Memorandum – Black-Cockatoo Assessment for Potential Solar Farm Areas

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From	[redacted]
Date	18 July 2025
Subject	**Extrapolated Black-Cockatoo Assessment for Potential Solar Farm Areas**

Introduction

Umwelt were engaged by Synergy Renewable Energy Development (SynergyRED) to perform a Basic and Targeted survey within the proposed Tathra Wind Farm Area (the Project) (Umwelt, 2025). Following completion of the works, SynergyRED requested additional analysis focussing on the potential usage by Carnaby's Black-Cockatoo (*Zanda latirostris*) (Endangered, EPBC & BC Act).

Specifically, the request pertains to five proposed solar farm options located within the broader Tathra Wind Farm Area footprint. The project areas relevant to this assessment are described below.

Project Area Definitions

Within the Project, several areas of study have been delineated. The **Basic Fauna Survey Area** (Basic FSA) comprises the 'Tathra Wind Farm' area, and six major road intersections, and is the area subject to a Basic level fauna assessment. The **Targeted Fauna Survey Area** (Targeted FSA) comprises the proposed development footprint supplied by SynergyRED which includes a series of proposed indicative turbine access roads, the six major road intersections, and 90 m buffered turbine areas. This is the area surveyed as part of the Targeted fauna assessment. The **Solar Farm Areas** comprise five potential options within the Basic FSA and is the focus of this current report.

Project areas are described in **Table 1** and **Table 2**, and are presented in **Figure 1**.

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Table 1 Project Area Definitions

Name	Definition	Extent
Basic FSA	Comprises: • the lots considered for inclusion in the Project • site access turning circles (approx. 40-100 m buffers) into the lots • roadside remnant vegetation on selected routes • road intersection areas enroute to the Project.	18,441.4 ha
Targeted FSA	Contained entirely within the Basic FSA, comprises: • indicative site layout of access tracks for the Project (as provided by SynergyRED on 1 November 2024) • indicative wind turbine locations (90 m buffers) • site access turning circles (10 m buffers) into the lots • intersection turning circles (10 m buffers) enroute to the Project.	1,263.9 ha
Solar Areas	Contained entirely within the Basic FSA, comprises: • five solar farm options (further described in **Table 2**).	1,011.7 ha

Table 2 Solar Farm Areas

Solar Area ID	Lot Number	Area (ha)
SA01	10891	221.0
SA02	31 & 10847	208.6
SA03	10847	169.1
SA04	10845	200.9
SA05	10846	212.1
Total		**1,011.7**

Methodology

An assessment of Black-Cockatoo foraging habitat quality was initially conducted across the Targeted FSA, encompassing 1,263.9 hectares. Within this area, detailed foraging surveys were carried out at 109 representative locations to evaluate habitat suitability. To provide broader ecological context, general fauna habitat mapping was also completed across the entire Basic FSA, covering 18,441.4 hectares.

To evaluate Black-Cockatoo foraging values within the Solar Farm Area, foraging quality scores were extrapolated from the Targeted FSA using spatial analysis tools in ArcGIS Pro. This was performed by the same Senior Zoologist who undertook the Basic and Targeted assessments and authorised this memorandum. Specifically:

- Foraging scores (ranging from 0 to 6, following the methodology outlined in Bamford, 2020) were spatially intersected with mapped habitat types.
- A conservative approach was adopted: the highest recorded foraging score within each habitat type was applied uniformly across that entire habitat type, ensuring potential habitat value was not underestimated.

This methodology provides a precautionary yet spatially informed basis for assessing potential impacts on Black-Cockatoo foraging habitat within the Solar Farm Area.

Due to the differing scope of the Basic and Targeted surveys, a comprehensive assessment of nesting tree potential within the Solar Farm Area was not feasible, as not all individual trees were surveyed. As a result, the relative likelihood of each Solar Farm Area supporting potential breeding habitat for Carnaby's Black-Cockatoo was inferred based on a combination of previous field observations, survey notes, and the professional judgement and recollections of the field team. While this approach does not replace a dedicated nesting tree assessment, it provides a preliminary indication of potential breeding habitat presence to inform further planning and impact assessment.

