

Submissions Report

COLEAMBALLY SOLAR FARM



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1 INTRODUCTION

1.1 BACKGROUND

The Coleambally Solar Farm proposal (the 'proposal'), for a 150 megawatt solar farm, would generate approximately 380,000 MWh of electricity per year. The proposal involves the construction and operation of a solar photovoltaic array over an area up to 570 hectares and includes associated infrastructure, maintenance facilities, access tracks, an underground powerline to connect to the nearby substation and a road intersection upgrade. The proposal is classified as State Significant Development under the NSW *Environmental Planning and Assessment Act 1979* and requires consent from the NSW Minister for Planning.

Neoen is an Independent Power Producer (IPP) specialising in renewable energy projects including solar, wind and biomass. The company's headquarters are in Paris (France), with an experienced staff of around 100 employees. Neoen has reached an industrial maturity with 1GW of assets either in operation or construction. The company is scaling up its portfolio of projects, both inside and outside France, with the goal of reaching a capacity of 3 GW by 2020. They have a target of 1 GW of projects in the construction phase in Australia by 2020.

An Environmental Impact Statement (EIS), describing the proposal and assessing its potential environmental impacts, was prepared by NGH Environmental and submitted to the NSW Department of Planning and Environment. The EIS was placed on public exhibition between 5 May to 3 June 2017.

Key environmental issues, based on the requirements of the Secretary's Environmental Assessment Requirements (SEARs) for the preparation of the EIS, included:

- Biodiversity
- Aboriginal cultural heritage
- Visual impacts
- Land use
- Noise impacts

These issues were investigated via specialist assessments. Lower risk issues were investigated primarily by desktop assessment.

1.2 PURPOSE OF THIS REPORT

NGH Environmental has prepared this submissions report on behalf of Neoen in response to the Department of Planning and Environment's letter dated 14 June 2017 and to fulfil the requirements of Section 85A of the *Environmental Planning and Assessment Regulation 2000*. The purpose of the Submissions Report is to:

- Consider and respond to the issues raised in the public and agency submissions for the proposal.
- Describe any changes to the proposal, including a revised set of proposed mitigation measures.

1.3 PROPOSAL SUMMARY

Site location

The proposed Coleambally Solar Farm is located about five kilometres north east of Coleambally in NSW within the Murrumbidgee Local Government Area (LGA) as shown in Figure 1-1. It is proposed to access the site from the north of the proposal area by Ercildoune Road. The proposed solar farm would connect to the existing 132 kilovolt (kV) TransGrid substation located directly across Ercildoune Road immediately north of the proposal area. A minor extension to the substation would also be needed to accommodate infrastructure for the solar farm connection.

Key components of the proposal

The Coleambally Solar Farm proposal area covers approximately 570 hectares (ha) of land. Key development and infrastructure components are illustrated in Figure 1-2 and would include:

- Solar arrays, PV boxes or skids.
- Potential battery storage.
- Delivery station and solar substation.
- Associated above or underground cabling.
- Underground connection to TransGrid substation and extension to substation.
- Ancillary facilities.
- New proposal area access point from Ercildoune Road and associated road upgrades.
- Possible new access point from Kook Road for solar substation maintenance purposes only.
- Construction of bridges across Tubbo irrigation channel and central drainage channel.
- Construction of internal gravel access tracks.
- Possible irrigation drainage channel relocation, subject to final design.
- Subdivision of land.
- Perimeter security fencing.

Detailed design would allow for avoidance of sensitive features on the site. The proposed native vegetation buffer would be established post-construction, to minimise visual impacts in specific locations.

Ground disturbance would be limited to:

- The installation of the piles supporting the solar panels, which would be driven or screwed into the ground.
- Construction of internal gravel access tracks and access bridges.
- Establishment of PV skids or boxes, delivery station and solar substation.
- Trenching and possible boring for the installation of cables.
- Establishment of staff amenities and offices.
- Construction of parking area.
- Construction of perimeter security fencing.
- Trenching and boring of underground transmission line.
- Substation extension.
- Establishment of battery storage if carried out.
- Modification or relocation of irrigation drainage channel if carried out.
- Source of soil material for substation extension from existing borrow pit located within the Coleambally substation site.

The following construction ancillary facilities would be located within the proposal area:

- Material laydown areas.
- Temporary construction site offices.
- Temporary car and bus parking areas for construction workers transportation. Once the solar farm has been commissioned a small car park would remain for the minimal staff required and occasional visitors.
- Staff amenities. Once constructed, the solar farm would be monitored and operated remotely and would therefore require a minimum number of maintenance personnel to be onsite.
- Parking for staff and visitors.

These facilities would be designed in line with the relevant Australian standards.

Staff amenities would be designed to accommodate the number of workers at the peak of the construction period and would include:

- Car park.
- Sanitary modules with septic tank.
- Changing rooms.
- Administrative office.
- Undercover storage area.
- Muster point in case of emergency.
- Genset for electrical supply.

It is noted that the location of the ancillary facilities on the proposed infrastructure plan are indicative only and final locations would be determined at the detailed design phase.

The Coleambally Solar Farm would produce an estimated 380,000 MWh/year of renewable electricity and supply over 11,000 GWh over its life. The construction phase of the project would be 9 to 12 months with a capital cost of approximately \$210 million. The proposal is expected to have a 30 year operating life.

For more detailed information of the proposed solar farm components and ancillary facilities refer to Section 3 of the EIS.

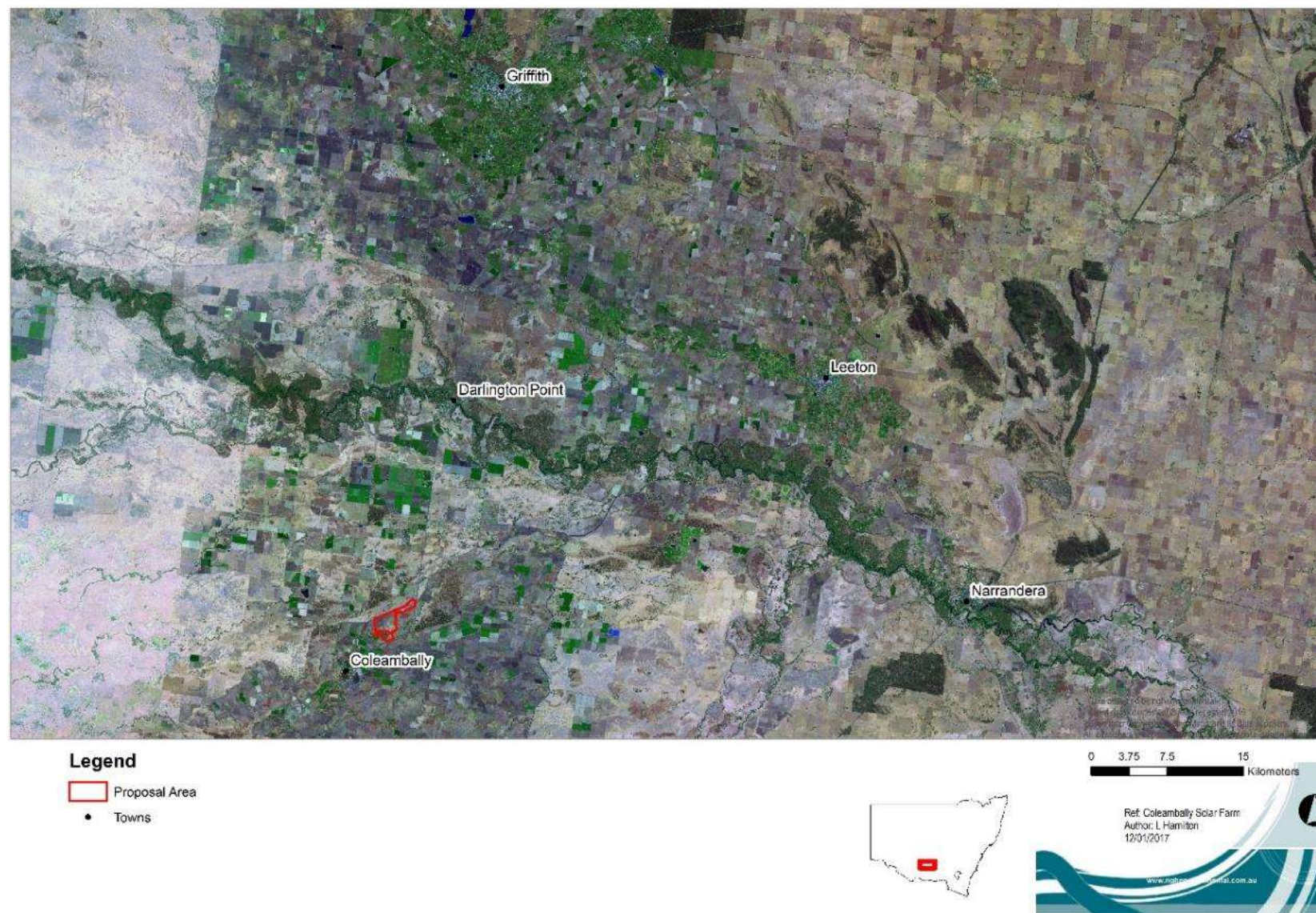


Figure 1-1 Location of the proposal

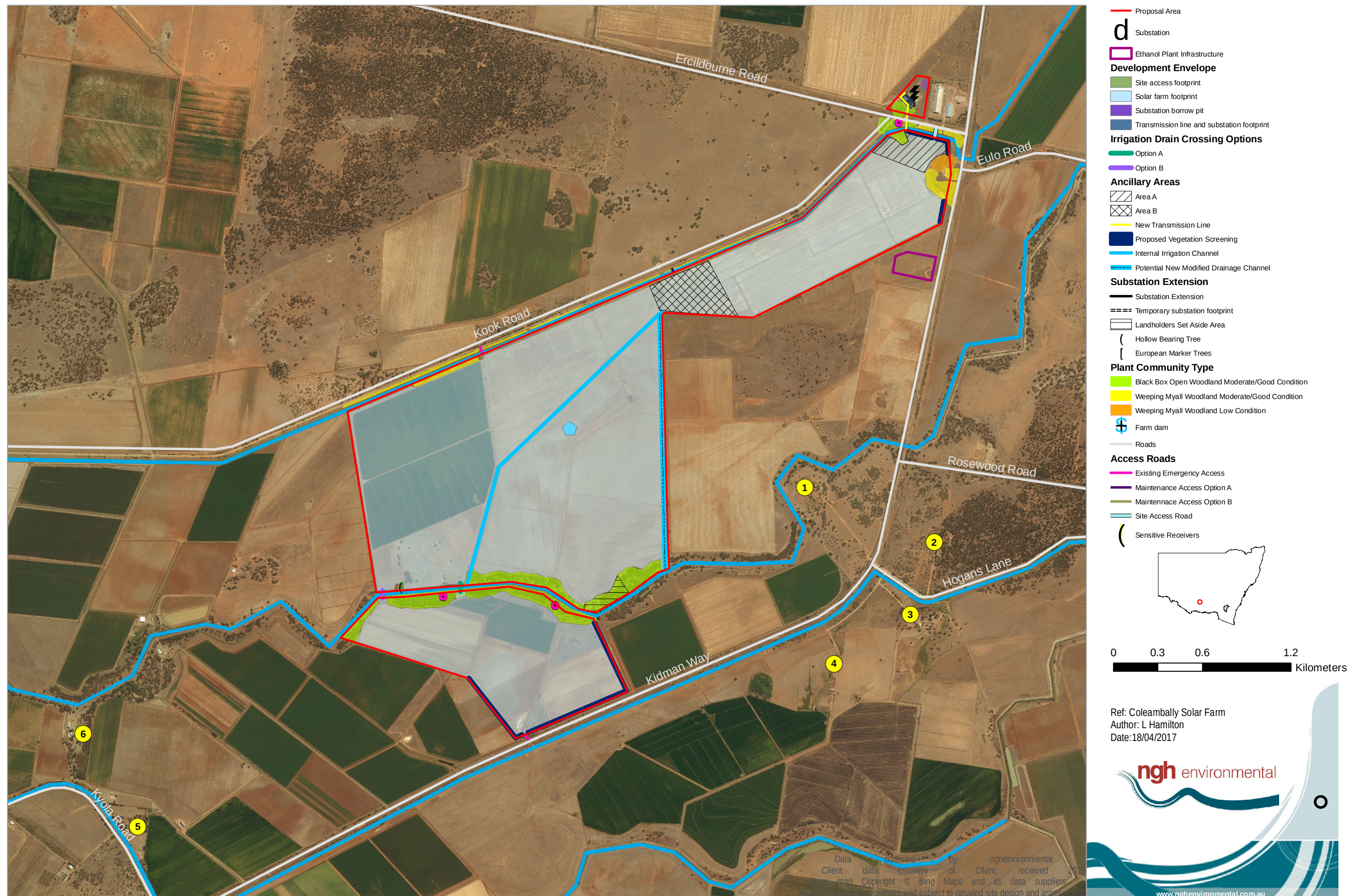


Figure 1-2 Proposed site layout

Indicative timeline

An indicative timeline for the proposal is outlined in Table 1-1.

Table 1-1 Indicative timeline.

Phase	Approximate commencement	Approximate duration
Construction	December 2017 (early works in September 2017)	Nine to 12 months
Commissioning	August 2018	One month
Operation	September 2018	About 30 years
Decommissioning	2047	Six months

1.4 EXHIBITION PERIOD AND LOCATION

The EIS was placed on public exhibition for a period of 4 weeks from the 5 May to 3 June 2017. It was available on-line at http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8208.

Hard copies were available at the following locations:

- Department of Planning and Environment: Information Centre
- Murrumbidgee Council: 39 Brolga Place, Coleambally
- Nature Conservation Council: 14/338 Pitt Street, Sydney

In addition to DPE's formal exhibition process, Neoen carried out the following community consultation:

- Provided notification of the exhibition period on its Coleambally Solar Farm website.
- Sent emails to adjacent neighbours where contact details had been provided as part of previous consultation.

Murrumbidgee Council also provided an update on its social media page.

1.5 PROJECT BENEFITS

Key benefits of the proposal include:

- The Coleambally Solar Farm would generate approximately 380,000 megawatt hours (MWh) of renewable electricity per year.
- Based on an emission factor of 0.87 kg CO₂-e/kWh (for NSW and ACT) (DIICCS RTE 2013) the proposed solar energy facility would displace more than 300,000 tonnes of carbon dioxide (CO₂) or greenhouse gas emissions per year.
- The proposed solar energy facility could supply enough power each year to service over 52,000 average New South Wales households (ACIL Allen Consulting, 2015).
- A solar energy facility that displaces over 300,000 tonnes of CO₂ per annum is the equivalent of taking approximately 90,000 cars off the road each year, based on an average car in NSW travelling 14,100 km per year (DIT 2011).

1.6 PROJECT JUSTIFICATION

The proposed Coleambally Solar Farm is justified in terms of reducing Australia's GHG emissions and meeting future energy demands. It would contribute to Australia's renewable energy targets and support a global reduction in GHG emissions. It would also contribute to economic development in Coleambally and surrounding region.

The proposal area is considered to be suitable for the proposal given:

- It is located within close proximity to existing electricity infrastructure, being the Coleambally Substation.
- The land has been heavily disturbed from past and current agricultural activities.
- Given the location, site attributes and the heavy disturbance of the land, the proposal would have low impacts on the environment.
- The proposal area is not subject to land hazards such as flooding, bush fire and is not known to hold land contamination.
- The proposal is not likely to generate land use conflicts with surrounding land uses.
- The community have provided support for the proposal.

2 CONSIDERATION OF SUBMISSIONS

2.1 RESPONSES RECEIVED

During the exhibition period, the Department of Planning and Environment received submissions from a total of nine agencies and two individual members of the public for the proposal. The submissions are provided in full in Appendix B and are summarised in the following sections.

2.2 PROPONENT'S RESPONSE TO COMMUNITY SUBMISSIONS

Submissions from individual members of the public have been paraphrased and addressed in the following sections.

Individual member of the public – Number 1

Comments	Proponent's response
Eagle Energy owns land adjacent to the proposed development. The proposed development involves Lot 78 DP750896. A Part 3A approval currently exists for a large ethanol and dairy, which includes Lot 78 DP750896. As Eagle Energy hold an existing approval on Lot 78 we object to the proposed solar farm on this land.	Lot 78 in DP750896 (Lot 78) is part of the site for Neoen's proposed Coleambally Solar Farm. Neoen has entered into an option deed with the landholder of Lot 78, to lease the land for the purpose of the proposed solar farm. In the event Neoen's development application is approved, Neoen intends to exercise this option and commence the development. Although Eagle Energy's project approval MP 06_0020 for the Four Arrows ethanol and dairy project also includes Lot 78, Neoen is aware that Eagle Energy has not obtained the landholder's consent to occupy and construct the ethanol and dairy project on Lot 78. Neoen notes that project approval MP 06_0020 does not of itself give Eagle Energy rights to occupy and carry out development on Lot 78 and there is nothing to prevent Neoen from including Lot 78 in its development application for Coleambally Solar Farm.

Individual member of the public – Number 2

Comments	Proponent's response
I object to the proposed Coleambally solar farm on the grounds of its likely adverse impact on NSW electricity prices and electricity security for NSW. Electricity prices I have previously brought to the attention of the Department and the PAC the way in which intermittent electricity generators subsidised under the LRET make on-demand baseload thermal plants uneconomic and drive them out of the electricity system creating electricity insecurity (since by definition intermittent power generators such as this proposal do not produce power 24/7) and forcing up electricity prices damaging the whole NSW economy, destroying jobs, destroying assets and harming millions of NSW citizens, particularly the least affluent.	Solar farms use sunshine to generate electricity. This fuel is available at no cost, which means the marginal cost of running a solar farm is virtually negligible. As a result, there is incentive for solar projects to bid on the wholesale electricity market at a very low price, to ensure their energy will be dispatched on the grid. This generally leads to lower wholesale electricity prices which ultimately benefit the end consumer. Expert reports, such as the May 2014 Roam Consulting report (Roam Consulting, 2014), show that the Renewable Energy Target leads to lower electricity prices in the medium to long term. A number of Australian coal plants are getting close to or have exceeded their expected lifespans, leading to more risks of technical issues, or the need for closure. Concerns about the environmental and health impacts associated with the operation of these coal fueled plants is also contributing to their closure. Since 2012, a total of nine coal fired power stations across Australia have closed with the most recent being the Hazelwood Power Station in Victoria. The following coal fired power stations have closed in NSW during this period: • Munmorah Power Station on the Central Coast (in 2012) • Wallerawang Power Station near Lithgow (in 2014) • Redbank Power Station near Singleton (in 2014) Retired coal capacity means that the national electricity grid must connect new generators to meet the demand of the Australian people in the years to come. Taking into account economics as well as environmental impact, renewable energy, and solar energy in particular, has a major role to play in providing a long-term alternative to coal power stations. It is considered that no changes to the proposal or EIS is required in response to this submission.
Electricity security I bring to your attention the recent articles by Robert Gottlieb in The Australian (April 20th and 21st 2017) in which, after consulting power engineers, he forecasts 'If we have a "normal" summer in 2017-18 in our two largest cities it is absolutely certain we will have blackouts covering 10 to 15 days'.	Simultaneous to the planning approval process, Neoen is going through a thorough process with Essential Energy and the Australian Energy Market Operator (AEMO) to ensure that the design of the solar farm meets all required grid standards. In NSW, risk to electricity security most commonly occurs during periods of heatwaves when electricity consumption increases due to the use of air

The Department is already culpable in producing this situation. Approving more intermittent power generators will cause even greater long term harm to the NSW. It will also impose additional costs on NSW taxpayers when the NSW Government is forced to pay compensation upon rescinding such approvals.

