

Department of Planning, Housing and Infrastructure

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Birriwa Solar Farm

State Significant Development Assessment Report (SSD-29508870)

May 2024





Acknowledgement of Country

The Department of Planning and Environment acknowledges that it stands on Aboriginal land. We acknowledge the Traditional Custodians of the land and show our respect for Elders past and present through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

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Preface

This assessment report provides a record of the Department of Planning, Housing and Infrastructure's (the Department) assessment and evaluation of the State significant development (SSD) application for the Birriwa Solar Farm located in the Central-West and Orana Renewable Energy Zone (CWO REZ), approximately 15 kilometres (km) south-east of Dunedoo, lodged by ACEN Australia Pty Ltd. The report includes:

- an explanation of why the project is considered SSD and who the consent authority is
- an assessment of the project against government policy and statutory requirements, including mandatory considerations
- a demonstration of how matters raised by the community and other stakeholders have been considered
- an explanation of any changes made to the project during the assessment process
- an assessment of the likely environmental, social and economic impacts of the project
- an evaluation which weighs up the likely impacts and benefits of the project, having regard to the proposed mitigations, offsets, community views and expert advice; and provides a view on whether the impacts are on balance, acceptable
- an opinion on whether the project is approvable or not, along with the reasons, to assist the Independent Planning Commission in making an informed decision about whether development consent for the project can be granted and any conditions that should be imposed.

Executive Summary

ACEN Australia Pty Ltd (ACEN) proposes to develop the Birriwa Solar Farm (the project), a 600 megawatt (MW) solar farm and 600 MW / 1200 MW-hour (MWh) battery, approximately 15 kilometres (km) south-east of Dunedoo in the Mid-Western Regional and Warrumbungle Shire local government areas (LGA), within the Central-West Orana Renewable Energy Zone (CWO REZ).

The site is located in close proximity to the Castlereagh Highway. The project would connect to the proposed CWO REZ Merotherie Energy Hub that is being developed by Energy Corporation of NSW, which would act as a connection point for renewable energy projects in the CWO REZ.

The Department of Planning, Housing and Infrastructure (the Department) exhibited the Environmental Impact Statement for the project between 14 October 2022 and 10 November 2022 and received 89 public submissions (85 objections and 4 providing comment). Mid-Western Regional Council provided comment and Warrumbungle Shire Council provided an objection during the exhibition, including concerns about cumulative impacts, traffic and accommodation. Advice was also received from 13 government agencies.

The Department consulted with both councils and relevant government agencies on key issues, inspected the site and met with nearby sensitive receivers. None of the agencies, or utility providers, objected to the project, and they each recommended the implementation of appropriate mitigation and management measures.

In response to agency advice and public submissions, ACEN amended the project by including a workers accommodation camp and revised the project area as a means of mitigating potential impacts.

The project amendments would lead to better outcomes and address key concerns raised by the Department, agencies and in public submissions by reducing the reliance of the project on local accommodation providers.

The Department exhibited the Amendment Report and Submissions Report between 6 October 2023 and 19 October 2023 and received 45 public submissions (all objections). Mid-Western Regional Council and Warrumbungle Shire Council both provided further comment on the project, with Warrumbungle Shire Council maintaining their objection to the project overall.

The key assessment considerations are energy security, land use compatibility, transport, social and visual amenity. The Department has also undertaken a comprehensive assessment of the full range of other potential impacts and recommended a range of detailed conditions, developed in conjunction with agencies and Councils, to ensure all potential impacts are effectively minimised, managed or offset.

The majority of the site has been cleared and is currently used for sheep and cattle grazing, as well as low intensity dry land cropping. The site does not contain any mapped Biophysical Strategic Agricultural Land (BSAL) and land within the development footprint is categorised as Land and Soil Capability Class 5 (severe limitations) and Class 7 (extremely severe limitations). The project would not significantly reduce the overall agricultural productivity of the region and the site could be returned to agricultural uses in the future. The Department notes that ACEN intends to continue grazing concurrently with the operation of the solar farm.

The development footprint requires the clearing of 405.71 ha of native plant community types, however the vast majority of this is low quality land that has minimal biodiversity values and does not require offset (only 8.63 ha would require offsetting under the NSW Biodiversity Offset Scheme). The project has been designed and refined

to effectively avoid and minimise biodiversity impacts to native vegetation. The Biodiversity Conservation and Science Group within NSW DCCEEW (BCS) raised no issues with the project and advised that the Biodiversity Development Assessment Report (BDAR) met all relevant requirements. The Department considers that the biodiversity impacts of the project would not be significant, subject to a range of mitigation and adaptive management measures and by offsetting the residual biodiversity impacts.

The Department considers the project would not result in unacceptable impacts on the capacity, efficiency or safety of the road network. Potential traffic impacts would be largely restricted to the 28-month construction period and would be suitably managed through road upgrades, restricting vehicles to approved routes, road maintenance and the implementation of a Traffic Management Plan.

The Department has also considered the potential cumulative impacts with other developments in the region and considers that there would be no significant cumulative traffic, visual or noise impacts due to distance and different haulage routes.

The site is located in a sparsely populated rural area. There are 22 non-associated residences within 2 km of the development footprint. The solar arrays are relatively low-lying structures and expansive views across the area are limited by topography and established vegetation. While the introduction of the project would represent a change to the local rural landscape, ACEN has demonstrated that the visual impacts of the proposed development are low for all residential receivers, per the Department's *Large Scale Solar Energy Guideline*. Furthermore, the Department considers that ACEN's proposed mitigation measures, including screen planting, would adequately reduce the potential visual impacts of the project to an acceptable level.

The project is consistent with the Commonwealth's Renewable Energy Target and NSW's *Climate Change Policy Framework* and *Net Zero Plan Stage 1: 2020 – 2030*, as it would contribute 600 MW of renewable energy to the National Electricity Market, including a battery with a capacity of 600 MW / 1,200 MW-hour. Importantly, the battery would enable the project to store energy for dispatch to the grid outside of daylight hours and / or during periods of peak demand, which has the potential to contribute to increased grid stability and energy security.

The project is located in the CWO REZ, which was formally declared by the Minister for Energy in 2022 under section 24(1) of the *Electricity Infrastructure Investment Act 2020* (the EII Act). The CWO REZ is aimed at encouraging investment in electricity infrastructure and unlocking additional generation capacity in order to ensure secure and reliable energy in NSW.

The Department considers the site appropriate for the project as it has good solar resources, available capacity on the existing electricity network and is consistent with the Department's *Large-Scale Solar Energy Guideline*.

The project would also provide flow-on benefits to the local community, including up to 500 construction jobs at its peak, 20 operational jobs and contributions to local councils of 1.5% of the project's capital expenditure through a voluntary planning agreement. There would be broader benefits to the State through an injection of \$1 billion in capital investment into the NSW economy.

The Department considers the project would not result in any significant impacts on the local community or the environment, and any residual impacts can be managed through the implementation of the recommended conditions.

The Department considers that the project would result in benefits to the State of NSW and the local community and is therefore in the public interest and approvable.

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1 Introduction

1.1 Project

1. ACEN Australia Pty Ltd (ACEN), proposes to develop a 600 megawatt (MW) State significant development (SSD) solar farm in the Central-West Orana Renewable Energy Zone (CWO REZ) approximately 15 kilometres (km) south-east of Dunedoo, within the Mid-Western Regional and Warrumbungle Shire local government areas (LGA) (see Figure 1).
2. The project would include a 600 MW / 1200 MW-hour (MWh) battery energy storage system (BESS), an on-site accommodation camp. It also involves the upgrading and decommissioning of equipment over time. The project would connect to the proposed CWO REZ Merotherie Energy Hub substation being developed by the Energy Corporation of NSW (EnergyCo).
3. Access to the site is proposed from the Castlereagh Highway via Barneys Reef Road and Birriwa Bus Route South. Construction of the project would commence in late 2025 with an anticipated construction period of approximately 28 months.

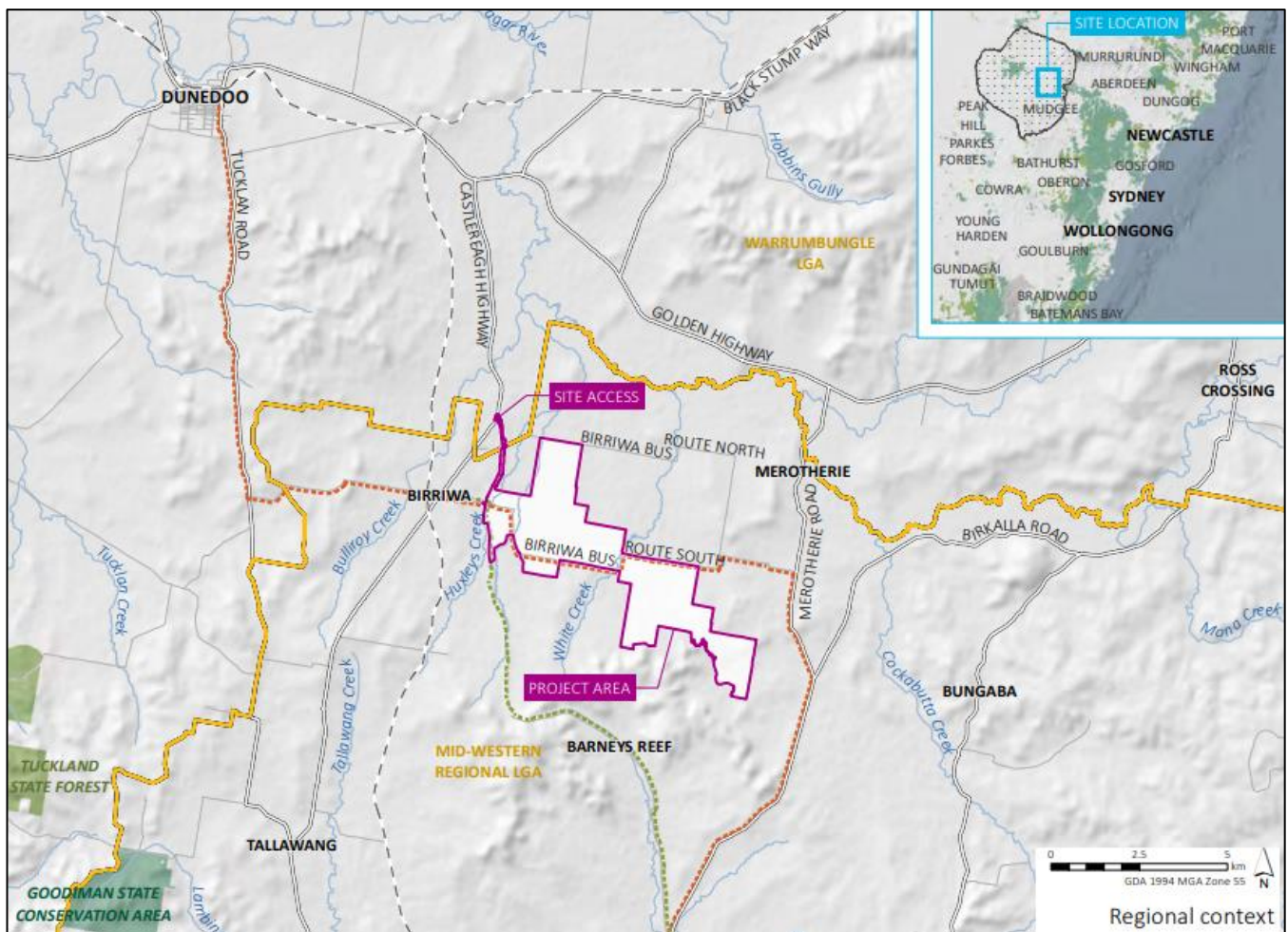


Figure 1 | Regional Context

4. The key components of the project are summarised in **Table 1**, depicted in **Figure 2** (as originally proposed) and **Figure 3** (as amended), and described in detail in the Environmental Impact Statement (EIS) and supporting documentation (see **Appendix A**, **Appendix E** and **Appendix F**).

Table 1 | Main aspects of the project

Aspect	Description
Project Summary	<p>The project includes:</p> <ul style="list-style-type: none"> • approximately 1.2 to 1.4 million solar panels and associated mounting infrastructure (up to 4.7m high) • a BESS with a capacity of up to 600 MW and a storage duration of up to 2 hours (1,200 MWh) • electrical collection and conversion systems, including inverter and transformer units, switchyard and control room • an on-site substation with a connection voltage of up to 500 kilovolts • underground and aboveground cables • an operational infrastructure area, including demountable offices, amenities, noise wall and equipment sheds • parking and internal access roads • a temporary construction compound (during construction and decommissioning only) • a temporary accommodation camp with a capacity of up to 500 construction staff during the construction phase of the project.
Project Area	<ul style="list-style-type: none"> • Total site area: 1,535 hectares (ha). • Development footprint: 1,197 ha. • Solar and BESS area: 1,159 ha. • Accommodation camp area: 38 ha.
Site entry and access route	<ul style="list-style-type: none"> • The proposed access route is Castlereagh Highway, Barneys Reef Road and Birriwa Bus Route South. • An internal access track, suitable for emergency vehicles, would be constructed south of the accommodation camp.
Road upgrades	<p>Road upgrades proposed:</p> <ul style="list-style-type: none"> • upgrade of Castlereagh Highway/Barneys Reef Road to include Auxiliary left turn (AUL) and Channelised right turn (CHR) intersection treatment • upgrade of Barneys Reef Road • upgrade of Barneys Reef Road/Birriwa Bus Route South to include BAR intersection treatment • upgrade of Birriwa Bus Route South.
Construction	<ul style="list-style-type: none"> • The construction period would be approximately 28 months including a construction period of 3 to 7 months for the accommodation camp. • The peak construction period is set to commence from mid-2027 for a duration of six months. • Construction hours would be limited to Monday to Friday 7 am to 6 pm, and Saturday 8 am to 1 pm.