Results and Discussion

The five proposed solar farm areas intersect a single mapped fauna habitat type: Cleared Agricultural Land (**Figure 2**) (Umwelt, 2025). This habitat type was assessed as having a Black-Cockatoo foraging quality score of 1, indicating negligible to low foraging value based on the extrapolated scoring methodology (**Figure 3**).

Based on field observations and extrapolated data from the Basic and Targeted Fauna Surveys, the likely dominant tree species within each solar area are summarised below:

- SA01 - *Eucalyptus todtiana*.
- SA02 - *E. todtiana*.
- SA03 - *E. todtiana*.
- SA04 - *E. todtiana*.
- SA05 - Primarily *E. todtiana*, with some presence of *Eucalyptus accedens* (Powderbark Wandoo).

While *E. todtiana* is not typically associated with nesting by Carnaby's Black-Cockatoo, the potential for isolated suitable nesting trees within all Solar Farm Areas cannot be excluded without further on-ground assessment. Notably, a small stand of *E. accedens* (Powderbark Wandoo) was observed within SA05 during the Basic fauna survey. Powderbark Wandoo is a recognised nesting species for Carnaby's Black-Cockatoo (DAWE, 2022) and may represent a higher-value habitat feature within the development footprint. Powderbark Wandoo and Wandoo (*E. Wandoo*) were recorded throughout various habitat types of the Basic FSA, and it is possible that remnant trees may be present within any of the Solar Farm Areas. Currently, Powderbark Wandoo are known to be present within SA05 and have not been recorded in the other Solar Farm Areas to date although extensive nest tree surveys have not been undertaken in these areas.

Given the potential presence of suitable nesting habitat, particularly within SA05, it is recommended that:

- All trees within the proposed Solar Farm Areas be ground-truthed and assessed for Black-Cockatoo nesting suitability prior to any vegetation clearing.
- Particular attention be given to mature *E. accedens* and *E. wandoo* individuals, which may contain hollows suitable for nesting.

This approach ensures that potential impacts to breeding habitat for Carnaby's Black-Cockatoo are appropriately identified and managed in accordance with relevant environmental legislation and conservation guidelines.

