ESCO Pacific

Sandigo Solar Farm proposal

Response to Submissions

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ESCO Pacific

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1 Project Information

1.1 Overview

ESCO Pacific is proposing to undertake the development and operation of a utility-scale solar energy facility with a capacity up to 100 megawatts (MW) (the Proposal) on Lots 33, 35, 55 on Plan 754550, 174 Mitchells Road, Sandigo, NSW (the site).

The Project site is located approximately 28 km southeast of Narrandera and 55 km northwest of Wagga Wagga within Federation Council. The main land use of the region is rural and consists predominantly of grazing and cropping, with its primary income derived from the agriculture industry.

The Project area encompasses the holdings of an existing farming property, of which the land comprises relatively flat-lying open paddocks.

The Project site is bounded to the north by the Sturt Highway and to the west by Mitchells Road.

The Project Layout is provided in Appendix 1.

2 Proponent's response to Community Submissions

One submission was received from a nearby resident during the public exhibition stage. The submission was registered to a household located 1.4km away. Operational amenity and construction impacts from the project are limited by:

- The 1.4km separation distance
- A major arterial road, the Sturt Highway located between the project site and the subject house
- Vegetation and slope surrounding the Sandy Creek, located between the project site and subject house.

Comment within Submission	Response from Solar Farm Applicant
At the start of the report there is reference to environmental weeds on this land, and then the term "weeds" is used several times, as if to denigrate this land and portray it as weed infested and worthless. This is the exact same land type as Geppert's recently paid nearly $2000 per acre for on their western boundary. *It is prime farming land. By Accents definition all Australian farming land would be "infested" with environmental weeds and of limited value, and one would assume, of no consequence should an industrial developer choose to use it.*	The EIS states that the development site is comprised largely of pasture grasses and environmental weeds. Weeds identified on the development site include Common Sowthistle *Sonchus oleraceus*, Prickly Lettuce *Lactuca serriola* and the high-threat weed African Lovegrass *Eragrostis curvula*. This is a scientific statement made by accredited ecologists in order to assess the ecological value of the site. The development site has been chosen due to low environmental constraints and proximity to the grid. The EIS did not intend to justify the economic value of the site.
The "scattered" paddock trees referred to are normal densities for farming areas in NSW.	The terminology used in the EIS is consistent with the Biodiversity Assessment Method as mentioned in the Biodiversity Conservation Act 2016.

Reference is also made to "vast open areas". If you live a closeted life in a city you may think so, but in reality this is a closely settled area and was part of the closer settlement schemes particularly after WW2.	The EIS referred to 'vast open areas' so as to make a distinction between the development site and other type of lands such as land covered by forests or urban areas.
Neither is the land "flat". There is a definite and measurable slope and the change in elevation from the Sandy Creek to Mark Geppert's woolshed is significant. *After heavy rainfall, sheets of runoff water regularly flow over the highway.*	Reference to flat land was made in the context of suitability for the feasible design and construction a utility scale solar farm. A storm water and flood impact assessment of the development of the use of the land storm water is referenced in sections 2.8 and 8.4 of the EIS. A Stormwater Management Plan condition will form part of any approval. The condition will require a detailed plan involving engineered mitigation measures using LIDAR data, to ensure that there is no detrimental impact to hydrology of land surrounding the subject site.
Accent say this is NOT fire prone land. *That's not correct. There have been large bushfires in the area. Around 1972 a large bushfire started on "Aberfeldie", new year's eve I believe, and travelled with such speed that wheat crops were burnt in strips.* *Again in the 1980's a fire started on the Boree Creek - Sandigo Road and, fanned by horrendous winds, travelled toward Kywong. On that occasion the only reason we were not burnt out was because the farm where this development is proposed was fallowed, and that large firebreak saved our farm.* *There were subsequent court cases for each of these fires and large settlements followed as everyone locally well knows.*	The EIS states that the site is not located on land mapped as Bushfire Prone Land, according to the NSW Rural Fire Service Bush Fire Prone Land Tool (NSW RFS 2017a). The EIS also lists the following management and mitigation measures will be implemented to reduce bush fire and electrical fire risk: - Preparing a Bush Fire Management Plan (BFMP) prior to construction, in accordance with the NSW RFS Planning for Bush Fire Protection – a guide for councils, planners, fire authorities and developers 2017 (NSW RFS 2017b), and in consultation with the NSW RFS District Office. - Preparing an ERP in accordance with FRNSW requirements as outlined in the SEARs, which ESCO Pacific accepts as a condition of Development Consent. - The ERP will also be prepared in accordance with the NSW RFS Planning for Bush Fire Protection – a guide for councils, planners, fire authorities and developers 2017, and in consultation with the NSW RFS District Office, addressing on-site and off-site fire events. The ERP will detail appropriate risk control measures to mitigate potential risks to health and safety of firefighters and other first responders. Mitigation measures are detailed in section 8.10.4 of the EIS.