Aspect	Description
Operation	<ul style="list-style-type: none"> The expected operational life of the infrastructure is approximately 30 years. However, the project may involve infrastructure upgrades that may extend the operational life. The solar farm and BESS would operate 24 hours a day, seven days a week.
Decommissioning and rehabilitation	The project includes decommissioning at the end of the project life, which would involve removing all infrastructure.
Subdivision	Subdivision would be required to facilitate connection to the transmission network, for the on-site substation, for the BESS, and to enable the existing landowner to retain the residual land.
Employment	Up to 500 construction jobs and up to 20 operational jobs.
Capital investment value	\$1 billion

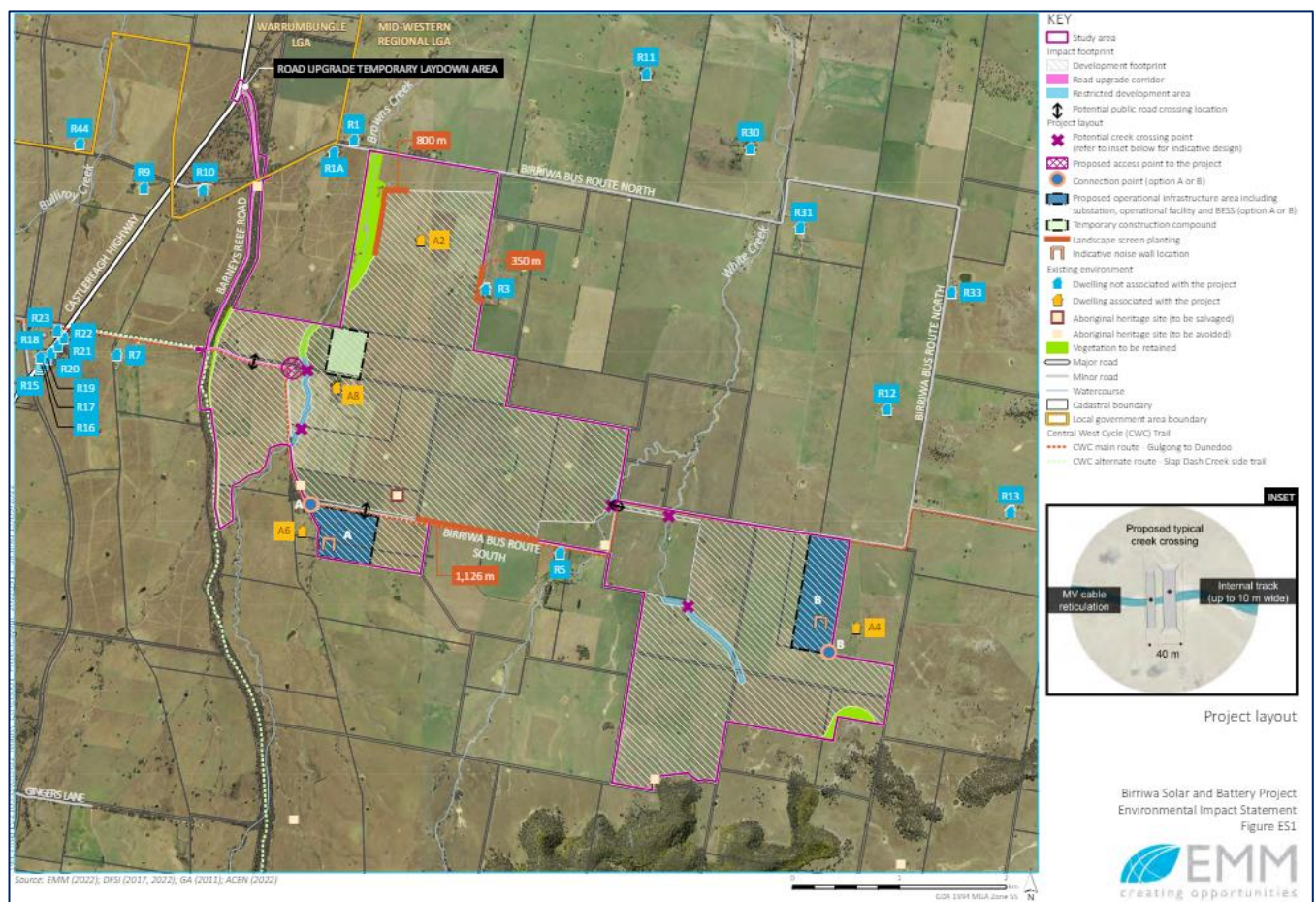


Figure 2 | Original Project Site

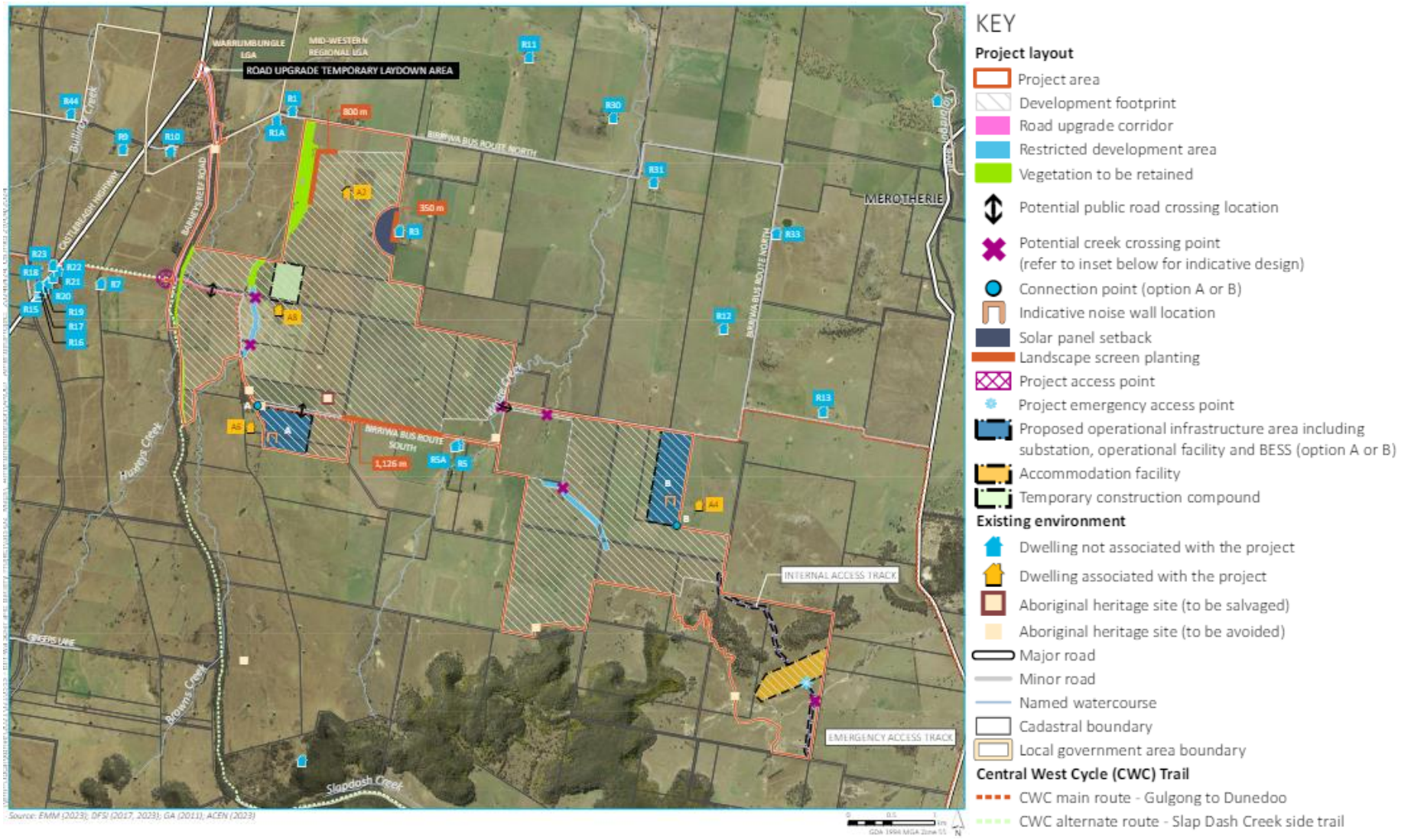


Figure 3 | Amended Project Site

2 Strategic Context

2.1 Site and Surrounds

5. The site is largely cleared agricultural land zoned RU1 Primary Production, the majority of which is currently used for sheep and cattle grazing, as well as low intensity dry land cropping. Surrounding land is also predominantly zoned RU1, with the exception of a section of 'Barneys Reef' hills adjoining the subject site to the south, which is zoned C3 Environmental Management .
6. Access to the site would be via the Castlereagh Highway/Barneys Reef Road intersection to the west of the development footprint which would be upgraded as part of the proposed development.
7. Land within the site is generally flat to gently undulating and has been predominantly cleared for agricultural use. The site does not contain any mapped Biophysical Strategic Agricultural Land (BSAL) and land within the development footprint is categorised as Land and Soil Capability (LSC) Class 5 (severe limitations) and Class 7 (extremely severe limitations).
8. Several ephemeral watercourses traverse the site in a generally northerly direction, including Huxley Creek, Browns Creek and White Creek. A further unnamed watercourse is located south of the proposed accommodation camp development footprint and would be crossed by the proposed emergency access track. Multiple farm dams are also located within the development footprint.
9. There are four associated and 22 non-associated residences within 2 km of the development site, 10 of which are located in the settlement of Birriwa. The closest non-associated residence (R5) to the development footprint is located 250 m to the south. The closest non-associated residence (R34) to the accommodation camp development footprint is located approximately 2.3 km to the east.
10. The key aspects of the project are provided in detail in the Project Description chapter of the Amendment Report and outlined in Table 1.

2.2 Other Energy Projects

11. There are 16 State significant renewable energy projects within 25 km of the project site.
12. Of the SSD projects:
 - two are approved (Stubbo Solar Farm and Dunedoo Solar Farm), with Stubbo Solar Farm having commenced construction
 - 14 are in various stages of the SSD assessment process.
13. Potential cumulative impacts at a regional level relate to the loss in agricultural land and workforce accommodation. The broader potential cumulative impact on agricultural land in the region is discussed further in section 5.2 and workforce accommodation is addressed in section 5.5.
14. Potential cumulative impacts on the local roads along the proposed transport route from these projects is discussed further in section 5.3.

Table 2 | Nearby Renewable Energy Projects

Project	Capacity (MW)	Status	Approximate distance from the project (km)
CWOREZ Network Infrastructure		Proposed	Immediately adjacent (south)
Barneys Reef Wind Farm	300	Proposed	1.4 (southeast)
Narragamba	320	Proposed	2 (southeast)
Avonside Solar Farm	180	Proposed	10.5 (west)
Orana Wind Farm	524	Proposed	12 (northwest)
Narragamba Solar Farm	320	Proposed	13 (southeast)
Dunedoo Solar Farm	55	Approved	13.5 (northwest)
Stubbo Solar and Battery Project	400	Construction	14 (southeast)
Valley of the Winds Wind Farm	800	Proposed	14 (northeast)
Tallawang Solar Farm	500	Proposed	16 (south)
Bellambi Heights BESS	200	Proposed	21 (south)
Mayfair Solar Farm	60	Proposed	23 (south)
Sandy Creek	750	Proposed	23 (southwest)
Mavis Solar Farm	250	Proposed	24 (south)
Cobbora Solar farm	700	Proposed	25 (west)
Ulan Solar Farm	50	Proposed	25 (southeast)

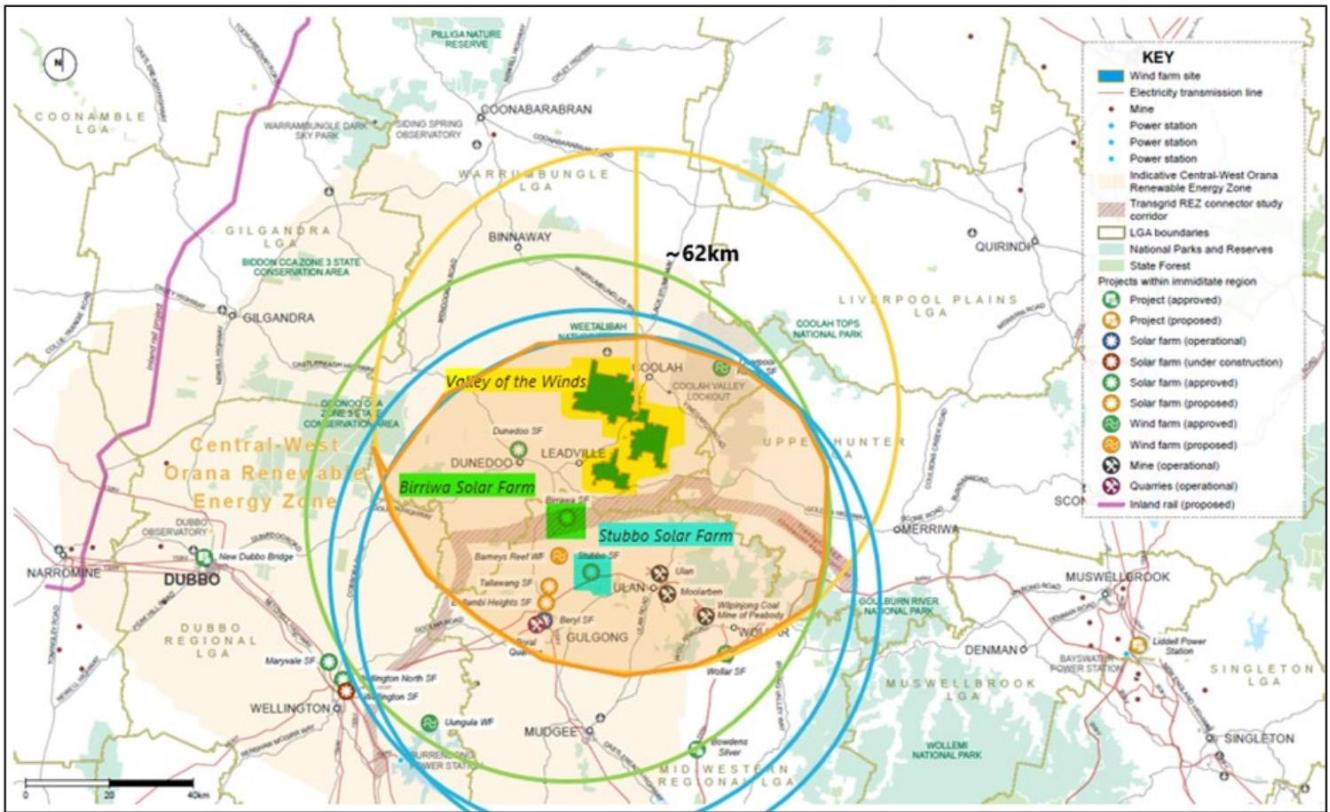


Figure 4 | Nearby SSD Renewable Energy Projects

2.3 Energy Context

15. The Commonwealth and State energy context is described in Table 3.

Table 3 | Energy Context

Policy / Year	Summary
Australia's Long Term Emissions Reduction Plan (2021)	Sets a pathway to net zero emissions by 2050 and affirms Australia's commitment to meeting its revised 2030 target (43% below 2005 levels).
Australian Energy Market Operator's 2022 Integrated System Plan (ISP)	Notes that: <ul style="list-style-type: none"> without coal, investment is needed to meet significantly increased electricity demand requiring a nine-fold increase in large-scale variable renewable energy generation (wind and solar) a mix of solar and wind is needed, and they offer complementary daily and seasonal profiles.

Policy / Year	Summary
<p>NSW:</p> <p><i>Climate Change Policy Framework (2016), Transmission Infrastructure Strategy (2018), Electricity Strategy (2019), Electricity Infrastructure Roadmap (2020), Net Zero Plan Stage 1: 2020 – 2030 (2020) and Implementation update (2022), Central West and Orana Regional Plan 2036 and 2041 Local Strategic Planning Statement</i></p>	<p>Relevant aspects of these policy documents include:</p> <ul style="list-style-type: none"> • aims to achieve net zero emissions in NSW by 2050 and reduce emissions by 70% below 2005 levels by 2035 • notes that all coal fired power plants in NSW are scheduled for closure within the next twenty years • identifies REZs across NSW aimed at encouraging investment in new electricity infrastructure and unlocking additional generation capacity in order to ensure secure and reliable energy in NSW • Regional goals to support the State’s transition to lower emissions and Council goals to promote renewable energy production • CWO REZ was declared in December 2022 and is the first step in formalising the REZ under the <i>Electrical Infrastructure Investment Act (EII ACT)</i>.

16. In 2023, NSW derived approximately 36% of its energy from renewable sources. The rest was derived from fossil fuels, including 61% from coal and 3% from gas. NSW is one of the nation’s leaders in large-scale renewables, with 39 major operational projects and 69 under construction or planned to be under construction.
17. The project’s alignment with existing Commonwealth and State policies and strategies are considered in section 5.1.

2.4 NSW Solar Guideline

18. The Department released the *Large-Scale Solar Energy Guideline* in December 2018 to provide the community, industry, and regulators with guidance on the planning framework for assessing large-scale solar projects and identifying the key planning considerations relevant to solar energy development in NSW.
19. The Guideline was revised in August 2022 following extensive consultation, to ensure the assessment of large-scale solar energy projects continues to be transparent, consistent and supported by the best available information. While the revised guideline does not strictly apply to this project as it was lodged prior to the transition period ending following its release, the project is broadly consistent with the principles in the revised guideline.
20. The Guideline recognises that large-scale solar projects could help to reduce reliance on fossil fuels, thereby contributing to reduction in air pollution and greenhouse gas emissions, while also supporting regional NSW through job creation and investment in communities that may not have similar opportunities from other industries.

