear native vegetation is not required if a native vegetation clearing permit under Part V of the EP Act is obtained. However, if an exemption for a Part V clearing permit under the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (EPA 2004) applies, a licence to clear native vegetation under the CAWS Act will still be required (unless an exemption under the CAWS Act applies).

Relevant to the proposed action, whilst an exemption under the Regulations will apply (subject to the DA), a clearing licence under the CAWS Act is being pursued by the proponent.

**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. \***

Prior to the Regional Development Assessment Panel granting DA approval, the proposed action was subject to public advertising, consultation and open for public submissions. As part of this process, there has been extensive and ongoing consultation with the general public and specific Local and State Government departments.

Registered Aboriginal Heritage Site ID 16713 (Collie River Waugal) intersects through a small portion of the proposed actions 'transmission cable route' south of Collie-Williams Road. Site ID 16713 is not a restricted heritage place and extends over a 74 km area from the Bunbury coast in the west to the Shire of West Arthur to the east of the project area. The proponent is committed to the ongoing consultation with Aboriginal Elders/Traditional Owners including the Gnaala Karla Booja Aboriginal Corporation (GKB) in accordance with the Interim Engaging with First Nations People and Communities on Assessments and Approvals under the EPBC Guidance (2023). To this end, the proponent has entered into a Noongar Standard Heritage Agreement (NSHA) with GKB and lodged an activity notice pursuant to the NSHA to facilitate detailed archaeological surveys across the project area with local aboriginal knowledge holders. In consultation with GKB, the proponent has also committed to an First Nations community fund that will result in annual contributions to benefit the local Collie community.

## 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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Alternatively, email us at [privacy@dcceew.gov.au](mailto:privacy@dcceew.gov.au).

**Confirm that you have read and understand this Privacy Notice \***

### **1.3.1.1 Is Referring party an organisation or business? \***

Yes

## Referring party organisation details

**ABN/ACN** 57144772510

**Organisation name** Emerge Environmental Services Pty Ltd

**Organisation address** Suite 4, 26 Railway Road, Subiaco WA 6008

## Referring party details

**Name** Jason Hick

**Job title** Director, Principal Environmental Consultant

**Phone** 08 9380 4988

**Email** jason.hick@emergeassociates.com.au

**Address** Suite 4, 26 Railway Road, Subiaco WA 6008

## 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** 684769453

**Organisation name** PALMER RENEWABLE ENERGY PTY LTD

**Organisation address** Level 3/338 Barker Road, Subiaco WA 6008 (Mail: PO Box 782, Subiaco WA 6904)

## Person proposing to take the action details

**Name** Linh Le

**Job title** Project Director - Empowered

**Phone** 0417988241

**Email** linh.le@empowered.com.au

**Address** Level 3/338 Barker Road, Subiaco WA 6008 (Mail: PO Box 782, Subiaco WA 6904 )

**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? \***

Yes

**1.3.2.16 Describe the nature of the trust arrangement in relation to the proposed action. \***

Palmer Renewable Energy Pty Ltd is the corporate Trustee for the Palmer Renewable Energy Trust which is a unit trust.

**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. \***

Palmer Renewable Energy Pty Ltd as a trustee for the Palmer Renewable Energy Trust (the proponent) is aware of its environmental duties and obligations, as evidenced by the progression of this referral. The company is working with an experienced team of environmental consultants and is engaging with relevant guidance to ensure potential environmental impacts are identified and appropriately managed in accordance with applicable Commonwealth and State environmental and planning legislation.

There are no current or previous proceedings against the proponent under any Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources.

**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**

The proponent is committed to protecting the environment through adherence to:

- Commitment to comply with all applicable environmental laws, regulations, standards and any other compliance obligations specific to its operations, including relevant approvals.
- Consulting and communicating relevant environmental information and outcomes with all interested parties.
- Conducting audits and addressing any issues or non-conformances in a timely manner.

## 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? \*

Yes

#### Proposed designated proponent organisation details

**ABN/ACN** 684769453

**Organisation name** PALMER RENEWABLE ENERGY PTY LTD

**Organisation address** Level 3/338 Barker Road, Subiaco WA 6008 (Mail: PO Box 782, Subiaco WA 6904)

#### Proposed designated proponent details

**Name** Linh Le

**Job title** Project Director - Empowered

**Phone** 0417988241

**Email** linh.le@empowered.com.au

**Address** Level 3/338 Barker Road, Subiaco WA 6008 (Mail: PO Box 782, Subiaco WA 6904 )

## 1.3.4 Identity: Summary of allocation

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## ✔ Confirmed Referring party's identity

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

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ABN/ACN	57144772510
Organisation name	Emerge Environmental Services Pty Ltd
Organisation address	Suite 4, 26 Railway Road, Subiaco WA 6008
Representative's name	Jason Hick
Representative's job title	Director, Principal Environmental Consultant
Phone	08 9380 4988
Email	jason.hick@emergeassociates.com.au
Address	Suite 4, 26 Railway Road, Subiaco WA 6008

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## ✔ 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.

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ABN/ACN	684769453
Organisation name	PALMER RENEWABLE ENERGY PTY LTD
Organisation address	Level 3/338 Barker Road, Subiaco WA 6008 (Mail: PO Box 782, Subiaco WA 6904)
Representative's name	Linh Le
Representative's job title	Project Director - Empowered
Phone	0417988241
Email	linh.le@empowered.com.au
Address	Level 3/338 Barker Road, Subiaco WA 6008 (Mail: PO Box 782, Subiaco WA 6904 )

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## ✔ 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.

Same as Person proposing to take the action information.

## 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

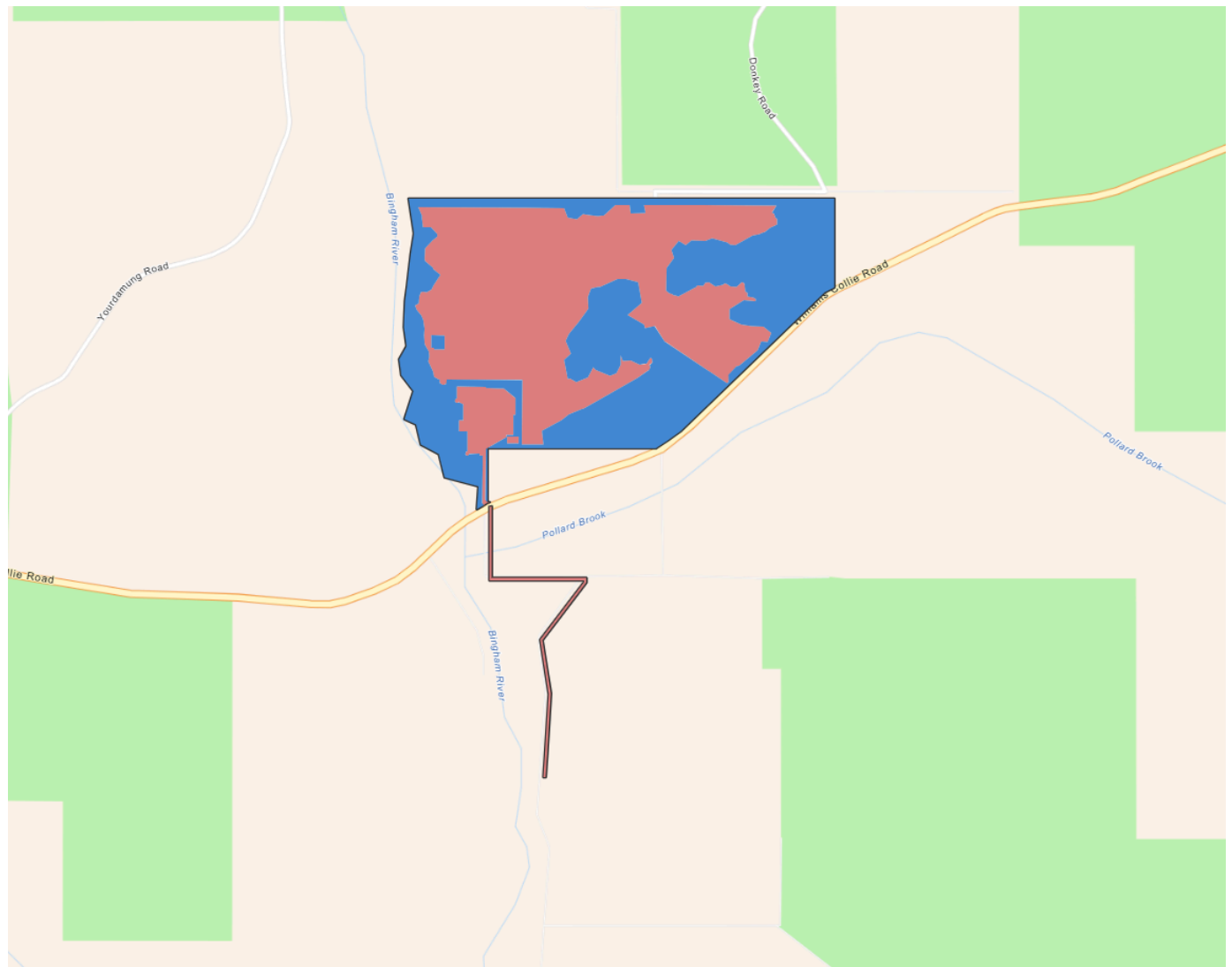
## 1.4 Payment details: Payment allocation