This proposal needs to be entirely rejected as nothing more than vandalism against the State of NSW and its citizens.

conditioners and fans increases. The availability of the sun during these periods of heatwaves is generally considered to be very high. The availability of solar farms during these periods is therefore considered a key method of reducing the risk of outages. The reason for this is that solar farms are likely to be generating electricity at close to capacity during these periods due to the increased availability of the sun.

Currently, large-scale solar plants represent less than one per cent of Australia's electricity generation which is only a fraction of what could be achieved due to suitable operating conditions available in many locations around Australia. Major research organisations such as the CSIRO and Australian National University, for example, believe that one hundred percent renewable energy future is technically achievable, with storage systems and smart grids expected to play a major role in allowing very high renewable energy penetration.

It is considered that no changes to the proposal or EIS is required in response to this submission.

2.3 PROPONENT'S RESPONSE TO GOVERNMENT AGENCY SUBMISSIONS

Agency submissions have been paraphrased and addressed in the following sections.

Office of Environmental and Heritage (OEH) & OEH Heritage Division

Comment	Response
Aboriginal heritage	
The Coleambally Solar Farm Aboriginal Cultural Heritage Assessment (ACHA) is consistent with the requirements identified by the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales. OEH support the recommendations outlined in Section 9 however consider amendment to the Heritage Unexpected Finds Protocol is required to ensure compliance with legislation in place to protect ACH in NSW and that no additional harm occurs to any ACH should it be encountered during works associated with this proposal.	The proponent supports comments made by OEH. The requested condition of development consent has been incorporated into existing mitigation measures AH1 and AH2, as detailed in Section 3 of this Submissions Report.
Historic heritage	
The Coleambally Solar Farm ACHA identified 3 European survey marker trees within areas of remnant vegetation across the subject area however	Section 7.9.3 of the EIS identified that there would be no impact on the marker trees.

Comment	Response
provides insufficient detail relating to consultation with the relevant authority, consideration of potential impacts and appropriate management measures. OEH requests forwarding the EIS and providing supporting information (including ACHA) to OEH's Heritage Division directly at heritage@heritage.nsw.gov.au and seek formal comment in regards to the European culturally modified trees.	To further minimise the potential for impact, a mitigation measure was included in the EIS to protect the trees (HH1). As requested, a copy of the EIS and ACHA have been forwarded to OEH's Heritage Division for comment. OEH Heritage Division responded with the comments provided in the next row.
Heritage Division The Heritage Division considers that appropriate mitigation measures would include the following: • An Archival Recording for the three European marker trees. • Avoidance by future works. • Unexpected finds protocol to cover the situation of any historical archaeological 'relics' being discovered in the project area.	The proponent does not object to the recommended conditions of consent. A mitigation measure requiring an Archival Recording has been included in Section 3 of this Submissions Report. A mitigation measure has also been included requiring avoidance of the trees by future works. The requirement for an unexpected finds protocol is already included in Section 3 (HH2), this has been updated to incorporate the terms used by the OEH Heritage Division.
Biodiversity	
Biodiversity Offset Strategy A BOS should be submitted with the BAR, and include assessment of the number and type of credits that may be created at the offset site (FBA Section 12, page 47).	A preliminary Biodiversity Offset Strategy has been added to Section 8 of the BAR. This strategy demonstrates the proposal area's ability to meet offset requirements. The proponent welcomes OEH's support of a process that allows the approval to proceed with a requirement to undertake a survey for three threatened flora species before construction commences and refinement of the offset calculations if required. A mitigation measure (BD18) recommended by OEH has been included in Section 3 of this Submissions Report requiring a survey prior to the finalisation of the final credit profile and Biodiversity Offset Strategy.

Comment	Response
Data Provision OEH prefers that all floristic data is entered by the surveyor into the VIS Flora survey module of BIONET. The FBA reporting requirements specify that plot and transect field data be provided as copies of field data sheets and MS Excel spreadsheets.	Field Data Sheets have been provided in Appendix F of the BAR and have been emailed to OEH (planning.matters@environment.nsw.gov.au).
Previous Vegetation Clearance Details of the previously approved native vegetation clearance has not been provided.	Previous Vegetation Clearance approvals obtained by the landholder have been provided to OEH as requested. Given the clearing was carried out by the landholder as part of his farming operation, it is considered that previous clearing should not form part of the assessment of the proposed development. The BAR includes consideration of existing offsets and land set-aside under the NV Act (see Figure 3-7 of the BAR).
BAR There are a number of inconsistencies within the EIS, BAR and Credit Calculator.	The BAR and EIS have been updated to address inconsistencies, including: • The correct landscape value score in the BAR. • The correct PCTs in the credit calculator and BAR. • The number of hollow bearing trees to be removed have been clarified. • Native over-storey cover has been correctly entered in the credit calculator. • The BAR has been amended to state the threatened Black Falcon was recorded on the proposal site. • The BAR has been updated to represent how EEC will be delineated on the site. • Credit calculator inconsistencies have been addressed.
Section 6 Avoid and Minimise Impacts <u>Perimeter Security Fence</u> It is recommended construction activities and storage of materials for boundary fencing should be wholly contained within the proposal site. Disturbance to road reserves other than access points identified in the EIS must not occur.	This change is supported and has been incorporated into the mitigation measures in Section 6 of the BAR, Sections 6.2 and 8.2 of the EIS and Section 4 of this Submissions Report.
Section 6. Avoid and minimise impacts. <u>Table 6-1. Direct Impacts</u>	This change is supported and has been incorporated into the mitigation measures in Section 6 of the BAR,

Comment	Response
It is recommended where trees are to be removed they should be used to provide additional habitat on site by placing them with remnant vegetation.	Sections 6.2 and 8.2 of the EIS and Section 3 of this Submissions Report.
Section 6. Avoid and minimise impacts <u>Table 6-1 Direct Impacts</u> It is recommended that no removal of trees with hollows is to occur during spring to early summer to avoid the main breeding period of hollow-dependent fauna.	This change is supported and has been incorporated into the mitigation measures in Section 6 of the BAR and Sections 6.2 and 8.2 of the EIS. Mitigation measure BD6 in Section 3 of this Submissions Report has been included to specify when hollow bearing trees are not to be removed.
Section 6. Avoid and minimise impacts <u>Table 6 -1 Direct Impacts</u> It is not clear why barb wire fencing is required. It is recommended that plain wire fencing be used for the perimeter fencing, in particular near screen plantings and remnant vegetation.	The proponent prefers the use of a single strand of barbed wire on the perimeter fencing for security and public safety purposes. The proposed fencing is not very high and requires barbed wire to prevent unlawful access to the solar farm. Security fencing is required to protect the infrastructure and ensure security of electricity supply. The following mitigation measure is proposed and has been included in Section 3 of this Submissions Report. "Plain wire is to be used on security fencing where practicable and where it meets safety and security requirements of the solar farm."
Section 6. Avoid and minimise impacts <u>Table 6 -2 Indirect Impacts</u> No responsibility has been assigned for training/enforcement of site speed limits to minimise fauna strikes.	The BAR has been updated to address this matter. Mitigation measure BD16 has been added to Section 3 of this Submissions Report.
Section 6. Avoid and minimise impacts <u>Table 6 -2 Indirect Impacts</u> No measures have been given to avoid and minimise the impacts perimeter fencing potentially altering the movements of fauna through the landscape.	Perimeter fencing could potentially funnel ground-dwelling fauna species onto Ercildourne Road. This is a minor road and impacts would be minimal. Mitigation measures to enforce site speed limits would minimise the impacts. The BAR has been updated to address this matter. Mitigation measure BD16 has been added to Section 3 of this Submissions Report.
Community Consultation	
The proponent is encouraged to "involve" key stakeholders beyond "inform" and "consult" as referenced in the Community Consultation Plan. It is recommended that: • All stakeholders are made aware of employment opportunities, including local training providers. • That local energy benefits for the community including access to affordable renewable energy	The proponent has no objection to making stakeholders, including local training providers, aware of employment opportunities. It is considered that the benefits of the proposal have been discussed in Section 2.2 of the EIS. The proponent has no objection to liaising with the Office of Environment and Heritage's Regional Clean

Comment	Response
and energy efficiency information are considered. • That the proponent liaise with the Office of Environment and Heritage's Regional Clean Energy Coordinator/Community Engagement Team Leader regarding community consultation, employment, education and local energy benefit opportunities. • That the Community Consultation Plan incorporates a social impact assessment framework to measure resultant impacts of the development.	Energy Coordinator/Community Engagement Team Leader following approval. The EIS has addressed social impact in Section 7.6. To this extent, the proposal is considered unlikely to have substantial adverse social impacts and conversely would provide positive social outcomes in terms of local employment and use of local services. Given this, it is not considered necessary to undertake an analysis of impacts of the development.

NSW Roads & Maritime Services (RMS)

Comment	Response
RMS has assessed the Development Application based on the documentation provided and would raise no objection to the development proposal subject to the Consent Authority ensuring that the development is undertaken in accordance with the information submitted as amended by the inclusion of conditions of consent detailed in the RMS submission (refer to Appendix A).	The proponent has no objection to recommended conditions of consent detailed in the RMS submission, with the exception of condition number 3. The other recommended conditions of consent have been incorporated within Section 3 of this Submissions Report. With regard to recommended condition number 3, it is requested that RMS consider allowing some programming flexibility for when road upgrade work should occur. It is requested that road upgrade work be carried out prior to the commencement of major construction work. This would allow preliminary site preparation works, such as installation of fencing and establishment of the compound, to be undertaken prior to or in parallel with the road upgrade works. It is requested that the condition of consent be re-worded as follows (amendments underlined): "Prior to the commencement of <u>major</u> construction on-site, the Proponent must undertake all works to upgrade any road, its associated road reserve and any public infrastructure in that road reserve, to a standard suitable for use by heavy vehicles to meet any reasonable requirements that may be specified by the relevant roads authority. <u>Low traffic generating activities such as installation of fencing and site preparation work may be carried out prior to road upgrades.</u> The design and specifications, and construction, of these works must be completed and

	certified by an appropriately qualified person to be to a standard to accommodate the traffic generating requirements of the project. On Classified Roads the geometric road design and pavement design must be to the satisfaction of the Roads and Maritime Services.” Mitigation measure TT2 in Section 3 of this Submissions Report has been amended to incorporate RMS comments. It is also noted that recommended condition number 7 affects biodiversity mitigation measure BD11 where local indigenous species, such as those of Weeping Myall Woodland, are recommended for use within the landscaping buffer.
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Department of Primary Industries (DPI)

Comment	Response
While a number of potential water sources have been identified in the EIS for the water demands during and post construction, the security of these sources, the adequacy of existing water licences or the ability to obtain additional water entitlement has not been considered. Where additional extraction is proposed such as groundwater, this would also require an impact assessment on existing users and the environment. The proponent should confirm these details prior to approval being granted for the project to ensure water supply arrangement and licensing requirements can be met.	During construction, the proposal would require 401.5ML over a 9 to 12 month period. The annual operational water required for the proposal would be about 1.5ML per year of raw water. A negligible amount of potable water would be required during operation for site amenities. Discussions have been held with a Murrumbidgee Council officer and the Coleambally Irrigation Co-operative Limited (CICL) Company Secretary regarding access to water during construction and operation. Council has advised that both raw water and potable water is available for purchase in 10,000L tanker. Advice received from CICL is that raw water would be available and could be sourced from the adjacent irrigation channel during construction and operation. Sourcing water from the channel would involve: • Making an agreement with one of the proposal area’s landholders to utilise their metered outlet from the irrigation channel. • Purchasing general security water during the irrigation season (mid August – mid May) through the temporary trade market or through one of the landholders existing licence. • During the irrigation off-season, high security water could be purchased and delivered through the irrigation channels.

Comment	Response
	This would require discussion of details or the water requirement at the time. • Delivery of the purchased water would be finalised through further discussion with CACL. Should groundwater extraction be required, an existing bore with a suitable licence classification and capacity would be sourced.
The EIS refers to an irrigation channel that borders part of the southern project area. This channel appears to be in the location of a natural watercourse, however the EIS indicates this channel is only used for conveying irrigation flows. The proponent should confirm whether this channel also receives catchment runoff from upstream and whether this alters the potential flood impacts predicted in the EIS.	The irrigation drainage channel that borders part of the southern proposal area has been constructed to generally follow the path of a natural creek. The creek could convey both natural and irrigation flows, however given the proposal area is not prone to flooding it is considered that the natural creekline would not have an impact on the potential for the proposal area to flood.
The EIS proposes two bridges over irrigation channels and the potential relocation of an irrigation channel. The proponent should ensure these works are consistent with DPI Water's guidelines for Controlled Activities on Waterfront Land (2012) and that they are completed in consultation with the relevant landholders and the irrigation authority.	The proponent supports this comment made by DPI. This matter has been included in Section 3 of this Submissions Report.
The proponent should notify DPI Water of confirmed proposals to relocate any irrigation channels. This is to enable consideration of amendments to the irrigation licence held by Coleambally Irrigation Cooperative Limited.	The proponent supports this comment made by DPI. Following completion of the detailed design of the proposed solar farm, should the relocation of an irrigation channel be necessary, the proponent shall notify DPI. This matter has been included in Section 3 of this Submissions Report.
The proponent should ensure that the Weed Management Plan includes vehicle hygiene regimes.	The proponent supports this comment made by DPI. It is noted that the mitigation measure relating to the preparation of a Weed Management Plan (BD10) has been amended to include vehicle hygiene. This matter has been included in Section 3 of this Submissions Report. It is noted that mitigation measure LU4, also relating to weed management, has been deleted and combined with mitigation measure BD10 for clarity.
DPI recommended conditions of consent, as detailed in their submission provided in Appendix A.	The proponent has no objection to the recommended conditions of consent detailed in the DPI submission, with the exception the requirement to bury subsurface infrastructure at 1200mm below surface level. It is noted that the SEARs required subsurface infrastructure to be buried at a depth of 500mm. Further consultation with DPI had been carried out, as detailed in Section 5.1 of the EIS, where a depth of 500mm or over was confirmed. The proposal proceeded based on this advice.

Comment	Response
	Given the amount of subsurface infrastructure that would require trenching, it is considered impractical and prohibitive to bury at a depth of 1200mm below surface level. It is requested that subsurface infrastructure to be left in place after decommissioning be required to be buried at 500mm depth as originally advised. It is noted that a mitigation measure to ensure construction works would be managed in accordance with the Managing Urban Stormwater: Soils and Construction series is already listed in mitigation measure SO2. This mitigation measure has been amended to include the title of the resource to be adhered to.

Fire and Rescue NSW (FRNSW)

Issue	Response
FRNSW notes that the facility's proposed location is within a NSW Rural Fire Services' (RFS) Fire District. Notwithstanding the above, in the event of a significant fire event (either on or off-site in close proximity to the development) or hazardous material incident FRNSW will be responded to either assist the RFS or to fulfil the role of designated combat agency. It is FRNSW experience that small and large scale photovoltaic installations present unique electrical hazard risks to our personnel when fulfilling their emergency first responder role (NB the Fire Brigades Act 1989 imposes specific statutory functions and duties upon the Commissioner of FRNSW). In addition, the Work Health and Safety (WHS) Act 2011 (and its subordinate Regulation) classify FRNSW as an entity conducting a business or undertaking (PCBU). Clauses 34 and 35 of the WHS Regulation impose specific obligations upon a PCBU to identify hazards and manage risks at workplaces. Due to the electrical hazards associated with large scale photovoltaic installations and the potential risk to the health and safety of firefighters, both FRNSW and the NSW Rural Fire Service must be able to implement effective and appropriate risk control measures when managing an emergency incident at the proposed site. FRNSW recommend that an Emergency Response Plan be prepared and included items to be addressed in the plan, as detailed in their submission provided in Appendix A.	The proponent supports comments made by FRNSW. The requested conditions of development consent have been included in Section 3 of this Submissions Report.

NSW Rural Fire Service (RFS)

Issue	Response
While the subject site is not mapped bush fire prone by Murrumbidgee Shire Council, the subject land has a significant potential to carry grass fires. Further NSW RFS is the primary response agency for fighting structural fires within the site. RFS recommend conditions of consent regarding management of the land to protect against bushfire, as detailed in their submission provided in Appendix A.	The proponent generally supports comments made by RFS, with the exception of the requirement to provide a 20 metre APZ. The proposal area is located in an area with a Fire Danger Index (FDI) of 80, the slope of the land is "flat" and surrounding vegetation is dominated by cropping. It is considered that an APZ of 10 metres would meet the requirements of the <i>Planning for Bush Fire Protection 2006</i>. For this reason, it is requested that an APZ of 10 metres be conditioned for the proposal. The requested conditions of development consent, including the requested amendment to the required

	APZ, have been included in Section 3 of this Submissions Report.
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Department of Planning & Environment – Resources & Geoscience (DRG)

Issue	Response
DRG has reviewed the EIS and is satisfied that the Proponent has considered the potential impacts the proposal may have upon mineral, energy and construction material resources and exploration activities in the vicinity of the project site. It is noted that the record of consultation with Murrumbidgee Council has been included in the EIS as requested. DRG supports the proposed Coleambally Solar Farm as it aligns with Government policy to increase renewable energy generation, jobs and investment in the State.	Noted.