3 Statutory Context

3.1 State significant development

21. The project is classified as SSD under section 4.36 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). This is because it triggers the criteria in clause 20 of Schedule 1 of *State Environmental Planning Policy (Planning Systems) 2021* (Planning Systems SEPP), as it is development for the purpose of electricity generating works with a capital investment value of more than \$30 million.
22. Under Section 4.5(a) of the EP&A Act and Clause 1(b) of Section 2.7 of the Planning Systems SEPP, the Independent Planning Commission (the Commission) is the consent authority for the development as the project has received more than 50 unique public submissions by way of objection and Warrumbungle Shire Council objected during the exhibition period.

3.2 Amended application

23. In accordance with Clause 37 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation), a development application can be amended at any time before the application is determined. ACEN sought to amend its application, the details of which are summarised in section 4.6 of this report. Under the delegation from the consent authority (i.e. the Commission for this development), of 14 June 2022, the Director, Energy Assessments can agree to amendments to an application.
24. The Department accepted the amended application for the following reasons:
 - the project amendments, while increasing the development footprint of the project, ultimately served to reduce the potential cumulative impacts of the project as a whole (traffic and accommodation in particular);
 - the amended application directly responds to the key issues raised in public submissions received by the Department during the exhibition of the original application;
 - ACEN assessed the impacts of the amended project (see **Appendix E** and **Appendix F**); and
 - the Department made the additional information available online and sent it to the relevant agencies for comment.

3.3 Permissibility

25. The development site is zoned as RU1 – Primary Production under the *Mid-Western Regional Local Environmental Plan 2012* (Mid-Western LEP), and RU1 – Primary Production / SP2 – Infrastructure (Classified Road) under the *Warrumbungle Local Environmental Plan 2013* (Warrumbungle LEP), the provisions of which are discussed in section 5.2.

26. The project is permissible because electricity generating works are permissible with consent on any land in a prescribed rural, industrial or special use zone, including RU1 and SP2 zones, under clause 2.36 of the *State Environmental Planning Policy (Transport and Infrastructure) 2021* (Transport and Infrastructure SEPP).
27. While the site is located within proximity of the regional city Dubbo (80 km away), the entirety of the site (including all solar panels, transmission infrastructure and road upgrades) is located outside of land covered by the *State Environmental Planning Policy (Infrastructure) 2007 Regional Cities Map - Dubbo*.

3.4 Integrated and other approvals

28. Under Section 4.41 of the EP&A Act, a number of other approvals are integrated into the SSD approval process, and therefore are not required to be separately obtained for the project. Under Section 4.42 of the EP&A Act, a number of further approvals are required, but must be substantially consistent with any development consent for the project (e.g. approvals for any works under the *Roads Act 1993*).
29. The Department has consulted with the relevant government agencies responsible for the integrated and other approvals, including the future network operator EnergyCo NSW, considered their advice in its assessment of the project, and included suitable conditions in the recommended conditions of consent to address these matters (see **Appendix G**).
30. ACEN considers that the project may require approval from the Commonwealth Minister for the Environment under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC) and may submit a referral prior to the commencement of construction.

3.5 Renewable energy zone

31. The EII Act coordinates investment in transmission, generation, storage and firming infrastructure in NSW and gives effect to the Electricity Infrastructure Roadmap. Under Section 19 of the EII Act, the Minister for Energy may declare a renewable energy zone comprising a specified geographical area of the State, and specified generation, storage or network infrastructure.
32. This project is located in the geographical area specified in the CWO REZ declaration, which would comprise all planned, new and existing network infrastructure, with an intended network capacity of 4.5 gigawatts.

3.6 Mandatory matters for consideration

33. Section 4.15 of the EP&A Act outlines the matters that a consent authority must take into consideration when determining development applications. The Department has considered all of these matters in its assessment of the project, as well as ACEN's consideration of environmental planning instruments in its EIS, as summarised in **section 5** of this report. The Department has also considered relevant provisions of the environmental planning instruments in **Appendix I**.

4 Engagement

4.1 Department's engagement on the EIS

34. The Department publicly exhibited the EIS from 14 October 2022 until 10 November 2022, advertised the exhibition in the *Mudgee Guardian* and notified landowners adjacent to the project boundary.
35. The Department consulted with Mid-Western Regional Council and Warrumbungle Shire Council and relevant government agencies throughout the assessment. The Department also inspected the site on 14 December 2023, and visited surrounding landowners to further understand their concerns.
36. The Department notified and sought comment from Transgrid and Transport for NSW (TfNSW) in accordance with the Transport and Infrastructure SEPP, as discussed further in section 4.3 of the report.

4.2 Summary of Council's submissions

37. Both councils provided submissions during exhibition of the EIS and during exhibition of the Amendment Report and Submissions Report.
38. On the original EIS exhibition period, Mid-Western Regional Council provided comment and Warrumbungle Shire Council objected.
39. In response to feedback from both councils regarding the lack of available workforce accommodation, ACEN provided an amended application that proposed an accommodation camp on the site.
40. ACEN also provided additional information through the Submissions Report to address many of the concerns from both councils, including servicing of the development, visual impacts and traffic impacts to the local road network.
41. Both councils provided feedback to the Amendment Report and Submissions Report. This advice is presented in section 4.7 of this report.
42. Both councils have agreed to the general terms proposed by ACEN for a voluntary planning agreement should the project be approved.

4.3 Summary of advice received from government agencies

43. During exhibition of the EIS, the Department received advice from 13 government agencies. A summary of the agency advice is provided in Table 4. A link to the full copies of the advice is provided in Appendix C.
44. The Department also consulted with the future network operator, EnergyCo NSW, who raised no concerns about the project.

Table 4 | Summary of agency advice

Agency	Advice summary
Biodiversity Conservation and Science Group within NSW DCCEEW (BCS)	Requested further information and revisions to the Biodiversity Development Assessment Report (BDAR), including ensuring all impacts within the development footprint are considered, determination of non-native vegetation, and credit-staging. The applicant updated the BDAR to address the above matters, including further justification of survey measures and justification of mapping
TfNSW	Commented on the adequacy of the traffic impact assessment, including construction traffic impacts, provision of intersection plans and swept path analysis, particularly for heavy vehicles requiring escort, the safety of the key intersection upgrade of Castlereagh Highway and Barneys Reef Road. The applicant updated the Traffic Impact Assessment to provide greater consideration to the matters raised by TfNSW. This included revised intersection upgrade details and greater consideration of cumulative impacts.
Heritage NSW Group within NSW DCCEEW (Heritage NSW)	Required updates to the Aboriginal Cultural Heritage Assessment (ACHAR) to include clear assessment of cultural values as per the Burra Charter and <i>Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (2011)</i> . The applicant updated the ACHAR to include additional assessments from the Mudgee and Ulan areas, with this data incorporated into predictive modelling.
Water Group within NSW DCCEEW	Requested information to confirm that the tributary of Whites Creek on Lot 30 DP750755 includes a 30m buffer and provided recommendations relating to water supply details to be provided. The applicant confirmed 30m buffers to be provided to White Creek and committed to the preparation and delivery of a Soil and Water Management Plan prior to construction.
DPI Agriculture	Provided recommendations for operational and decommissioning measures to maintain the agricultural use and capability of the land.
DPI Fisheries	Recommended the implementation of riparian buffer zones and measures to ensure fish passage is maintained. Recommended that development comply with relevant policy, including <i>Policy and Guidelines for Fish Habitat Conservation and Management</i> and <i>Guidelines for Controlled Activities on Waterfront Land</i> .
Crown Lands	Satisfied that NSW <i>Crown Land Management Act 2016</i> had been addressed.
Fire & Rescue NSW (FRNSW)	Recommended preparation of a comprehensive Emergency Plan and Fire Safety Study.
NSW Rural Fire Service (RFS)	Recommended the requirement of a Bush Fire Emergency Management and Operations Plan, asset protection zones (APZs) and design requirements.
Transgrid	No comments or advice provided.

Agency	Advice summary
Siding Spring Observatory	Satisfied that measures proposed to be implemented would effectively mitigate impacts of night-time lighting on the night sky.
Mining, Exploration and Geoscience (MEG)	No comments or issues raised.
Australian Rail Track Corporation (ARTC)	No objections.

4.4 Summary of public submissions

45. During the exhibition period of the EIS, the Department received 89 unique submissions from the public (including two interest groups), of which 85 objected to the project and 4 provided comment.
46. A summary of the proximity of public submissions is provided in Table 5 and a link to all submissions is provided in Appendix B.

Table 5 | Public submissions on the EIS

Submitter distance to development footprint	Number of submissions
<5 km	11
5-100 km	46
> 100 km	13
Other*	19

* Interstate or not specified

47. Around 13% of submissions were received from residents located within 5 km of the site, 52% were from residents located between 5 – 100 km from the site, and 35% were from residents located over 100 km from the site, interstate or not specified. Most submissions to the project typically focused on local impacts and matters related to the local community.
48. The key issues raised in public submissions are summarised in Figure 5. The most common matters raised in submissions include the following:
- land use compatibility: site selection, use of agricultural land, impacts on adjacent agricultural activities
 - visual: impacts on the surrounding landscape, proximity to residents, effectiveness of vegetation screening and glare
 - cumulative impacts of the development in conjunction with other renewable projects in the region
 - environmental impacts including impacts on biodiversity.

- 49. Other issues raised in objections included decommissioning, social impacts (including stress and mental well-being), landscape values, traffic, and impacts on local housing supply.
- 50. A further breakdown and summary of key issues raised by the public is summarised in **Appendix H. Section 5** of this report provides a summary of the Department’s consideration of these matters and recommended conditions.

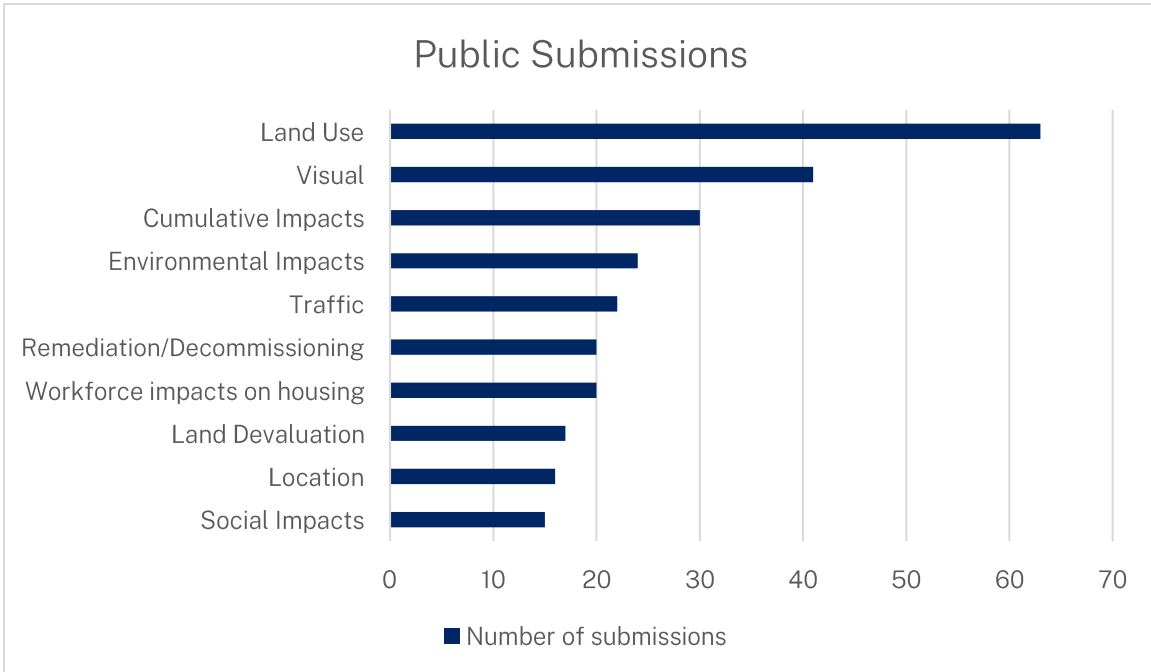


Figure 5 | Key Issues Raised in Public Submissions

4.5 Response to submissions

- 51. Following the public exhibition period, the Department asked the applicant to respond to the issues raised in submissions and the advice received from government agencies.
- 52. The applicant provided a Submissions Report (**Appendix D**) and provided additional information during the Department’s assessment (see **Appendix F**).
- 53. The Department published the Submissions Report on the NSW planning portal and forwarded the Submissions Report to relevant government agencies and both councils for comment.

4.6 Amendment report

- 54. Following consideration of submissions on the project, ACEN amended its application, as detailed in the Amendment Report (see **Appendix E**). In summary, the amendments included the provision of a temporary workers accommodation camp capable of housing 500 workers, expansion of the development footprint to include land hosting the accommodation camp, and a reduction of the required construction staff for the project from 800 to 500. These changes are captured within **Figure 3** above and a comparison between the original and amended project is detailed within **Table 6** below.

Table 6 | Amendment comparison

Aspect	EIS Project	Amended Project	Difference
Study Area	1,330 ha	1,535 ha	205 ha
Development Footprint	1,159 ha	1,197 ha	38 ha
Targeted Capacity (Solar)	600 MW (AC)	600 MW (AC)	-
Targeted Capacity (BESS)	600 MW for 2 hours	600 MW for 2 hours	-
Construction Duration:	Approximately 28 months	Approximately 28 months	3 – 7 month accommodation camp construction period within 28 month construction period
Construction Workforce	Up to 800 people at peak	Up to 500 at peak	- 300 people
Construction workforce accommodation	Use of available rental and motel accommodation in surrounding townships and regional centres	Accommodation camp proposed on site to accommodate up to 500 construction workers	500 person accommodation camp introduced
Construction staging	<ol style="list-style-type: none"> Public road upgrades, including public road crossings. Site establishment, including security fencing and internal access tracks. Construction of solar modules and associated infrastructure (including temporary construction ancillary facilities). BESS and substation installation. Commissioning and testing. 	<ol style="list-style-type: none"> Establishment of internal access tracks for the project. Public road upgrades, including public road crossings for the project. Site establishment, including security fencing, and bushfire asset protection zones for the project. Minor earthworks, including levelling for the prefabricated demountable units for the accommodation camp. Construction of the accommodation camp, including delivery and construction of prefabricated demountable units, and utility infrastructure for a 	Additional stages introduced

Aspect	EIS Project	Amended Project	Difference
		<p>capacity of approximately 500 people.</p> <p>6. Construction of the project, including construction of temporary ancillary facilities, the solar modules, BESS and substation installation.</p> <p>7. Commissioning and testing of the project.</p>	
Operational lifespan	The operational lifespan of the project would be in the order of 30 years, unless the solar farm is re-powered at the end of the solar modules' technical life	The accommodation camp would be operational for the duration of the solar and battery project construction phase, which is anticipated to be approximately 28 months	Accommodation camp component included as separate to operational lifespan of the solar farm.
Decommissioning	Once the project reaches the end of its investment and operational life, the project infrastructure would be decommissioned and the development footprint returned to its pre-existing land use, namely suitable for grazing or cropping, or another land use as agreed by the project owner and the landholders at that time	Following the construction of the project, the accommodation camp may be maintained for use by the construction workforce associated with other ACEN developments in the region, if this is approved as part of future development applications. If not pursued, the accommodation camp would be dismantled, and the site generally restored to its former condition.	Options to be determined regarding decommissioning of accommodation camp.

4.7 Summary of Council Feedback – Amendment

55. Both councils provided submissions during exhibition of the Amendment Report and during exhibition of the Amendment Submissions Report. It is noted that both Councils were generally supportive of the amended application's inclusion of an accommodation camp.
56. ACEN provided additional information through the Amendment Submissions Report to address remaining concerns from both councils, including management of waste produced on site, servicing of the site and traffic impacts to the local road network.