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

Person proposing to take the action

## 2. Location

## 2.1 Project footprint



**Project Area:** 179.58 Ha **Disturbance Footprint:** 98.58 Ha **Avoidance Area:** 81.00 Ha

## 2.2 Footprint details

### 2.2.1 What is the address of the proposed action? \*

Lots 788, 787, 102 and 100 Collie-Williams Road in Palmer, Shire of Collie Western Australia (W

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

Western 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? \*

Private ownership of freehold land and portion of unconstructed road reserve, which is:

- Lot 788 and 787 on Deposited Plan 232871
- Lot 102 and Lot 100 on Deposited Plan 426501
- Land ID 3539124 (Collie-Williams Road), Land ID 3539119, 3539122 and ID 3539123 (unconstructed road reserve).

## 3. Existing environment

## 3.1 Physical description

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

The project area is located approximately 13.5 km north-east of Collie Town and 155 km south-east of the Perth Central Business District.

The project area has historically and is presently used for low intensity agricultural uses such as pastoral sheep grazing and cropping. As a result, large portions of the project area have been historically cleared and are completely devoid of native vegetation comprising paddock grasses. Remnant mature trees are scattered across the project area, whilst discrete patches of native vegetation remain with these comprising mature native trees predominantly devoid of native understorey vegetation as a result of historical clearing and sheep grazing. The remaining native vegetation within the project area comprises four native vegetation units ranging from 'degraded' to 'completely degraded' condition (refer to **Section 3.2**). The balance of the project area currently comprises non native vegetation, predominantly including paddock grasses.

One rural residential dwelling and a number of farm and storage related structures including man-made dams remain within the project area to date. An above ground Water Corporation regional water supply pipe runs adjacent to Collie-Williams Road.

Existing access is presently limited to the the southern boundary via a unsealed track from Collie-Williams Road. Ultimately, the project area will connect to and be accessible via the existing constructed Collie Williams Road via Lot 100 and the existing unconstructed road easement. Additional internal tracks will be constructed within the project area.

The project area is zoned 'Rural' under the Shire of Collie Local Planning Scheme (LPS) No. 6. No R-codes, restricted uses or additional uses apply to the area. In accordance with LPS No.6, the construction of a renewable energy facility on land zoned 'Rural' is allowed where the local government has exercised its discretion by granting development approval after advertising the application in accordance with clause 64 of the deemed provisions. The proposed action is in accordance with the current land use zoning and there will be no changes to the zoning for the purposes of the proposed action. The local government has exercised its discretion and granted DA. Areas surrounding the project area are also largely zoned 'Rural', while areas reserved as 'State Forest' are situated directly to the north and east of the project area (refer to **Att. A - Figures, Figure 1**). These areas are managed by the Department of Biodiversity and Attractions (DBCA) or are legislated lands comprising the Muja State Forest (F24) (DBCA 2023a).

The project area is intersected by Collie-Williams Road, bounded by the Bingham River to the west and generally surrounded by agricultural land and extensive areas of native vegetation associated with the Muja and Harris River State Forests. The constructed Western Power Shotts Terminal (electrical substation) and transmission line corridors are located to the south-west of the project area, with the NEOEN Collie BESS nearing construction completion within a portion of Lots 775 and 784 to the south (refer to **Att. A - Figures, Figure 1**). Other surrounding land uses include agricultural land holdings with rural residential dwellings.

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

It is proposed that the project area will accommodate and operate a BESS and solar PV farm. As outlined in **Section 3.1.1**, the project area has historically and is presently used for low intensity agricultural uses such as pastoral sheep grazing, which will be continued throughout the operation of the solar PV and BESS. The proposed action has been designed in a manner that allows the continuous use of the project area for rural land uses such as pastoral grazing.

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

The project area does not contain any restricted landforms or unique geological features. Development of landform as a result of earthworks (expected to be minimal) will be confined to the project area with no impacts on unique landform or geological features within or external to the project area.

The Muja State Forest is located directly to the east of the project area extending over a 74,000 ha area and is managed primarily for water protection and biodiversity conservation purposes. The Harris River State Forest located further to the west of the project area is managed primarily for the protection of high-quality water supplies and biodiversity conservation. These areas are DBCA managed or legislated lands.

### **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 elevation along Collie-Williams Road intercepting through the project area ranges from approximately 205 metres in relation to the Australian Height Datum (m AHD) at its western extent to 235 m AHD at its eastern extent relevant to the project area. Elevation across the project area generally ranges between 205 m AHD adjacent to the Bingham River and to the south of Collie-Williams Road (west and south of site) sloping upwards to 260 m AHD towards the site in a north-east direction, with multiple elevation points (high points) across the project area (Landgate 2025), as shown in **Att. A - Figures, Figure 3**.

## 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

Emerge undertook a flora and vegetation assessment across a 420 ha area to the standard required as outlined in the Environmental Protection Authority's (EPA's) *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA 2016). The survey area covered a larger area to provide a broader understanding of the environmental values of the area and to inform the proposed action design. The assessment was undertaken over four days in February, March and October 2024. The assessment report is provided as **Att. C - Flora and Vegetation Assessment**, with the following findings summarised:

- A total of 41 native and 21 non-native flora species were recorded in the broader survey area, (**Att. C - Flora and Vegetation Assessment, Section 4.1.1, pp 15**).
- No threatened flora species or threatened ecological communities have been identified and were considered unlikely to occur within the project area based on the 'degraded' site conditions and absence of suitable habitat (**Att. C - Flora and Vegetation Assessment, Section 5.1, pp 22**). Whilst it was noted that the presence or absence of endangered *Caladenia dorrienii* and *Caladenia leucochila* could not be determined from one seasonal spring survey (undertaken at the end of the species flowering period), it was noted that suitable habitat for the species would be limited to vegetation in 'good' and 'very good - good' condition, none of which occurs within the project area (**Att. C - Flora and Vegetation Assessment, Section 5.1, pp 22**). A likelihood of occurrence assessment was undertaken and determined no threatened flora species are likely to occur within the project area (**Att. C - Flora and Vegetation Assessment, Appendix B**).

## Fauna

Emerge Associates have undertaken a Basic Fauna and Targeted Black Cockatoo Assessment in accordance with the EPA's *Technical Guidance - Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment* (EPA 2020). The assessment included a site survey by two zoologists on four days in February, March, October and December 2024. Transects were traversed over a 420 ha survey area to evaluate the fauna habitat and record the presence of fauna species. A targeted black cockatoo survey was also undertaken to identify the presence of potential black cockatoo breeding, roosting and foraging habitat. The assessment report is provided as **Att. D - Fauna Assessment** and includes the likelihood of occurrence assessment for MNES fauna species as Appendix C.