Murrumbidgee Council

Issue	Response
Murrumbidgee Council recommended the inclusion of conditions of consent relating to traffic management, application for construction certificates and section 68 approval, waste disposal, fire management, visual impact, pollution control, signage, site amenities, Building Code of Australia compliance and carparking.	The proponent supports comments made by Murrumbidgee Council. The proponent generally raises no objection to the inclusion of the recommended conditions of consent, with the following exceptions (these conditions are considered to be already addressed in the mitigation measures): • Condition 6 – It appears that this condition relates to residential subdivisions. • Condition 7 – The proponent intends to prepare a Waste Management Plan in accordance with mitigation measure WM1 in Section 3. • Condition 8 - The proponent intends to prepare a Waste Management Plan in accordance with mitigation measure WM1 in Section 3. • Condition 13 – The proponent intends to prepare a Soil and Water Management Plan incorporating an Erosion and Sediment Control Plan in accordance with mitigation measure SO2 in Section 3.

Nature Conservation Council

Issue	Response
It is our position that this proposed solar farm would deliver a net-positive impact on nature and for the citizens of New South Wales and as such we support planning approval for this project. We would like to highlight some of the benefits that the Coleambally Solar Farm would offer to the people of NSW: • With an installed capacity of 150 megawatts, it would produce 380,000 MWh of electricity per year – enough to power 52,000 homes; • By reducing reliance on coal fired power plants, it would save more than 300,000 tonnes of CO₂ from being released each year; • It would reduce reliance on coal fired power plants – diversifying the state’s energy mix and promoting renewable energy production; • At peak, construction would create 300 jobs during commissioning and an additional 7 full time jobs during operation; • It would contribute to our efforts to avoid dangerous global warming, which is threatening human and ecosystem health.	Noted.

2.4 PROPOSAL MODIFICATIONS

Changes to the proposal that have been incorporated into this submission report are minor and are related to:

1. Revisions to the proposal’s mitigation measures in response to submissions. These are detailed in Section 3.
2. General revisions to the proposal’s mitigation measures to rectify anomalies, as detailed in Section 3. This includes the addition of a general mitigation measure for the preparation of a Construction Environmental Management Plan (CEMP) (GE1), and the removal of mitigation measure BD11 given overhead transmission lines are not proposed.
3. Commitment to offsetting threatened species and endangered ecological communities that would be removed as a result of the proposal. Amendments to the BAR, including the addition of a BOS, have been made. Amendments to mitigation measures are included in Section 3 of this Submissions Report.

3 UPDATED MITIGATION MEASURES

In response to submission received, this report proposes a number of changes to the safeguards and mitigation measures detailed in the EIS. Table 3-1 provides the full list of safeguards and mitigation measures with those amended highlighted in grey. New text is shown underlined and removed text shown with ~~strike through~~. Table 3-1 provides the full list of safeguards and mitigation measures as amended.

Table 3-1 Revised safeguards and mitigation measures

No.	Safeguards and mitigation measures	C	O	D
General				
GE1	<u>A Construction Environmental Management Plan (CEMP) would be prepared prior to construction commencing, and implemented throughout construction.</u>	C		
Biodiversity				
BD1	Develop and implement a construction Flora and Fauna Management Plan (FFMP) for incorporation of construction related environmental management safeguards. <u>A landscaping strategy should be included within the FFMP.</u>	C		
BD2	Prior to the commencement of work, a physical vegetation clearing boundary at the approved clearing limit is to be clearly demarcated and implemented. This will include environmentally sensitive areas such as EECs. The delineation of such a boundary may include the use of temporary fencing, flagging tape, parawebbing or similar. <u>Prior to the commencement of work, a physical boundary of the approved clearing limit is to be clearly delineated and implemented. The delineation of such a boundary may include the use of temporary fencing, flagging tape, parawebbing or similar.</u>	C		
BD3	Clearing and construction contractors would be given inductions that make clear the importance of the sensitive area habitat and its species.	C		
BD4	Where trees are to be retained, an adequate tree protection zone (TPZ) will be provided around each tree for the duration of construction. Details for calculating TPZs are provided within <i>Australian Standard 4970-2009 – Protection of trees on development sites</i> .	C		
BD5	A pre-clearing process will be implemented before clearing begins. Pre-clearing surveys will be carried out by an ecologist and will include general fauna surveys, general tree hollow inspections and dam/waterway inspections. Habitat trees will be clearly marked with flagging tape.	C		
BD6	When programming the works, consider breeding periods of fauna that may be impacted. <u>Trees with hollows should not be removed between 1 September and 1 December, in order to mitigate direct impacts to threatened fauna during the breeding season. Clearing of Hollow Bearing Trees will be avoided where possible.</u>	C		
BD7	An unexpected threatened species finds procedure will be developed before clearing commences.	C		
BD8	A 'Clearing and Grubbing Plan' will be developed to; • Include best practice methods for the removal of woody vegetation and non-woody vegetation. • Trees will be removed in such a way as not to cause damage to surrounding vegetation. Root systems of trees and shrubs to be removed will be retained in-ground to ensure surrounding ground layer vegetation is undisturbed and to prevent soil erosion. • Require that where work cannot avoid encroaching into the TPZ, it not impinge on the structural root zones (SRZ) of trees to be retained.	C		

No.	Safeguards and mitigation measures	C	O	D
	Details for calculating the SRZs are provided within <i>Australian Standard 4970-2009 – Protection of trees on development sites</i>. - Where possible, trees to be removed will be mulched on-site and re-used to stabilise disturbed areas. All trees to be removed should be placed in areas of retained native vegetation to provide additional fauna habitat. - Tree clearing protocol, that includes staged habitat removal, and a requirement for an ecologist being present during tree-felling of all hollow-bearing trees to ensure that any potential impacts on fauna are minimised			
BD9	Any fallen timber, dead wood and bush rock (if present) encountered on site will be left in situ or relocated to a suitable place nearby. Rock will be removed with suitable machinery so as not to damage the underlying rock or result in excessive soil disturbance.	C		
BD10	A Weed Management Plan would be developed for the proposal to prevent/minimise the spread of weeds. Prepare a Pest and Weed Management Plan to manage the occurrence of noxious weeds and pest species across the site during construction and operation. The plans must be prepared in accordance with Murrumbidgee Council and NSW DPI requirements. Where possible integrate weed and pest management with adjoining landowners. This would include: - Management protocol for declared noxious weeds as stipulated by the <i>Noxious Weeds Act 1993</i> during and post construction. - A protocol for weed hygiene in relation to <u>vehicles</u>, plant, machinery and importation and management of fill. - Any occurrences of pathogens such as Myrtle Rust and Phytophthora would be monitored, treated and reported.	C		
BD11	To minimise fire risk from bird collisions, reflective power line marking balls may be used if required by TransGrid on any overhead transmission lines.		0	
BD12 BD11	Any onsite landscape plantings (such as to address visual impacts) will be comprised of local indigenous species (such as those of Weeping Myall Woodland) with the object of increasing the structure of the existing vegetation. Planting locations would be designed to improve the connectivity between patches in the landscape where consistent with landscaping outcomes and the solar farm operation.		0	
BD12	EEC areas to be retained would be delineated, and construction activities would be excluded from these areas. These areas are shown in Figure 3 8 of the BAR. Clearing and construction contractors would be given inductions that make clear the importance of this area and its species.	C		
BD13	Stockpiling and storage of materials and machinery will be avoided within the dripline (extent of foliage cover) of any native tree.	C		
BD14	Construction activities and storage of materials for boundary fencing should be wholly contained within the proposal area. Disturbance to road reserves other than access points identified in the EIS must not occur.	C		
BD15	Awareness training during site inductions regarding enforcing site speed limits.		0	
BD16	Plain wire is to be used on security fencing where practicable and where it meets safety and security requirements of the solar farm.	C		
BD17	Prior to construction, surveys must be conducted for <i>Calotis moorei</i> , <i>Convolvulus tedmoorei</i> and <i>Leptorhynchus oriental</i> to determine presence or absence on the site. If a species credit is required for any of these species, then	C		

No.	Safeguards and mitigation measures	C	O	D
	<u>this must be incorporated into the final credit profile and offset strategy before construction commences.</u>			
Aboriginal Cultural Heritage				
AH1	Develop or amend the Heritage Unexpected Finds Protocol to include the following process. If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities, the proponent must: 1. Not further harm the object; 2. Immediately cease all work at the particular location; 3. Secure the area so as to avoid further harm to the Aboriginal object; 4. Notify OEH as soon as practical on 131555, providing any details of the Aboriginal object and its location; and 5. Not recommence any work at the particular location unless authorised in writing by OEH. An unexpected finds protocol (UFP) must be prepared and followed should there be an inadvertent discovery of Aboriginal objects occur.	C		
AH2	In the event that skeletal remains are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police and OEH contacted. In the unlikely event that human remains are discovered during the construction, all work must cease in the immediate vicinity. OEH, the local police and the registered Aboriginal parties should be notified. Further assessment would be undertaken to determine if the remains were Aboriginal or non-Aboriginal.	C		
Visual Amenity				
VA1	The materials and colour of onsite infrastructure will, where practical, be non-reflective and in keeping with the materials and colouring of existing infrastructure or of a colour that will blend with the landscape.	Design stage		
VA2	Night lighting would be minimised to the maximum extent possible (i.e. manually operated safety lighting at main component locations). It would be directed away from the Kidman Way, so as not to cause light spill that may be hazardous to drivers.	C	O	D
Land Use				
LU1	Consultation with adjacent landholders would be ongoing to manage interactions between the solar farm and other properties.	C	O	D
LU2	Consultation would be undertaken with TransGrid regarding connection to the substation and design of electricity transmission infrastructure.	C		
LU3	A Rehabilitation and Decommissioning Management Plan is to be prepared in consultation with NSW Department of Primary Industries and the landowner prior to decommissioning. The Rehabilitation and Decommissioning Management Plan is to include: • <u>Rehabilitation objectives and strategies for returning the land to irrigated agricultural production.</u> • <u>Locational identification for any remaining subsurface infrastructure.</u>			D

No.	Safeguards and mitigation measures	C	O	D
	- Baseline data including soil and land resources, current land use and capability. Decommissioning should include: - Removal of all above ground infrastructure. - Removal of gravel from internal access tracks where required, in consultation with landowner. - Reverse any compaction by mechanical ripping. - Reinstate irrigation infrastructure in consultation with landowner, including laser levelling and contour/bund reconstruction where required.			
LU4	Prepare a pest and weed management plan to manage the occurrence of noxious weeds and pest species across the site during construction and operation. The plans must be prepared in accordance with Murrumbidgee Council and NSW DPI requirements. Where possible integrate weed and pest management with adjoining landowners.	C	O	
Noise				
NS1	Works should be undertaken during standard working hours only. (Except for the connection to substation) - Monday – Friday 7am to 6pm - Saturday 8am to 1pm - No work on Sundays or public holidays	C		
NS2	All staff on-site should be informed of procedures to operate plant and equipment in a quiet and efficient manner.	C	O	D
NS3	A letter box drop would be prepared and provided to residences in close proximity to the works. The letter would contain details of the proposed works including timing and duration and a contact person for any enquiries or complaints.	C	O	D
NS4	Regular inspection and maintenance of equipment to ensure that plant is in good condition.	C	O	D
Soil				
SO1	A Ground Cover Management Plan would be developed to address soil erosion, fire control and biodiversity issues. The plan would include: - Monitoring and triggers for action to address issues arising from erosion that develops during operation. - Consideration of species that will be utilised by grazing animals, if applicable, and spacing that will encourage pasture growth. - Water supply options for stock. - Alternatives for protecting the soil if pasture establishment is not successful.		O	
SO2	A Soil and Water Management Plan (SWMP) and Erosion and Sediment Control Plan (ESCP) would be prepared in consultation with DPI Water (water.referral@dpi.nsw.gov.au), implemented and monitored during the construction and decommissioning of the proposal, in accordance with Landcom (2004), to minimise soil (and water) impacts. These plans would include provisions such as:	C		D

No.	Safeguards and mitigation measures	C	O	D
	- At the commencement of the works, and progressively during construction, install the required erosion control and sediment capture measures. - Regularly inspect erosion and sediment controls, particularly following rainfall. - Maintain a register of inspection and maintenance of erosion control and sediment capture measures. - Ensure that machinery arrives on site in a clean, washed condition, free of fluid leaks. - Ensure that machinery leaves the site in a clean condition to avoid tracking of sediment onto public roads. - In all excavation activities, separate subsoils and topsoils and ensure that they are replaced in their natural configuration to assist revegetation. - Stockpile topsoil appropriately, so as to minimise weed infestation, maintain soil organic matter, maintain soil structure and microbial activity. - Manage works in consideration of heavy rainfall events. - Areas of disturbed soil would be rehabilitated promptly and progressively during construction.			
SO3	A Spill Response Plan would be developed and implemented during construction, operation and decommissioning to prevent contaminants affecting adjacent surrounding environments. It would include measures to: - Manage the storage of any potential contaminants onsite. - Mitigate the effects of soil contamination by fuels or other chemicals (including emergency response and EPA notification procedures and remediation). - A protocol would be developed in relation to discovering buried contaminants within the proposal area (e.g. pesticide containers if any). It would include stop work, remediation and disposal requirements.	C	O	D
SO4	During construction, operation and decommissioning, dust would be managed to prevent dust leaving the proposal area. This includes dust from stockpiled materials.	C	O	D
SO5	Any area that was temporarily used during construction (laydown and trailer complex areas) would be restored back to original condition or re-vegetated with native plants.		O	
SO6	Soil must be tested for clay content, CEC and EC prior to commencement of construction work to determine whether the application of gypsum is required while trenching and the rate of application.	C		
SO7	The construction of the channel bridges and the relocation of the irrigation channel (if carried out) must be carried out in accordance with DPI Water's <i>Guidelines for Controlled Activities on Waterfront Land</i> (2012) and be completed in consultation with the relevant landholders and the irrigation authority.	C		
SO8	DPI Water must be notified of confirmed proposals to relocate any irrigation channels. This is to enable consideration of amendments to the irrigation licence held by Coleambally Irrigation Cooperative Limited.	C		
Water				
WA1	All staff would be appropriately trained through toolbox talks for the minimisation and management of accidental spills.	C	O	D

No.	Safeguards and mitigation measures	C	O	D
WA2	All fuels, chemicals, and liquids would be stored at least 50 m away from any waterways or drainage lines and would be stored in an impervious bunded area.	C	O	D
WA3	Adequate incident management procedures will be incorporated into the Construction and Operation Environmental Management Plans, including requirement to notify EPA for incidents that cause material harm to the environment (refer s147-153 Protection of the Environment Operations Act).	C	O	D
WA4	The refuelling of plant and maintenance of machinery would be undertaken in impervious bunded areas.	C	O	D
WA5	Machinery would be checked daily to ensure there is no oil, fuel or other liquids leaking from the machinery. All staff would be appropriately trained through toolbox talks for the minimisation and management of accidental spills	C		D
Traffic, Transport & Road Safety				
TT1	A Haulage Plan would be developed and implemented during construction and decommissioning, including but not limited to: • Assessment of road routes to minimise impacts on transport infrastructure. • Scheduling of deliveries of major components to minimise safety risks (on other local traffic). • Traffic controls (signage and speed restrictions etc.).	C		D
TT2 TT1	<u>A Traffic Management Plan (TMP) shall be prepared in consultation with the relevant road authorities (Council and Roads and Maritime Services) to outline measures to manage traffic related issues associated with the development, particularly during the construction and decommission processes. The appointed transport contractor shall be involved in the preparation of this plan. The plan shall address all light and heavy traffic generation to the development site and detail the potential impacts associated with the development, the mitigation measures to be implemented, and the procedures to monitor and ensure compliance. This plan shall address, but not necessarily be limited to the following;</u> <u>1. Require that all vehicular access to the site be via the approved access route.</u> <u>2. Details of traffic routes to be used by heavy and light vehicles, and any associated impacts and any road-specific mitigation measures.</u> <u>3. Details of measures to be employed to ensure safety of road users and minimise potential conflict with project generated traffic.</u> <u>4. Proposed hours for construction activities, as night time construction presents additional traffic related issues to be considered.</u> <u>5. The management and coordination of the movement of vehicles for construction and worker related access to the site and to limit disruption to other motorists, emergency vehicles, school bus timetables and school zone operating times.</u> <u>6. Loads, weights and lengths of haulage and construction related vehicles and the number of movements of such vehicles.</u> <u>7. Procedures for informing the public where any road access will be restricted as a result of the project.</u> <u>8. Any proposed precautionary measures such as signage to warn road users such as motorists about the construction activities for the project.</u>	C		D

No.	Safeguards and mitigation measures	C	O	D
	9. A Driver Code of Conduct to address such items as; appropriate driver behaviour including adherence to all traffic regulations and speed limits, safe overtaking and maintaining appropriate distances between vehicles, etc and appropriate penalties for infringements of the Code. 10. Details of procedures for receiving and addressing complaints from the community concerning traffic issues associated with truck movements to and from the site. A Traffic Management Plan would be developed and implemented during construction and decommissioning. The plan would include, but not be limited to: - Assessment of road condition prior to construction on all local roads that would be utilised. - A program for monitoring road condition, to repair damage exacerbated by the construction and decommissioning traffic. - The designated routes of construction traffic to the site. - Carpooling/shuttle bus arrangements to minimise vehicle numbers during construction. - Scheduling of deliveries. - Community consultation regarding traffic impacts for nearby residents. - Consideration of cumulative impacts. - Traffic controls (speed limits, signage, etc.). - Procedure to monitor traffic impacts and adapt controls (where required) to reduce the impacts. - Providing a contact phone number to enable any issues or concerns to be rapidly identified and addressed through appropriate procedures.			
TT2	The proponent would consult with the Murrumbidgee Council regarding the proposed upgrading of Ercildoune road. The upgrade would be subject to detailed design, and must be designed and constructed to the relevant Australian road design standards.	C		
TT3	The proposed Ercildoune Road and Kidman Way intersection upgrade must be designed and constructed in accordance with NSW Roads and Maritime Services requirements.	C		
TT4	The proponent would repair any damage resulting from project traffic (except that resulting from normal wear and tear) as required at the proponent's cost. The Proponent must engage an appropriately qualified person to prepare a Road Dilapidation Report for all road routes to be used during the construction (and decommissioning) activities, in consultation with the relevant road authority (Roads and Maritime Services and Council). This report is to address all road related infrastructure. Reports must be prepared prior commencement of, and after completion of, construction (and decommissioning). Any damage resulting from the construction (or decommissioning) traffic, except that resulting from normal wear and tear, must be repaired at the Proponent's cost. The applicant is accountable for this process, rather than the proposed haulage contractor. Such work shall be undertaken at a time as agreed upon between the Proponent and relevant road authorities.	C		
TT5	<u>Prior to the commencement of major construction on-site, the Proponent must undertake all works to upgrade any road, its associated road reserve and any public infrastructure in that road reserve, to a standard suitable for use by heavy vehicles to meet any reasonable requirements that may be specified by the</u>	C		