I live in close proximity to this proposal and landscaping and screening are necessary. *In summer or drought conditions eucalypts lose their leaves and a strong wind can defoliate them and any screening effect from the trees on our property is diminished greatly. It is not my responsibility to provide amenity to these developers on my property with my vegetation.* *Glare from these easterly and north-easterly facing panels is inevitable unless they are screened effectively. This will affect me and highway traffic.* *Because the site slopes significantly towards the highway the effect will be to elevate the panels as they move up the hill to the south. This will be unsightly and the glare a real traffic hazard.* *Landscaping and visual screening must be placed on the eastern and northern sides of this site.*	The dwelling is located approximately 1.4km from the development site boundary. Views to the subject site at such a setback would be considered recessive compared to trees in the foreground area. The agricultural landscape is disrupted by the existence of high voltage power lines and the highway. Notwithstanding this, the Visual Impact Assessment (Appendix H – section 3.2 of the EIS) identifies the dwelling as a Sensitive Receiver (D2) but was found during field survey to be screened from the site by remnant vegetation along Sandy Creek and the Sturt Highway.
Mention is made of access for RFS tankers access. Do I take it from this that locals will be required to provide fire security for this multi-million dollar scheme? If they expect this I think they are mistaken. *It needs to be a requirement that adequate equipment and manpower be provided by the development operator to provide their own fire security.* *Significant fire breaks, properly maintained should also be mandatory.*	The Proponent will comply with all regulations regarding bushfire management and emergency vehicles access. The EIS addresses Bushfire management in section 8.10 of the EIS. ESCO Pacific accept the inclusion of all Conditions recommended by NSW Rural Fire Services and Fire & Rescue NSW if the project is approved.
Rehabilitation requirements should be set in stone now. Not three years before expiry of the scheme. *There is no surety that the same operators will be in charge in three years' time let alone forty years' time.* *Rehabilitation agreements determined now must apply to all future owners and operators and be water tight.* *In the mining industry companies are often stripped of assets and there are no funds for clean-up or rehabilitation or compensation, and that's if they are still solvent.* *Governments and taxpayers are then left to foot the bill. Politicians are too keen to climb on the current fashion bandwagon but are never around when the proverbial hits the fan.*	The project financiers undertake a thorough assessment to ensure the project is credit worthy. The Current lending practice and regulation is more stringent than it has been for major energy projects in preceding decades. The solar farm lease agreement includes a decommissioning bond into which funds are invested through the operational lifetime of the solar farm. The modules, inverters and other components hold significant value, so in the unlikely event the asset owner should not be able to repay their debt, the lender would take ownership of the project, attract another investor to realise the value of the energy generating asset. As is typical of other energy generators, a decommissioning condition sets a regulatory obligation to rehabilitate the land to a suitable standard to enable the reinstatement of its existing agricultural land use. Compared to