A supplementary black cockatoo habitat tree assessment was undertaken in September 2025 to confirm the status of a number of previously identified habitat trees that at the time of the original survey in 2024 could not be confidently categorised as either 'suitable' or 'potential' nesting trees. At that time, all trees that could not be confirmed were conservatively mapped as 'suitable' nesting trees to inform the baseline design of the proposed action and the DA process and subsequently refined following completion of the assessment. The assessment report is provided as **Att. E - Supplementary Black Cockatoo Assessment**.

Additionally, a review was undertaken of the fauna habitat identified in the original survey across the project area and its suitability for conservation significant species. The outcomes of this assessment are provided in **Att. F - Fauna Technical Memorandum**.

The outcomes of the above fauna surveys and findings specifically relevant to the project area are summarised as follows:

- Five broad fauna habitat types occur within the project area (refer to **Att. A - Figures, Figure 4**) predominantly comprising 'grassland and bare ground', encompassing discrete patches of 'eucalypt forest' and 'scattered trees'. 'Riparian woodland' vegetation occurs adjacent to the Bingham River; however, entirely outside of the project areas disturbance footprint (unless where overhanging canopy occurs within the disturbance footprint) (see **Att. C - Fauna Assessment, Section 4.1.4 pp. 16**). A small portion of the project area comprises 'dams'.

- During the field survey, a total of 36 native and five (5) non-native fauna species were directly or indirectly recorded (from foraging evidence).
- Two species listed as a declared pest pursuant to the *Biosecurity and Agriculture Management Act 2007*, \**Oryctolagus cuniculus* (rabbit) and *Vulpes vulpes* (fox), were identified from scats within the survey area.
- A total of 14 conservation significant species were considered to possibly occur in the survey area.
- Three species are considered to have a 'high' likelihood of occurrence within the project area including Carnaby's black cockatoo (CBC), Baudin's black cockatoo (BBC) and Forest red-tailed black cockatoo (FRTBC).
- A total of 37.29 ha of foraging habitat for CBC occurs within the project area, all of which comprises 'high quality' native primary foraging habitat associated with the 'eucalyptus woodland' and 'scattered trees' fauna habitat types (see **Att. A - Figures, Figure 5**).
- A total of 37.29 ha of foraging habitat for FRTBC occurs within the project area, all of which comprises 'high quality' native primary foraging habitat (see **Att. A - Figures, Figure 6**).
- A total of 35.62 ha of 'high quality' foraging habitat for BBC occurs within the project area, 1.65 ha of which comprises 'high quality' native secondary foraging habitat associated with the 'eucalyptus woodland' and 'scattered trees' fauna habitat types (see **Att. A - Figures, Figure 7**).
- A total of 881 potential black cockatoo habitat trees were identified across the project area, and an additional 14 suitable nesting trees (see **Att. A - Figures, Figure 8**). It is noted that a habitat tree assessment was not undertaken within a 13 ha area in the eastern portion of the project area (completely accommodated within the avoidance area) and as such the total number of habitat trees within the referral area would exceed the 881 formally assessed trees.
- No black cockatoo roosting or secondary evidence of roosting was identified (**Att. D - Fauna Assessment, pp. 20**).
- *Apus pacificus* (Pacific swift), *Dasyurus geoffroii* (Chuditch), *Pseudocheirus occidentalis* (western ringtail possum (WRP)) and *Setonix brachyurus* (Quokka) were classified to have a 'moderate' likelihood of occurrence within the survey area (**Att. D - Fauna Assessment, Appendix C**).
- Due to historical vegetation clearing and pastoral sheep grazing, the project area lacks extensive native vegetation consisting of a multi-tiered vegetation structure (i.e. combined ground, under and overstorey vegetation) which would provide refuge habitat for ground dwelling fauna such as Chuditch, WRP and Quokka. Areas surrounding the project area comprising dense forest type vegetation within the State forests likely provide suitable habitat for all three species. The species may occur in the wider locality of the project area and utilise the project area as part of the species home ranges, however noting that it generally lacks the habitat requirements that would provide refuge to the species, they are unlikely to occur on a frequent basis (if at all) given the lack of suitable habitat.
- WRP: Three key management zones have been identified for the species, which are defined as areas considered the most important extant populations (DPaW 2017). The project area lies outside of these management zones, with the Swan Coastal Plain zone being the closest. Critical habitat within this zone is defined as 'long unburnt mature remnant peppermint woodlands with high canopy continuity and high nutrient foliage with minimal periods of summer moisture stress, and habitat connecting patches of remnants' (DPaW 2017). The habitat in the project area does not meet this definition of critical habitat and does not provide the primary food source for the species (peppermint). The species does utilise eucalyptus species for refuge and foraging, meaning the eucalypt forest habitat may be traversed by individuals infrequently as part of their broader home range. It is noted that this vegetation lacks any understorey vegetation and cover for WRP and the species would therefore not likely reside within the project area on a permanent or frequent basis. As the proposed action is not expected to directly or indirectly impact on this species, it is not further considered in this referral. It is further acknowledged that the proposed action and ongoing operation of the BESS and solar PV would not prevent any WRP from safely traversing throughout the project area.

- Quokka: the species requires access to fresh water and have a strong association with peppermint trees swamps with dense understoreys for the cover and foraging they provide. The 'riparian woodland' habitat surrounding the Bingham River is degraded, lacking peppermint trees and dense understorey vegetation meaning it is unlikely to support Quokka noting this habitat is fully accommodated within the avoidance area and will facilitate continuous movement. The eucalypt forest habitat would not be suitable for Quokka as it lacks dense vertical vegetation and early seral growth. It is likely that if the species occurs in the region, it would be found within areas of State forest that provide dense forest type vegetation. There is therefore no suitable habitat within the project area for the species. As the proposed action is not expected to directly or indirectly impact on this species, it is not further considered in this referral.
- Chuditch: The species may use the 'riparian woodland' adjacent to the Bingham River as a dispersal corridor as part of their vast home range, within this habitat fully avoided. Overall there is no suitable habitat within the project area that would be impacted and as such the proposed action is not expected to directly or indirectly impact on this species or suitable habitat types. It is further acknowledged that the proposed action and ongoing operation of the BESS and solar PV would not prevent any Chuditch from safely traversing throughout the project area.

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

The project area occurs on the Darling Plateau which is an ancient erosion surface capped with laterite and dissected by drainage channels. The eastern part of the Plateau is characterised by flat topped hills bound by breakaways and more prominent hills (monadnocks) which protrude above the general level of the plateau. The western part comprises valleys with steep, rocky slopes and narrow, flat floors. The project area locality largely consist of soils that are loamy gravels, deep sands, with saline and non-saline wet soils.

The project area is contained within the Jarrah Forest region and within the 'JF1' or northern jarrah forest subregion. The northern jarrah forest subregion is characterised by *Eucalyptus marginata* (jarrah) – *Corymbia calophylla* (marri) forest on laterite gravels with *Eucalyptus wandoo* – marri woodlands in the eastern part. At a local level, vegetation complex mapping indicates that four vegetation complexes occur within the project area, namely Dwellingup (D4), Pindalup, Swamp and Yarragil 2 as described in **Att. C - Flora and Vegetation Assessment, Section 2.1.6, pp. 5.**

The flora and vegetation assessment identified the following vegetation units specifically in the project area, with these detailed in **Att. C - Flora and Vegetation Assessment, Section 4.2** and **Att. A - Figures, Figure 9**):