No.	Safeguards and mitigation measures	C	O	D
	<u>relevant roads authority. Low traffic generating activities such as installation of fencing and site preparation work may be carried out prior to road upgrades. The design and specifications, and construction, of these works must be completed and certified by an appropriately qualified person to be to a standard to accommodate the traffic generating requirements of the project. On Classified Roads the geometric road design and pavement design must be to the satisfaction of the Roads and Maritime Services.</u>			
TT6	<u>As a minimum the intersection of the Kidman Way and Ercildoune Road is to be constructed and the roadside maintained to the satisfaction of Roads and Maritime Services to comply with the following:</u> <u>1. Provide for the required Safe Intersection Sight Distance (SISD) with a reaction time of 2.5 seconds in either direction in accordance with the Austroads Publications as amended by the supplements adopted by Roads and Maritime Services for the posted speed limit. Compliance with this requirement is to be certified by an appropriately qualified person prior to construction of the vehicular access.</u> <u>2. Constructed with a Basic Right Turn (BAR) and Basic Left Turn (BAL) intersection treatment in accordance with the Austroads Guide to Road Design as amended by the supplements adopted by Roads and Maritime Services for the posted speed limit on the Kidman Way. The intersection is to be constructed to the standards required for an approved road train route.</u> <u>3. Designed and constructed so as not to interfere with the capacity of the current roadside drainage network and to prevent water from proceeding onto, or ponding within, the carriageway of the Kidman Way. If a culvert is to be installed and is to be located within the required clear zone of the Kidman Way for the posted speed zone it is to be constructed with a traversable type headwall.</u> <u>4. The construction of Ercildoune Road to 2 lanes and be sealed for at least 50 metres from its intersection with the Kidman Way. The intersection shall be designed and constructed so that vehicles turning between the Kidman Way and the access road are not required to cross to the opposing travel lane in order to perform a turn manoeuvre. The intersection shall be line marked in accordance with Australian standards.</u>	C		
TT7	<u>A management plan to provide measures to suppress dust generation from the development site and the transportation route shall be prepared and implemented to the satisfaction of Council and Roads and Maritime Services.</u>	C		
TT8	<u>No external lighting of any infrastructure associated with the project is permitted at night that may cause distraction to road users other than low intensity security lighting.</u>	C	O	
TT9	<u>A landscaped buffer (at least 5 metres in width planted with a variety of species endemic to the area and growing to a mature height ranging from 2 metres to at least 5 metres) shall be established and maintained within the subject property along the frontages of the site to the Kidman Way and Ercildoune Road to a standard to minimise distraction of the travelling public.</u>	C		
TT10	<u>Glint and glare from the solar panels shall not cause a nuisance, disturbance or hazard to the travelling public on the public road network. In the event of glint or glare from the solar plant being evident from a public road, the proponent shall immediately implement glare mitigation measures such as construction of a barrier (e.g. fence) or other approved device to remove any nuisance, distraction and/or hazard caused as a result of glare from the solar panels.</u>		O	

No.	Safeguards and mitigation measures	C	O	D
TT11	<u>Once the new access roadway is constructed to Ercildoune Road all existing accesses to the developments site from the Kidman Way shall be removed or retained and locked for emergency purposes only and any damage or disturbance to the road reserve of the Kidman Way shall be restored to match surrounding landform in accordance with Council requirements.</u>	<u>C</u>		
TT12	<u>The Kidman Way is part of the State Road network. For works on the State Road network the developer is required to enter into a Works Authorisation Deed (WAD) with Roads and Maritime Services before finalising the design or undertaking any construction work within or connecting to the road reserve. The Works Authorisation Deed documentation is to be submitted for each specific change to the state road network for assessment and approval by Roads and Maritime Services prior to commencement of any works within the road reserve. The applicant is to contact the Land Use Manager for the South West Region on Ph. 02 69236611 for further detail.</u>	<u>C</u>		
TT13	<u>Any works within the road reserve of the Kidman Way requires approval under Section 138 of the Roads Act, 1993 from the road authority (Council) and concurrence from Roads and Maritime Services prior to commencement of any such works. The developer is responsible for all public utility adjustment/relocation works, necessitated by the development and as required by the various public utility authorities and/or their agents.</u>	<u>C</u>		
TT14	<u>All works associated with the project shall be at no cost to the Roads and Maritime Services.</u>	<u>C</u>	<u>O</u>	<u>D</u>
Climate & Air Quality				
AQ1	Development of a complaints procedure to promptly identify and respond to issues generating complaints.	C	O	D
AQ2	Protocols to guide vehicle and construction equipment use, to minimise emissions would be included in construction and operational environmental management plans. This would include but not be limited to Australian standards and POEO Act requirements.	C	O	D
AQ3	During construction, operation and decommissioning, dust would be managed to prevent dust leaving the proposal area. This includes dust from stockpiled materials.	C	O	D
Electric & Magnetic Fields				
EM1	All design and engineering would be undertaken by qualified competent persons with the support of specialists as required.	C		
EM2	All electrical equipment would be designed in accordance with relevant codes and industry best practice standards in Australia.	C		
EM3	Transmission lines would be located as far as practical from residences, farm sheds, and yards in order to reduce the potential for both chronic and acute exposure to EMFs.	C		
EM4	Design of electrical infrastructure would minimise EMFs. (underground).	C		
Socioeconomic & Community				
SE1	A Community Consultation Plan would be implemented during construction to manage impacts to community stakeholders, including but not limited to: Protocols to keep the community updated about the progress of the project and project benefits.	C		

No.	Safeguards and mitigation measures	C	O	D
	• Protocols to inform relevant stakeholders of potential impacts (haulage, noise etc.). • Protocols to respond to any complaints received.			
SE2	Liaison with local industry representatives to maximise the use of local contractors, manufacturing facilities, materials.	C		
SE3	Liaison with local representatives regarding accommodation options for staff, to minimise adverse impacts on local services.	C		D
SE4	Liaison with local tourism industry representatives to manage potential timing conflicts or cooperation opportunities with local events.	C		D
Waste				
WM1	A Waste Management Plan (WMP) would be developed and implemented during construction, operation and decommissioning to minimise wastes. It would include but not be limited to: • Identification of opportunities to avoid, reuse and recycle, in accordance with the waste hierarchy. • Quantification and classification of all waste streams. • Provision for recycling management onsite. • Provision of toilet facilities for onsite workers and how sullage would be disposed of (i.e., pump out to local sewage treatment plant). • Tracking of all waste leaving the site. • Disposal of waste at facilities permitted to accept the waste. • Requirements for hauling waste (such as covered loads).	C	O	D
Bush Fire & Emergencies				
BF1	A Fire Management Plan (FMP) shall be prepared in consultation with NSW RFS Murrumbidgee Irrigation Area (MIA) Fire Control Centre. The FMP shall include: • 24 hour emergency contact details including alternative telephone contact; • Site infrastructure plan; • Fire fighting water supply plan; • Site access and internal road plan; • Construction of Asset Protection Zones (APZ) and their continued maintenance; • Location of hazards (Physical, Chemical and Electrical) that will impact on fire fighting operations and procedures to manage identified hazards during fire fighting operations; • Such additional matters as required by the NSW RFS District Office (FMP review and updates). A Bush Fire Management Plan would be developed and implemented during construction, operation and decommissioning, with input from the RFS, and include but not be limited to: • Management of activities with a risk of fire ignition. • Management of fuel loads onsite. • Storage and maintenance of firefighting equipment, including siting and provision of adequate water supplies for bush fire suppression.	C	O	D

No.	Safeguards and mitigation measures	C	O	D
	• The below requirements of <i>Planning for Bush Fire Protection 2006</i>: ○ Identifying asset protection zones ○ Providing adequate egress/access to the site ○ Emergency evacuation measures ○ Operational procedures relating to mitigation and suppression of bush fire relevant to the solar farm.			
BF2	<u>The entire solar array development footprint is to be managed as an Asset Protection Zone (APZ) as outlined within Section 4.1.3 and Appendix 5 of 'Planning for Bush Fire Protection 2006' and the NSW Rural Fire Service's document 'Standards for Asset Protection Zones'.</u>	C		
BF3	<u>A 20,000 litre water supply (tank) fitted with a 65mm storz fitting shall be located adjoining the internal property access road within the required APZ.</u>		O	
BF4	<u>To allow for emergency service personnel to undertake property protection activities, a 10 metre defendable space that permits unobstructed vehicle access is to be provided around the perimeter of the solar array development site.</u>	C		
BF5	<u>A comprehensive Emergency Response Plan (ERP) is to be developed for the site. Without limiting the scope of the ERP, the following matters are recommended to be addressed:</u> <u>Foreseeable on-site and off-site fire events and other emergency incidents, (e.g. fires involving solar panel arrays, bushfires in the immediate vicinity or potential hazmat incidents).</u> <u>Detail the appropriate risk control measures that would need to be implemented in order to safely mitigate potential risks to the health and safety of firefighters and other first responders (including electrical hazards). Such measures would include the level of personal protective clothing required to be worn, the minimum level of respiratory protection required, decontamination procedures, minimum evacuation zone distances and a safe method of shutting down and isolating the photovoltaic system (either in its entirety or partially, as determined by risk assessment).</u> <u>Other risk control measures that may need to be implemented in a fire emergency due to any unique hazards specific to the site.</u> <u>Two copies of the ERP are to be stored in a prominent 'Emergency Information Cabinet' which is located in a position directly adjacent to the site's main entry points.</u>		O	
BF6	<u>Once constructed and prior to operation, the operator of the facility is to make contact with the relevant local emergency management committee (LEMC).</u>		O	
Historic Heritage				
HH1	The European Survey Marker Trees should be clearly identified in the Construction Environmental Management Plan (CEMP). If construction work is required within 50m of any of these trees, the trees would be protected prior to work commencing using paraweb fencing or similar and not removed until construction work has been completed.	C		D

No.	Safeguards and mitigation measures	C	O	D
HH2	Should an item of historic heritage be identified, the Heritage Division (OEH) would be contacted prior to further work being carried out in the vicinity.	C	O	D
<u>HH3</u>	<u>An Archival Recording of the three identified European marker trees prior to commencement of work.</u>	<u>C</u>		
<u>HH4</u>	<u>The three identified European marker trees are to be avoided by all future works.</u>	<u>C</u>	<u>O</u>	<u>D</u>

4 REFERENCES

Roam Consulting 2014 *RET (Australia's Renewable Energy Target) Policy Analysis*, report to Clean Energy Council

APPENDIX A SUBMISSIONS



Office of Environment & Heritage

Your reference:
Our reference:
Contact:

SSD 8208
DOC17/261230
Andrew Fisher
Ph: (02) 6022 0623

Ms Elle Donnelley
Resource Assessments
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Dear Ms Donnelley

RE: Coleambally Solar Farm, Murrumbidgee LGA – Environmental Impact Statement (SSD 8208)

I refer to your email dated 4 May 2017 seeking comment from the Office of Environment and Heritage (OEHS) on the Environmental Impact Statement (EIS) for the Coleambally Solar Farm (SSD 8208). We have reviewed exhibited EIS. The OEHS review takes into account Secretary's Environmental Assessment Requirements (SEARs) provided by the Department of Planning and Environment to the proponent on 2 February 2017. Full details are provided in **Attachment A** but the key matters are discussed further below.

OEHS considers that the EIS **does not** meet the Secretary's requirements, because a Biodiversity Offset Strategy (BOS) has not been submitted with the Biodiversity Assessment Report (BAR) as is a requirement of the Framework for Biodiversity Assessment. There is some discussion about offset requirements under the NSW Biodiversity Offsets Policy for Major Projects but the BOS should be included to identify whether the impacts of the proposal are likely to be offset by the available mechanisms. As the credit profile has yet to be finalised, we recommend that the final BAR be updated to incorporate a BOS in order to be certain that impacts associated with the approval will be adequately offset.

There are a number of inconsistencies within the EIS, the BAR and the Credit Calculator. We recommend that documentation be updated to clarify these inconsistencies as detailed in **Attachment A** before approval. Most of these inconsistencies are relatively minor, but they have complicated our assessment of the final impacts of the proposal. Two specific matters that may need immediate address are as follows:

- We believe that areas of vegetation on the property may have been cleared prior to assessment without appropriate approvals under the *Native Vegetation Act 2003*. We have passed this on to our Compliance and Regulation Team, but it is unclear to us how this should be considered in the context of the current application. As a minimum, we recommend that the proponent provide details of the vegetation clearance approvals obtained for the proposal site.
- There are a number of species credit species that have been assumed to occur on the site, but the intention is to survey these species in spring to determine if they are to be impacted. We are assuming that this survey will be proposed to occur post approval, but prior to construction commencing. While we are generally supportive of this approach, it is unclear how the credit requirement for these species can be incorporated into the conditions of approval, particularly if the species are found to not occur. We have included a recommended condition of approval, but recognise that consistency with past approvals where species have been assumed to occur on a development site should be implemented if approval is granted.

We consider that the Aboriginal cultural heritage assessment (ACH) is appropriate but include a recommendation to update the Unexpected Finds Management Procedure provided in Appendix C to be consistent with legislation in place to protect ACH in NSW. There are a number of European survey marker trees identified and recommend that the EIS be referred to OEH's Heritage Division at heritage@heritage.nsw.gov.au for their consideration.

We have also included a number of recommended conditions of approval in **Attachment A**. In the past many of these recommendations have been included within various management plans including Construction Environmental (CEMP), Biodiversity (BMP) and Heritage (HMP) Management Plans. All plans required as a Condition of Approval that relate to biodiversity or ACH should be developed in consultation with OEH, to ensure that issues identified in this submission are adequately addressed.

We have also reviewed the Community Consultation Plan and we encourage the proponent to "involve" key stakeholders beyond "inform" and "consult" as currently referenced. The OEH Regional Clean Energy Coordinator/Community Engagement Team Leader can provide further information regarding community consultation, employment, education and local energy benefit opportunities.

If you have any questions regarding this matter please contact Andrew Fisher on 6022 0623 or email andrew.fisher@environment.nsw.gov.au.

Yours sincerely

 2/6/17

PETER EWIN
Senior Team Leader Planning
South West Region
Regional Operations Group
Office of Environment & Heritage

ATTACHMENT A – Detailed comments for the Coleambally Solar Farm Environmental Impact Statement (SSD 8208)

ATTACHMENT B – OEH response to request for Secretary's Environmental Assessment Requirements (SEARs) 2
February 2017

ATTACHMENT A – Detailed comments for Coleambally Solar Farm Environmental Impact Statement (SSD 8208)

Aboriginal cultural heritage

Based on information provided the Coleambally Solar Farm Aboriginal Cultural Heritage Assessment (ACHA) is consistent with the requirements identified by the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (OEH2010a). OEH support the recommendations outlined in Section 9 (Recommendations) however consider amendment to the Heritage Unexpected Finds Protocol (Appendix C) is required to ensure compliance with legislation in place to protect ACH in NSW and that no additional harm occurs to any ACH should it be encountered during works associated with this proposal.

Based on consideration of the above, we recommend the following conditions of development consent:

- *Develop or amend the Heritage Unexpected Finds Protocol to include the following process. If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities, the proponent must:*
 1. *Not further harm the object;*
 2. *Immediately cease all work at the particular location;*
 3. *Secure the area so as to avoid further harm to the Aboriginal object;*
 4. *Notify OEH as soon as practical on 131555, providing any details of the Aboriginal object and its location; and*
 5. *Not recommence any work at the particular location unless authorised in writing by OEH.*

In the event that skeletal remains are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police and OEH contacted.

Historic Heritage

The Coleambally Solar Farm ACHA identified 3 European survey marker trees within areas of remnant vegetation across the subject area however provides insufficient detail relating to consultation with the relevant authority, consideration of potential impacts and appropriate management measures.

Based on consideration of the above, we request that the following be implemented:

- Forward the EIS and provide supporting information (including ACHA) to OEH's Heritage Division directly at heritage@heritage.nsw.gov.au and seek formal comment in regards to the European culturally modified trees.

Biodiversity

The EIS does not meet the Secretary's requirements for biodiversity assessment. We have reviewed the Biodiversity Assessment Report (BAR) against minimum information requirements for each document as listed in Appendix 7 of the Framework for Biodiversity Assessment (FBA).

A Biodiversity Offset Strategy (BOS) has not been provided. A BOS should be submitted with the BAR, and include assessment of the number and type of credits that may be created at the offset site (FBA Section 12, page 47). The BAR does not state when the BOS will be developed for this project, however it is noted in the BAR that retirement of credits must be carried out in accordance with the NSW Biodiversity Offsets Policy for Major Projects, and will be achieved by acquiring or retiring credits under the BioBanking Scheme, making payments into an offset fund intended to be established by the NSW Government, or providing suitable supplementary measures.

As the credit profile has yet to be finalised (see below) we recommend that the final BAR be updated to incorporate a BOS in order to be certain that impacts associated with the approval will be adequately offset.

Based on consideration of the above, we recommend the following be finalised before approval is granted:

- *The BAR be finalised to include a BOS. The BOS to be provided to OEH for review.*

Data provision

Spatial data requirements for the FBA have not been fully met. Appendix 7 of the FBA lists the information, maps and data that are expected to be submitted with the BAR. Our EIS review would have been greatly assisted by having a spatial representation of the construction and operational footprint, and vegetation mapping.

Floristic plot and transect field data has been provided in the BAR (Table 3-4) and Appendix A.1. While not stipulated in the FBA, OEH prefer that all floristic data is entered by the surveyor into the VIS Flora Survey module of BioNET. The FBA reporting requirements (page 100) specify that plot and transect field data be provided as copies of field data sheets (to assist with checking of potential data entry errors in the future) and MS Excel spreadsheets.