	fossil fuel generators, gas wells or wind turbines, solar arrays are regarded as low impact energy infrastructure in that the steel posts are perforated into the ground and contain no concrete foundations. The infrastructure is therefore cheap, and simple to remove at the end of its lifetime. Within Australia, the end of life solar components industry is yet to mature given that the earliest domestic and commercial systems are only just reaching decommissioning stage. As technology in this area is advancing at a rapid pace, a prescriptive, rather than intent based condition would limit the ability to decommission the solar farm in line with what will be considered 'best practice' at the end of the project life.
This proposal has minimal ongoing benefit to the ratepayers, and as it will no longer be farmland it should be rated differently and heavily as a direct benefit to the shire.	The Solar Farm will represent a significant investment of money in the area through construction. A solar farm is a valid assessable land use within a Rural Zone. An assessment must be undertaken to manage and mitigate any amenity impacts. Notwithstanding this, the solar farm will represent a significant investment in the local economy through construction. In addition, rates are not an amenity issue and do not form part of any other assessment provision within the Planning legislation.
Sandy Creek has non- permanent, non-flowing, unreliable and irregular supply. *It is part of the Sandy Creek Water Users Association irrigation water delivery system.* *Often the only water in it is that water which members have pumped there from the Old Man Creek.* *There should not be any expectation that access to this water is freely available or available at all.*	The Proponent does not intend to access water from Sandy Creek. Options to access water will be in line with relevant legislation and are as follows: - Water tankers to be brought on site, - Temporary dams on construction site, - Bore water.

3 Proponent's response to Government Agency Submissions

3.1 Office of Environment and Heritage

3.1.1 Aboriginal Cultural Heritage

The Aboriginal Cultural Heritage Assessment Report (ACHAR) has been updated from the version appended to the Sandigo Solar Project EIS, in response to comments received from the Office of Environment and Heritage. The updated report is included in Appendix 1 and general responses to submissions are listed in the table below.

Comment	Response
The ACHAR references out-dated guidance material (2005 DEC Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment) The proponent must clarify whether this is a referencing error or confirm that archaeological and cultural values assessment is consistent, and complies with, guidance material listed in the SEARs. The assessment must be conducted in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (2010)	This is a referencing error. The archaeological and cultural values assessment is consistent and complies with guidance material listed in the SEARs. The updated final ACHAR (Appendix 1) addresses this issue.
Aboriginal cultural heritage (ACH) management and mitigation measures are to be identified in the CEMP and DMP. Recommended Condition of Approval: *The Construction Environmental Management Plan (CEMP) and Decommissioning Management Plan (DMP) must include appropriate ACH management and mitigation measures to the satisfaction of OEH. This is to include an appropriate unexpected finds protocol (as detailed in the ACHAR) and clear marking and protection of any ACH constraints, within or near to, proposed activities.*	ESCO Pacific accept the inclusion of this as a Permit Condition if the project is approved.
An Aboriginal Site Impact Recording Form is required following impacts to AHIMS sites (salvage and repatriation) Recommended Condition of Approval: *An Aboriginal Site Impact Recording Form must be prepared following impacts to AHIMS sites, including surface collection/salvage and repatriation. Completed forms should be sent to the AHIMS Registrar to be included as an*	ESCO Pacific accept the inclusion of this as a Permit Condition if the project is approved.

addendum to the original site recording form for each site.	

3.1.2 Biodiversity

The Biodiversity Development Assessment Report (BDAR) has been updated from the version appended to the Sandigo Solar Project EIS, in response to comments received from the Office of Environment and Heritage. The updated BDAR and the updated EIS biodiversity chapter are included in Appendix 2 and 3 and general responses to submissions are listed in the table below.

Comment	Response
The paddock tree assessment module in the Biodiversity Development Assessment report (BDAR) appears to have been incorrectly applied, resulting in a lower than expected credit requirement for the number of paddock trees proposed for clearing. OEH recommend that the vegetation zone assessment is revised and the credit requirement re-calculated following discussions with OEH South West Branch. The following steps are likely to need reassessment: - Assignment of all native vegetation on the site to a vegetation zone. - Inclusion in Table 4.3 of all trees able to be assessed using the paddock tree assessment module. - Assessment of all class 2 and 3 paddock trees for threatened species habitat suitability - Re-calculation of the offset requirement using the streamlined assessment module for clearing paddock trees (BAM Appendix 1). - Impact summary in BDAR Section 6.4.	BDAR updated throughout to reflect this approach to ecosystem credit calculation i.e. ecosystem credit of 41.25 (see Appendix 2).
A proposed access point from Mitchells Road on the south-western boundary of the site is shown on Figure 3.1. This area does not appear to have been included in the development footprint or assessed for impacts to biodiversity. Confirm if clearing is required for the access point and if native vegetation is present on the road reserve. The BDAR will need to be revised if native vegetation on the road reserve will be impacted by the proposal.	Section 1.2 of the BDAR states that vegetation on Mitchells Road was assessed. Section 3.5 states that vegetation north of the study area on Mitchells Road provides a movement corridor for local wildlife. Section 3.4.2 states that this vegetation is also the Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia community and that it will not be impacted by the proposed development. Section 6.3.1 states that access will include the southern part of Mitchells Road "where