- 32.48 ha of **EmCc**, a native plant community described as 'Open forest *Eucalyptus marginata* and/or *Corymbia calophylla* and occasional *Banksia grandis* over occasional *Hakea prostrata*, *Persoonia longifolia* and *Xanthorrhoea preissii* (or absent) over sparse shrubland *Acacia pulchella*, *Hakea lissocarpa* and *Hibbertia ?commutata* (or absent) over scattered *Lomandra* spp., *Austrostipa* sp. and *Rytidosperma* sp. (or absent) over sparse to closed grassland of pasture weeds (or absent) and occasional native species.'
- 0.62 ha of **Er**, a native plant community described as 'Open woodland *Eucalyptus rudis* and occasional *Eucalyptus wandoo* over occasional scattered shrubs *Melaleuca lateritia* (or absent) over occasional sedges *Typha* sp. and or/*Juncus* sp. in wetter areas (or absent) over pasture weeds and occasional native species'.
- 9.53 ha of **ErCd**, a native plant community described as 'Open woodland *Eucalyptus rudis* (or absent) over occasional scattered shrubs *Melaleuca lateritia* (or absent) over closed sedgeland \**Carex divisa* or *Typha* sp. and *Juncus* sp. in wetter areas over closed grassland of pasture weeds and occasional native species'.
- 0.08 ha of **ErMGt**, a native plant community described as 'Open woodland *Eucalyptus rudis* and *Melaleuca* sp. over scattered myrtaceous shrubs over tall grassland \**Phalaris* sp. over scattered *Gahnia trifida* over pasture weeds and occasional native species'.
- 136.56 ha of **non-native**, described as 'heavily disturbed areas comprising predominantly non-native grassland of pasture weeds and scattered native and non-native trees. Bare areas associated with tracks, buildings and dams were also included in this unit'.

Vegetation condition was assessed against the Keighery (1994) methodology and is outlined in **Att. C – Flora and Vegetation Assessment, Section 4.2.2**, and shown in **Att. A - Figures, Figure 10**.

The majority of the project area is mapped as being in 'completely degraded' condition, with the balance mapped as 'degraded' or 'degraded to completely degraded' condition.

## 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.**

The PMST search did not identify any Commonwealth Heritage Places occurring within or adjacent to the project area. A desktop review of the WA state heritage Office inherit Database indicated that no State recognised heritage values occur within or adjacent to the project area.

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

In Western Australia, the Aboriginal Heritage Enquiry System (AHIS) is maintained pursuant to Section 38 of the *Aboriginal Heritage Act 1972* (AH Act) by the Department of Planning, Lands and Heritage (DPLH), and contains information on Registered Aboriginal Heritage Sites and Other Heritage Places throughout Western Australia.

It is noted that investigations and consultation with indigenous people are ongoing to exploring the heritage values within the project area.

The project area lies within the Gnaala Karla Booja Indigenous Land Use Area and within the traditional lands of the Wilman People. In accordance with the *Aboriginal Heritage Due Diligence Guidelines* (DAA 2013), a search of the AHIS online database (DPLH 2023) was undertaken which identified registered Aboriginal Heritage Site ID 16713 (Collie River Waugal) intersecting through a small portion of the project area's 'transmission cable route' south of Collie-Williams Road. Site ID 16713 is not a restricted heritage place and extends over a 74 km area from the Bunbury coast in the west to the Shire of West Arthur to the east of the project area. The location of the heritage site is shown on **Att. A - Figures, Figure 11**.

Archae-aus (2025) have undertaken due diligence assessments for the proposed action including a desktop review of the known Aboriginal cultural heritage within the project area and broader surrounds, including places or objects that may be overlapping Aboriginal cultural heritage values. The assessment also identified potential heritage constraints within the project area under the AH Act.

Whilst Archae-aus (2025) acknowledges that the proposed action will unlikely directly affect Place ID 16713 (considered an important mythological place, natural feature and water source), understanding the types and relationships between cultural heritage places and the wider cultural landscape helps to inform heritage risk assessment for unsurveyed areas within similar environments. A preliminary assessment of the potential for Aboriginal cultural heritage within the project area and associated development footprint was therefore undertaken by Archae-aus. It was concluded that there appears to be areas within the project area (within portions south of Collie-Williams Road and adjacent to the western project area boundary (north of Collie-Williams Road)) considered to have an overall 'high' chance of encountering water sources, camps, ethnographic sites including creation/dreaming narrative, artefact scatters and water sources. Small areas of the northern portion of the project area were also considered to have a 'moderate' chance of encountering burials, modified trees, historical Aboriginal heritage places, potential archaeological deposits and plant resources. Furthermore, large patches of native vegetation remaining within the project area's avoidance area are also considered to have a 'moderate' chance of encountering heritage values. Notwithstanding, the archaeological characteristics and ethnographic values of the project area and broader study area in their entirety are currently unknown, as no area-specific surveys have been conducted to date (Archae-aus 2025).

Based on the results of the desktop assessment undertaken by Archae-aus (2025), and prior to any mitigation measures being put in place, there is an assessed 'high' and 'moderate' risk of the implementation of the proposed action impacting Aboriginal cultural heritage within portions of the project area. Archae-aus advised that archaeological and ethnographic surveys and engagement with the Gnaala Karla Booja Aboriginal Corporation will be required. The results of field assessments will be able to refine the levels of archaeological and cultural heritage potential for the project area and provide a better understanding of the zones of potential heritage values associated with the proposed action.

The proponent is committed to the ongoing consultation with Aboriginal Elders/Traditional Owners including the Gnaala Karla Booja Aboriginal Corporation (GKB) in accordance with the Interim Engaging with First Nations People and Communities on Assessments and Approvals under the EPBC Guidance (2023). To this end, the proponent has entered into a Noongar Standard Heritage Agreement (NSHA) with GKB and lodged an activity notice pursuant to the NSHA to facilitate detailed archaeological surveys across the project area with local aboriginal knowledge holders. In consultation with GKB, the proponent has also committed to an First Nations community fund that will result in annual contributions to benefit the local Collie community.

Based on the results of the archaeological and ethnographic field assessments, if Aboriginal cultural heritage places are found to be within the project area's disturbance footprint and where potential impacts cannot be avoided, the proponent will seek Section 18 approval under the AH Act and develop a Cultural Heritage Management Plan subject to consultation with the Gnaala Karla Booja Aboriginal Corporation.

Furthermore, and in addition to any heritage management plan that may be required, standard construction measures will be implemented throughout the works associated with the proposed action that will include temporary suspension of works should unexpected Aboriginal or archaeological significant material be uncovered.

In respect to registered Aboriginal Heritage Site ID 16713 (Collie River Waugal) intersecting a small portion of the disturbance footprint to the south of Collie-Williams Road that will comprise the underground transmission cable system; horizontal directional drilling techniques will be employed that will prevent the need of open trench construction and any potential impacts to the heritage site.

## 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. \***

## Groundwater

A review of the water register (DWER 2025b) indicates that project area is within the Upper Collie Water Management Area, which is underlain by the below fractured rock aquifers:

- Level 1 - Collie combined fractured rock west - Alluvium
- Level 2 - Collie combined fractured rock west - Calcrete
- Level 3 - Collie combined fractured rock west - Palaeochannel
- Level 4 - Collie combined fractured rock west - Fractured rock.

Groundwater resource for the Collie area is within the proclaimed Collie Coal Basin which is made of the Premier and Cardiff sub-basins. Coal is mined from the Collie Coal Basin therefore needing dewatering for operations purposes. Surplus groundwater (mine dewater) is in high demand for cooling purposes of the local power industry (DWER 2025a).

Whilst groundwater sources beneath the project area have not been classified in accordance with publicly available data, an assessment of estimated groundwater levels using the Australian Groundwater Explorer (BoM 2025a) and available literature on the formations observe that the shallow groundwater within the superficial quaternary deposits would be expected to be approximately 1 m below ground level (Mott MacDonald 2024). Due to the close proximity of the Bingham River and Pollard Brook, surficial groundwater could potentially be observed at the waterways level along the western and southern boundaries of the project area.

The proposed action will not involve any dewatering and no adverse impacts to groundwater or surface water quality are expected. A Water Management Plan (WMP) was prepared by Emerge Associates (see **Att. G - Water Management Plan**) and outlines the integrated water cycle management approach for the project area.

The solar PV and BESS will utilise reticulated water sourced from the existing Water Corporation regional supply pipeline, and as such no groundwater abstraction is proposed.