57. Mid-Western Regional Council provided feedback on ACEN’s Amendment Submissions Report raising further queries of detail around sewage, water and traffic management. Warrumbungle Shire Council maintained their objection due to concerns around CWO REZ-related cumulative impacts and concerns over the required Barneys Reef Road upgrades.
58. The Department issued additional requests for information to the applicant to address both councils remaining concerns over the proposed development. The Department also consulted with both councils on conditions of consent for the project and received feedback.

4.8 Summary of Government Agency comments - Amendment

59. During exhibition of the Amendment Report, the Department received advice from 13 government agencies. A summary of the agency advice is provided in Table 7. A link to the full copies of the advice is provided in Appendix C.

Table 7 | Summary of agency advice - Amendment

Agency	Advice summary
BCS	<p>Recommended breeding habitat of the superb parrot be reviewed across the site. Otherwise BCS was pleased to see previous recommendations were responded to.</p> <p>Following the applicant's review of the Superb Parrot breeding range, assumed presence of Superb Parrot was removed from the BDAR.</p> <p>BCS were satisfied with the amendments made and provided a recommended condition to include in any approval granted.</p>
TfNSW	<p>Raised concerns about the assessment of traffic generation/traffic routes associated with the accommodation camp. This included OSOM vehicles, heavy vehicles and light vehicles. TfNSW then requested further information be provided post-RTS regarding Traffic Generation and traffic surveys, swept paths and transport route assessments.</p> <p>The applicant has since responded to TfNSW queries of the Amendment Report and Amendment RTS through ongoing correspondence with the Department and TfNSW.</p>
Heritage NSW	<p>Required additional justification of notification and further discussion on potential subsurface archaeological material in the amendment project area.</p> <p>Responses provided within the RTS were considered to adequately address HNSW comments. Recommendations that an ACHMP prior to works be a condition of approval and that all landowners be provided with locations of registered aboriginal cultural heritage items on their titles.</p>
Water Group within NSW DCCEEW	<p>Requested water sourcing details be provided pre-determination and that post-approval works be carried out in accordance with the Guidelines for Controlled Activities on Waterfront Land. Recommended that sufficient water entitlement be acquired to account for maximum predicted water demand.</p> <p>The applicant subsequently provided information regarding project water demands and water supply options, demonstrating their ability to service the site.</p>

Agency	Advice summary
DPI Agriculture	Considered that the Amendment Submissions Report adequately addressed matters concerning agriculture. Also recommended that underground infrastructure is removed to a depth of at least 500mm through decommissioning/rehabilitation of the site.
DPI Fisheries	Recommended the implementation of riparian buffer zones and measures to ensure fish passage is maintained. Recommended that development comply relevant policy including with <i>Policy and Guidelines for Fish Habitat Conservation and Management</i> and <i>Guidelines for Controlled Activities on Waterfront Land</i> .
Crown Lands	Satisfied that NSW <i>Crown Land Management Act 2016</i> had been addressed.
FRNSW	No additional comments or recommendations for consideration.
RFS	Recommended the requirement of a Bush Fire Emergency Management and Operations Plan, APZs and compliance with construction and water supply provisions set out within <i>Planning for Bushfire Protection 2019</i> .
Transgrid	No comments or advice provided.
Siding Spring Observatory	Satisfied that measures proposed to be implemented would effectively mitigate impacts of night-time lighting on the night sky.
MEG	No comments or issues raised.
ARTC	No objections to proposal.

4.9 Summary of public submissions - Amendment

60. Given the significance of the project amendments, the Department publicly exhibited the Amendment Report from 6 October 2023 to 19 October 2023, advertised the exhibition in the *Mudgee Guardian* and notified landowners adjacent to the project boundary.
61. During the exhibition period of the Amended EIS, the Department received 45 unique submissions from the public (including one interest group), of which 45 objected to the project.
62. A summary of the proximity of public submissions is provided in **Table 8** and a link to all submissions is provided in **Appendix B**.

Table 8 | Public submissions on the EIS Amendment

Submitter distance to development footprint	Number of submissions
<5 km	3
5-100 km	35
> 100 km	8

63. Around 7% of submissions were received from residents located within 5 km of the site, 76% were from residents located between 5 – 100 km from the site, and 17% were from residents located over 100 km from the site, interstate or overseas. Regardless of proximity to the site, all submissions to the project typically focused on local impacts and matters related to the local community.
64. The key issues raised in public submissions are summarised in **Figure 6**. The most common matters raised in submissions included the following:
- workers camp: unwanted addition of the workers camp in the area, concerns about servicing of the camp, social (including safety and security concerns, stress and mental well-being) and traffic impacts associated with the camp
 - land use compatibility of the camp: use of agricultural land, impacts on adjacent agricultural activities
 - environmental impacts, bushfire risk and cumulative impacts associated with the camp.
65. A further breakdown and summary of key issues raised by the public is summarised in **Appendix H. section 5** of this report provides a summary of the Department’s consideration of these matters and recommended conditions.

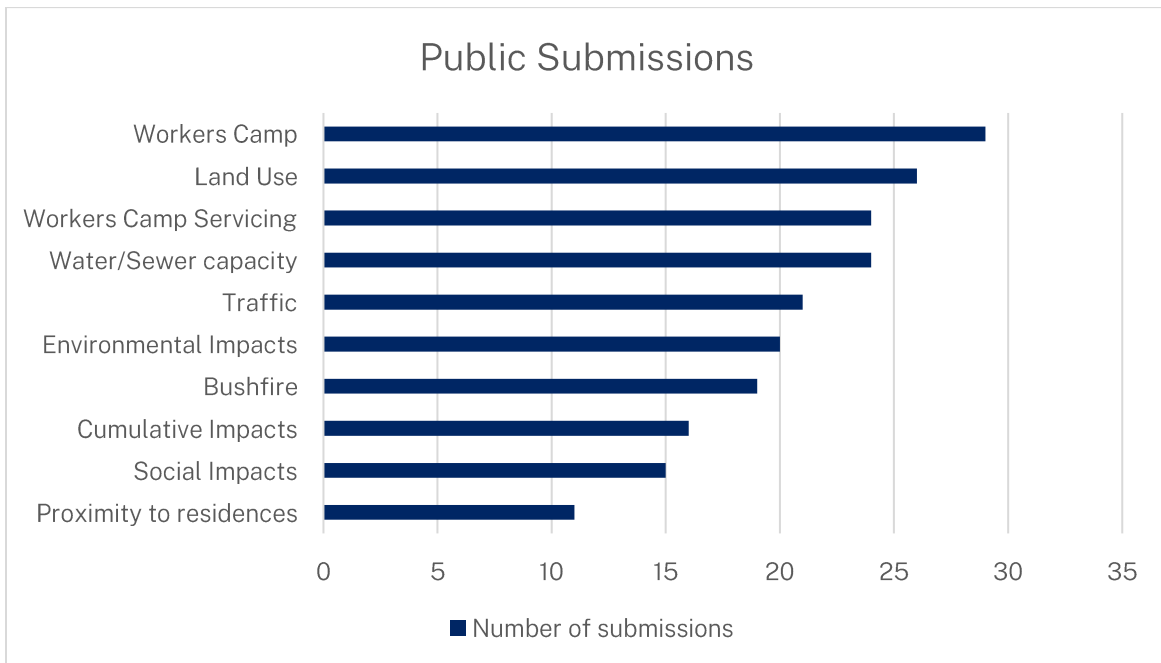


Figure 6 | Key Issues Raised in Public Submissions on the Amendment

5 Assessment

66. The Department has undertaken a comprehensive assessment of the merits of the project. This report provides a detailed discussion of the key issues, namely the energy transition (section 5.1), land use compatibility (section 5.2), traffic and transport (section 5.3), visual (section 5.4), social/accommodation impacts (section 5.5).
67. The Department has also considered the full range of other potential impacts associated with the project and has included a summary of the conclusions in section 5.6.

5.1 Energy transition

68. The project aligns with a range of national and state policies, which identify the need to diversify the energy generation mix and reduce the carbon emissions intensity of the grid while providing energy security and reliability.
69. With a generating capacity of 600 MW, the solar farm would generate enough electricity to power about 229,154 homes. This is consistent with the *NSW Climate Change Policy Framework* of achieving net zero emissions by 2050. The inclusion of a battery would enable the project to store energy for dispatch to the grid outside of daylight hours and/or during peak demand as well as providing grid stability services and back-up capacity to ensure security of supply.
70. The project would be located within the CWO REZ, which has been identified for investment in new electricity infrastructure and unlocking additional generation capacity in order to ensure secure and reliable energy in NSW. As such, the project would play an important role in:

- increasing renewable energy generation and capacity
- firming the grid by including 600 MW / 1,200 MWh of energy storage
- contributing to the transition to a cleaner energy system as coal fired generators retire.

71. The project is in an area where EnergyCo NSW are proposing the CWO REZ Merotherie Energy Hub which would act as a connection point for renewable energy projects in the CWO REZ. This would provide direct access to the transmission network with available capacity and abundant solar resources in the CWO REZ, on land where solar development is permissible (RU1 zoned land) with consent under the Transport and Infrastructure SEPP.

5.2 Land use compatibility

5.2.1 Provisions of the LEP

72. The site is located on land within the RU1 Primary Production zone under the Mid-Western LEP and land zoned RU1 Primary Production and SP2 Infrastructure (Classified Road) within the Warrumbungle LEP.

73. As discussed in section 3.3, a solar farm is a permissible land use with consent in land zoned RU1 under the Mid-Western LEP.

74. While a solar farm is permitted with consent in the RU1 and SP2 zones under the Transport and Infrastructure SEPP, the Department notes a solar farm would otherwise be a prohibited land use in the RU1 zone under a strict reading of the Warrumbungle LEP. However, based on a broader reading of the Warrumbungle LEP, and consideration of the objectives of the RU1 zone and other strategic documents for the region, the Department considers that there is no clear intention to prevent the development of a solar farm on the subject land.

75. Firstly, both the Mid-Western LEP and Warrumbungle LEP expressly reference the Infrastructure SEPP and acknowledge that electricity generating works are regulated by the Infrastructure SEPP, rather than the LEP. As described above, a solar farm is permitted with consent on land zoned RU1 and SP2 under the Infrastructure SEPP.

76. Secondly, the project is consistent with the objectives of the relevant RU1 and SP2 zonings under the respective LEP's, particularly by:

- providing diversity in primary industry enterprises and systems appropriate for the area
- minimising the fragmentation and alienation of resource lands
- minimising conflict between land uses within this zone and within adjoining zones
- allowing for non-agricultural land uses that would not restrict the use of other land in the locality for agricultural purposes
- to provide for infrastructure and related uses.

77. While the Mid-Western Regional and Warrumbungle LGAs have traditionally relied upon agriculture, the introduction of solar energy generation would contribute to a more diverse local economy, thereby supporting the local economy and community. In addition, the proposed solar farm would encourage renewable energy development which is consistent with key government strategic

planning guidance, including the *Central West and Orana Regional Plan 2041*, which includes an objective to Support the State's transition to net zero by 2050 and deliver the CWO REZ. The plan identifies renewable energy generation capabilities of the region and the opportunity to leverage the CWO REZ to provide economic benefit to communities.

78. While the Department considers that the project is compatible with each LEP, and broader strategic planning objectives for the site, the project's impacts on other land uses are further discussed below.

5.2.2 Potential Loss of Agricultural Land

79. Eighty-nine objections received across the EIS and Amendment exhibition periods (63 and 26 objections respectively) raised concerns about establishing a solar farm on agricultural land.
80. The project has a development footprint of approximately 1,197 ha. The majority of which has been cleared and is currently used for sheep and cattle grazing, as well as low intensity dry land cropping.
81. Siting of the project has avoided important agricultural land with the project area being mapped as Class 5 and 7 under the *Land and Soil Capability Mapping for NSW* (OEH 2017), indicating agricultural uses are largely restricted to low-moderate impact uses such as grazing and occasional cultivation for fodder crops. This is consistent with the *Large-Scale Solar Energy Guideline's* focus on identifying BSAL and land classes 1, 2 and 3 as constraints that should be considered in site selection.
82. The inherent agricultural capability of the land would not be affected by the project due to the relatively low scale of the development, and ACEN has committed to investigating the possibility for continued grazing on the subject lands and to restoring the Land Soil Capability of lands disturbed (beyond those areas identified above) through decommissioning/rehabilitation to existing LSC. Accordingly, the Department has included requirements to maintain the site's current land capability, including ground cover within the development footprint during the construction and operation of the project.
83. Regarding potential cumulative impacts, the project's development footprint (1,197 ha) combined with the other proposed, approved and/or operational SSD solar farms in the Central West and Orana region (14,640 ha) would be approximately 15,837 ha. The loss of 15,837 ha of agricultural land represents a tiny proportion (0.18%) of the 8.9 million ha of land currently used for agricultural output in the CWO REZ. It would result in a negligible reduction in the overall productivity of the region.
84. The Department notes that neither DPI Agriculture nor either council raised concerns that the project would compromise the long-term use of the land for agricultural purposes, subject to the implementation of a recommended set of conditions which provide suggested management measures from construction to decommissioning. These recommended management measures consider biosecurity risks, pests, weeds, soil degradation and land degradation to avoid long-term impacts associated with large-scale development of traditionally agricultural land.
85. The potential loss of a small area of grazing land in the region must be balanced against:
- the broader strategic goals of the Commonwealth and NSW governments for the development of renewable energy into the future
 - the environmental benefits of solar energy, particularly with reducing greenhouse gas emissions

- the economic benefits of solar energy in an area with good solar resources and capacity in the existing electricity network
 - the benefits of dispatchable energy for grid stability and reliability.
86. Based on these considerations, the Department considers that the proposed solar farm represents an effective and compatible use of the land within the region and that the site is suitable to accommodate the development.
87. The Department considers that the development would not fragment or alienate any resource lands in the LGA and is capable of being returned to usable agricultural land following decommissioning.
88. The Department considers that the project represents an effective and compatible use of the land within the region and that the site is suitable to accommodate the development.

5.3 Traffic and transport

89. Forty-three submissions received across the EIS and Amendment exhibition periods raised concerns about the potential traffic impacts on local roads during the construction period.
90. TfNSW initially raised concerns about the design of the intersection upgrade at the Barneys Reef Road / Castlereagh Highway intersection, and both councils raised concerns around the impacts on local roads, in particular Barneys Reef Road and Birriwa Bus Route South.
91. Construction of the project involves the delivery of plant, equipment and materials, including the movement of heavy vehicles requiring escort, which has the potential to impact on the local and regional road network primarily during construction.
92. In response to submissions and advice received from TfNSW and both councils, ACEN supplemented its Traffic Impact Assessment with an additional assessment of the haulage route for over-dimensional vehicles, a revised intersection design for the Barneys Reef Road / Castlereagh Highway intersection, a revised design for the Barneys Reef Road / Birriwa Bus Route South intersection, and additional assessment of trip generation.

5.3.1 Traffic routes and site access

93. Most of the components for the project would be transported from the Port of Newcastle or Sydney. The haulage route for the project is via the Castlereagh Highway, Barneys Reef Road and Birriwa Bus Route South.
94. All vehicles associated with the project would access the site via the primary site access point on Birriwa Bus Route South, located at the northwest corner of the site (see **Figure 7**). This includes all traffic to and from the accommodation camp, located on the south-eastern part of the site. The accommodation camp would be accessed via internal roads through the site, with an exit from the accommodation camp to Merotherie Road to be used only in the case of emergency.
95. No project traffic would use the Castlereagh Highway / Birriwa Bus Route South intersection, Birriwa Bus Route North and Merotherie Road.