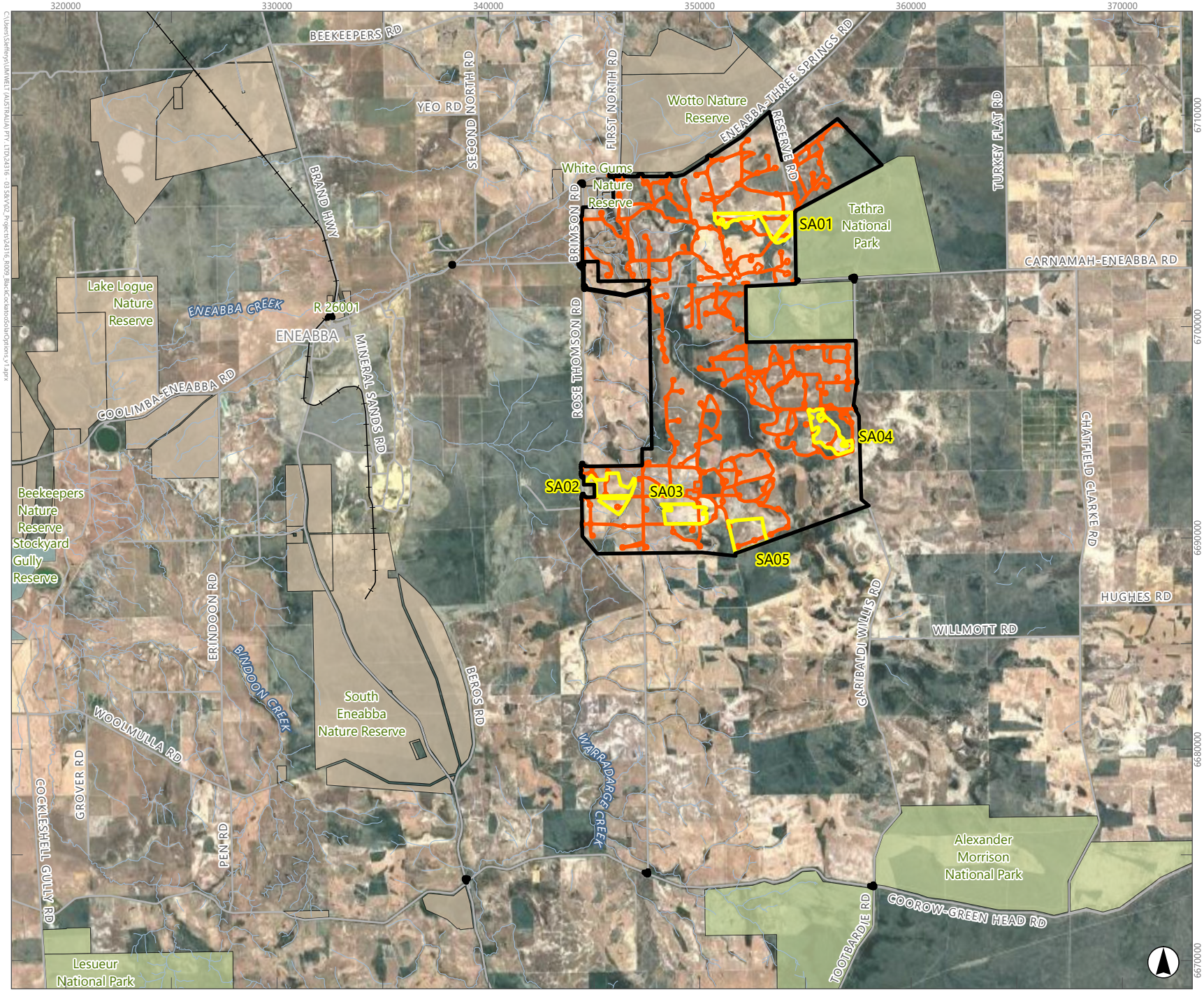
References

Bamford. (2020). *Scoring system for the assessment of foraging value of vegetation for Black-Cockatoos*. Bamford Consulting Ecologists. https://ecologists.bamford.id.au/ecological-consulting/black-cockatoos

DAWE, (Department of Agriculture, Water and the Environment). (2022). *Referral guideline for 3 WA threatened black cockatoo species—Carnaby's Cockatoo (Zanda latirostris), Baudin's Cockatoo (Zanda baudinii) and the Forest Red-tailed Black-cockatoo (Calyptorhynchus banksii naso)*.

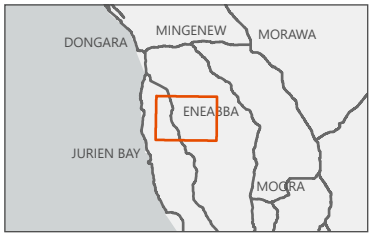
Umwelt. (2025). *Tathra Wind Farm Basic and Targeted Fauna Assessment (Unpublished report prepared for SynergyRED)*.

FIGURE 1
Project Area



Legend

- Basic Fauna Survey Area (Basic FSA)
- Targeted Fauna Survey Area (Targeted FSA)
- Solar Farm Area
- Road
- Railway
- Watercourse
- National Park
- Nature Reserve
- Section 5(1)(g) Reserve



0 5 10

Kilometres

Scale 1:250,000 at A4
GDA2020 MGA Zone 50

Image Source: ESRI Basemap (2023) | **Data Source:** Landgate (2024), DBCA (2024), Umwelt (2025), SynergyRED (2024)