## Surface Water

The Bingham River passes adjacent to the western project area boundary in a north-south (downstream) direction and meets the Collie River approximately 3.2 km south of the project area, as shown on **Att. A - Figures, Figure 12**. A significant stream and local tributary of Bingham River is Pollard Brook that intersects through a portion of the project area south of Collie-Williams Road. Pollard Brook connects to the Bingham River from an easterly direction before connecting to other major tributaries including the Lemon Tributary. The Bingham River and Pollard Brook are highly seasonal with the highest flows observed during the winter months when rainfall is the highest. During the summer months when the base flow is at its lowest, the system naturally ceases to flow forming a series of pools.

There is no existing flood mapping available for the project area and no relevant hydrological studies of the relevant hydrological features. Therefore, to support the proposed action's siting and design process, Emerge Associates undertook surface runoff modelling to characterise the floodplain area of the Bingham River and Pollard Brook for the major rainfall event (1% annual exceedance probability (AEP)), which run adjacent to the project area, to determine the potential hydrological impacts and/or risks to the proposed action. The proposed action has been designed having regard to the inundation extent. All proposed infrastructure will be located outside the major rainfall even (1% AEP) floodplain of the Bingham River. This is further described in the WMP (**Att. G - Water Management Plan**).

## Wetlands

The *Geomorphic Wetlands of Wheatbelt Wetlands (DBCA-021)* dataset maps geomorphic wetland features and classifies them based on their landform shape and water permanence. Each wetland feature is classified according to their host landform and hydroperiod. A review of the dataset indicated that no wetland features occur within the project area nor immediate surrounds. Given the project area is

surrounding by Muja State Forest and the gentle and continues slope across the land, the likelihood of a wetland occurring within project area would be minimal and there was no evidence identified throughout the environmental investigations undertaken within the project area. Notwithstanding, it is noted along the western and southern boundary of the site the Bingham and Pollard Brook floodplain areas are identified as discussed above, with these fully retained in the avoidance area.

## 4. Impacts and mitigation

## 4.1 Impact details

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

<b>EPBC Act section</b>	<b>Controlling provision</b>	<b>Impacted</b>	<b>Reviewed</b>
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.

\*

This is not an applicable MNES as there are no World Heritage properties within or in close proximity to the project area.

### 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.

\*

This is not an applicable MNES as there are no National Heritage Places within or in close proximity to the project area.

### 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.

Direct impact	Indirect impact	Ramsar wetland
No	No	Peel-Yalgorup System

**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 Peel-Yalgorup System was identified as part of the PMST search, with the project area located within its buffer area only (within 40 km to 50 km upstream). This is therefore considered not an applicable MNES as there are no RAMSAR wetlands within or in close proximity to the project area.

The proposed action would not directly or indirectly impact on the Peel-Yalgorup System RAMSAR.

**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	<i>Aphelocephala leucopsis</i>	Southern Whiteface
No	No	<i>Botaurus poiciloptilus</i>	Australasian Bittern
No	No	<i>Calidris acuminata</i>	Sharp-tailed Sandpiper
No	No	<i>Calidris ferruginea</i>	Curlew Sandpiper
Yes	No	<i>Calyptorhynchus banksii naso</i>	Forest Red-tailed Black-Cockatoo, Karrak
No	No	<i>Dasyurus geoffroii</i>	Chuditch, Western Quoll
No	No	<i>Diuris micrantha</i>	Dwarf Bee-orchid
No	No	<i>Leipoa ocellata</i>	Malleefowl
No	No	<i>Myrmecobius fasciatus</i>	Numbat
No	No	<i>Nannatherina balstoni</i>	Balston's Pygmy Perch
No	No	<i>Pseudocheirus occidentalis</i>	Western Ringtail Possum, Ngwayir, Womp, Woder, Ngoor, Ngoolangit
No	No	<i>Westralunio carteri</i>	Carter's Freshwater Mussel, Ambiguous Mussel
Yes	No	<i>Zanda baudinii</i>	Baudin's Cockatoo, Baudin's Black-Cockatoo, Long-billed Black-cockatoo
Yes	No	<i>Zanda latirostris</i>	Carnaby's Black Cockatoo, Short-billed Black-cockatoo

### Ecological communities

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#### 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. \*

##### **Carnaby's Black Cockatoo (CBC) (*Zanda latirostris*)**

The proposed action will result in the permanent loss of 4.54 ha of 'high quality' primary native foraging resources for CBC including the loss of 184 trees that meet the criteria of potential nesting trees (none with suitable nesting hollows).

The proposed action will not result in direct impacts to the species that would result in species mortality such as through vehicle strikes. The proposed action will not result in indirect impacts on CBC relating to habitat fragmentation and/or the introduction of pest and diseases that may impact surrounding habitat nor indirectly impact the species population. Any impacts as a result of the proposed action can be mitigated through the implementation of standard construction environmental management measures/plans, detailed in **Section 4.1.4.10**.

##### **Forest Red-tailed Black Cockatoo (FRTBC) (*Calyptorhynchus banksii naso*)**

The proposed action will result in the the permanent loss of 4.54 ha of 'high quality' primary native foraging resources for FRTBC including the loss of 184 trees that meet the criteria of potential nesting trees (none with suitable hollows for breeding).

The proposed action will not result in direct impacts to the species that would result in species mortality such as through vehicle strikes. The proposed action will not result in indirect impacts on FRTBC relating to habitat fragmentation and/or the introduction of pest and diseases that may impact surrounding habitat nor indirectly impact the species population. Any indirect impacts as a result of the proposed action can be mitigated through the implementation of standard construction environmental management measures/plans, detailed in **Section 4.1.4.10**

##### **Baudin's Black Cockatoo (BBC) (*Zanda baudinii*)**

The proposed action will result in the the permanent loss of 2.99 ha of 'high quality' primary native and 1.54 ha of 'high quality' secondary native foraging resources for BBC including the loss of 184 trees that meet the criteria of potential nesting trees (none with suitable nesting hollows).

The proposed action will not result in direct impacts to the species that would result in species mortality such as through vehicle strikes. The proposed action will not result in indirect impacts on BBC relating to habitat fragmentation and/or the introduction of pest and diseases that may impact surrounding habitat nor indirectly impact the species population. Any indirect impacts as a result of the proposed action can be mitigated through the implementation of standard construction environmental management measures/plans, detailed in **Section 4.1.4.10**

The residual impacts of the proposed action on all three MNES are summarised in **Att. A - Figures, Figure 13**, which illustrates the project area 'post-development' (after avoidance and mitigation measures are applied (see **Section 4.1.4.10**)).

#### 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. \*

The MNES Impact Guidelines 1.1 (DotE 2013) identify significant impact criteria for endangered species to assist determining whether the environmental impacts of a proposed action are likely to be significant. An assessment of the potential impacts of the proposed action on CBC, BBC and FRTBC using the 'Endangered' species Impact Criteria is provided below, with the species collectively referred to as black cockatoo (unless where stated otherwise).

The anticipated residual impacts on black cockatoo as a result of the proposed action are not considered to represent a significant residual impact based on the assessment below.

Lead to a long-term decrease in the size of the population - Not likely.

The implementation of the proposed action is not likely to lead to a long-term decrease in the population of black cockatoo.

The criteria used to determine significant impacts for vulnerable and threatened species listed in the Significant Impact Guidelines (DotE 2013) refers to 'populations' and 'important populations', with these terms not defined for black cockatoo due to the mobile and widely-distributed nature of these species (DSEWPaC 2012). Therefore, it is more appropriate to consider significance in terms of impacts on habitat rather than the population.

To lead to a long-term decrease in the size of a population, the proposed action would need to bring about a sustained reduction in birth rates and/or a sustained increase in mortality rates for the species. The proposed action is unlikely to result in direct impacts on black cockatoo that would lead to species mortality, either indirectly through a significant reduction of available foraging, roosting or breeding resources in the region, or directly through activities that could lead to bird deaths as a result of vehicle strikes or destruction of existing nests as no suitable nesting trees will be removed.