Based on consideration of the above, we request that the following be provided:

- The proponent provide scanned copies of plot and transect field data sheets to OEH via email at planning.matters@environment.nsw.gov.au.
- If floristic data are not intended to be entered directly into the VIS Flora Survey module of the Atlas of NSW Wildlife, copies of plot and transect field data are to be provided in MS Excel spreadsheet format to OEH via email at planning.matters@environment.nsw.gov.au.

Previous vegetation clearance

Figure 3-7 (page 17) shows a number of areas that are labelled as 'vegetation previously cleared by landholder through different approval process' and a 'landholder set aside area'. Details of this previously approved native vegetation clearance have not been provided. It is in the interest of the proponent to ensure that this is clarified. Although vegetation clearance may be permitted under the *Native Vegetation Act 2003* it appears that in this case at least some of the areas cleared were not covered by approvals obtained from Riverina Local Land Services. This matter has been referred to OEH Compliance and Regulation for investigation.

The EIS needs to demonstrate that any offsets or set aside areas required under the *Native Vegetation Act 2003* will not be impacted by the proposed development.

Based on consideration of the above, we request that the following be provided:

- The proponent provide details of the vegetation clearance approvals obtained for the proposal site.

Hollow bearing trees

The BAR section 4.2.4 (page 30) states that five hollow bearing trees will be impacted by the proposal (in Zone 3). This is consistent with EIS section 6.2.2 (page 67). However BAR Table 4-3 and text on page 31 refers to six hollow bearing trees to be removed in Zone 3 (possible Squirrel Glider habitat). BAR section 7.3.3 (page 51) refers to five hollow bearing trees to be removed. It is not clear from BAR Figure 4-1 or Appendix B Hollow bearing tree data whether five or six hollow bearing trees are to be removed and this needs to be clarified.

Section 1. Introduction

Perimeter security fencing is listed as part of the proposal (page 1). Construction and maintenance of the security fence should be contained within the proposal site. Storage of fencing materials and associated machinery must also be within the proposal site and not within patches of native vegetation.

1.4 Sources of information used

Keith (2006) is listed in the Reference section but the correct citation is Keith (2006). This publication describes the NSW vegetation formations and classes.

Section 4.2 refers to biometric vegetation plots being assigned to a PCT “as per the OEH database”. It is assumed that this is referring to the VIS Classification database, which describes PCTs. VIS Classification should be referenced with the following or similar details:

OEH (2017). *NSW Vegetation Information System (VIS) Classification Database*, Office of Environment and Heritage, date accessed, www.environment.nsw.gov.au/NSWVCA20PRapp/default.aspx

Section 2. Landscape features

2.8.6 Landscape value score

It is stated that the Landscape Value Score is zero (page 9) but in the submitted Credit Calculator the value of 12 is shown.

Section 3. Native vegetation

3.1.3 Site values (plot data entered into BCC)

On page 21, Zones 1, 2 & 3 list PCT#16 as BVT MR514 but in the submitted Credit Calculator MR518 is shown.

For Zone 2, under Management zone details in the Credit Calculator, ‘Native over-storey cover’ = 2.00 but it is understood that this will be cleared so the value of zero should be used.

Section 4. Threatened species

4.2.4 Survey results

It is stated (page 30) that none of the flora or fauna species that were detected during site surveys are listed as threatened species. This is inconsistent with Appendix A.2 Fauna Species List which lists Black Falcon as having been observed on site in Black Box woodland. No further detail is provided but it is assumed that this bird was foraging or moving through/over the site.

As there are no stick nests present on the site this species is not considered to use the site for breeding. We would still expect this observation to be referred to in section 7.3.3 of the BAR where the impacts on threatened species are addressed.

Section 6. Avoid and minimise impacts

6.1 Direct impacts, 6.1.2 Construction phase

Table 6-1 (page 38) states that “where possible trees to be removed will be mulched on-site”. It is recommended that instead of mulching that cleared trees should be used to provide additional as habitat on site by placing them within existing remnant vegetation.

Table 6-1 (page 39) states that when programming works, breeding periods of fauna that may be impacted will be ‘considered’. OEH recommends that no removal of trees with hollows is to occur during spring to early summer to avoid the main breeding period for hollow-dependent fauna. The pre-clearance inspections referred to in this table should be done but these should not be considered as a substitute for restricting the removal of trees with hollows to outside the main breeding period.

It is stated on page 39 that EECs will be delineated as “environmentally sensitive areas” by a physical clearing boundary, but some Myall woodland EEC (0.08 ha) is proposed to be cleared. This needs to be clarified.

The intention to develop a Weed Management Plan is supported (Table 6-1, page 40).

6.1 Direct impacts, 6.1.3 Operational phase

Collision risk to birds and microbats of exterior barbed-wire fencing is identified (page 41). It is not clear why barbed-wire fencing required. No measures are given to avoid and minimise these impacts. It is recommended that plain wire fencing be used, in particular near screen plantings and remnant vegetation.

OEH supports the use of local species in landscape plantings to address visual impacts (Table 6-2, page 42). A landscaping strategy should be included with the Flora and Fauna Management Plan referred to in the main EIS document (section 6.2.5, page 73)

6.2 Indirect impacts, 6.2.2 Construction phase

No responsibility has been assigned for training/enforcement of site speed limits to minimise fauna strikes (Table 6-3, page 44). This should apply to perimeter/access roads as they will be carrying additional traffic.

6.2 Indirect impacts, 6.2.3 Operational phase

Perimeter fencing is identified as potentially altering the movements of fauna through the landscape by channelling onto roads (Table 6-4, page 45). No measures are given to avoid and minimise these impacts.

6.3 Cumulative impacts

It is stated on page 47 that “0.74 ha of ‘common native vegetation’ is to be removed”. Myall woodland as an endangered ecological community cannot be considered ‘common’.

Section 7. Impact summary

7. Impacts requiring further consideration, 7.3.3 Impacts on threatened species

In the SEARs advice that we provided to DPE on 2 February 2017 we specified species and communities that required further consideration if impacted by the proposal. This included consideration of the habitat requirements of species that are identified as not being able to withstand further loss in the catchment, such as nest trees for some threatened birds. The Superb Parrot has been recorded within one kilometre of the proposal site and while we specified in our SEARs response that nest trees were to be considered for this species on the site, the hollow-bearing trees on the site have not been surveyed for breeding use by this species (page 51).

In its consideration of species credit species, the BAR states that the Superb Parrot was not recorded on the proposal site, however it is “presumed to occur on occasion” and “habitat elements that occur on site are common in the local area” (Table 4-4, page 36). The BAR concludes that the Superb Parrot is considered “unlikely” to be affected by the proposal.

Consistent with our comments on section 6 above, we recommend that no removal of trees with hollows should occur during spring to early summer to avoid the main breeding period for hollow-dependent fauna, which will include Superb Parrots. The pre-clearance process described in Table 6-1 (page 39) should followed to ensure that Superb Parrots, if present, do not have their breeding disrupted.

7.4 Ecosystem and species credits

The BAR (page 51) states that 23 credits are generated for PCT26 Black Box grassy open woodland wetland of rarely flooded depressions in south western NSW. This differs from the figure of 25 credits in the proposal submitted to Credit Calculator. This needs to be finalised to allow the inclusion of the final credit requirement in the conditions of approval.

The BAR assumes that four threatened species (three plants; *Calotis moorei*, *Convolvulus tedmoorei* and *Leptorhynchus orientalis* and the Squirrel Glider) occur on the proposal site, with credits generated for these species (page 52). The Executive Summary of the EIS indicates that targeted surveys will be conducted in spring to determine whether the three herbaceous plant species are present in the proposal area. No additional surveys are to be done for the Squirrel Glider.

The results of these surveys are likely to change the credit profile and therefore the offsetting requirements for this proposal. If it is assumed that these threatened species are present, the required species credits must be offset with a species credit created for the same species (FBA, s10.5.6.2), meaning that the proponent will need to find offsets in which these species occur. Our preference is that these surveys and the final credit requirements (if any) be undertaken before approval. However, it is unclear if this will occur so we are supportive of a process that allows approval to proceed, with a requirements to undertake survey before construction commences. If any of the species are identified on site, then the final credit requirement will need to be agreed

Based on consideration of the above, we recommend the following be finalised before approval is granted:

- There are a number of inconsistencies within the EIS, the BAR and the Credit Calculator. We recommend that documentation be updated to clarify these inconsistencies including:
 - The correct landscape value score to be stated in the BAR.
 - The correct PCTs be submitted to the Credit Calculator and referred to in the BAR.
 - The number of hollow bearing trees to be removed to be confirmed and reported consistently in the revised BAR.
 - Native over-storey cover to be correctly entered in the Credit Calculator for Management zone details for Zone 2.
 - The BAR correctly state that the threatened Black Falcon was recorded on the proposal site.
 - The BAR to be updated to correctly represent how EEC will be delineated on the site.
 - The BAR provide details of the measures taken to avoid and mitigate the risk of collision by birds and microbats to barbed-wire fencing.
 - The BAR to assign responsibility for training/enforcement of site speed limits.
 - The BAR provide details of the measures taken to avoid and mitigate the effects of the perimeter fencing on fauna movement.
 - Section 7 of the BAR be revised to provide credit calculations that are consistent with the proposal submitted to the Credit Calculator.

Based on consideration of the above, we recommend the following conditions of development consent:

- *Construction activities and storage of materials for boundary fencing should be wholly contained within the proposal site. Disturbance to road reserves other than access points identified in the EIS must not occur.*
- *All trees to be removed should be placed in areas of retained native vegetation to provide additional fauna habitat.*
- *Trees with hollows should not be removed during spring to early summer, in order to mitigate direct impacts to threatened fauna during the breeding season.*
- *Prior to construction, surveys must be conducted for Calotis moorei, Convolvulus tedmoorei and Leptorhynchus orientalis to determine presence or absence on the site. If a species credit is required for any of these species, then this must be incorporated into the final credit profile and offset strategy before construction commences.*

Community Consultation Plan

The proponent is encouraged to “involve” key stakeholders beyond “inform” and “consult” as referenced in the Community Consultation Plan.

It is recommended:

- That all stakeholders are made aware of employment opportunities, including local training providers.
- That local energy benefits for the community including access to affordable renewable energy and energy efficiency information are considered.
- That the proponent liaise with the Office of Environment and Heritage’s Regional Clean Energy Coordinator/Community Engagement Team Leader regarding community consultation, employment, education and local energy benefit opportunities.
- That the Community Consultation Plan incorporates a social impact assessment framework to measure resultant impacts of the development



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Ref No: DOC17/315775

Ms Elle Donnelley
A/Senior Planner, Resource Assessments
Department of Planning & Environment
GPO Box 39 SYDNEY NSW 2001
Sent by e-mail to: elle.donnelley@planning.nsw.gov.au

Dear Ms Donnelley

RE: SSD 8208 Coleambally Solar Farm - Heritage trees – Measures for Conservation

Reference is made to your email received on 9 June 2017 requesting comment from the Heritage Division of OEH (on behalf of the Heritage Council of NSW) for the above SSD proposal. It is noted that the OEH South West Region recommended referral of this proposal to the Heritage Division as three European Marked Trees were found during field survey of the project area.

The three marked trees have been described and recorded in the report titled 'Environmental Impact Statement Coleambally Solar Farm' prepared by ngh Environmental dated April 2017. documents provided in the links with your email have been reviewed. That report advises that the three European Marked Trees (survey markers) were the only heritage items within the project area and that all other identified European heritage items are more than 10 Kilometres away from the Solar Farm proposal area.

Section 7.9.3 of the abovementioned report advises that the three European marker trees identified within the proposal area are unlikely to be affected by the construction, operation or decommissioning phases of the proposed solar farm. These areas would be avoided and no vegetation is proposed to be removed near these trees.

It is considered that appropriate mitigation measures for the three trees would include Archival Recording and avoidance by future works. An unexpected finds protocol is also recommended to be included in any Conditions of Approval for the Solar Farm proposal to cover the situation of any historical archaeological 'relics' being discovered in the project area.

If you have any questions arising from this letter, please contact Siobhan Lavelle, Senior Team Leader, Archaeological Heritage at the Heritage Division, Office of Environment and Heritage on telephone (02) 9873 8546 or by e-mail: siobhan.lavelle@environment.nsw.gov.au.

Yours sincerely

Rajeev Maini
Acting Manager, Conservation
Heritage Division
Office of Environment & Heritage
As Delegate of the Heritage Council of NSW
23 June 2017

2 June 2017

SWT17/00012
SF2017/022657

The Manager
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Attention: Elle Donnelley

**SSD 8208 - PROPOSED "COLEAMBALLY" SOLAR FARM, LOT 78, 81, 82, 83, 100 & 101
DP750896 & LOT 1 DP821577, KIDMAN WAY, COLEAMBALLY.**

I refer to your correspondence regarding the subject Application which was referred to the Roads and Maritime Services for assessment and comment.

Roads and Maritime Services has reviewed the Environmental Impact Statement (EIS) prepared by NGH Environmental for the Coleambally Solar Farm project. From the information provided it is understood that the proposal is for the establishment and operation of a 150 MW solar photovoltaic (PV) plant and associated infrastructure on the subject site. The subject site has frontage to the Kidman Way, which is a classified road, and to Ercildoune Road within a 100 km/h speed zone. The Kidman Way is an approved road train route.

The development will comprise of a series of photovoltaic panels (approximately 560,000) erected on the site. It is noted from the documentation that various options are being considered for the mounting of the panels however it is understood that each of the options have relatively comparable footprints, visual and environmental impacts. The various options for the panel structures will stand about 2.5 metres above ground.

It is understood that the anticipated total construction period will be between 3 to 4 months. Due to the characteristics of such a development the significant proportion of traffic generation (for both light and heavy vehicles) occurs during the construction and decommissioning stages of the development with the operational phase of the development will generate limited traffic. The EIS and outlines transport issues and details Management and mitigation measures for traffic generation including works to the intersection of the Kidman Way and Ercildoune Road. A Traffic Management Plan is proposed to be developed with input from the relevant roads authorities for construction activity.

The submitted documentation considers the heavy and light vehicle traffic generation for construction of the facility. The documentation does not finalise the preferred route for the delivery of components to the development site or the source of other products, such as the aggregate, water and sand. Therefore any consent for this development will require the preparation of an appropriate Traffic Management Plan. As the proposal relies on access via the classified and local road network this plan should be finalised in consultation with the relevant road authorities, in this case being both the Roads and Maritime Services and Balranald Shire Council.

The submitted documentation indicates that access to the development site is proposed from Ercildoune Road and through the intersection of the Kidman Way and Ercildoune Road. It is appropriate to require that all access to the development site be via this access and not via any other access points to the site. Given the potential traffic generation, including light vehicles, being predominantly from the south the submitted reports propose the construction of a Basic Right Turn (BAR) and Basic Left Turn (BAL) intersection treatment at the intersection of the Kidman Way and Ercildoune Road. Access to the site from Ercildoune Road should be consistent with Council's requirements. Appendix G includes a design for the intersection of the Kidman Way and Ercildoune Road that is generally consistent with the requirements of Roads and Maritime.

It is proposed that approximately 300 construction personnel would be required on site during the peak construction period. The construction workforce is proposed to be housed within the local area including Coleambally, Jerilderie Griffith and surrounding localities. Given the distances required to be travelled and the construction workforce numbers it would be appropriate to consider options to address driver fatigue for the construction period of the development. The submitted documentation refers to car pooling and buses being organised to transport personnel to and from the development site.

The development proposes to address any perceived impact on visual amenity or glint/glare for motorists by the establishment of plantings to screen the development from view along the Kidman Way. This is proposed to shield the facility from the most frequent and direct views from the Kidman Way and will minimise distraction of the motorist.

Roads and Maritime is mainly concerned with the provision of safe access between the subject site and the public road network and the impact of the development on the safety and efficiency of the road network. Roads and Maritime emphasises the need, particularly during the construction phase of this development, to minimise the impacts on the existing road network. As the subject site is to be accessed via the intersection with the Kidman Way which is located within a 100 km/h speed zone the following conditions are proposed for road safety reasons.

Roads and Maritime Services has assessed the Development Application based on the documentation provided and would raise no objection to the development proposal subject to the Consent Authority ensuring that the development is undertaken in accordance with the information submitted as amended by the inclusion of the following as conditions of consent (if approved):-

1. A Traffic Management Plan shall be prepared in consultation with the relevant road authorities (Council and Roads and Maritime Services) to outline measures to manage traffic related issues associated with the development, particularly during the construction and decommission processes. The appointed transport contractor shall be involved in the preparation of this plan. The plan shall address all light and heavy traffic generation to the development site and detail the potential impacts associated with the development, the mitigation measures to be implemented, and the procedures to monitor and ensure compliance. This plan shall address, but not necessarily be limited to the following;
 - i) Require that all vehicular access to the site be via the approved access route.
 - ii) Details of traffic routes to be used by heavy and light vehicles, and any associated impacts and any road-specific mitigation measures.
 - iii) Details of measures to be employed to ensure safety of road users and minimise potential conflict with project generated traffic,
 - iv) Proposed hours for construction activities, as night time construction presents additional traffic related issues to be considered.
 - v) The management and coordination of the movement of vehicles for construction and worker related access to the site and to limit disruption to other motorists, emergency vehicles, school bus timetables and school zone operating times,
 - vi) loads, weights and lengths of haulage and construction related vehicles and the number of movements of such vehicles,
 - vii) procedures for informing the public where any road access will be restricted as a result of the project,

- viii) any proposed precautionary measures such as signage to warn road users such as motorists about the construction activities for the project,
 - ix) a Driver Code of Conduct to address such items as; appropriate driver behaviour including adherence to all traffic regulations and speed limits, safe overtaking and maintaining appropriate distances between vehicles, etc and appropriate penalties for infringements of the Code,
 - x) details of procedures for receiving and addressing complaints from the community concerning traffic issues associated with truck movements to and from the site,
2. The Proponent must engage an appropriately qualified person to prepare a Road Dilapidation Report for all road routes to be used during the construction (and decommissioning) activities, in consultation with the relevant road authority (Roads and Maritime Services and Council). This report is to address all road related infrastructure. Reports must be prepared prior commencement of, and after completion of, construction (and decommissioning). Any damage resulting from the construction (or decommissioning) traffic, except that resulting from normal wear and tear, must be repaired at the Proponent's cost. The applicant is accountable for this process, rather than the proposed haulage contractor. Such work shall be undertaken at a time as agreed upon between the Proponent and relevant road authorities.
3. Prior to the commencement of construction on-site, the Proponent must undertake all works to upgrade any road, its associated road reserve and any public infrastructure in that road reserve, to a standard suitable for use by heavy vehicles to meet any reasonable requirements that may be specified by the relevant roads authority. The design and specifications, and construction, of these works must be completed and certified by an appropriately qualified person to be to a standard to accommodate the traffic generating requirements of the project. On Classified Roads the geometric road design and pavement design must be to the satisfaction of the Roads and Maritime Services.
4. As a minimum the intersection of the Kidman Way and Ercildoune Road is to be constructed and the roadside maintained to the satisfaction of Roads and Maritime Services to comply with the following:
- i) Provide for the required Safe Intersection Sight Distance (SISD) with a reaction time of 2.5 seconds in either direction in accordance with the Austroads Publications as amended by the supplements adopted by Roads and Maritime Services for the posted speed limit. Compliance with this requirement is to be certified by an appropriately qualified person prior to construction of the vehicular access.
 - ii) Constructed with a Basic Right Turn (BAR) and Basic Left Turn (BAL) intersection treatment in accordance with the Austroads Guide to Road Design as amended by the supplements adopted by Roads and Maritime Services for the posted speed limit on the Kidman Way. The intersection is to be constructed to the standards required for an approved road train route.
 - iii) Designed and constructed so as not to interfere with the capacity of the current roadside drainage network and to prevent water from proceeding onto, or ponding within, the carriageway of the Kidman Way. If a culvert is to be installed and is to be located within the required clear zone of the Kidman Way for the posted speed zone it is to be constructed with a traversable type headwall.
 - iv) The construction of Ercildoune Road to 2 lanes and be sealed for at least 50 metres from its intersection with the Kidman Way. The intersection shall be designed and constructed so that vehicles turning between the Kidman Way and the access road are not required to cross to the opposing travel lane in order to perform a turn manoeuvre. The intersection shall be line marked in accordance with Australian standards.