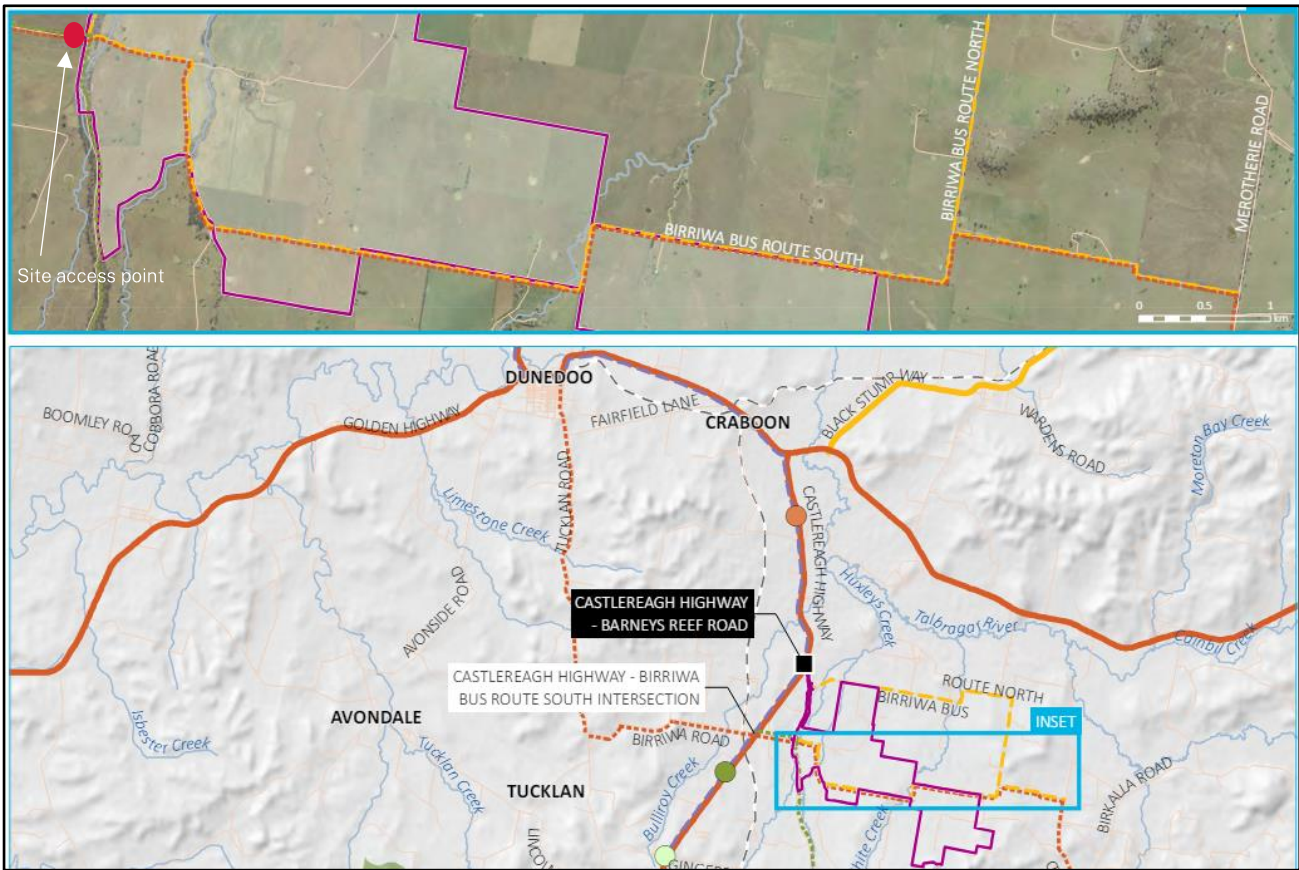


Figure 7 | Birriwa Bus Route South and site access point

5.3.2 Traffic volumes

96. The main increase in project related traffic would occur during the 28-month construction period, with a peak period of six months from mid-2027. The construction of the accommodation camp would occur prior to the construction of the solar farm and BESS, over a period of 3 to 7 months.
97. The estimated peak daily vehicle movements during construction would be up to 120 heavy vehicles and 50 light vehicles. This is a significant reduction in the number of light vehicle movements that were originally proposed for the project (from 360 to 50), as a result of the introduction of the accommodation camp. The 50 light vehicle movements represents 10% of the 500-person workforce that would be drawn from the local area and not residing in the accommodation camp.
98. A maximum of 27 heavy vehicle movements would be required at peak hour during peak construction. Heavy vehicles used to construct the accommodation camp would avoid peak hour.
99. Additionally, it is anticipated that there would be a total of 6 movements of heavy vehicles requiring escort during construction of the project. As construction activities would be restricted to daytime hours, construction related vehicles would be using the local road network during the day only. Heavy vehicles up to 26 m in length would be used for transporting materials and components to the site.
100. Traffic generation during operations would be significantly less than the construction phase (i.e. up to 20 light vehicles per day would be required during operations, with heavy vehicles only occasionally required for replacing larger components of project infrastructure).

5.3.3 Road upgrades and maintenance

101. TfNSW and both councils commented on the proposed transport route, which has resulted in revisions to the road upgrades proposed to be undertaken to support the traffic associated with the project.
102. The EIS for the project initially outlined that works may be required to support the over-size over-mass (OSOM) movements through Merriwa, however the applicant has confirmed that these are not required given the specific design vehicle for the project.
103. The intersection of Castlereagh Highway / Barneys Reef Road would be upgraded to provide an Austroads type CHR and AUL treatment in consideration of the potential cumulative traffic impacts from other projects.
104. Both Barneys Reef Road and Birriwa Bus Route South between the Castlereagh Highway intersection and the site would require resurfacing and widening, to a minimum road width of 9.2 m, which includes 7.2 m seal and 2 m unsealed shoulders.
105. The intersection of Barneys Reef Road and Birriwa Bus Route South would also be provided with a basic right turn treatment.
106. ACEN has consulted with both councils about the proposed local road upgrades, and have committed to finalising the designs for these works in consultation with the councils, along with preparing road dilapidation surveys and repairing any damage resulting from the construction traffic.
107. Both councils have provided feedback on the recommended conditions of consent in relation to these road upgrades.

5.3.4 Cumulative impacts

108. There are a number of approved or proposed energy projects in the region, given the project's location in the CWO REZ, including Tallawang Solar Farm, CWO REZ Transmission Project and Barneys Reef Wind Farm which may have impacts on the Castlereagh Highway and Barneys Reef Road intersection. ACEN's assessment has considered the traffic volumes from Tallawang Solar Farm and CWO REZ Transmission Project given that these two projects have EIS documents submitted with the Department.
109. The applicant's cumulative assessment of impacts along Castlereagh Highway at the Barneys Reef Road intersection identified that accounting for both the traffic generated from Birriwa Solar Farm and the above projects, a basic left (BAL) / short CHR(s) would be required. However, the applicant is proposing a conservative turn treatment at the intersection of a CHR and AUL.
110. TfNSW noted that the proposed turn treatments at the intersection were appropriate, however raised some comments around the strategic design of the intersection. TfNSW has agreed that the applicant should provide a revised strategic design of the intersection post-approval.
111. For these reasons, the Department considers that there would be no material cumulative traffic impacts on the State or local road network as a result of the project. Notwithstanding, the Department has included a requirement in the Traffic Management Plan to minimise potential cumulative traffic impacts.

5.3.5 Recommended conditions

112. The Department has recommended conditions of consent requiring ACEN to:
- undertake the relevant road upgrades prior to the commencement of construction
 - restrict project related vehicles to the use of the approved access route only
 - restrict the number of vehicles during construction, upgrading and decommissioning to the peak volumes identified in the EIS
 - provide a revised strategic design for the Castlereagh Highway / Barneys Reef Road intersection to TfNSW
 - ensure the length of vehicles (excluding heavy vehicles requiring escort) does not exceed 26 m
 - prepare and implement a Transport Management Plan (TMP) in consultation with TfNSW and both councils, including provisions for dilapidation surveys, and details of the measures that would be implemented to address road safety, including safety for the cyclists along the Central West Cycle Trail (CWCT).
113. Subject to the recommended conditions, the Department and TfNSW are satisfied that the project would not result in significant impacts on road network capacity, efficiency or safety.

5.4 Visual

114. Concerns about visual impacts were raised in the majority of public submissions, including a number of residences in proximity to the site. These concerns included potential impacts on the visual landscape and scenic quality of the region, as well as glint and glare impacts.
115. ACEN provided a Landscape and Visual Impact Assessment with the EIS, and an addendum assessing the amended application.
116. The Department visited the site and nearby non-associated residences to assess visual impacts and to further understand residents' concerns.
117. The Department's *Large-Scale Solar Energy Guideline* (2018) applies to the assessment as it was in force at the time of the development application.
118. However, to ensure its assessment is in line with contemporary landscape and visual requirements, the Department also considered the content of the revised *Large-Scale Solar Energy Guideline* (2022) and accompanying *Technical Supplement - Landscape and Visual Impact Assessment*, which provides a detailed description of the landscape character and visual impact assessment process for largescale solar energy development in NSW.

5.4.1 Visual context

119. The site and surrounds are located within a largely cleared agricultural landscape that is heavily disturbed by grazing and occasional cropping with scattered rural dwellings. Much of the development footprint has been extensively cleared of trees and has been highly modified by historic farming practices. The landscape typical of the region is predominantly cleared, open grazing land with scattered groupings of remnant native trees.

120. The main transport infrastructure in the surrounding area comprises the Castlereagh Highway and the Golden Highway. The Castlereagh Highway runs north-south approximately 1.2 km west of the solar array. The Golden Highway runs east-west approximately 4 km north of the project. There is a rail line connecting Birriwa to Dunedoo to the north and Gulgong to the south. The rail line is approximately 1.5 km west of the project at its closest point. The CWCT is located adjacent to the project site.
121. There are 22 non-associated residences within 2 km of the development footprint (see Figure 8), with the closest residence being R5, which is located 250m from the development footprint.

5.4.2 Visual mitigation

122. Through correspondence with neighbouring landholders the project footprint has been designed to minimise visual impacts from the outset. Following feedback from the Department, further opportunities to mitigate visual impacts were identified and implemented within the project.
123. Mitigation measures have been introduced as part of the original EIS, primarily involving the establishment of screen planting between public views and nearby non-associated receivers.
124. All residential receivers which were identified as experiencing moderate visual impacts have been assessed against the 2022 Large Scale Solar Energy Guideline’s Technical Supplement - Landscape and Visual Impact Assessment. Post-mitigation, each of these receivers are considered to be subject to either low or very low visual impacts.
125. Following the addition of the accommodation camp facility, an addendum Visual Impact Assessment concluded that the visual impacts of the facility would be ‘Low’ at nearby receivers, which would have filtered views of the camp through existing vegetation. Accordingly, no further mitigation measures have been proposed for the accommodation camp.



Figure 8 | Proposed Landscape Plan

126. ACEN has proposed the following avoidance and mitigation measures to reduce the potential visual impacts on surrounding receivers:
- establishing a 350m setback between the solar array and residence R3
 - minimising clearing and trimming of existing vegetation
 - planting of vegetation screening in accordance with the landscape plan to screen views of the project from nearby residences, road users and Central West Cycle Trail users
 - using non-reflecting materials and paints to reduce glint and glare
 - minimising unnecessary night-time lighting of the development and using lower intensity lighting to reduce disturbance to neighbouring properties.

5.4.3 Assessment

Landscape

127. Public submissions highlight that the landscape is valued by the community for its scenic value and agricultural history. However, the Department notes that the low-lying nature of the development, proximity to major transport infrastructure and existing and proposed vegetation screening, would minimise views of the project from the surrounding area.
128. Impacts on the local landscape have been reduced through project design, including screen planting.
129. The solar farm & BESS would only be slightly visible from vehicles travelling along Castlereagh Highway, as it is screening by existing vegetation.
130. The Department recognises that the introduction of the proposed solar farm to a rural area would result in a change to the local landscape, but considers the development would have a limited impact beyond the project's immediate vicinity given it would not be visible from nearby townships or key transport routes through the region. Accordingly, to the Department considers the project would have a limited impact on the visual landscape of the region as a whole.

Residences (Direct and Cumulative Impacts)

131. The nature of the proposed development would serve to minimise its visibility from surrounding residences as the solar panels would be relatively low lying (up to 4.7 m high) and the BESS, power conversion units and substation would be a similar size to agricultural sheds commonly used in the area.
132. Of the 22 non-associated residences within 2 km of the development footprint, the visual reports concluded that five would experience moderate visual impacts prior to mitigation, and 15 residences would experience low visual impacts. Post-mitigation, all identified receivers are considered to experience, low, and very low to nil visual impacts when assessed against the 2022 Large Scale Solar Energy Guideline Technical Supplement - Landscape and Visual Impact Assessment. The 2022 Guideline and Technical Supplement provides additional guidance around the assessment of visual impacts in a more objective and standardised manner.

133. The Department considers that both the direct and cumulative visual impacts on all potentially affected residences would be low, very low or nil, due to the separation distance, the undulating topography of land surrounding the site and intervening existing and proposed vegetation, which is consistent with the objectives of the *Large-Scale Solar Guideline (2018)* and broadly consistent with the requirements of the *Large-Scale Solar Energy Guideline (2022)* and accompanying *Technical Supplement - Landscape and Visual Impact Assessment*.
134. The Department's assessment of non-associated residences within 2 km of the development footprint, and the potential for cumulative impacts with Barneys Reef Wind Farm (BRWF) and Valley of the Winds Wind Farm (VWWF), is summarised in Table 9. There would be nil or low cumulative impacts associated with BRWF and VWWF due to distance, topography and intervening vegetation.
135. There is a moderate cumulative visual impact anticipated for travellers along the CWCT (Merotherie Road and Birriwa Bus Route) due to views of the BRWF in addition to views of the Birriwa Solar Farm and Stubbo Solar Farm. Additional tree planting is proposed to mitigate these impacts. Accordingly, the CWCT will experience a low visual impact post-mitigation which the Department considers acceptable in the context of the area as a growing renewable energy zone.
136. There is also likely to be minor cumulative visual impacts for travellers along the Castlereagh Highway (viewpoint 8) due to the BRWF, for which an EIS is yet to be submitted. The overall visual impact for travellers along Castlereagh Highway however remains very low due to existing vegetation screening the site.

Table 9 | Summary of visual impacts to residences

Residence ID and distance from development footprint	ACEN's visual impact rating	Department's assessment
R1 (550m)	Low	<ul style="list-style-type: none"> Intervening existing vegetation alongside road and along waterway between the development site and residence would limit views of the project, resulting in low visual impacts. *BRWF (>3km south-west) and VWWF (>9km north) unlikely to result in any cumulative visual impacts given distance and existing topography/vegetation between the residence and respective developments.
R1a (600m)	Low	<ul style="list-style-type: none"> Intervening existing vegetation alongside road and along waterway between the development site and residence would limit views of the project, resulting in low visual impacts. *BRWF (>3km south-west) and VWWF (>9km north) unlikely to result in any cumulative visual impacts given distance and existing topography/vegetation between the residence and respective developments.