The project area does not provide foraging habitat to an extent that it can be considered to be critical to the survival of a population based on the vast range black cockatoo are known to travel in search of foraging sources in particular around known roost and breeding sites. Whilst the project area contains foraging resources that could potentially be used by black cockatoo (with the majority to be retained within the avoidance area (approximately 87%), there are abundant other foraging resources in the local and broader region (including large areas of State forest directly adjacent to the project area), and in proximity to known roost and breeding sites such that foraging habitat within the project area's development footprint comprising scattered paddock trees would not be significantly relied upon to support any potential nearby breeding individuals. As such, the proposed action is unlikely to result in a sustained reduction in birth rates.

The project area supports only a small proportion of available foraging resources in the local and regional area, the loss of which would not significantly reduce habitat availability across a local or regional scale and/or on a cumulative scale.

Standard best-practice construction management mitigation measures can be implemented to suitably minimise the risk of bird strikes during construction (e.g. pre-works fauna inspections, construction vehicle speed limits and directional clearing to encourage bird dispersal).

Reduce the area of occupancy of the species - Not likely.

Given the relatively small extent of potential foraging habitat within the project area comprising modified and disturbed pastoral land compared to the much larger avoidance areas of remnant vegetation likely to provide suitable foraging, roosting and breeding habitat in the wider locality of the project area, the proposed clearing of up to 4.54 ha of 'high quality' primary native foraging resources is unlikely to reduce the area of occupancy of black cockatoo in the broader landscape including large areas of State forest. The proposed action avoids the clearing of remaining patches of native vegetation providing suitable foraging, roosting and breeding habitat and instead will result in the clearing of scattered trees not considered critical habitat for the species.

Fragment the existing population into two or more populations - Not likely.

The implementation of the proposed action is not likely to fragment any existing population or habitat for black cockatoo.

Black cockatoo are highly mobile species and extensive areas of State forests containing high quality habitat are located in the locality of the project area. The removal of isolated and scattered paddock trees would not alter the existing habitat connectivity in the area as no material separation would occur between remaining potential habitat once the proposed action has been undertaken. The proposed action avoids the clearing of remaining patches of native vegetation providing suitable foraging, roosting and breeding habitat maintaining habitat connectivity (albeit already fragmented across the project area due to historical clearing for rural land uses).

Adversely affect habitat critical to the survival of the species - Not likely

It is not likely for the proposed action to affect habitat critical to the survival of black cockatoo.

The CBC Recovery Plan (DEC 2013) highlights the critical habitat to the survival of CBC as Eucalypt woodlands that provide nest hollows for breeding, roosting and foraging habitat, woodland sites known to have supported breeding in the past and that could be used again in the future and vegetation that provides food sources as well as night roosting.

Habitat critical to the survival and important populations of FRTBC and BBC comprises all marri, karri and jarrah forests, woodlands and remnants in the south-west of Western Australia receiving more than 600 mm of annual average rainfall.

Vegetation within the project area is considered to meet some characteristics of habitat considered critical to black cockatoo; however, notably the proposed action will not impact on suitable nesting trees, nor areas of eucalypt woodland that would provide breeding and roosting habitat considered critical for the species, which is abundant in the adjacent State forests. Whilst the project area contains potentially suitable foraging resources, there are abundant other habitat resources in the local and broader region, and in proximity to known roost and breeding sites such that foraging habitat within the project area would not be significantly relied upon to support any potential nearby breeding individuals.

Disrupt the breeding cycle of a population - Not likely

The implementation of the proposed action is not likely to disrupt the breeding cycle of black cockatoo.

To disrupt the breeding cycle of a population, the proposed action would have to directly impact on breeding black cockatoo individuals. This is considered a 'very low' risk given no suitable nesting trees are proposed to be impacted, with all suitable nesting trees to be retained within the project area's avoidance footprint.

Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline - Not likely

The implementation of the proposed action is not likely to modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.

The proposed action will result in the clearing of up to 4.54 ha of 'high quality' primary native foraging resources comprised of isolated and scattered trees over paddock grasses. This impact is considered relatively minor in the context of available habitat in the region and adjacent extensive areas of State forests.

Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered specie's habitat - Not likely

The proposed action is unlikely to result in the introduction of any new invasive species to the area. The key consideration for this criterion would be the introduction of species that are known to compete with black cockatoo for nesting hollows or foraging resources. These species include the native and introduced

corellas, galahs, Australian shelducks, Australian wood ducks and feral European honeybees. There is no evidence of any invasive species impacting on the available habitat within the project area as a result of the proposed action.

The project area is located within a agricultural landscape where invasive species are relatively common and widespread (as compared to more remote areas comprising relatively undisturbed remnant bushland away from agricultural land uses). As such, it is unlikely that the proposed action would result in such species becoming established, as they are likely already established across the local and regional area.

Introduce disease that may cause the species to decline, or interfere with the recovery of the species - Not likely\_

The proposed action within the project area is unlikely to result in the introduction of diseases (such as beak and feather disease virus) that may cause black cockatoo to decline.

The proposed action is unlikely to be responsible for the introduction of these diseases, or increase the susceptibility of birds to these diseases, as the project area is located within an area already exposed to a high degree of human interaction and local disturbance meaning that if they were to occur, they would likely have already been introduced as part of previous human disturbances, land clearing and existing land uses.

The implementation of the proposed action is not likely to interfere with the recovery of black cockatoo. As discussed above, the proposed action will not interfere with or disrupt the breeding cycle of black cockatoo, nor will it result in a reduction in their current range due to habitat fragmentation. As such, the attainment of the recovery objective would not be compromised by the proposed action.

#### **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 within the project area is not considered to be a controlled action as it is considered unlikely to have significant adverse impacts on the three relevant MNES (CBC, BBC and FRTBC). This conclusion is based on the following:

- The proposed action and potential impacts on CBC, BBC and FRTBC habitat have been assessed against the significant impact criteria of the MNES *Significant Impact Guidelines 1.1* (2013), with the assessment concluding that the proposed action is unlikely to result in significant impacts.
- The proposed action will not result in impacts on suitable black cockatoo nesting trees, with all suitable nesting trees to be retained within the project area's avoidance footprint. No evidence of black cockatoo utilising the project area for breeding was identified and it is likely black cockatoo breed in areas with more intact vegetation.
- The proposed action will result in the removal of scattered trees providing potential foraging resources for black cockatoo within a rural landscape; however, completely avoids any impacts on remaining patches of 'eucalypt woodland' within the project area, which provide suitable foraging, roosting and breeding habitat.
- The proposed action would not cause direct impacts on black cockatoo that would result in the species injury, mortality, or interrupt the breeding cycle of the species.
- Habitat available within the project area only meets some characteristics of habitat considered critical for black cockatoo with large areas of remnant vegetation of much better quality protected within extensive areas of State forests directly adjacent to the project area.
- Whilst some foraging habitat within the project area would be removed as a result of the proposed action;
  - It is of a relatively small quantum and of highly modified structure within a agricultural setting (i.e. scattered trees amongst paddocks).
  - Its removal would not result in significant fragmentation of potential black cockatoo habitat, whilst avifauna movement corridors would be maintained between the project area and larger patches of potential habitat in the broader locality including potential foraging and breeding habitat, known roosting sites and watering habitat.
- The proponent proposes to avoid impacts to and retain a minimum of 32.63 ha of 'high quality' primary native foraging resources comprising patches of 'eucalypt forest' within the project area including 697 potential (confirmed habitat trees) and 14 suitable nesting trees for black cockatoo. Additional habitat trees (not formally assessed) will be avoided within the approximately 13 ha area of 'eucalypt woodland' comprising primary native foraging habitat in the eastern portion of the project area.
- Standard best-practice construction management mitigation measures will be implemented to suitably mitigate potential impacts to MNES during construction. This includes:
  - mandatory site inductions
  - pre-start civil contractor briefings to highlight no-go areas.
  - pre-works fauna and tree inspections and fauna spotter onsite during construction by a suitably qualified zoologist.
  - construction vehicle speed limits
  - directional clearing to encourage bird dispersal (should any birds be present)
  - use of clean machinery
  - required imported soil will be from certified sources free of pathogens and disease
  - fencing/demarcation of retained vegetation
  - provision of GPS coordinates of retained vegetation to contractors
  - restricting access of vehicles to the construction site to minimise the risk of weed spread or introduction
  - use of water carts and ground stabilisation to minimise wind-blown dust emissions.
- There will be no direct or indirect impact on other MNES including WRP, Quokka and Chuditch given there is a lack of suitable habitat within the project area and the proposed action will result in the avoidance of any potential movement corridors including 'riparian woodland' vegetation, 'eucalypt

woodland' and would remain traversable by the species post-construction and during the operation phase of the BESS and solar PV.