5. A management plan to provide measures to suppress dust generation from the development site and the transportation route shall be prepared and implemented to the satisfaction of Council and Roads and Maritime Services.
6. No external lighting of any infrastructure associated with the project is permitted at night that may cause distraction to road users other than low intensity security lighting.
7. A landscaped buffer (at least 5 metres in width planted with a variety of species endemic to the area and growing to a mature height ranging from 2 metres to at least 5 metres) shall be established and maintained within the subject property along the frontages of the site to the Kidman Way and Ercildoune Road to a standard to minimise distraction of the travelling public.
8. Glint and glare from the solar panels shall not cause a nuisance, disturbance or hazard to the travelling public on the public road network. In the event of glint or glare from the solar plant being evident from a public road, the proponent shall immediately implement glare mitigation measures such as construction of a barrier (e.g. fence) or other approved device to remove any nuisance, distraction and/or hazard caused as a result of glare from the solar panels.
9. Once the new access roadway is constructed to Ercildoune Road all existing accesses to the developments site from the Kidman Way shall be removed or retained and locked for emergency purposes only and any damage or disturbance to the road reserve of the Kidman Way shall be restored to match surrounding landform in accordance with Council requirements.
10. The Kidman Way is part of the State Road network. For works on the State Road network the developer is required to enter into a Works Authorisation Deed (WAD) with Roads and Maritime Services before finalising the design or undertaking any construction work within or connecting to the road reserve. The Works Authorisation Deed documentation is to be submitted for each specific change to the state road network for assessment and approval by Roads and Maritime Services prior to commencement of any works within the road reserve. The applicant is to contact the Land Use Manager for the South West Region on Ph. 02 69236611 for further detail.
11. Any works within the road reserve of the Kidman Way requires approval under Section 138 of the Roads Act, 1993 from the road authority (Council) and concurrence from Roads and Maritime Services prior to commencement of any such works. The developer is responsible for all public utility adjustment/relocation works, necessitated by the development and as required by the various public utility authorities and/or their agents.
12. All works associated with the project shall be at no cost to the Roads and Maritime Services.

Under the provisions of the Environmental Planning & Assessment Act the Consent Authority is responsible to consider any likely impacts on the natural or built environment. Depending on the level of environmental assessment undertaken to date and nature of the works it may be necessary for the developer to undertake further environmental assessment for any ancillary road works required as a condition on the development.

Any enquiries regarding this correspondence may be referred to the Manager, Land Use for Roads and Maritime Services (South West Region), Maurice Morgan, phone (02) 6923 6611. **Please forward a copy of the Notice of Determination for this Development Application to the Roads and Maritime Services at the same time as advising the applicant.**

Yours faithfully



Per:
Peter McMahon
Acting Regional Manager
South West Region



Department of Primary Industries

OUT17/21553

Ms Elle Donnelley
Resource Assessments
NSW Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Elle.donnelley@planning.nsw.gov.au

Dear Ms Donnelley

Coleambally Solar Farm (SSD 8208) Comment on the Environmental Impact Statement (EIS)

I refer to your email of 4 May 2017 to the Department of Primary Industries (DPI) in respect to the above matter. Comment has been sought from relevant divisions of DPI. Views were also sought from NSW Department of Industry - Lands that are now a division of the broader Department and no longer within NSW DPI.

Any further referrals to DPI can be sent by email to landuse.enquiries@dpi.nsw.gov.au.

DPI has reviewed the EIS and provides the following recommendations:

- While a number of potential water sources have been identified in the EIS for the water demands during and post construction, the security of these sources, the adequacy of existing water licences or the ability to obtain additional water entitlement has not been considered. Where additional extraction is proposed such as groundwater, this would also require an impact assessment on existing users and the environment. The proponent should confirm these details prior to approval being granted for the project to ensure water supply arrangement and licensing requirements can be met.
- The EIS refers to an irrigation channel that borders part of the southern project area. This channel appears to be in the location of a natural watercourse, however the EIS indicates this channel is only used for conveying irrigation flows. The proponent should confirm whether this channel also receives catchment runoff from upstream and whether this alters the potential flood impacts predicted in the EIS.
- The EIS proposes two bridges over irrigation channels and the potential relocation of an irrigation channel. The proponent should ensure these works are consistent with DPI Water's guidelines for [Controlled Activities on Waterfront Land \(2012\)](#) and that they are completed in consultation with the relevant landholders and the irrigation authority.
- The proponent should notify DPI Water of confirmed proposals to relocate any irrigation channels. This is to enable consideration of amendments to the irrigation licence held by Coleambally Irrigation Cooperative Limited.
- The proponent should ensure that the Weed Management Plan includes vehicle hygiene regimes.

- The following should be included as conditions of consent in any approval granted for the project:
 - All construction works would be managed in accordance with the [Managing Urban Stormwater: Soils and Construction series](#).
 - All subsurface infrastructure should be required to be removed at the decommissioning of the project, or otherwise located at least 1200mm below ground level to ensure no future agricultural activities are impacted.
 - The proponent should prepare the following documents in consultation with DPI Water (water.referral@dpi.nsw.gov.au) prior to commencement of activities:
 - a Soil and Water Management Plan; and
 - Erosion and Sediment Control Plan.
 - The proponent should prepare the following documents in consultation with DPI Agriculture (landuse.ag@dpi.nsw.gov.au) prior to commencement of activities:
 - a decommissioning management plan with rehabilitation objectives and strategies for returning the land to irrigated agricultural production, including providing locational identification for any remaining subsurface infrastructure, baseline data including soil and land resources, current land use and capability, and rehabilitation objectives and strategies;
 - a Groundcover Management Plan including consideration of species that will be utilised by grazing animals, spacings that will encourage pasture growth, water supply options for stock, and alternatives for protecting the soil if pasture establishment is not successful; and
 - a Construction Environmental Management Plan (CEMP) following project approval for the establishment of erosion and sedimentation controls at the commencement of works and throughout construction and during trenching for the underground cabling.

Yours sincerely



Mitchell Isaacs
Director, Planning Policy & Assessment Advice
1 June 2017

DPI appreciates your help to improve our advice to you. Please complete this three minute survey about the advice we have provided to you, here:
<https://goo.gl/o8TXWz>



**Murrumbidgee
COUNCIL**

Darlington Point Office
21 Carrington Street
PO Box 5
DARLINGTON POINT NSW 2706

Telephone: 02 6960 5500

Coleambally Office
39 Brolga Place
COLEAMBALLY NSW 2707

Telephone: 02 6954 4060

Jerilderie Office
35 Jerilderie Street
PO Box 96
JERILDERIE NSW 2716

Telephone 03 5886 1200

File: SSD

31 May 2017

Department of Planning and Environment
Attention: Elle Donnelley
GPO Box 39
SYDNEY NSW 2001

Dear Elle

State Significant Development 8208

Murrumbidgee Council have reviewed the Environmental Impact Statement for the proposed Solar Project at Coleambally and provide the following comments and proposed conditions for inclusion on any consent.

If you would like further information regarding Council's submission, please contact Susan Appleyard, Director of Environmental Services on 03 5886 1200.

Yours faithfully

Craig Moffitt
GENERAL MANAGER

Attachment

MURRUMBIDGEE COUNCIL SUBMISSION **SSD 8208 COLEAMBALLY SOLAR FARM**

Traffic Management

The EIS states that a Traffic Management Plan will be prepared for the site in consultation with Roads and Maritime Services and Murrumbidgee Council.

This should also be a condition of consent as there are a number of issues surrounding the potential impacts of the traffic flow around and into and out of the site. Some of the issues identified include:

- Pavement within for Ercildoune Road
- The required upgrade works to the intersection of Kidman Way and Ercildoune Road.
- The nature of the access point off kook road.
- Road- train access as Ercildoune road only has seasonal road-train access.
- Internal traffic movement plan will be required.
- Detailed design and construction plans for the bridge(s) to cross the internal channels
- Design for the onsite carparking area include one disabled parking space per 50 parking spaces or part there off.
- Stormwater control for all road and parking areas.

Approvals from Council/Principal Certifying Authority

Construction certificate(s) will be required for the proposed works on site. More detailed plans will be required to determine if the following will need the consent of a PCA or council.

Construction Certificates:

- The Solar arrays and associated structures.
- The bridges
- The amenities buildings on site. Details of a potable water supply will also be required with this application.

Section 68 Approval under the Local Government Act

- Onsite sewerage management system
- Stormwater disposal if onto Council roads.

Waste Disposal

A detailed waste management plan will be required for the project. The Landfills within the Council area are unlicensed and have limited capacity and are limited in some materials it can take.

Fire Management Plan

A fire management plan will be required for the control of grass fires through the site.

Visual Impact

A landscaping plan should be included as part of the overall site plan to ensure that the visual impact of the solar facility is minimized especially along the Kidman Way corridor.

Pollution Control

Noise, air and erosion control measures are to be put in place prior to, during and after construction to ensure that the impact of the development especially during construction is minimised.

The following conditions are to be included in any consent issued:

1. A Construction Certificate is to be obtained from Council or an accredited Private Certifier to verify that, if all building work is carried out in accordance with those endorsed detailed plans and specifications, it will fully comply to all of the provisions of the Building Code of Australia (BCA).

Reason: This is a prescribed Condition of the Environmental Planning and Assessment Act and Associated Regulations

2. The erection of the building the subject of this development consent MUST not be commenced until:
 - (a) detailed plans/specifications of the building have been endorsed with a construction certificate by:
 - (i) the Council; or
 - (ii) an accredited certifier, and
 - (b) the person having the benefit of the development consent:
 - (i) has appointed a principal certifying authority; and
 - (ii) has notified the Council of the appointment, and
 - (c) the person having the benefit of the development consent must lodge a notice of commencement form with Council prior to commencement of work at least two day prior to commencing the erection of the building.

Reason: These are requirements of the Environmental Planning and Assessment Act and associated Regulations

3. Prior to any works being undertaken in the road reserve, a road opening permit is to be obtained from Council.

Reason: To ensure Council's assets are maintained in accordance with relevant Australian Standards.

4. Prior to Occupation of the Development an application for an onsite sewerage waste management system (septic tank) is to be submitted and approved by Council.

Reason: To ensure the adequate treatment and disposal of effluent.

5. All plumbing and drainage work to be carried out in accordance with AS3500 National Plumbing and Drainage Code.

Reason: To ensure compliance with the requirements of the relevant legislation.

6. Potable water supply is to be provided on site for each allotment/dwelling.

Reason: To provide a suitable water supply for domestic purposes.

7. Builders/Developers are to provide on site waste bins for waste materials generated during construction or they are to remove waste from the site on a daily basis.

Reason: To avoid a public health nuisance.

8. Prior to works commencing on site, a waste management plan is to be provided to and approved by Council for the construction phase of the project.

Reason: To ensure compliance with the Protection of the Environment Operations (Waste) Regulation 2014.

9. **Landscaping** - A detailed landscape plan shall be submitted to and approved by Council within six (6) months of the date of this approval. Approved landscaping works shall be completed within twelve (12) months of approval of same. All landscaping works shall be adequately protected against damage and shall be maintained as required.

Reason: To ensure that an appropriate detailed landscape design is prepared in conjunction with the overall design of the proposed development and maintained for the future.

10. Any spoil deposited on public roads during the cartage of materials from or to the site shall be removed on the same day. The cartage of spoil shall cease, as directed by Council, if the Council determines that excessive deposition of spoil onto the road is taking place.

Reason: To ensure erosion control measures have been implemented.

11. Provision is to be made of an approved safety fence around the site prior to commencement of works.

Reason: To protect the safety of persons on adjoining land.

12. Any waste or excavated material removed from the site is to be taken to an authorised site for disposal. No fill is to be deposited on other land without the prior consent of Council.

Reason: To ensure the responsible disposal of surplus landfill.

13. Prior to works commencing on site the applicant is to provide Council with a plan outlining the provision of erosion control measures, dust suppression measures and noise containment measures. The plan is to be approved by Council, and measures in the plan are to be enacted prior to commencement of any earthworks within the site.

Reason: To minimise pollution generated by the development.

14. All vehicles must enter and exit the development in a forward direction to avoid possible conflict with through traffic on Ercildoune Road and Kook Road.

Reason: To minimise possible accidents with traffic on the adjacent road.

15. Prior to release of the Construction Certificate detailed plans of the upgrade works to the road network surrounding the development are to be supplied to Murrumbidgee Council and the Roads and Maritime Service for approval. The plans are to include the following areas as a minimum:

- intersection of the Kidman Way and Ercildoune Road
- the length of Ercildoune Road to 50 metres past the entrance to the proposed development side
- the emergency entry and exit point on Kook Road

Reason: To ensure adequate vehicular access to the proposed development

16. For the purposes of safety and preventing obstruction, all vehicles being loaded and/or unloaded are to stand wholly within the site.

Reason: To ensure obstruction of roads does not occur.

17. Prior to issuing of a Construction Certificate, submission of plans for all internal roads, bridges and car parking spaces, manoeuvring area and access driveways all conforming to Australian Standards 2890 & 3500. Drainage and pavement designs are to be prepared by a qualified engineer and are to address expected vehicle loadings and any fill compaction requirements.

Reason: To ensure that the car parking is designed to a standard commensurate to proposed use

18. **Car Park**

Prior to issue of an Occupation Certificate, provide car park construction conforming to the approved plans.

Reason: To ensure provision of a car park commensurate with proposed use.

19. Disabled Car Park

Provide at least one (1) car parking space on site for people with disabilities.

Reason: To ensure compliance with the Building Code of Australia and the Disability Discrimination Act 1992.

20. An emergency response plan certified by Workcover is to be submitted to Council prior to occupation of the development. Special attention is to be given to grass and electrical fires.

Reason: To ensure adequate measures are in place in the event of an emergency.

21. Advice to Applicant

Please note that if you require B-Double or Road Train Access to the site in the future, a formal request to allow B-Double and/or Road Train access to the site is required to be lodged with Council for reporting to the Local Traffic Committee.

22. Signage

A sign must be erected in a prominent position on any work site on which work involved in the erection or demolition of a building is being carried out:

- (i) showing the name, address and telephone number of the principal certifying authority for the work, and
- (ii) showing the name for the principal contractor (if any) for any building work and a telephone number on which that person may be contacted outside working hours, and
- (iii) stating that unauthorised entry to the work site is prohibited.

Any such sign is to be maintained while the building work, subdivision work or demolition work is being carried out, but must be removed when the work had been completed.

This Condition does not apply to:

- (i) building work carried out inside an existing building, subdivision work or demolition work that is carried out inside an existing building, that does not affect the external walls of the building; or
- (ii) in relation to Crown building work that is certified, in accordance with Section 116G of the Environmental Planning and Assessment Act, to comply with technical provisions of the State's building laws.

Reason: This is a prescribed condition of the Environmental Planning and Assessment Act 1979 & Regulation 2000.

23. Toilet Facilities

Toilet facilities are to be provided at or in the vicinity of the work site on which work involved in the erection or demolition of a building is being carried out, at the rate of one toilet for every 20 persons or part of 20 persons employed at the site.

The provision of toilet facilities in accordance with this condition must be completed before the commencement of construction works.

Reason: This is a prescribed condition of the Environmental Planning and Assessment Act 1979 & Regulation 2000.

24. Compliance

The structure(s) are to comply with the relevant requirements of the Building Code of Australia and the Environmental Planning and Assessment Act 1979.

Reason: To ensure compliance with the Building Code of Australia.

25. Portable fire extinguishers

Portable fire extinguishers are to be provided in accordance with section E1.6 of the Building Code of Australia.

Reason: To ensure compliance with the Building Code of Australia.

26. Exit signs

An exit sign must be clearly visible to persons approaching the exit and must be installed on or above or adjacent to each door serving as, or forming part of, a required exit.

Reason: To ensure compliance with the Building Code of Australia.

27. Essential Fire Safety Equipment

All essential fire or other safety measures must be maintained in accordance with BCA requirements.

Reason: To ensure compliance with the Building Code of Australia.

28. Annual Fire Safety Statement

The owner shall supply to the Council an Annual Fire Safety Statement which is to state that each essential fire or other safety measure installed in the building has been inspected and tested by a competent person and that the service was, or was not, designed, installed and capable of operating at the required standard.

Reason: To ensure the ongoing maintenance of fire and safety equipment.