Residence ID and distance from development footprint	ACEN's visual impact rating	Department's assessment
R3 (350m)	Low	<ul style="list-style-type: none"> Views to the development footprint would be available to the west and south of the residence. Existing planting close to the residence would help fracture views. There are trees located within the development footprint that can be retained to screen the solar arrays. Screen planting is proposed along the development footprint boundary to reduce the potential visual impact. The applicant has setback the solar array 350m from the R3 dwelling to further reduce visual impacts. *BRWF (>3km south-west) & VWWF (>9km north) unlikely to result in any cumulative visual impacts given distance and existing topography/vegetation between the residence and respective developments.
R5 (250m)	Low	<ul style="list-style-type: none"> Views from the residence to the development footprint are filtered through existing vegetation surrounding the residence. A setback from the solar panels has been included at this property in the project design *BRWF (>3km south-east) and VWWF (>9km north) unlikely to result in any cumulative visual impacts given distance and existing topography/vegetation between the residence and respective developments.
R5a (250m)	Low	<ul style="list-style-type: none"> Views from the residence to the development footprint are filtered through existing vegetation surrounding the residence. A setback from the solar panels has been included at this property in the project design *BRWF (>3km south-east) and VWWF (>9km north) unlikely to result in any cumulative visual impacts given distance and existing topography/vegetation between the residence and respective developments.
R7 (910m)	Very Low	<ul style="list-style-type: none"> A small area of the project would be visible above the tree line from this viewpoint. However, most of the project is screened from view by the existing trees. *BRWF (>3km south-west) and VWWF (>9km north) unlikely to result in any cumulative visual impacts given distance and existing topography/vegetation between the residence and respective developments.
R9 (1.4km)	Low	<ul style="list-style-type: none"> Existing vegetation and topography would screen the development footprint and road improvement works. *BRWF (>3km south-west) and VWWF (>9km north) unlikely to result in any cumulative visual impacts given distance and existing topography/vegetation between the residence and respective developments.
R10 (1.12km)	Low	<ul style="list-style-type: none"> Existing vegetation and topography would screen the development footprint. The residence may have filtered views of road improvement works. *BRWF (>3km south-west) and VWWF (>9km north) unlikely to result in any cumulative visual impacts given distance and existing topography/vegetation between the residence and respective developments.

Residence ID and distance from development footprint	ACEN's visual impact rating	Department's assessment
R11 (1.78km)	Low	<ul style="list-style-type: none"> Existing vegetation around the residence would screen portions of the development footprint. The distance to the project also results in a low visual impact. *BRWF (>3km south-east) and VWWF (>9km north) unlikely to result in any cumulative visual impacts given distance and existing topography/vegetation between the residence and respective developments.
R12 (1.26km)	Low	<ul style="list-style-type: none"> Topography and existing vegetation between the residence and the project area would screen portions of the development footprint. *BRWF (>3km south-east) and VWWF (>9km north) unlikely to result in any cumulative visual impacts given distance and existing topography/vegetation between the residence and respective developments.
R13 (1.52km)	Low	<ul style="list-style-type: none"> Topography and trees along roadways would screen portions of the development footprint. The overall visual impact of the solar farm at this residence is low. Potential low cumulative impacts have been identified due to Barneys Reef Wind Farm to the south-east of the property (closest turbine approximately 2.4km south-east of the Birriwa Solar Farm array area) Overall, a low visual impact is anticipated given the screened views to the Birriwa Solar Farm development.
R14 (1.68km)	Low	<ul style="list-style-type: none"> Topography and trees at residence block views to development footprint. *BRWF (>3km south-west) and VWWF (>9km north) unlikely to result in any cumulative visual impacts given distance and existing topography/vegetation between the residence and respective developments.
R15 – R23 (1.42km – 1.60km)	Low	<ul style="list-style-type: none"> Topography and trees at residence block views to development footprint *BRWF (>3km south-west) and VWWF (>9km north) unlikely to result in any cumulative visual impacts given distance and existing topography/vegetation between the residence and respective developments.

* Cumulative visual impacts of the project with BRWF and VWWF

137. It is noted that all residences beyond 2 km from the development footprint are assessed as having low visual impacts. Overall, residences R34, R35, R36 and R37 would experience obstructed views of the Birriwa Solar Farm, resulting in a very low visual impact. While potential cumulative impacts associated with Barneys Reef Wind Farm to the east are recognised for some residences, the overall visual impact on these properties would remain low.

Glint and Glare

138. While photovoltaic panels are designed to absorb rather than reflect sunlight, the Department recognises that some project components have the potential to generate glare or reflection, including the galvanised steel used for the solar panel mounting framework, but that this diminishes over time.

139. Birriwa Solar Farm's glint and glare analysis, which is based on a worst case scenario, identified the potential for temporary glare to be experienced by a small number of residential receivers and along some routes. The only location where more than very minor glare impacts may be experienced is along the Birriwa Bus Route South.
140. Potential glare would mostly be produced as a result of the BESS building, and only experienced along certain parts of Birriwa Bus Route South. Intervening vegetation and screening along Birriwa Bus Route South may also reduce these impacts further. The roads authority raised no concerns around the glare impacts along the route.
141. The Department has recommended conditions requiring the applicant to minimise the off-site visual impacts of the development, including the potential for any glare or reflection, and to ensure the visual appearance of all ancillary infrastructure (including paint colours) blends in as far as possible with the surrounding landscape. Subject to the recommended conditions, the Department is satisfied that the project would not cause significant glint or glare to nearby receivers.

5.4.4 Recommended Conditions

142. The Department has recommended conditions of consent requiring ACEN to:
- establish and maintain a vegetation buffer (landscape screening) as described in the EIS prior to commencing operation;
 - minimise the off-site visual impacts of the development, including the potential for any glare or reflection ; and
 - minimise the off-site lighting impacts of the development.
143. Subject to the recommended conditions, the Department is satisfied that the project would not result in significant visual impacts. The site selection and project design is consistent with the Department's Large-Scale Solar Energy Guideline, particularly in avoiding sites with high visibility such as those on prominent or high ground positions, or sites which are located in a valley with elevated nearby residences with views toward the site.
144. The Department considers that ACEN has adequately reduced the potential visual impacts of the project to an acceptable level, while largely maintaining the proposed solar power generating capacity.

5.5 Social/Accommodation

145. Concerns about the social impacts of the proposed development were raised in 15 submissions during the EIS exhibition and in 15 submissions during the Amendment exhibition. These concerns related to anticipated negative impacts on privacy and safety, visual amenity, lifestyles, livelihoods and traffic, as well as the potential for the construction workers to increase demand for local public health services and accommodation.
146. ACEN provided a Social Impact Assessment (SIA), Addendum SIA, and an Updated Addendum SIA assessing the social impacts of the proposed development as the project evolved over time, including recommendations for the implementation of additional mitigation measures where possible.

147. The SIA considered impacts of the project locally and regionally. The identified local impacts relate to local social infrastructure and services, workforce, business and industry, housing and accommodation, and community health and wellbeing. The Mid-Western Regional LGA and Warrumbungle LGA are identified as the regional area and are subject to fewer direct social impacts, and more indirect social impacts. The area of social influence has been defined in accordance with the *Social Impact Assessment Guideline (2023)*.
148. The Department has reviewed all submissions received and met with non-associated residences to understand key concerns around the proposed development, including social and accommodation concerns.
149. The Department has assessed the proposed development against the provisions of the *Social Impact Assessment Guideline (2023)* to ensure that the assessment is targeted and proportionate to the likely project impacts and the project's context.

5.5.1 Amenity Impacts

150. Stakeholder engagement carried out by ACEN found that concerns were raised in relation to potential social amenity impacts associated with construction activities and ongoing operations of the project. These impacts related to construction activities such as privacy and safety, traffic, noise, vibration and lighting intrusion. An additional social amenity impact associated with the proposed development and construction activities is the potential impact on the safe use of the CWCT.
151. The Department is satisfied that the potential social amenity impacts can be effectively managed through conditions requiring monitoring and recording of complaints, and implementation of appropriate management plans to minimise impacts. ACEN has also committed to employing security personnel on site in response to concerns raised by the public around safety and security. Additionally, ACEN has committed to investigating whether a 2 m wide 'dust lane' to separate the cycle trail within the study area from construction activities can be delivered, in consultation with CWCT Inc. The Department has also recommended conditions of consent requiring them to address safety of cycle users in their transport management plan. Accordingly, the Department is satisfied that potential social amenity impacts are acceptable.

5.5.2 Accommodation Camp Servicing

152. ACEN proposed an Accommodation Camp through the Amendment Report to address potential impacts on accommodation availability in the area. Consultation with key stakeholders during the amendment exhibition raised concerns around the servicing of the accommodation camp and the potential for the accommodation camp to increase demand for limited social resources in the region.
153. ACEN has demonstrated means of servicing the accommodation camp in relation to water, sewage, waste, electricity and medical services as follows:
- Water supply options and regulatory pathways have been identified to support the water requirements of the project, with ACEN's current preference being to source water from bores with existing Water Access Licenses. ACEN has detailed water demands of the project and demonstrated that options are available to meet these demands.

- Sewage treatment options have been detailed, with ACEN's preferred option being a pump-out sewerage system with capacity to hold the estimated sewage generation for weekly removal.
- ACEN has confirmed Dubbo Regional Council (DRC) has capacity and is willing to accept most waste streams generated by the project. Further licensed facilities have been identified to handle the remaining waste streams and would be confirmed prior to construction commencing.
- ACEN has proposed that an on-site medical facility would be established and resourced with a qualified nurse. Activities that require a general practitioner would be serviced off-site. Additionally, ACEN has proposed the implementation of a telehealth service for workers, offering virtual access to a general practitioner.
- Electricity would be generated on-site using solar panels and batteries. Electricity may also be sourced via the local distribution network, where available and via diesel generation where access to the grid is unavailable.

154. The Department is satisfied that the proposed accommodation camp is capable of being effectively serviced, with final details of the provision of services to be determined through the post-approval stage of development, prior to construction. Accordingly, the Department considers the proposed accommodation camp to be a suitable means of mitigating potential increased demand for housing and associated residential services in the region.

5.5.3 Cumulative Impacts

155. An assessment has been completed with reference to the *Cumulative Impact Assessment Guidelines for State Significant Projects*. Potential cumulative impacts have been identified with five nearby projects located within the CWO REZ (Merotherie Energy hub, Stubbo Solar Farm, Tallawang Solar Farm, Barneys Reef Wind Farm and Valley of the Winds Wind Farm).

156. ACEN has undertaken a cumulative impact assessment of the proposed development (including visual, traffic, servicing, workforce, amenity and housing). The addition of the accommodation camp would substantially reduce the potential social cumulative impacts that may otherwise be experienced by the local community due to the project. In particular, it would reduce the cumulative impacts that the proposed construction workforce would otherwise have on traffic and the availability of short-term accommodation in the local and regional area.

157. The Department is satisfied that the project has been designed to minimise opportunities for potential cumulative social impacts, noting the development site's location within the CWO REZ.

5.5.4 Conclusion/Recommended Conditions

158. The Department has recommended conditions of consent requiring ACEN to:

- prepare an Accommodation and Employment Strategy for the project in consultation with both councils for approval by the Planning Secretary prior to commencement of construction
- prepare an Accommodation Camp Management Plan in consultation with both councils prior to commencing construction of the accommodation camp
- ensure utilities at the accommodation camp, including water, wastewater, waste and electricity, are designed and located in accordance with Mid-Western Regional Council specifications.

5.6 Other issues

159. The Department’s consideration of other issues is summarised in Table 10.

Table 10 | Assessment of other issues

Issue	Recommended conditions
<p>Biodiversity</p> <ul style="list-style-type: none"> • The project site covers an area of 1,535ha, which includes a disturbance footprint of 1,197ha. • The site has been subject to clearing for agricultural use and has been used primarily for sheep and cattle grazing, as well as low intensity cropping. The applicant has designed the project to avoid areas of significant biodiversity value across the site, including higher order streams and areas of higher quality vegetation. • A total of 405.71 ha of native vegetation would be cleared for the project, however the vast majority of this is low quality land that has minimal biodiversity values and does not require offset. • Three Plant Community Types (PCT) occur across the site (PCT 479 - Narrow-leaved Ironbark- Black Cypress Pine - stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest, PCT80 – Western Grey Box – White Cypress Pine tall woodland and PCT281 – Rough-Barked Apple – red gum – Yellow Box woodland). • Two of these PCTs (PCT80 and PCT281) within the subject land meet the criteria for inclusion as NSW Biodiversity Conservation Act 2016 (BC Act) listed Threatened Ecological Communities (TECs). • 76.80 ha of PCT80 and 300.46 ha of PCT281 would be cleared for the project, however only 1.18 ha and 7.45 ha respectively of these are of condition requiring offsetting under the NSW Biodiversity Offset Scheme (BOS). 28.45 ha of PCT479 would be cleared, however this is entirely grassland of low condition and does not require offsetting under the BOS. • Habitat assessments within the subject land concluded that targeted surveys were required for seven flora species and 14 fauna species. No candidate flora species were recorded during the surveys. One candidate fauna species, the Koala, was recorded in the form of scats during dog detection surveys. Presence has been assumed for Chalinolobus dwyeri (Large-eared Pied Bat) due to potential habitat within the subject land. Both of which the Department has required offsets within the recommended conditions. • The introduction of the accommodation camp also introduced land which could be habitat for the Superb Parrot, which presence was assumed for. However, in response to feedback from BCS, the applicant reviewed their BDAR to consider the likelihood of this species occurring, and as a result this species has been ruled out and no credits are required. 	<ul style="list-style-type: none"> • Retire the applicable biodiversity offset credits in accordance with the NSW Biodiversity Offsets Scheme. • Prepare and implement a Biodiversity Management Plan in consultation with BCS, including measures to protect and manage vegetation and fauna habitat outside the approved disturbance area.

Issue	Recommended conditions
<ul style="list-style-type: none"> • PCT 281 is a candidate entity for Serious and Irreversible Impacts (SII) under the BC Act, along with the Regent Honeyeater and the Large-eared Pied Bat which had the potential to occur. The Regent Honeyeater was not recorded on site however presence has been assumed for Chalinolobus dwyeri (Large-eared Pied Bat). • EMM has undertaken an assessment of these three entities against the SII principles, which BCS raised no concerns with. • Given this, the Department and BCS considers it unlikely that the project would result in a SII to any biodiversity values. • The applicant has not yet made a referral to the Commonwealth under the EPBC Act, and considers that the project is unlikely to result in a significant impact on Matters of National Environmental Significance (MNES). • The impacts on native vegetation would generate 271 ecosystem credits and 244 species credits under the BC Act. The final credit requirement would be retired in accordance with the NSW Biodiversity Offset Scheme. • BCS raised no issues with the project and advised that the BDAR met all relevant requirements and supported offsets being split between the road upgrade works and the solar farm, consistent with the BDAR. • Overall, the Department considers that the project is unlikely to result in a significant impact on biodiversity values. 	
Heritage	
<p>Aboriginal Cultural Heritage</p> <ul style="list-style-type: none"> • Four public submissions raised concerns about potential impacts on Aboriginal cultural heritage. • ACEN commissioned a survey of the project site with representatives from four Registered Aboriginal Parties (RAPs). • The results of the survey identified eight previously unrecorded sites, including five within the study area. • The development footprint was refined to avoid impacts upon all identified sites except one isolated find of low archaeological significance (Mangarlowe IF-2), a flake artefact which is proposed to be salvaged prior to works commencing. • Winora IF-2, an isolated find chert flake of low archaeological significance has also been identified as potentially being impacted by the proposed development, subject to final design layout of the accommodation camp. Should the final design impact the Winora IF-2 site, it would be salvaged via surface collection in accordance with an approved Aboriginal Cultural Heritage Plan. • Temporary fencing is to be erected around scarred tree 36-2-0516 (Barneys Reef Road (ST-1)) during upgrades to Barneys Reef Road. • If Aboriginal artefacts or skeletal material are identified during construction of the project, all work would cease and an unanticipated finds procedure would be implemented, as committed to by ACEN in the EIS. • With these measures, the Department and Heritage NSW consider that the project would not significantly impact the Aboriginal heritage values of the locality. 	<ul style="list-style-type: none"> • Ensure the development does not cause any direct or indirect impacts on any items located within exclusion zones or outside the approved development footprint. • Salvage and relocate Aboriginal items in consultation with RAPs. • Prepare and implement an Aboriginal Cultural Heritage Management Plan in consultation with RAPs. • Cease any works and notify the NSW Police and Heritage NSW if human remains are identified over the life of the project.