**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. \***

## **Avoidance**

The project area's proximity to existing energy infrastructure serving the South West Interconnected System (SWIS) and the Collie region, and its current land use zoning ('Rural') characterised by largely cleared paddocks with scattered trees and isolated patches of native vegetation (limiting vegetation clearing requirements) provides for optimal siting of the proposed action compared to alternatives. The project area is optimal given it is located in proximity to other energy infrastructure, already historically largely cleared, but it retains areas for significant impact avoidance opportunities. The proponent has taken a range of measures to provide for the future retention of environmental values within the project area, where possible. The key management strategy for the proposed action is to avoid the clearing of native vegetation providing conservation significant fauna habitat for black cockatoo. The ecological survey results have informed the design and placement of the solar PV and BESS infrastructure to avoid areas of native vegetation associated with the 'eucalypt forest', 'scattered trees' and 'riparian woodland' fauna habitat types and any mature trees identified as suitable nesting trees for black cockatoo providing the most significant habitat values across the project area. The design of the proposed action demonstrates that infrastructure is positioned to avoid significant impacts on native vegetation and the above fauna habitat types (where possible), with particular consideration for black cockatoo habitat. The proposal will avoid approximately 43 ha (89%) of native vegetation remaining within the project area comprising the 'eucalypt forest', 'scattered trees' and 'riparian woodland' fauna habitat types. This includes the avoidance of up to 32.75 ha of 'high' quality primary native black cockatoo foraging resources within the avoidance area including 697 potential and 14 suitable black cockatoo nesting trees. It is important to note that the eastern most patch of identified 'eucalypt woodland' habitat within the project area comprising approximately 13 ha of 'high' quality primary native foraging habitat (all of which is accommodated within the avoidance area), was not included in the black cockatoo habitat tree survey area. Therefore formal assessment of the tree's suitability for black cockatoo breeding was not undertaken within this approximately 13 ha patch. This is because of the large number of trees that would require assessment, but would not be impacted from the proposed action within this portion of the avoidance area. This means that the avoidance of black cockatoo habitat trees will significantly exceed the avoidance of the 697 potential habitat trees that have been formally assessed in the balance of the referral area. Furthermore, no suitable habitat for other MNES species will be impacted as a result of the proposed action.

The above avoidance measures within the project area have been maximised as far as possible, whilst balancing the infrastructure requirements of the proposed action.

## **Mitigation**

Construction activities within the project area will need to be managed to protect vegetation and associated black cockatoo habitat proposed for retention in the avoidance footprint and/or vegetation external to the project area. This will involve clearly identifying vegetation proposed for retention using visual markers and/or fencing to identify the extent of works and protect vegetation and black cockatoo habitat. Trees to be retained will be protected in accordance with *Australian Standard (AS) 4970-2009: Protection of Trees on Development Sites*. All contractors on site will ensure that the tree protection measures are in place prior to works commencing. Tree protection may include fencing around the tree protection zone (TPZ) of retained trees (where scattered individually), supplementary watering, amelioration treatment of root zones, canopy reduction and limb or root pruning. The TPZ is a circular area (radius) defined around a tree to isolate its roots and crown from construction development in accordance with Standards Australia (2009) which requires no development within a TPZ, including excavation or filling.

The potential for direct and indirect impacts to native vegetation and associated black cockatoo habitat outside the project area's disturbance footprint such as unauthorised clearing and edge effects (spread of weeds, diseases and dust to nearby vegetation) is considered of 'low' risk and will be mitigated through standard construction management measures which will be outlined in a separate Construction

Environmental Management Plan (CEMP) (or of similar title), which is conditioned by the DA (refer to **Att. I - Development Approval, page 2 Condition 8**). Management measures for native vegetation in the project area must include:

- Identification of tree/vegetation retention areas on engineering drawings and delineation of TPZs. These will be identified as 'no go zones' or similar and managed in accordance with specialist arborist advice. No storage of machinery or equipment will be permitted under retained trees/vegetation.
- Demarcation measures such as fencing around retained vegetation including black cockatoo habitat trees.
- Prior to commencing earthworks within the project area, the contractor will:
  - Identify each of the trees to be retained, double checking all available identification information to ensure each and every tree is identified.
  - Affix additional non-damaging marking (such as flagging tape) to each tree to clearly identify the tree is to be retained, with this information clearly conveyed to all staff.
  - Erect a physical barrier, such as temporary fencing, around the TPZ of each tree (or group of trees) to be retained to demarcate the TPZ and prevent incidental or accidental access, clearing, excavation or filling within the TPZ.
  - Affix signage to the fencing advising no unauthorised entry.
- Implement hygiene protocols during the clearing and construction process to minimise introduction/spread of weeds and plant pathogens. This will include
  - Vehicles, machinery, and personnel to be free of mud/soil and plant material upon entering the site. Inspections to be completed prior to works commencing.
  - Minimising clearing and earthworks during wet conditions.
- Standard management to control dust within the project area during construction. Implementation of appropriate dust management measures can include:
  - Dust control measures such as through the use of water carts and/or surface stabilization measures (e.g. hydromulch) will be utilised to prevent potential dust deposition and impacts on native vegetation external to the development footprint.
  - Strict speed limits to limit the potential of dust and fauna strikes as a result of vehicle movements.
- Implementation of all bushfire management requirements as outlined in a Bushfire Management Plan.

The CEMP may further include the following requirements to implement the proposed action to specifically avoid and mitigate impacts on black cockatoo and other unexpected MNES fauna within the project area:

- Undertaking pre-clearing fauna inspections (with consideration of all MNES fauna that may utilise the project area) including of tree hollows for signs of use.
- During clearing works, having a suitably qualified and experienced fauna spotter/handler supervising the clearing activities, to actively search for fauna during clearing, relocate any opportunistically identified fauna, and attend to any injured fauna.
- Stipulating limits on construction vehicle operating speeds and operating times (i.e. within daylight hours), to minimise the chance of fauna vehicle strikes.
- Demarcation measures such as fencing around retained vegetation/fauna habitat.
- Undertaking clearing in a direction that avoids forming small patches of vegetation trapping fauna, typically toward other areas of vegetation, to allow any remaining fauna to move themselves away from the area once works commence.
- Clearing outside fauna breeding periods, particularly for black cockatoos.
- Providing training and inductions to construction personnel regarding fauna management.
- Having a protocol in place to manage any fauna which might be injured, for example taking injured fauna to the nearest wildlife or veterinary clinic.

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

Based on the information provided in this referral, with particular consideration of the proposed impact avoidance, it is not envisaged that there will be significant residual impacts to either CBC, FRTBC and BBC.

As the proposed action within the project area is not considered likely to result in significant residual impacts on MNES, and significant consideration for impact avoidance is demonstrated, offsets are not proposed.

It is acknowledged that as part of the DA and associated conditions (refer to **Att. I - Development Approval, page 1 Condition 2**), the proponent is obligated to plant screening vegetation in areas adjacent (within) the project area to screen potential visual impacts as a result of the proposed action from nearby sensitive land use (rural residencies). Whilst the detailed design and extent of the planting is currently unknown until more detailed designs are progressed, it is expected that the proponent will utilise locally native species including trees and shrubs that would ultimately provide suitable black cockatoo habitat resources and would likely provide habitat for movement corridors for other fauna species that may traverse the project area. The DA further requires the ongoing management of this vegetation including the preparation and implementation of relevant management plans.