29. Fire Safety Certificate

Prior to occupation of the building the owner must cause the Council to be given a fire safety certificate. The fire safety certificate must be in accordance with the Fire Safety Schedule issued for the development and is to state in relation to each essential fire or other safety measure implemented in the building or on the land on which the building is situated:

- (a) That the measure has been assessed by a person (chosen by the owner of the building) who is properly qualified to do so; and

- (b) That as at the date of the assessment the measure was found to be capable of functioning at a standard not less than that required by the relevant Australian standards

Reason: To ensure adequate fire safety in accordance with the requirements of the Building Code of Australia.



NSW RURAL FIRE SERVICE



The Secretary
Department of Planning & Environment
PO Box 39
SYDNEY NSW 2001

Your reference: SSD 8208
Our reference: D17/1416
DA17051007223 AB

Attention: Elle Donnelley

2 June 2017

Dear Ms Donnelley,

Agency Comment: Coleambally Solar Farm (SSD 8208); Lots 78, 81, 82, 83 DP 750896, Part of Lots 100 and 101 DP 750896, Lot 1 DP 821577, Lot 3 DP 1055725 - Kook Road Coleambally

I refer to NSW Planning and Environment correspondence dated 8 May 2017 seeking comment from the NSW Rural Fire Service (NSW RFS) regarding bush fire protection requirements for the above State Significant Development application.

The NSW RFS has received and reviewed the Environmental Assessment and understands the development proposal is for a *"proposed 150 Megawatt (MW) photovoltaic (PV) solar farm"* which includes:

- Solar arrays, PV boxes and skids.
- Potential battery storage.
- Delivery station and solar sub-station.
- Associated above and/or underground cabling.
- Underground connection to TransGrid substation and extension to substation.
- Ancillary facilities.
- New access point from Ercildoune Road and associated road upgrades.
- Possible new access point from Kook Road for solar substation maintenance purposes only.
- Construction of bridges across Tubbo irrigation channel and the central irrigation channel.
- Construction of internal gravel access tracks.
- Possible irrigation drainage channel relocation, subject to final design.
- Subdivision of land.
- Landscaping.

While the subject site is not mapped bush fire prone by Murrumbidgee Shire Council, the subject land has a significant potential to carry grass fires. Further NSW RFS is the primary response agency for fighting structural fires within the site.

Postal address

NSW Rural Fire Service
Records Management
Locked Bag 17
GRANVILLE NSW 2142

Street address

NSW Rural Fire Service
Coffs Harbour Customer Service
Centre
Suite 1, 129 West High Street
COFFS HARBOUR NSW 2450

T (02) 6691 0400
F (02) 6691 0499
www.rfs.nsw.gov.au
Email: csc@rfs.nsw.gov.au



As such, the NSW RFS recommends the following conditions be attached to any consent granted:

1. A Fire Management Plan (FMP) shall be prepared in consultation with NSW RFS Murrumbidgee Irrigation Area (MIA) Fire Control Centre. The FMP shall include:
 - 24 hour emergency contact details including alternative telephone contact;
 - Site infrastructure plan;
 - Fire fighting water supply plan;
 - Site access and internal road plan;
 - Construction of Asset Protection Zones (APZ) and their continued maintenance;
 - Location of hazards (Physical, Chemical and Electrical) that will impact on fire fighting operations and procedures to manage identified hazards during fire fighting operations;
 - Such additional matters as required by the NSW RFS District Office (FMP review and updates).
2. The entire solar array development footprint to be managed as an Asset Protection Zone as outlined within section 4.1.3 and Appendix 5 of 'Planning for Bush Fire Protection 2006' and the NSW Rural Fire Service's document 'Standards for Asset Protection Zones'.
3. A 20,000 litre water supply (tank) fitted with a 65mm storz fitting shall be located adjoining the internal property access road within the required APZ.
4. To allow for emergency service personnel to undertake property protection activities, a 20 metre defensible space (APZ) that permits unobstructed vehicle access is to be provided around the perimeter of the solar array development site.

For any enquiries regarding this correspondence, please contact Alan Bawden on 6691 0400.

Yours sincerely



Ivan Perkins
Acting Manager – Planning and Environmental Services North

The RFS has made getting information easier. For general information on 'Planning for Bush Fire Protection, 2006', visit the RFS web page at www.rfs.nsw.gov.au and search under 'Planning for Bush Fire Protection, 2006'.

File Ref. No: BFS17/947 (13467)
TRIM Doc. No: D17/37367
Contact: Stefan Watson

2 June 2017

The Department of Planning & Environment
C/- Elle Donnelley
GPO Box 39
SYDNEY NSW 2001

E: elle.donnelley@planning.nsw.gov.au

Dear Ms Donnelley

**Proposed Coleambally Solar Farm
Kidman Way NSW (SSD17_8208)**

I refer to the above development proposal's Environmental Impact Statement (EIS) which is currently on public exhibition. Fire & Rescue NSW (FRNSW) have reviewed the EIS and the following comments and recommendations are submitted for consideration.

FRNSW notes that the facility's proposed location is within a NSW Rural Fire Services' (RFS) Fire District. Notwithstanding the above, in the event of a significant fire event (either on or off-site in close proximity to the development) or hazardous material incident FRNSW will be responded to either assist the RFS or to fulfill the role of designated combat agency.

It is FRNSW experience that small and large scale photovoltaic installations present unique electrical hazard risks to our personnel when fulfilling their emergency first responder role (N.b. the Fire Brigades Act 1989 imposes specific statutory functions and duties upon the Commissioner of FRNSW).

In addition, the Work Health and Safety (WHS) Act 2011 (and its subordinate Regulation) classify FRNSW as an entity conducting a business or undertaking (PCBU). Clauses 34 and 35 of the WHS Regulation impose specific obligations upon a PCBU to identify hazards and manage risks at workplaces.

Due to the electrical hazards associated with large scale photovoltaic installations and the potential risk to the health and safety of firefighters, both FRNSW and the NSW Rural Fire Service must be able to implement effective and appropriate risk control measures when managing an emergency incident at the proposed site.

Recommendation/s

Should a fire or hazardous material incident occur, it is important that first responders have ready access to information which enables effective control measures to be quickly implemented. Without limiting the scope of the emergency response plan (ERP), the following matters are recommended to be addressed:

1. That a comprehensive ERP is developed for the site.
2. That the ERP specifically addresses foreseeable on-site and off-site fire events and other emergency incidents, (e.g. fires involving solar panel arrays, bushfires in the immediate vicinity or potential hazmat incidents).
3. That the ERP detail the appropriate risk control measures that would need to be implemented in order to safely mitigate potential risks to the health and safety of firefighters and other first responders (including electrical hazards). Such measures would include the level of personal protective clothing required to be worn, the minimum level of respiratory protection required, decontamination procedures, minimum evacuation zone distances and a safe method of shutting down and isolating the photovoltaic system (either in its entirety or partially, as determined by risk assessment).
4. Other risk control measures that may need to be implemented in a fire emergency due to any unique hazards specific to the site should also be included in the ERP.
5. That two copies of the ERP (detailed in recommendation 1 above) be stored in a prominent 'Emergency Information Cabinet' which is located in a position directly adjacent to the site's main entry point/s.
6. Once constructed and prior to operation, that the operator of the facility make contact with the relevant local emergency management committee (LEMC). The LEMC is a committee established by virtue of Section 28 of the State Emergency and Rescue Management Act 1989. LEMCs are required to be established so that emergency services organisations and other government agencies can proactively develop comprehensive inter agency local emergency procedures for significant hazardous sites within their particular local government area. The contact details of members of the LEMC can be obtained from the relevant local council.

For further information please contact Stefan Watson of the Fire Safety Assessment Unit, referencing FRNSW file number BFS17/947 (13467). Please ensure that all correspondence in relation to this matter is submitted electronically to firesafety@fire.nsw.gov.au.

Yours Sincerely

A handwritten signature in black ink, appearing to read 'M. Castelli'.

Mark Castelli
Team Leader
Fire safety Assessment Unit
FRNSW

Elle Donnelley
Acting Senior Planning Officer
Resource Assessments & Planning Services
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Elle.Donnelley@planning.nsw.gov.au

Dear Elle

**Coleambally Solar Farm (SSD 8208)
Environmental Impact Statement Exhibition**

I refer to your email dated 4 May 2017 inviting the Division of Resources & Geoscience (DRG) to provide comments on the Coleambally Solar Farm Project (SSD 8208) Environmental Impact Statement (EIS) Exhibition submitted by Neoen Australia Pty Limited (the Proponent).

DRG has reviewed adequacy of information provided in relation to the abovementioned application and provides the following advice.

DRG has reviewed the EIS and is satisfied that the Proponent has considered the potential impacts the proposal may have upon mineral, energy and construction material resources and exploration activities in the vicinity of the project site. It is noted that the record of consultation with Murrumbidgee Council has been included in the EIS as requested.

DRG supports the proposed Coleambally Solar Farm as it aligns with Government policy to increase renewable energy generation, jobs and investment in the State. Specifically, the proposal is aligned to the State's NSW Renewable Energy Action Plan, and would deliver positive social aspects, drive investment and growth in regional NSW and provide alternate income streams. Increasing solar energy in NSW will assist the Government in meeting its commitment to support the national Renewable Energy Target of 33,000 gigawatt hours (GWh) by 2020.

Should you have any enquires regarding this matter please contact:
Adam Banister, Acting Senior Advisory Officer - Royalties & Advisory Services (02) 4931 6439.

Yours sincerely



Zane West
Manager Royalties & Advisory Services
25 May 2017



Nature Conservation Council

The voice for nature in NSW

Ms. Carolyn McNally
Secretary
NSW Department of Planning & Environment
Level 22, 320 Pitt St
Sydney, 2000

1 May 2017

Submitted via <http://majorprojects.planning.nsw.gov.au>

NCC Submission in support of Coleambally Solar Farm

Dear Sir/Madam,

Thank you for the opportunity to comment on the recent application of Neoen Australia to build a solar farm near Coleambally, as part of your assessment of the solar farm development.

The Nature Conservation Council of NSW (**NCC**) is the peak environment organisation for New South Wales, representing over 150 member societies across the state. Together we are committed to protecting and conserving the wildlife, landscapes and natural resources of NSW.

It is our position that this proposed solar farm would deliver a net-positive impact on nature and for the citizens of New South Wales and as such we support planning approval for this project.

Increased investment in renewable energy projects such as solar farms is an essential step towards a low-carbon future. This project will significantly add to the installed renewable energy capacity in NSW. Further, it will contribute to the government's pledge to support the federal renewable energy target of 33,000GWh of renewable power generation by 2020.

Climate change is already having significant impacts to nature and these will only get worse unless projects such as the Coleambally Solar Farm are rapidly deployed. Climate change is also impacting the residents of New South Wales, specifically through health impacts, and impacts on infrastructure. Renewable energy projects such as the Coleambally Solar Farm are crucial to avoiding dangerous climate change. We ask that your assessment of this project considers the broader benefits of avoiding climate change by proceeding with this project.

We would like to highlight some of the benefits that the Coleambally Solar Farm would offer to the people of NSW:

- With an installed capacity of 150 megawatts, it would produce 380,000 MWh of electricity per year – enough to power 52,000 homes;
- By reducing reliance on coal fired power plants, it would save more than 300,000 tonnes of CO₂ from being released each year;
- It would reduce reliance on coal fired power plants – diversifying the state's energy mix and

promoting renewable energy production;

- At peak, construction would create 300 jobs during commissioning and an additional 7 full time jobs during operation;
- It would contribute to our efforts to avoid dangerous global warming, which is threatening human and ecosystem health.

If you would like any further information regarding our submission, please don't hesitate to contact Brad Smith in our office on (02) 9516 1488 or at bsmith@nature.org.au.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Kate Smolski', with a stylized, flowing script.

Kate Smolski,
CEO

Michael Crawford , of **Boro NSW**, made the following submission on the project:
Coleambally Solar

I object to the proposed Coleambally solar farm on the grounds of its likely adverse impact on NSW electricity prices and electricity security for NSW.

I have previously brought to the attention of the Department and the PAC the way in which intermittent electricity generators subsidised under the LRET make on-demand baseload thermal plants uneconomic and drive them out of the electricity system creating electricity insecurity (since by definition intermittent power generators such as this proposal do not produce power 24/7) and forcing up electricity prices damaging the whole NSW economy, destroying jobs, destroying assets and harming millions of NSW citizens, particularly the least affluent.

You have the information in my previous submissions on a number of wind farm proposals, though diligence in the planning task would require that the Department sourced the information independently.

I bring to your attention the recent articles by Robert Gottlieb in The Australian (April 20th and 21st) in which, after consulting power engineers, he forecasts 'If we have a "normal" summer in 2017-18 in our two largest cities it is absolutely certain we will have blackouts covering 10 to 15 days'.

The Department is already culpable in producing this situation. Approving more intermittent power generators will cause even greater long term harm to the NSW. It will also impose additional costs on NSW taxpayers when the NSW Government is forced to pay compensation upon rescinding such approvals.

This proposal needs to be entirely rejected as nothing more than vandalism against the State of NSW and its citizens.

From: PlanningAlerts <contact@planningalerts.org.au> on behalf of Robert Adams <Robert@xxxxxx.com.au>
Sent: Friday, 2 June 2017 11:52 AM
To: DPE CSE Information Planning Mailbox
Subject: Comment on application SSD 8208

For the attention of the General Manager / Planning Manager / Planning Department

Application	SSD 8208
Address	Kidman Way, Coleambally, NSW
Description	Coleambally Solar - Development of a 150 megawatt solar farm and associated infrastructure (see attached Environmental Impact Statement).
Name of commenter	Robert Adams
Address of commenter	xxxxxx, Coleambally NSW 2707
Email of commenter	Robert@xxxxxx.com.au

Comment

Eagle Energy Pty Ltd wishes to object to SSD 8208 by Neon Energy. The proposed development includes Lot 78 in DP750896. Eagle Energy owns Lots 79 and 80 in DP750896 which is adjacent to the proposed development.

Eagle Energy has a Part 3A approval for a large ethanol and dairy which includes Lot 78 DP750896.

As Eagle Energy hold an existing approval on Lot 78 we object to the proposed solar farm on this land.

This comment was submitted via PlanningAlerts, a free service run by [the OpenAustralia Foundation](#) for the public good. [View this application on PlanningAlerts](#)

APPENDIX B FULL SET OF REVISED SAFEGUARDS AND MITIGATION MEASURES

No.	Safeguards and mitigation measures	C	O	D
General				
GE1	A Construction Environmental Management Plan (CEMP) would be prepared prior to construction commencing, and implemented throughout construction.	C		
Biodiversity				
BD1	Develop and implement a construction Flora and Fauna Management Plan (FFMP) for incorporation of construction related environmental management safeguards. A landscaping strategy should be included within the FFMP.	C		
BD2	Prior to the commencement of work, a physical boundary of the approved clearing limit is to be clearly delineated and implemented. The delineation of such a boundary may include the use of temporary fencing, flagging tape, parawebbing or similar.	C		
BD3	Clearing and construction contractors would be given inductions that make clear the importance of the sensitive area habitat and its species.	C		
BD4	Where trees are to be retained, an adequate tree protection zone (TPZ) will be provided around each tree for the duration of construction. Details for calculating TPZs are provided within <i>Australian Standard 4970-2009 – Protection of trees on development sites</i> .	C		
BD5	A pre-clearing process will be implemented before clearing begins. Pre-clearing surveys will be carried out by an ecologist and will include general fauna surveys, general tree hollow inspections and dam/waterway inspections. Habitat trees will be clearly marked with flagging tape.	C		
BD6	Trees with hollows should not be removed between 1 September and 1 December, in order to mitigate direct impacts to threatened fauna during the breeding season. Clearing of Hollow Bearing Trees will be avoided where possible.	C		
BD7	An unexpected threatened species finds procedure will be developed before clearing commences.	C		
BD8	A 'Clearing and Grubbing Plan' will be developed to; • Include best practice methods for the removal of woody vegetation and non-woody vegetation. • Trees will be removed in such a way as not to cause damage to surrounding vegetation. Root systems of trees and shrubs to be removed will be retained in-ground to ensure surrounding ground layer vegetation is undisturbed and to prevent soil erosion. • Require that where work cannot avoid encroaching into the TPZ, it not impinge on the structural root zones (SRZ) of trees to be retained. Details for calculating the SRZs are provided within <i>Australian Standard 4970-2009 – Protection of trees on development sites</i>. • All trees to be removed should be placed in areas of retained native vegetation to provide additional fauna habitat. • Tree clearing protocol, that includes staged habitat removal, and a requirement for an ecologist being present during tree-felling of all hollow-bearing trees to ensure that any potential impacts on fauna are minimised	C		
BD9	Any fallen timber, dead wood and bush rock (if present) encountered on site will be left in situ or relocated to a suitable place nearby. Rock will be removed with suitable machinery so as not to damage the underlying rock or result in excessive soil disturbance.	C		

No.	Safeguards and mitigation measures	C	O	D
BD10	Prepare a Pest and Weed Management Plan to manage the occurrence of noxious weeds and pest species across the site during construction and operation. The plans must be prepared in accordance with Murrumbidgee Council and NSW DPI requirements. Where possible integrate weed and pest management with adjoining landowners. This would include: - Management protocol for declared noxious weeds as stipulated by the <i>Noxious Weeds Act 1993</i> during and post construction. - A protocol for weed hygiene in relation to vehicles, plant, machinery and importation and management of fill. - Any occurrences of pathogens such as Myrtle Rust and Phytophthora would be monitored, treated and reported.	C		
BD11	Any onsite landscape plantings (such as to address visual impacts) will be comprised of local indigenous species (such as those of Weeping Myall Woodland) with the object of increasing the structure of the existing vegetation. Planting locations would be designed to improve the connectivity between patches in the landscape where consistent with landscaping outcomes and the solar farm operation.		O	
BD12	EEC areas to be retained would be delineated, and construction activities would be excluded from these areas. These areas are shown in Figure 3 8 of the BAR. Clearing and construction contractors would be given inductions that make clear the importance of this area and its species.	C		
BD13	Stockpiling and storage of materials and machinery will be avoided within the dripline (extent of foliage cover) of any native tree.	C		
BD14	Construction activities and storage of materials for boundary fencing should be wholly contained within the proposal area. Disturbance to road reserves other than access points identified in the EIS must not occur.	C		
BD15	Awareness training during site inductions regarding enforcing site speed limits.		O	
BD16	Plain wire is to be used on security fencing where practicable and where it meets safety and security requirements of the solar farm.	C		
BD17	Prior to construction, surveys must be conducted for <i>Calotis moorei</i> , <i>Convolvulus tedmoorei</i> and <i>Leptorhynchus orientalis</i> to determine presence or absence on the site. If a species credit is required for any of these species, then this must be incorporated into the final credit profile and offset strategy before construction commences.	C		
Aboriginal Cultural Heritage				
AH1	Develop or amend the Heritage Unexpected Finds Protocol to include the following process. If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities, the proponent must: - Not further harm the object; - Immediately cease all work at the particular location; - Secure the area so as to avoid further harm to the Aboriginal object; - Notify OEH as soon as practical on 131555, providing any details of the Aboriginal object and its location; and - Not recommence any work at the particular location unless authorised in writing by OEH.	C		
AH2	In the event that skeletal remains are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police and OEH contacted.	C		