Issue	Recommended conditions
<p>Historic Heritage</p> <ul style="list-style-type: none"> • There are no items of historical heritage within 5 km of the development area. • The assessment concluded that there would be no impact on any listed heritage item. • The Department is satisfied that the project would not have any adverse impacts on State, National or World heritage items within or near the site. 	
<p>Erosion and sediment control</p>	
<ul style="list-style-type: none"> • Eight public submissions raised concerns about potential soil and erosion impacts. • The soil erosion hazard has been assessed as high due to the presence of dispersive subsoil. This hazard would be minimised to an acceptable level via adoption of appropriate drainage, erosion and sediment control practices, and management measures, during construction. • ACEN has committed to preparing Erosion and Sediment Control Plans to manage any potential impacts for works on waterfront land. • The Department considers that any erosion and sedimentation risks associated with the project can be effectively managed by following the <i>Managing Urban Stormwater: Soils and Construction</i> (Landcom, 2004). 	<ul style="list-style-type: none"> • Minimise any soil erosion in accordance with the <i>Managing Urban Stormwater: Soils and Construction</i> (Landcom, 2004) manual and ensure the project is constructed and maintained to avoid causing erosion on site.
<p>Water</p>	
<p>Surface Water and Flooding</p> <ul style="list-style-type: none"> • The site falls within the Macquarie-Bogan River Catchment, and the site contains three third order streams, namely, Huxleys Creek, Browns Creek and White Creek, along with a number of smaller unnamed tributaries. A further unnamed third order stream flows to the south of the proposed accommodation camp. • The site would be subject to low-depth flooding across the site in the 1% AEP event (generally <0.25m depth), with some areas of deeper flows through identified creeks and narrow floodplains associated with each creek. ACEN has committed to locating panels and other relevant infrastructure outside of the areas identified as higher flood hazard, and provide a minimum of 300 mm freeboard for the lowest edge, above the maximum 1% AEP flood level. • ACEN undertook a Flood Impact Assessment which demonstrates that additional flood impacts as a result of the development would be minor in all modelled events. 	<ul style="list-style-type: none"> • Design, construct and maintain the project to reduce impacts on surface water and flooding at the site • Ensure the solar panels and ancillary infrastructure do not cause any increased water being diverted off the site or alter hydrology off site • Ensure all works are undertaken in accordance with <i>Guidelines for Controlled Activities on Waterfront Land</i> (NRAR, 2018) and <i>Policy and Guidelines for Fish Habitat Conservation and Management</i> (2013).

Issue	Recommended conditions
<ul style="list-style-type: none"> • ACEN identified that there is an area on the northern edge of the development footprint extending downstream along Huxleys Creek (including part of a neighbouring property R1a), where the development may increase the depth of the flooding in the 1% AEP scenario by 1 to 2 cm. In the 1% AEP scenario, this area will experience flooding at a depth of 500-750mm. • ACEN has identified that these offsite impacts can be avoided by providing a buffer around Huxleys Creek and not locating panels along either side of the creek. • The Department has recommended conditions of consent requiring the development to ensure the solar panels and ancillary infrastructure do not cause any increased water being diverted off the site or alter hydrology off site. • Parts of the site may be at risk of temporary minor flooding during high rainfall, which may pose a safety risk to onsite workers. ACEN has committed to developing a flood response plan to manage this risk and would be required to identify specific emergency exit routes to be used in the case of flood in their Emergency Plan. • The potential for adverse water quality impacts would be managed through a Soil and Water Management Plan and an Erosion and Sediment Control Plan. With the implementation of these measures the Department considers there would be limited impacts to surface water. • None of the government agencies consulted with raised any concerns in relation to the flood impacts of the development. As such, the Department considers the potential additional flood impacts associated with the development to be minor and acceptable. <p>Groundwater/Water Supply</p> <ul style="list-style-type: none"> • There is likely to be a slightly lower percentage of infiltration through the soil profile and into the groundwater with a greater surface runoff from the study area. Given the minor increase and that the location of groundwater dependant ecosystems (GDE) are primarily upstream of the study area, this change is likely to have a negligible impact on GDEs at the study area. • Although groundwater in the vicinity of drainage lines is mapped as vulnerable, the only infrastructure proposed in these areas are solar panels which are capable of being constructed to shallow depths to avoid potential impacts on groundwater supplies. • Acquisition of a water access licence to access groundwater bores is a likely option to supply water to the site. • The Water Group provided advice during Amendment Exhibition and in response to ACEN's amendment submissions report recommending that ACEN demonstrate water demand and water sources capable of meeting project demands (between 7.5 ML during operation, 139 ML for construction and 139 ML during decommissioning per year). In response, ACEN provided entitlement details of existing Water Access Licences (WAL34929 & WAL34924), confirming sufficient water entitlement to meet demands and that WAL owners are open to entering into an agreement with ACEN to secure supply water for the project. • Should use of bore water be required for the project, the proponent would be required to obtain a water supply work approval under the <i>Water Management Act 2000</i> through The Water Group. 	<ul style="list-style-type: none"> • Prepare a Soil and Water Management Plan in consultation with the Water Group. • The applicant is to notify the Department of the final water supply sources following detailed design and prior to the commencement of construction.

Issue	Recommended conditions
<ul style="list-style-type: none"> The Water Group have acknowledged the proponent's intended means of supplying water to the project and have no objections to the minor impacts on groundwater associated with development of the project development. Based on the above, the Department considers the potential minor impacts on groundwater acceptable and that the project would have a negligible impact on groundwater resources. The Department is also satisfied that the proponent has demonstrated that sufficient access to viable water supplies is available. Subject to the recommended conditions, the Department considers that the project would not result in significant impacts on water resources. <p>Fish habitat</p> <ul style="list-style-type: none"> ACEN has committed to carrying out the construction of waterway crossings in consultation with DPI Fisheries and in accordance with <i>Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings</i> (NSW Fisheries 2003) and the <i>Policy and Guidelines for Fish Habitat Conservation and Management</i> (Update 2013) The Department and DPI Fisheries are satisfied the project would result in minimal impact to fish habitat subject to the protection of buffer zone widths to riparian corridors and that waterway crossings incorporate best practice design features to maintain fish passage. 	
<p>Dust</p> <ul style="list-style-type: none"> Construction of the project involves earthworks for site preparation, vegetation clearance, trenching for cables and construction of access tracks. Other sources of dust would include vehicles travelling on unsealed roads and wind-blown emissions during operations. The Department is satisfied that dust generated during construction of the project would be managed via the use of water trucks and additional stabilising techniques, which ACEN has committed to, as well as developing a process for monitoring dust on-site and weather conditions, to alter management measures as required in a proactive and reactive manner. 	<ul style="list-style-type: none"> Monitor and minimise dust generated from the lifecycle of the project from construction, operation and decommissioning.
<p>Waste</p> <p>Waste Management</p> <ul style="list-style-type: none"> ACEN has identified waste treatment facilities capable of accepting most waste streams to be produced by the development within the Dubbo LGA. ACEN has advised that Dubbo Regional Council confirmed that the Whylandra Waste and Recycling Facility (EPL# 6058) is able and licensed to receive transportation and packaging waste, general domestic waste, green waste and spoil. Hazardous liquid waste and oils can be taken by numerous contractors based locally. 	<ul style="list-style-type: none"> Waste Management Plan to be updated with final types and quantities of waste streams, along with waste treatment facilities responsible for their treatment prior to construction. The updated Waste

Issue	Recommended conditions
<ul style="list-style-type: none"> The Department is satisfied that waste produced in association with the development is capable of being effectively managed, subject to formal arrangements being finalised prior to construction commencing. <p>Sewage</p> <ul style="list-style-type: none"> The project is to produce approximately 125 kilolitres of sewage waste daily during construction. ACEN intends to service the proposed accommodation camp with a pump-out sewerage system. A septic tank connected to the units and communal infrastructure, is to be emptied and transported to a treatment facility weekly at a minimum. It was noted that the liquid waste may be able to be taken by DRC's Sewer water treatment plant. The Department is satisfied that, subject to ACEN entering into an arrangement with a treatment facility with capacity to take the sewage produced on site, sewage is capable of being effectively managed. 	<p>Treatment plan containing the above details is to be provided to the Department for approval prior to commencement of construction.</p> <ul style="list-style-type: none"> A Wastewater Treatment Plan setting out details of treatment is to be submitted to the Department and approved prior to the commencement of construction.
<p>Noise</p> <ul style="list-style-type: none"> Public submissions expressed concern about the noise impacts of the project during construction and operation. Noise generated during construction, upgrading and decommissioning activities are predicted to be well below the 'highly noise affected' criterion of 75dB(A) in the EPA's <i>Interim Construction Noise Guideline</i> (the ICNG) at all non-associated residential receivers and construction is limited to daytime hours. Construction noise would also not exceed the noise management level of 45 dB(A) for all non-associated residential receivers. The Department has recommended conditions restricting works to standard construction hours (i.e. 7 am to 6 pm Monday to Friday, and 8 am to 1 pm Saturday), with no works permitted on Sundays or NSW public holidays. However, the Department acknowledges that there may be some instances where construction activities, may be required to occur outside of standard hours. Where these activities are inaudible at non-associated receivers, required for emergency or if agreed with the Planning Secretary, the Department has recommended conditions allowing these activities to be undertaken outside of standard hours. The operational noise levels are also predicted to be below the lowest intrusive criteria in the <i>NSW Noise Policy for Industry</i> (EPA, 2017) at all non-associated receivers through the implementation of nominated mitigation and management measures. ACEN has committed to developing a Noise Management Plan to implement noise mitigation work practices and has committed to the construction of a 6.5m high barrier positioned to reduce noise impacts on nearby sensitive receivers associated with the operational infrastructure area. The Department has recommended conditions requiring the applicant to meet operational noise requirements and undertake monitoring. 	<ul style="list-style-type: none"> Minimise noise generated by the construction, upgrading or decommissioning activities on site in accordance with best practice requirements outlined in the ICNG. Comply with the noise management levels as derived from the <i>NSW Noise Policy for Industry</i> (EPA, 2017) at any non-associated residence. Restrict construction hours to Monday to Friday, 7 am – 6 pm and Saturday, 8 am – 1 pm.

Issue	Recommended conditions
<ul style="list-style-type: none"> • Road traffic noise during construction and operation would comply with the relevant criteria in the EPA's <i>Road Noise Policy</i>. • Vibration impacts from construction works would not impact any surrounding non-associated receivers and no operation ground vibration sources were identified. • The Department is satisfied that construction and operational noise impacts would be limited and has recommended conditions requiring ACEN to minimise noise during the entire life cycle of the project. 	
Hazards and risks	
<ul style="list-style-type: none"> • The site is not located on bushfire prone land. ACEN prepared a bushfire impact assessment and would be required to comply with the RFS's <i>Planning for Bushfire Protection 2019</i>. • The Department considers that the bushfire risks can be suitably controlled through the implementation of standard fire management procedures and recommendations made by FRNSW and RFS, including: <ul style="list-style-type: none"> • measures including APZs in accordance with <i>Planning for Bushfire Protection 2019</i> • preparation of a Fire Safety Study in consultation with FRNSW • development and implementation of a comprehensive Emergency Plan. • ACEN undertook a preliminary risk screening in accordance with <i>State Environmental Planning Policy No. 33 – Hazardous and Offensive Development</i>. The screening concluded that the transport and storage of hazardous materials for the projects would not exceed the relevant risk screening thresholds and the project is not considered to be potentially hazardous. • ACEN committed to preparing a Bush Fire Management Plan, Fire Safety Plan and Emergency Response Plan for the project. • The project would comply with the <i>International Commission on Non-Ionizing Radiation Protection (ICNIRP)</i> guidelines for electric, magnetic and electromagnetic fields. • Subject to the recommended conditions, the Department, FRNSW and RFS are satisfied that risks associated with the project would be minimal. 	<ul style="list-style-type: none"> • The BESS must not exceed the proposed total capacity of 600 MW across the project site and must be installed in an arrangement consistent with the EIS. • Prepare a Fire Safety Study and an Emergency Plan for the development. • Ensure the project complies with the relevant asset protection requirements in the RFS's <i>Planning for Bushfire Protection 2019</i> and Standards for APZs. • All chemicals, fuels and oils to be stored in accordance with Australian Standards and EPA requirements.
Subdivision	
<ul style="list-style-type: none"> • ACEN requires subdivision for the project, with two options for subdivision nominated (option A – a 2 into 5 lot subdivision, Option B – a 1 into 2 lot subdivision). The final subdivision would be subject to the final location selected for the substation/BESS and detailed design. 	<ul style="list-style-type: none"> • Subdivide the proposed land in accordance with requirements of the EP&A Act, EP&A Regulation and the <i>Conveyancing Act 1919</i> (NSW).

Issue	Recommended conditions
<ul style="list-style-type: none"> • The proposed subdivision of the lots would be below the minimum lot size of 100 ha and prohibited under a strict reading of the Mid-Western LEP. Under Section 4.38(3) of the EP&A Act, development consent for the project can be granted despite the subdivision component of the application being prohibited by the Mid-Western LEP. • The Department considers that the subdivision should be approved as it: <ul style="list-style-type: none"> – is necessary for the operation of the substation, the battery and the ancillary facilities – would not result in any additional dwelling entitlements on the subdivided lots – is consistent with the key objectives of the RU1 zone as it would encourage diversity and primary industry enterprises and minimise conflict between land uses. 	
Community benefit	
<ul style="list-style-type: none"> • The Department considers that, in addition to its contribution to energy transition, the project would generate direct and indirect benefits to the local community, including: <ul style="list-style-type: none"> – up to 500 construction workers would be required during the 6-month peak construction period; – expenditure on accommodation and business in the local economy by workers who would reside in the area; and – the procurement of goods and services by ACEN and associated contractors. • The Department considers that the project would not result in any significant or widespread reduction in land values in areas surrounding the project. • As discussed above, the landowner would be able to continue agricultural practices on remainder of the site and ACEN intends to support sheep grazing within the development footprint concurrently with the operation of the solar farm. • Further, ACEN has reached an in-principle agreement with Mid-Western Regional Council to enter into a Voluntary Planning Agreement (VPA). The VPA consists of: <ul style="list-style-type: none"> – Payment of 1.5% of the project’s capital expenditure, paid through a series of instalments over the lifetime of the project. ACEN Australia and Council agree to discuss the payment mechanism prior to commencement of construction. • Noting the above, the Department considers that the project would have a positive socio-economic impact on the local community. 	<ul style="list-style-type: none"> • ACEN implement its offer to enter into a planning agreement with Council. • Prepare an Accommodation and Employment Strategy for the project in consultation with both Councils, with consideration to prioritising the employment of local workers.