#### 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	<i>Actitis hypoleucos</i>	Common Sandpiper
No	No	<i>Apus pacificus</i>	Fork-tailed Swift
No	No	<i>Calidris acuminata</i>	Sharp-tailed Sandpiper
No	No	<i>Calidris ferruginea</i>	Curlew Sandpiper
No	No	<i>Calidris melanotos</i>	Pectoral Sandpiper
No	No	<i>Motacilla cinerea</i>	Grey Wagtail
No	No	<i>Pandion haliaetus</i>	Osprey

#### 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 Likelihood of Occurrence Assessment (**Att. D - Fauna Assessment, Appendix C**) identified that seven migratory species have a 'negligible' likelihood of occurrence within the project area as the project area does not provide suitable habitat for the species. The Fork-tailed swift (*Apus pacificus*) was the only migratory species considered to have a 'moderate' likelihood of occurrence, as it may opportunistically occur in or fly over the project area on commute or while searching for food. Whilst this species may be a common visitors in the area as part of its large home range, it would not breed within the project area and any occurrence of the species would likely be in the air space and largely independent from terrestrial habitat.

No migratory species are considered to be impacted by the proposed action.

#### 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.**

\*

This is not an applicable MNES as there are no nuclear actions associated with this proposed action.

**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.**

\*

This is not an applicable MNES as there are no Commonwealth marine areas at this project area.

**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.**

\*

This is not an applicable MNES as the proposed action is not within the Great Barrier Reef.

**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.**

\*

Not applicable to this proposed action as there are no coal seam gas or large coal mines at this project area.

**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.

—

**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.**

\*

Not applicable as the project area is not on Commonwealth land.

**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.**

\*

Not applicable as there are no Commonwealth heritage places overseas that are relevant to the project area or proposed action.

**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. \*

A primary consideration in the project area selection was to find a suitable site in proximity to key transformer infrastructure that is already largely cleared and would have limited MNES values and not require extensive vegetation clearing. The project area was considered optimal in this regard. The generation of renewable energy is a key State and Commonwealth priority and it is therefore acknowledged that there is no alternative in terms of energy generation and storage given the extent required to meet renewable energy generation and storage targets. Alternatives for the proposed action have not been considered further. The project area has been identified based on:

- the solar PV and BESS's requirement to be sited in proximity to existing energy infrastructure within the Collie region, with the areas directly adjacent to the project area comprising other battery storage systems (NEOEN Collie BESS and Synergy BESS), power stations and substations (Collie Power Station and Western Power Substation) and transmission line corridors.
- its current land use zoning ('Rural') characterised by largely cleared paddocks with scattered trees and isolated patches of native vegetation limiting vegetation clearing requirements, and allowing for the continuous use of the project area for traditional agricultural practices including maintaining sheep grazing activities post-development.

## 5. Lodgement

## 5.1 Attachments

## 1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment A - Figures.pdf Figures	12/12/2025	No	High
#2.	Document	Attachment B - Layout Plan.pdf Layout design	16/01/2026	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.	Link	Clearing in Controlled Catchments <a href="https://www.der.wa.gov.au/component/k2/item/3995..">https://www.der.wa.gov.au/component/k2/item/3995..</a>			High
#2.	Link	Environmental Protection (Clearing of Native Vegetation) Regulations 2004 <a href="https://www.legislation.wa.gov.au/legislation/st..">https://www.legislation.wa.gov.au/legislation/st..</a>			High
#3.	Link	Form 1 - CAWS Act 1947 - Application for licence to clear <a href="https://www.wa.gov.au/government/publications/fo..">https://www.wa.gov.au/government/publications/fo..</a>			High
#4.	Link	Referral guideline for 3 WA threatened black cockatoo species <a href="https://www.dcceew.gov.au/environment/epbc/publi..">https://www.dcceew.gov.au/environment/epbc/publi..</a>			High
#5.	Link	Shire of Collie Local Planning Strategy <a href="https://www.collie.wa.gov.au/planning-framework-..">https://www.collie.wa.gov.au/planning-framework-..</a>			High
#6.	Link	Significant Impact Guidelines 1.1 - Matters of National Environmental Significance <a href="https://www.dcceew.gov.au/environment/epbc/publi..">https://www.dcceew.gov.au/environment/epbc/publi..</a>			High
#7.	Link	State Planning Policy 2.0 - Environment and natural resources policy <a href="https://www.wa.gov.au/government/publications/st..">https://www.wa.gov.au/government/publications/st..</a>			High
#8.	Link	State Planning Policy 3.7 Bushfire <a href="https://www.planning.wa.gov.au/state-">https://www.planning.wa.gov.au/state-</a>			High

planning-po..

#9.	Link	State Planning Strategy 2050 <a href="https://www.wa.gov.au/government/publications/st..">https://www.wa.gov.au/government/publications/st..</a>	High
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## 1.3.2.16 (Person proposing to take the action) Nature of the trust arrangement in relation to the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment H - Trust Deed.pdf	25/11/2025	Yes	

## 3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment C - Flora and Vegetation Assessment.pdf Flora and Vegetation Assessment	14/11/2025	No	High
#2.	Document	Attachment D - Fauna Assessment.pdf Basic Fauna and Targeted Black Cockatoo Assessment	14/11/2025	No	High
#3.	Document	Attachment E - Supplementary Black Cockatoo Assessment.pdf Supplementary black cockatoo habitat assessment report	12/12/2025	No	High
#4.	Document	Attachment F - Fauna Technical Memorandum.pdf Supplementary MNES fauna assessment report	18/12/2025	No	High
#5.	Link	Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment <a href="https://www.epa.wa.gov.au/policies-guidance/tech..">https://www.epa.wa.gov.au/policies-guidance/tech..</a>			High
#6.	Link	Technical Guidance - Terrestrial vertebrate fauna surveys for environmental impact assessment <a href="https://www.epa.wa.gov.au/policies-guidance/tech..">https://www.epa.wa.gov.au/policies-guidance/tech..</a>			High

## 3.3.2 Indigenous heritage values that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Link				

Aboriginal Heritage Inquiry System

High

<https://www.wa.gov.au/government/document-collec..>

## 3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment G - Water Management Plan.pdf water Management Plan	26/11/2025	No	High

## 4.1.4.10 (Threatened Species and Ecological Communities) Avoidance or mitigation measures proposed for this action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Attachment I - Development Approval.pdf Development Assessment Panel Approval	18/12/2025	No	High

## 5.2 Declarations

## ✔ Completed Referring party's declaration

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

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ABN/ACN	57144772510
Organisation name	Emerge Environmental Services Pty Ltd
Organisation address	Suite 4, 26 Railway Road, Subiaco WA 6008
Representative's name	Jason Hick
Representative's job title	Director, Principal Environmental Consultant
Phone	08 9380 4988
Email	jason.hick@emergeassociates.com.au
Address	Suite 4, 26 Railway Road, Subiaco WA 6008

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

Check this box to confirm these are the correct identification details. \*

By checking this box, I, **Jason Hick of Emerge Environmental Services Pty Ltd**, 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. \*

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.

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## ✔ 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.

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ABN/ACN	684769453
Organisation name	PALMER RENEWABLE ENERGY PTY LTD
Organisation address	Level 3/338 Barker Road, Subiaco WA 6008 (Mail: PO Box 782, Subiaco WA 6904)
Representative's name	Linh Le

Representative's job title	Project Director - Empowered
Phone	0417988241
Email	linh.le@empowered.com.au
Address	Level 3/338 Barker Road, Subiaco WA 6008 (Mail: PO Box 782, Subiaco WA 6904 )

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

Check this box to confirm these are the correct identification details. \*

I, **Linh Le of PALMER RENEWABLE ENERGY 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. \*

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.

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### **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.

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Same as Person proposing to take the action information.

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

Check this box to confirm these are the correct identification details. \*

I, **Linh Le of PALMER RENEWABLE ENERGY PTY LTD**, 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. \*

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.