No.	Safeguards and mitigation measures	C	O	D
Visual Amenity				
VA1	The materials and colour of onsite infrastructure will, where practical, be non-reflective and in keeping with the materials and colouring of existing infrastructure or of a colour that will blend with the landscape.	Design stage		
VA2	Night lighting would be minimised to the maximum extent possible (i.e. manually operated safety lighting at main component locations). It would be directed away from the Kidman Way, so as not to cause light spill that may be hazardous to drivers.	C	O	D
Land Use				
LU1	Consultation with adjacent landholders would be ongoing to manage interactions between the solar farm and other properties.	C	O	D
LU2	Consultation would be undertaken with TransGrid regarding connection to the substation and design of electricity transmission infrastructure.	C		
LU3	A Rehabilitation and Decommissioning Management Plan is to be prepared in consultation with NSW Department of Primary Industries and the landowner prior to decommissioning. The Rehabilitation and Decommissioning Management Plan is to include: • Rehabilitation objectives and strategies for returning the land to irrigated agricultural production. • Locational identification for any remaining subsurface infrastructure. • Baseline data including soil and land resources, current land use and capability. Decommissioning should include: • Removal of all above ground infrastructure. • Removal of gravel from internal access tracks where required, in consultation with landowner. • Reverse any compaction by mechanical ripping. • Reinstall irrigation infrastructure in consultation with landowner, including laser levelling and contour/bund reconstruction where required.			D
Noise				
NS1	Works should be undertaken during standard working hours only. (Except for the connection to substation) • Monday – Friday 7am to 6pm • Saturday 8am to 1pm • No work on Sundays or public holidays	C		
NS2	All staff on-site should be informed of procedures to operate plant and equipment in a quiet and efficient manner.	C	O	D
NS3	A letter box drop would be prepared and provided to residences in close proximity to the works. The letter would contain details of the proposed works including timing and duration and a contact person for any enquiries or complaints.	C	O	D
NS4	Regular inspection and maintenance of equipment to ensure that plant is in good condition.	C	O	D

No.	Safeguards and mitigation measures	C	O	D
Soil				
SO1	A Ground Cover Management Plan would be developed to address soil erosion, fire control and biodiversity issues. The plan would include: - Monitoring and triggers for action to address issues arising from erosion that develops during operation. - Consideration of species that will be utilised by grazing animals, if applicable, and spacing that will encourage pasture growth. - Water supply options for stock. - Alternatives for protecting the soil if pasture establishment is not successful.		O	
SO2	A Soil and Water Management Plan (SWMP) and Erosion and Sediment Control Plan (ESCP) would be prepared in consultation with DPI Water (water.referral@dpi.nsw.gov.au), implemented and monitored during the construction and decommissioning of the proposal, in accordance with Landcom (2004), to minimise soil (and water) impacts. These plans would include provisions such as: - At the commencement of the works, and progressively during construction, install the required erosion control and sediment capture measures. - Regularly inspect erosion and sediment controls, particularly following rainfall. - Maintain a register of inspection and maintenance of erosion control and sediment capture measures. - Ensure that machinery arrives on site in a clean, washed condition, free of fluid leaks. - Ensure that machinery leaves the site in a clean condition to avoid tracking of sediment onto public roads. - In all excavation activities, separate subsoils and topsoils and ensure that they are replaced in their natural configuration to assist revegetation. - Stockpile topsoil appropriately, so as to minimise weed infestation, maintain soil organic matter, maintain soil structure and microbial activity. - Manage works in consideration of heavy rainfall events. - Areas of disturbed soil would be rehabilitated promptly and progressively during construction.	C		D
SO3	A Spill Response Plan would be developed and implemented during construction, operation and decommissioning to prevent contaminants affecting adjacent surrounding environments. It would include measures to: - Manage the storage of any potential contaminants onsite. - Mitigate the effects of soil contamination by fuels or other chemicals (including emergency response and EPA notification procedures and remediation). - A protocol would be developed in relation to discovering buried contaminants within the proposal area (e.g. pesticide containers if any). It would include stop work, remediation and disposal requirements.	C	O	D

No.	Safeguards and mitigation measures	C	O	D
SO4	During construction, operation and decommissioning, dust would be managed to prevent dust leaving the proposal area. This includes dust from stockpiled materials.	C	O	D
SO5	Any area that was temporarily used during construction (laydown and trailer complex areas) would be restored back to original condition or re-vegetated with native plants.		O	
SO6	Soil must be tested for clay content, CEC and EC prior to commencement of construction work to determine whether the application of gypsum is required while trenching and the rate of application.	C		
SO7	The construction of the channel bridges and the relocation of the irrigation channel (if carried out) must be carried out in accordance with DPI Water's <i>Guidelines for Controlled Activities on Waterfront Land</i> (2012) and be completed in consultation with the relevant landholders and the irrigation authority.	C		
SO8	DPI Water must be notified of confirmed proposals to relocate any irrigation channels. This is to enable consideration of amendments to the irrigation licence held by Coleambally Irrigation Cooperative Limited.	C		
Water				
WA1	All staff would be appropriately trained through toolbox talks for the minimisation and management of accidental spills.	C	O	D
WA2	All fuels, chemicals, and liquids would be stored at least 50 m away from any waterways or drainage lines and would be stored in an impervious bunded area.	C	O	D
WA3	Adequate incident management procedures will be incorporated into the Construction and Operation Environmental Management Plans, including requirement to notify EPA for incidents that cause material harm to the environment (refer s147-153 Protection of the Environment Operations Act).	C	O	D
WA4	The refuelling of plant and maintenance of machinery would be undertaken in impervious bunded areas.	C	O	D
WA5	Machinery would be checked daily to ensure there is no oil, fuel or other liquids leaking from the machinery. All staff would be appropriately trained through toolbox talks for the minimisation and management of accidental spills	C		D
Traffic, Transport & Road Safety				
TT1	A Traffic Management Plan (TMP) shall be prepared in consultation with the relevant road authorities (Council and Roads and Maritime Services) to outline measures to manage traffic related issues associated with the development, particularly during the construction and decommission processes. The appointed transport contractor shall be involved in the preparation of this plan. The plan shall address all light and heavy traffic generation to the development site and detail the potential impacts associated with the development, the mitigation measures to be implemented, and the procedures to monitor and ensure compliance. This plan shall address, but not necessarily be limited to the following; 1. Require that all vehicular access to the site be via the approved access route. 2. Details of traffic routes to be used by heavy and light vehicles, and any associated impacts and any road-specific mitigation measures. 3. Details of measures to be employed to ensure safety of road users and minimise potential conflict with project generated traffic. 4. Proposed hours for construction activities, as night time construction presents additional traffic related issues to be considered.	C		D

No.	Safeguards and mitigation measures	C	O	D
	5. The management and coordination of the movement of vehicles for construction and worker related access to the site and to limit disruption to other motorists, emergency vehicles, school bus timetables and school zone operating times. 6. Loads, weights and lengths of haulage and construction related vehicles and the number of movements of such vehicles. 7. Procedures for informing the public where any road access will be restricted as a result of the project. 8. Any proposed precautionary measures such as signage to warn road users such as motorists about the construction activities for the project. 9. A Driver Code of Conduct to address such items as; appropriate driver behaviour including adherence to all traffic regulations and speed limits, safe overtaking and maintaining appropriate distances between vehicles, etc and appropriate penalties for infringements of the Code. 10. Details of procedures for receiving and addressing complaints from the community concerning traffic issues associated with truck movements to and from the site.			
TT2	The proponent would consult with the Murrumbidgee Council regarding the proposed upgrading of Ercildoune road. The upgrade would be subject to detailed design, and must be designed and constructed to the relevant Australian road design standards.	C		
TT3	The proposed Ercildoune Road and Kidman Way intersection upgrade must be designed and constructed in accordance with NSW Roads and Maritime Services requirements.	C		
TT4	The Proponent must engage an appropriately qualified person to prepare a Road Dilapidation Report for all road routes to be used during the construction (and decommissioning) activities, in consultation with the relevant road authority (Roads and Maritime Services and Council). This report is to address all road related infrastructure. Reports must be prepared prior commencement of, and after completion of, construction (and decommissioning). Any damage resulting from the construction (or decommissioning) traffic, except that resulting from normal wear and tear, must be repaired at the Proponent's cost. The applicant is accountable for this process, rather than the proposed haulage contractor. Such work shall be undertaken at a time as agreed upon between the Proponent and relevant road authorities.	C		
TT5	Prior to the commencement of major construction on-site, the Proponent must undertake all works to upgrade any road, its associated road reserve and any public infrastructure in that road reserve, to a standard suitable for use by heavy vehicles to meet any reasonable requirements that may be specified by the relevant roads authority. Low traffic generating activities such as installation of fencing and site preparation work may be carried out prior to road upgrades. The design and specifications, and construction, of these works must be completed and certified by an appropriately qualified person to be to a standard to accommodate the traffic generating requirements of the project. On Classified Roads the geometric road design and pavement design must be to the satisfaction of the Roads and Maritime Services.	C		
TT6	As a minimum the intersection of the Kidman Way and Ercildoune Road is to be constructed and the roadside maintained to the satisfaction of Roads and Maritime Services to comply with the following: 1. Provide for the required Safe Intersection Sight Distance (SISD) with a reaction time of 2.5 seconds in either direction in accordance with the	C		

No.	Safeguards and mitigation measures	C	O	D
	Austroads Publications as amended by the supplements adopted by Roads and Maritime Services for the posted speed limit. Compliance with this requirement is to be certified by an appropriately qualified person prior to construction of the vehicular access. 2. Constructed with a Basic Right Turn (BAR) and Basic Left Turn (BAL) intersection treatment in accordance with the Austroads Guide to Road Design as amended by the supplements adopted by Roads and Maritime Services for the posted speed limit on the Kidman Way. The intersection is to be constructed to the standards required for an approved road train route. 3. Designed and constructed so as not to interfere with the capacity of the current roadside drainage network and to prevent water from proceeding onto, or ponding within, the carriageway of the Kidman Way. If a culvert is to be installed and is to be located within the required clear zone of the Kidman Way for the posted speed zone it is to be constructed with a traversable type headwall. 4. The construction of Ercildoune Road to 2 lanes and be sealed for at least 50 metres from its intersection with the Kidman Way. The intersection shall be designed and constructed so that vehicles turning between the Kidman Way and the access road are not required to cross to the opposing travel lane in order to perform a turn manoeuvre. The intersection shall be line marked in accordance with Australian standards.			
TT7	A management plan to provide measures to suppress dust generation from the development site and the transportation route shall be prepared and implemented to the satisfaction of Council and Roads and Maritime Services.	C		
TT8	No external lighting of any infrastructure associated with the project is permitted at night that may cause distraction to road users other than low intensity security lighting.	C	O	
TT9	A landscaped buffer (at least 5 metres in width planted with a variety of species endemic to the area and growing to a mature height ranging from 2 metres to at least 5 metres) shall be established and maintained within the subject property along the frontages of the site to the Kidman Way and Ercildoune Road to a standard to minimise distraction of the travelling public.	C		
TT10	Glint and glare from the solar panels shall not cause a nuisance, disturbance or hazard to the travelling public on the public road network. In the event of glint or glare from the solar plant being evident from a public road, the proponent shall immediately implement glare mitigation measures such as construction of a barrier (e.g. fence) or other approved device to remove any nuisance, distraction and/or hazard caused as a result of glare from the solar panels.		O	
TT11	Once the new access roadway is constructed to Ercildoune Road all existing accesses to the developments site from the Kidman Way shall be removed or retained and locked for emergency purposes only and any damage or disturbance to the road reserve of the Kidman Way shall be restored to match surrounding landform in accordance with Council requirements.	C		
TT12	The Kidman Way is part of the State Road network. For works on the State Road network the developer is required to enter into a Works Authorisation Deed (WAD) with Roads and Maritime Services before finalising the design or undertaking any construction work within or connecting to the road reserve. The Works Authorisation Deed documentation is to be submitted for each specific change to the state road network for assessment and approval by Roads and Maritime Services prior to commencement of any works within the road	C		

No.	Safeguards and mitigation measures	C	O	D
	reserve. The applicant is to contact the Land Use Manager for the South West Region on Ph. 02 69236611 for further detail.			
TT13	Any works within the road reserve of the Kidman Way requires approval under Section 138 of the Roads Act, 1993 from the road authority (Council) and concurrence from Roads and Maritime Services prior to commencement of any such works. The developer is responsible for all public utility adjustment/relocation works, necessitated by the development and as required by the various public utility authorities and/or their agents.	C		
TT14	All works associated with the project shall be at no cost to the Roads and Maritime Services.	C	O	D
Climate & Air Quality				
AQ1	Development of a complaints procedure to promptly identify and respond to issues generating complaints.	C	O	D
AQ2	Protocols to guide vehicle and construction equipment use, to minimise emissions would be included in construction and operational environmental management plans. This would include but not be limited to Australian standards and POEO Act requirements.	C	O	D
AQ3	During construction, operation and decommissioning, dust would be managed to prevent dust leaving the proposal area. This includes dust from stockpiled materials.	C	O	D
Electric & Magnetic Fields				
EM1	All design and engineering would be undertaken by qualified competent persons with the support of specialists as required.	C		
EM2	All electrical equipment would be designed in accordance with relevant codes and industry best practice standards in Australia.	C		
EM3	Transmission lines would be located as far as practical from residences, farm sheds, and yards in order to reduce the potential for both chronic and acute exposure to EMFs.	C		
EM4	Design of electrical infrastructure would minimise EMFs. (underground).	C		
Socioeconomic & Community				
SE1	A Community Consultation Plan would be implemented during construction to manage impacts to community stakeholders, including but not limited to: • Protocols to keep the community updated about the progress of the project and project benefits. • Protocols to inform relevant stakeholders of potential impacts (haulage, noise etc.). • Protocols to respond to any complaints received.	C		
SE2	Liaison with local industry representatives to maximise the use of local contractors, manufacturing facilities, materials.	C		
SE3	Liaison with local representatives regarding accommodation options for staff, to minimise adverse impacts on local services.	C		D
SE4	Liaison with local tourism industry representatives to manage potential timing conflicts or cooperation opportunities with local events.	C		D
Waste				

No.	Safeguards and mitigation measures	C	O	D
WM1	A Waste Management Plan (WMP) would be developed and implemented during construction, operation and decommissioning to minimise wastes. It would include but not be limited to: • Identification of opportunities to avoid, reuse and recycle, in accordance with the waste hierarchy. • Quantification and classification of all waste streams. • Provision for recycling management onsite. • Provision of toilet facilities for onsite workers and how sullage would be disposed of (i.e., pump out to local sewage treatment plant). • Tracking of all waste leaving the site. • Disposal of waste at facilities permitted to accept the waste. • Requirements for hauling waste (such as covered loads).	C	O	D
Bush Fire & Emergencies				
BF1	A Fire Management Plan (FMP) shall be prepared in consultation with NSW RFS Murrumbidgee Irrigation Area (MIA) Fire Control Centre. The FMP shall include: • 24 hour emergency contact details including alternative telephone contact; • Site infrastructure plan; • Fire fighting water supply plan; • Site access and internal road plan; • Construction of Asset Protection Zones (APZ) and their continued maintenance; • Location of hazards (Physical, Chemical and Electrical) that will impact on fire fighting operations and procedures to manage identified hazards during fire fighting operations; • Such additional matters as required by the NSW RFS District Office (FMP review and updates).	C	O	D
BF2	The entire solar array development footprint is to be managed as an Asset Protection Zone (APZ) as outlined within Section 4.1.3 and Appendix 5 of 'Planning for Bush Fire Protection 2006' and the NSW Rural Fire Service's document 'Standards for Asset Protection Zones'.	C		
BF3	A 20,000 litre water supply (tank) fitted with a 65mm storz fitting shall be located adjoining the internal property access road within the required APZ.		O	
BF4	To allow for emergency service personnel to undertake property protection activities, a 10 metre defendable space that permits unobstructed vehicle access is to be provided around the perimeter of the solar array development site.	C		
BF5	A comprehensive Emergency Response Plan (ERP) is to be developed for the site. Without limiting the scope of the ERP, the following matters are recommended to be addressed: 4. Foreseeable on-site and off-site fire events and other emergency incidents, (e.g. fires involving solar panel arrays, bushfires in the immediate vicinity or potential hazmat incidents). 5. Detail the appropriate risk control measures that would need to be implemented in order to safely mitigate potential risks to the		O	

No.	Safeguards and mitigation measures	C	O	D
	health and safety of firefighters and other first responders (including electrical hazards). Such measures would include the level of personal protective clothing required to be worn, the minimum level of respiratory protection required, decontamination procedures, minimum evacuation zone distances and a safe method of shutting down and isolating the photovoltaic system (either in its entirety or partially, as determined by risk assessment). 6. Other risk control measures that may need to be implemented in a fire emergency due to any unique hazards specific to the site. Two copies of the ERP are to be stored in a prominent 'Emergency Information Cabinet' which is located in a position directly adjacent to the site's main entry points.			
BF6	Once constructed and prior to operation, the operator of the facility is to make contact with the relevant local emergency management committee (LEMC).		O	
Historic Heritage				
HH1	The European Survey Marker Trees should be clearly identified in the Construction Environmental Management Plan (CEMP). If construction work is required within 50m of any of these trees, the trees would be protected prior to work commencing using paraweb fencing or similar and not removed until construction work has been completed.	C		D
HH2	Should an item of historic heritage be identified, the Heritage Division (OEH) would be contacted prior to further work being carried out in the vicinity.	C	O	D
HH3	An Archival Recording of the three identified European marker trees prior to commencement of work.	C		
HH4	The three identified European marker trees are to be avoided by all future works.	C	O	D