Land Value

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| <ul style="list-style-type: none">• The Department considers that the project would not result in any significant or widespread reduction in land values in areas surrounding the project.• The Department notes that:<ul style="list-style-type: none">– the project is permissible with development consent under both State and local planning instruments;– a detailed assessment of the merits of the project has found that the project is unlikely to generate significant economic, environmental or social impacts;– the impacts of the project can be further minimised by imposing suitable conditions on the project, and requiring a range of standard mitigation measures, such as vegetation screening, to be implemented; and– the Department considers that the visual impacts of the project on the surrounding residences and road users would not be significant; and– the Land and Environment Court has ruled on several occasions that the assessment of the impacts of projects on individual property values is not generally a relevant consideration under the EP&A Act, unless the project would have significant and widespread economic impacts on the locality, which is not the case in this instance. | <ul style="list-style-type: none">• No specific conditions required |
|---|---|

Decommissioning and rehabilitation

- | | |
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| <ul style="list-style-type: none">• The operational life of a large-scale solar project is likely to be 30 years, however they have the potential to operate for a long period of time if solar panels are upgraded over time, which would be permitted under the recommended conditions of consent.• The <i>Large-Scale Solar Energy Guideline</i> identifies four key decommissioning and rehabilitation principles for circumstances where an applicant ceases operating a project, which are the removal of project infrastructure, returning the land to its pre-existing use, including rehabilitating and restoring the pre-existing LSC Class where previously used for agricultural purposes, and the owner/operator of the project should be responsible for the decommissioning and rehabilitation and this should be reflected in an agreement with the host landowner(s).• With the implementation of objective-based conditions and monitoring requirements, which are consistent with these key principles, the Department considers that the solar farm would be suitably decommissioned at the end of the project life, or within 18 months if operations cease unexpectedly, and that the site be appropriately rehabilitated. | <ul style="list-style-type: none">• Include rehabilitation objectives requiring the site to be rehabilitated within 18 months of cessation of operations. |
|--|---|

6 Evaluation

160. The Department has assessed the development application, EIS, Submissions Report, Amendment Report and additional information and has carefully considered:
- submissions received from members of the community
 - comments provided by both councils
 - advice received from State and local Government agencies.
161. The Department has also considered the objectives of the EP&A Act, including the Ecologically Sustainable Development principles, and relevant considerations under section 4.15(1) of the EP&A Act. The Department has given consideration to ACEN's evaluation of the project's merits against applicable statutory and strategic planning requirements.
162. The site is wholly located on land zoned RU1, where electricity generating works are permissible with consent. The site is located in the CWO REZ, an area traditionally associated with agricultural practices, with 22 non-associated residences located within 2 km of the development footprint. The site has good solar resources, direct access to the regional road network and would have good access to the electricity network via the proposed CWO REZ transmission line and proposed Merotherie Energy Hub.
163. The project has been designed to largely avoid key constraints, including amenity impacts to nearby non-associated residences, agricultural land, watercourses, remnant native vegetation and Aboriginal heritage sites. Any residual impacts would be relatively minor and can be managed through the recommended conditions of consent.
164. The project would not result in any significant reduction in the overall agricultural productivity of the region, and it would avoid all areas of BSAL. Following decommissioning, the site could return to agricultural land as the inherent agricultural capability of the land would not be affected in the long term. The Department considers that there would be no significant visual impacts on surrounding residences, due to distance from non-residences or intervening topography and vegetation providing screening, setbacks from solar arrays and the public road network.
165. To address the residual impacts including traffic and transport, surface water, flooding, erosion and hazards, the Department has recommended a range of stringent conditions, developed in consultation with agencies and both councils, to ensure these impacts are effectively minimised, managed or offset.
166. The Department considered the submissions made through the exhibition of the project and the issues raised by the community and agencies during consultation. These matters have been addressed through changes to the project and the recommended conditions of consent.

167. Importantly, the project would assist in transitioning the electricity sector from coal and gas-fired power stations to low emissions sources and is consistent with the goals of the NSW's *Climate Change Policy Framework*, the *Net Zero Plan Stage 1: 2020 – 2030*. It would have a generating capacity of 600 MW of clean electricity, which is enough to power approximately 229,154 homes, and 600 MW of energy storage to dispatch energy to the grid when the energy generation from renewable resources is limited.
168. The Department considers that the project achieves an appropriate balance between maximising the efficiency of the solar resource development and minimising the potential impacts on surrounding land users and the environment. Through job creation and capital investment and a planning agreement with Mid-Western Regional Council, the project would also stimulate economic investment in renewable energy and provide flow-on benefits to the local community.
169. On balance, the Department considers that the project is in the public interest and is approvable, subject to the recommended conditions of consent (see **Appendix G**).
170. This assessment report is hereby presented to the Commission to determine the application.

Prepared by:

Nestor Tsambos, Team Leader

Cameron Ashe, Environmental Assessment Officer

Recommended by:



17/5/24



17/5/2024

Iwan Davies

Director

Energy Assessments

Clay Preshaw

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Energy, Resources and Industry

Appendices

Appendix A – Environmental Impact Statement

Appendix B – Submissions

Appendix C - Agency advice

Appendix D - Submissions Report

Appendix E - Amendment Report

Appendix F - Additional Information

Appendix G – Recommended Development Consent

Appendices A to G available at: <https://www.planningportal.nsw.gov.au/major-projects/projects/birriwa-solar-farm>

Appendix H – Consideration of community views

The Department exhibited the EIS for the project from 14 October 2022 until 10 November 2022 and received 89 unique submissions from the community (85 objections and 4 comments) including two objections from special interest groups.

The Department consulted with government agencies, Warrumbungle Shire Council and Mid-Western Regional Council throughout the assessment process.

The key issues raised by the community (including in public submissions) and considered in the Department’s Assessment Report include land use compatibility, visual impacts on surrounding landowners, cumulative impacts of projects in the CWO REZ, impacts on the local road network and impacts on biodiversity.

Other issues are addressed in detail in the Department’s Assessment Report.

Issue	Consideration
Compatibility of the proposed land use	Assessment <ul style="list-style-type: none">Siting of the project has avoided important agricultural land with the project area being mapped as Class 5 and 7 under the <i>Land and Soil Capability Mapping for NSW</i> (OEH 2017), indicating agricultural uses are largely restricted to low-moderate impact uses such as grazing

Issue	Consideration
<ul style="list-style-type: none"> • Loss of agricultural land • Impacts on neighbouring agricultural activities (including weeds, pests, soil and erosion) 	<p>and occasional cultivation for fodder crops. The cumulative loss of agricultural land for this project and other approved solar projects in the region...</p> <ul style="list-style-type: none"> • The site is intended to continue to be used for grazing purposes during operation and is to be returned to agricultural use following decommissioning. Accordingly, the Department is satisfied that the project would not result in any significant reduction in agricultural productivity of the region or of local agribusiness. • Agricultural operations of adjoining landholders would not be impacted as weeds would be controlled through strict land management measures, erosion and sediment risks can be managed effectively by implementing a control plan, water pollution is not permitted, and noise and dust would not be significant. • The site is located on land zoned RU1- Primary Production under the Mid-Western Regional LEP and land zoned RU1 – Primary Production and SP2 Infrastructure (Classified Road) under the Warrumbungle LEP. As such, the project is permitted with consent within each respective zone, through the Transport and Infrastructure SEPP. • The project is consistent with the Central West and Orana Regional Plan. • The site is located in the Central West and Orana REZ, which was declared due to its abundant solar resources and direct access to the electricity grid at a location with available network capacity. <p>Recommended Conditions:</p> <ul style="list-style-type: none"> • Restore land capability to pre-existing use. • Restore the groundcover of the site following construction or upgrading, maintain the groundcover with appropriate perennial species and manage weeds within the groundcover. • Minimise any soil erosion associated with the construction, upgrading or decommissioning of the development. • Ensure that the development does not cause any water pollution, as defined under Section 120 of the <i>Protection of the Environment Operations Act 1997</i> (POEO Act). • Ensure that noise associated with the construction, operation, upgrading and decommissioning of the project complies with the relevant noise criteria. • Minimise dust generated by the development.
<p>Visual Amenity</p> <ul style="list-style-type: none"> • Impacts on landscape views and rural character • Glint and glare impacts 	<p>Assessment</p> <ul style="list-style-type: none"> • The closest non-associated residence (R5) is located approximately 250m south of the development footprint. • The project has been designed to minimise potential impacts on surrounding receivers and has been amended to increase the setback of solar panels from the nearest receiver. • Of the 22 non-associated residences within 2 km of the development footprint, the visual reports concluded that all 22 receivers would experience low to nil visual impacts. • ACEN has committed to establishing and maintaining a vegetation buffer (landscape screening) as described in the EIS and shown in Appendix 1 prior to commencing operations.

Issue	Consideration
	<ul style="list-style-type: none"> The potential for glint and glare at nearby receptors and the public road network is limited by the existing established intervening vegetation and the proposed screen planting. <p>Recommended Conditions:</p> <ul style="list-style-type: none"> Minimise and mitigate the off-site visual impacts of the development, including the potential for any glare or reflection. Establish and maintain a vegetation buffer to minimise views from nearby receivers. Implement the mitigation measures (vegetation screening and on-site boundary planting) to limit visual impacts to non-associated receivers within the project locality. Ensure the visual appearance of all ancillary infrastructure (including paint colours) blends in with the surrounding landscape, where reasonable and feasible.
<p>Social/ Accommodation Impacts</p> <ul style="list-style-type: none"> Amenity impacts Accommodation camp servicing Cumulative impacts 	<p>Assessment</p> <ul style="list-style-type: none"> ACEN's SIA considered impacts of the project locally and regionally. Local impacts relate to local social infrastructure and services, workforce, business and industry, housing and accommodation, and community health and wellbeing. ACEN proposed an Accommodation Camp through the Amendment Report to address potential impacts on accommodation availability in the area. ACEN has demonstrated means of servicing the accommodation camp in relation to water, sewage, waste, electricity and medical services. The Department is satisfied that the proposed accommodation camp is capable of being effectively serviced and that it would be a suitable means of mitigating potential increased demand for housing in the region. ACEN has undertaken a cumulative impact assessment of the proposed development (including visual, traffic, servicing, workforce, amenity and housing). The accommodation camp would substantially reduce the potential social cumulative impacts. The Department is satisfied that the project has been designed to minimise opportunities for potential cumulative social impacts. <p>Recommended Conditions</p> <ul style="list-style-type: none"> Prepare an Accommodation and Employment Strategy for the project in consultation with both councils for approval by the Planning Secretary prior to commencement of construction. Prepare an Accommodation Camp Management Plan in consultation with both councils prior to commencing construction of the accommodation camp. Ensure utilities at the accommodation camp, including water, wastewater, waste and electricity, are designed and located in accordance with Mid-Western Regional Council specifications.
<p>Biodiversity Impacts</p> <ul style="list-style-type: none"> Wildlife and vegetation impacts 	<p>Assessment</p> <ul style="list-style-type: none"> The project site is characterised by cleared farmland, and of the 1,197 ha development footprint would clear 405.71 ha of native vegetation, the vast majority of which being low biodiversity value land which would not require offsets. ACEN designed the project to avoid disturbance of native vegetation where practicable.

Issue	Consideration
<ul style="list-style-type: none"> Erosion and soil impacts 	<ul style="list-style-type: none"> EMM undertook an assessment of three entities against the SAI principles. BCS, and accordingly the Department, are satisfied that the project would not result in a SAI to any biodiversity values. The impacts on native vegetation would generate 271 ecosystem credits and 244 species under the BC Act which would be retired through the NSW Biodiversity Offset Scheme. Overall, the Department considers that the project is unlikely to result in a significant impact on biodiversity values. <p>Recommended Conditions:</p> <ul style="list-style-type: none"> ACEN must not clear any native vegetation or fauna habitat located outside the approved disturbance areas. Retire the applicable biodiversity offset credits in accordance with the NSW Biodiversity Offsets Scheme. Prepare and implement a Biodiversity Management Plan in consultation with BCS, including measures to protect and manage vegetation and fauna habitat outside the approved disturbance area.
<p>Traffic and Transport Impacts</p>	<p>Assessment</p> <ul style="list-style-type: none"> The traffic impacts associated with the development have been referred to both Councils and TfNSW for advice. ACEN has worked with TfNSW and has responded to matters raised by both Councils in preparing suitable road upgrades and in detailing suitable management of traffic generation associated with the development. Both Councils have provided input in draft conditions, with the proposed impacts and road upgrades considered acceptable. Proposed road upgrades have been designed in consideration of cumulative transport impacts associated with further projects in the CWO REZ. <p>Recommended Conditions:</p> <ul style="list-style-type: none"> Undertake the relevant road upgrades prior to the commencement of construction. Restrict project related vehicles to the use of the approved access route only. Restrict the number of vehicles during construction, upgrading and decommissioning to the peak volumes identified in the EIS. Provide a revised strategic design for the Castlereagh Highway / Barneys Reef Road intersection to TfNSW. Ensure the length of vehicles (excluding heavy vehicles requiring escort) does not exceed 26 m. Prepare and implement a Transport Management Plan (TMP) in consultation with TfNSW and both councils, including provisions for dilapidation surveys, and details of the measures that would be implemented to address road safety, including safety for the cyclists along the Central West Cycle Trail (CWCT).

Appendix I - Statutory considerations

Objects of the EP&A Act

In line with the requirements of Section 4.15 of the EP&A Act, the Department's assessment of the project has given detailed consideration to a number of statutory requirements. These include:

- the objects found in Section 1.3 of the EP&A Act; and
- the matters listed under Section 4.15(1) of the EP&A Act, including applicable environmental planning instruments and regulations.

The Department has considered all these matters in its assessment of the project and has provided a summary of this assessment below.

Summary

Objects of the EP&A Act

The objects of most relevance to the Consent Authority's decision on whether to approve the project are found in Section 1.3(a), (b), (c), (e) and (f) of the EP&A Act.

The Department considers the project encourages the proper development of natural resources (Object 1.3(a)) and the promotion of orderly and economic use of land (Object 1.3(c)), particularly as the project:

- is a permissible land use on the subject land
- is located in a logical location for efficient solar energy development
- is able to be managed such that the impacts of the project could be adequately minimised, managed, or at least compensated for, to an acceptable standard
- would contribute to a more diverse local industry, thereby supporting the local economy and community
- would not fragment or alienate resource lands in the LGA
- is consistent with the goals of NSW's *Climate Change Policy Framework* and *Net Zero Plan Stage 1: 2020 – 2030* and would assist in meeting Australia's renewable energy targets whilst reducing greenhouse gas emissions.

The Department has considered the encouragement of Ecologically Sustainable Development (ESD) (Object 1.3 (b)) in its assessment of the project. This assessment integrates all significant socio-economic and environmental considerations and seeks to avoid any potential serious or irreversible environmental damage, based on an assessment of risk-weighted consequences.

In addition, the Department considers that an appropriately designed SSD solar farm, in itself, is consistent with many of the principles of ESD. ACEN has also considered the project against the principles of ESD. Following its consideration, the Department considers that the project can be carried out in a manner that is consistent with the principles of ESD.

Consideration of environmental protection (Object 1.3(e)) is provided in **section 5.6** of this report. Following its consideration, the Department considers that the project could be undertaken in a manner that would at least maintain the biodiversity values of the locality over the medium to long term and would not significantly impact threatened species and ecological communities of the locality. The Department is also satisfied that any residual biodiversity impacts could be managed and/or mitigated by imposing appropriate conditions and retiring the required biodiversity offset credits.

Summary

Consideration of the sustainable management of built and cultural heritage (Object 1.3(f)) is also provided in **section 5.6** of this report. Following its consideration, the Department considers the project would not significantly impact the built or cultural heritage of the locality, and any residual impacts can be managed and/or mitigated by imposing appropriate conditions.

State significant development

Under Section 4.36 of the EP&A Act the project is considered a State Significant Development.

Under Section 4.5(a) of the EP&A Act and Clause 1(b) of Section 2.7 of the Planning Systems SEPP, the Independent Planning Commission is the consent authority for the development as the project received more than 50 unique public submissions by way of objection.

Environmental Planning Instruments (EPIs)

The *Mid-Western Regional Local Environmental Plan 2012* (Mid-Western LEP) and *Warrumbungle Local Environmental Plan 2013* (Warrumbungle LEP) apply and are discussed in **sections 3.3** and **5.2** of this report, particularly regarding permissibility and land use zoning. As discussed in **section 5.2** while the project would be prohibited under the Warrumbungle LEP within the RU1 zone, it is permissible under the Infrastructure SEPP. In accordance with the Infrastructure SEPP, the Department has given written notice of the project to Transgrid and TfNSW.

ACEN completed a preliminary risk screening in accordance with *SEPP No. 33 – Hazardous and Offensive Development* and confirmed the project was not categorised as potentially hazardous or potentially offensive development. The Department has also considered the provisions of *SEPP No. 55 – Remediation of Land*. The site is not listed as a contaminated site in the NSW EPA Contaminated Land Record and list of NSW contaminated sites. Given the site has historically been used for agricultural uses, the Department considers the site would be suitable for the proposed development.