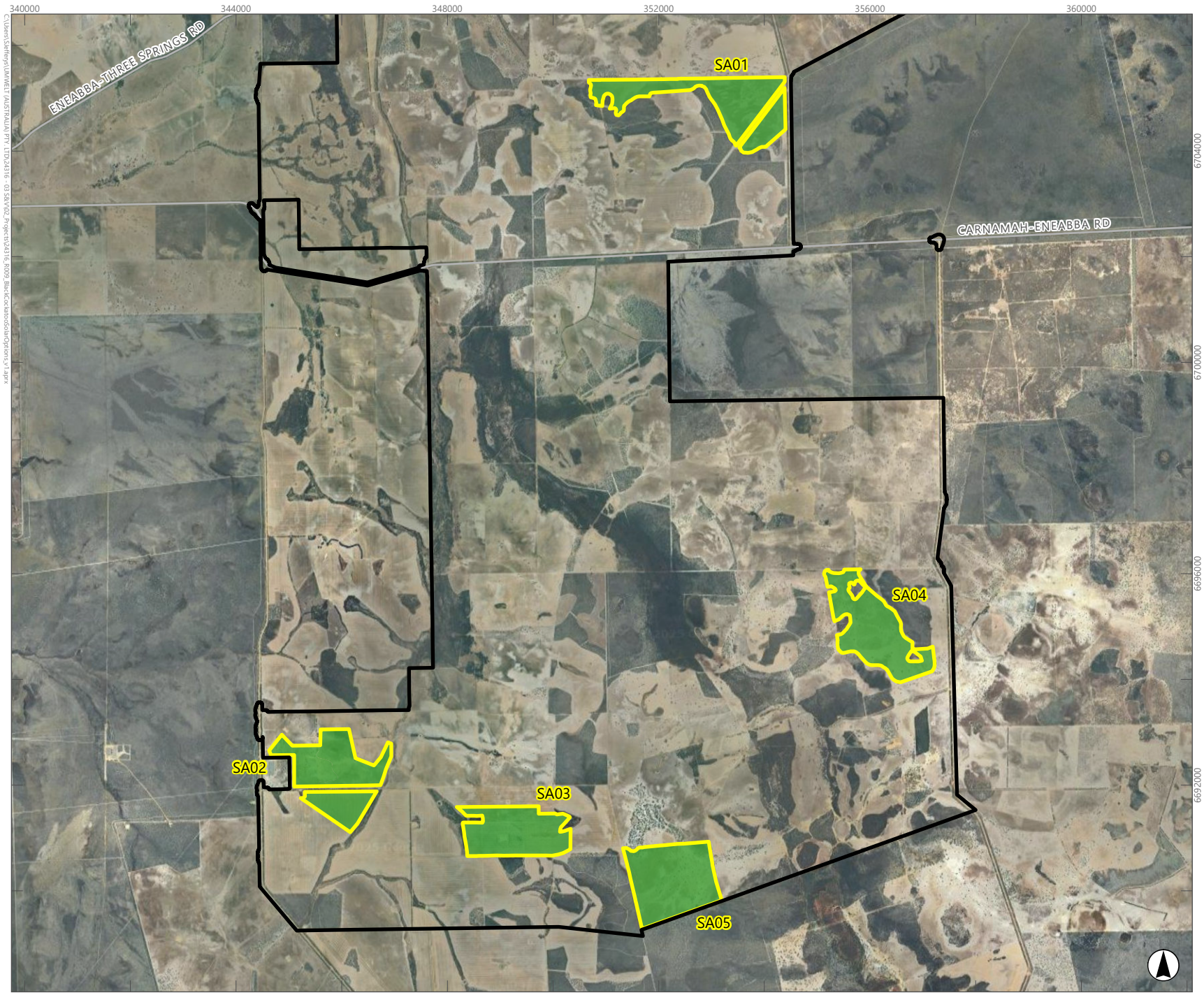


FIGURE 2

Fauna Habitats within Solar Farm Area

Legend

- Basic Fauna Survey Area (Basic FSA)
- Solar Farm Area
- Road

Fauna Habitat Mapping

- Cleared agricultural land

0 2 4

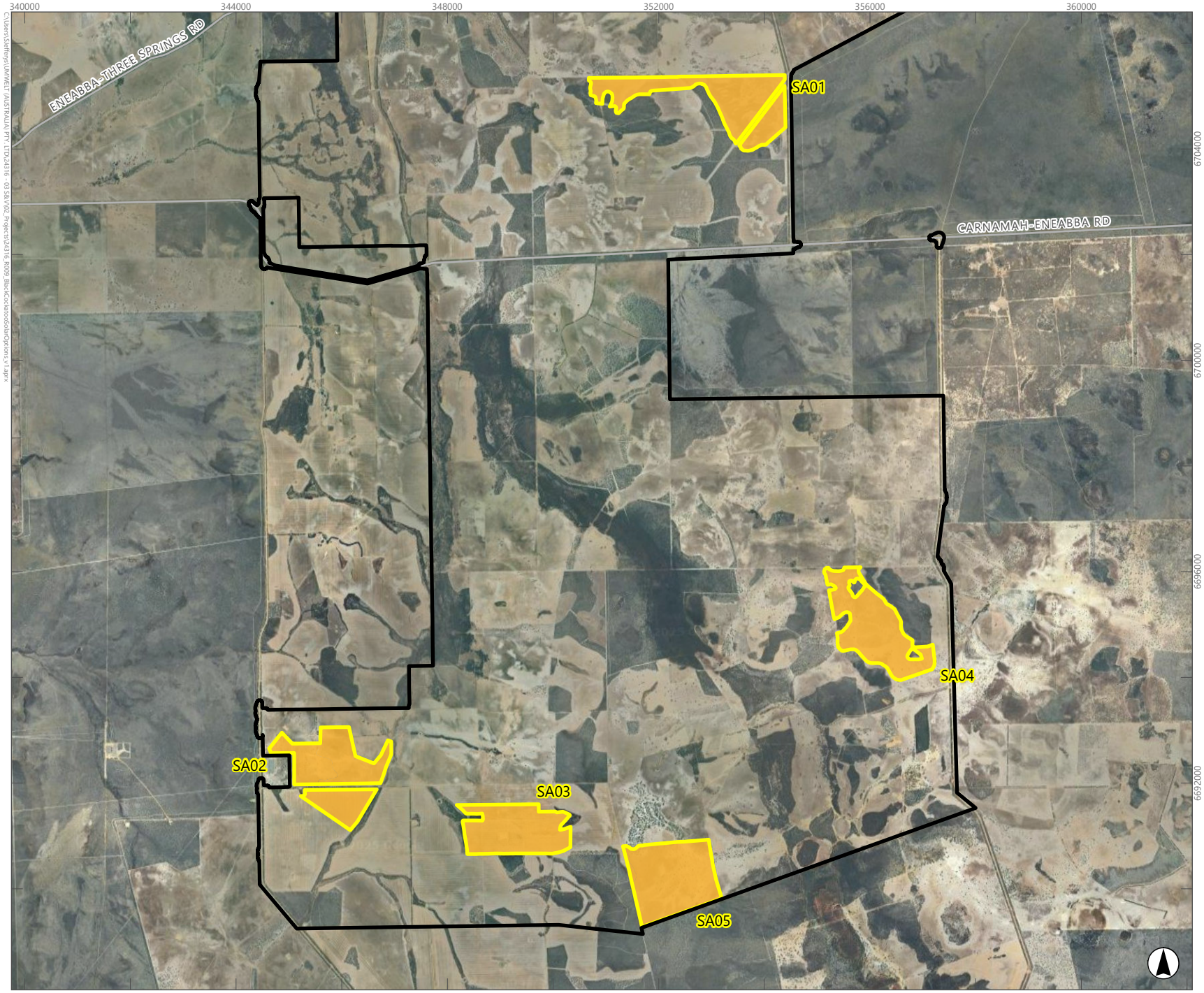
Kilometres

Scale 1:100,000 at A4
GDA2020 MGA Zone 50

Image Source: ESRI Basemap (2023) | **Data Source:** Landgate (2024), Umwelt (2025), SynergyRED (2024)

FIGURE 3

Carnaby's Black-Cockatoo Extrapolated Foraging Quality Score for the Solar Farm Area



Legend

- Basic Fauna Survey Area (Basic FSA)
- Solar Farm Area
- Road

BCE Foraging Habitat Quality Score

- 6 High Foraging Value
- 5 Moderate to High Foraging Value
- 4 Moderate Foraging Value
- 3 Low to Moderate Foraging Value
- 2 Low Foraging Value
- 1 Negligible to Low Foraging Value
- 0 No Foraging Value

0 2 4

Kilometres

Scale 1:100,000 at A4
GDA2020 MGA Zone 50

Image Source: ESRI Basemap (2023) | **Data Source:** Landgate (2024), Umwelt (2025), SynergyRED (2024)

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