	the road reserve is of low ecological value, to minimise vegetation removal".
The Fauna Rescue Protocol (BDAR page 55) should also include: - Confirming the hollow-dependent species likely to be using hollows and ensuring that construction timing is outside their specific breeding periods. - Ensuring that local wildlife rescue organisations are aware in advance that construction is starting and that rescued fauna may need assistance.	Fauna Rescue Protocol updated in the EIS. Owls and possible are likely to be using hollows (see Appendix 3).
Biodiversity offsets should be in place before the commencement of clearing for construction.	EIS biodiversity chapter updated to reflect changes (see Appendix 3).

Comment	Response
Scientific names for plants should follow NSW PlantNet (plantnet.rbgsyd.nsw.gov.au/). For example, white cypress pine (*Callitris glaucophylla*) has been incorrectly referred to as *Callitris columellaris*.	One correction made to page 7 - Report updated
A proposed access point from Mitchells Road on the south-western boundary of the site is shown on Figure 3.1. This area does not appear to have been included in the development footprint or assessed for impacts to biodiversity. Recommendation: - Confirm the activities proposed for the access point and if native vegetation is present on the road reserve. The BDAR will need to be revised if native vegetation on the road reserve will be impacted by the proposal.	Section 1.2 states that vegetation on Mitchells Road was assessed. Section 3.5 states that vegetation north of the study area on Mitchells Road provides a movement corridor for local wildlife. Section 3.4.2 states that this vegetation is also the Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia community and that it will not be impacted by the proposed development. Section 6.3.1 states that access will include the southern part of Mitchells Road "where the road reserve is of low ecological value, to minimise vegetation removal" Further detail added to 4.4 to be clearer about the type of vegetation in these road reserves and likely impacts to native vegetation.
Fish and fish habitat are not covered by the BC Act or considered by the BAM. This information is not assessed by OEH so should be included in the EIS, rather than the BDAR.	These references can be removed as they are not relevant to the BDAR. References to fish in sections 1.3, 1.4, 1.5.4 and 8 have been removed.

Comment	Response
The use of the term 'plot/transect' is ambiguous. BAM plots for vegetation measurements do not include transect sampling and should be as per BAM sections 5.2.1.7 to 5.2.1.11. The number of plots undertaken within the development footprint is unclear. The text states that seven plots were sampled within the development site, however Table 2.1 shows 14 plots within the two zones. Table 2.1 (page 14) refers to Zone 2 as 'PCT 76 (low condition)' and based on the small area is presumably the buffered paddock trees. The description and mapped area of Zone 2 on Figure 5 (page 68) does not match Table 2.1.	The term Plot/Transect changed to plot throughout. Text corrected to state that 14 Plots are used. Figure 5 has been updated to match Table 2.1
The criteria for determining if vegetation meets the definition of paddock trees in the paddock tree assessment module appear to have been incorrectly applied. This has resulted in a requirement of 6 ecosystem credits, which is lower than expected for the number of paddock trees proposed for clearing. The paddock tree zone is an area where native vegetation cover consists of paddock trees with a non-native understorey. In the absence of an endorsed operational manual for the BAM, we offer the following advice for applying the paddock tree assessment. Please note that this advice applies to this proposal and may be updated in the future: 1. BAM section 4.3.2 'Assessing vegetation cover' - identify areas with native trees in paddocks during the vegetation cover assessment and assign a broad cover class relative to PCT benchmarks. 2. BAM section 5.3.1 - map vegetation zones, which will include delineate paddock tree zones. In this case: - Zone 1 is cropping with scattered trees. - Survey results for 'Zone 2- grazed' indicate that the understorey is predominantly non-native. - Based on vegetation zones mapped on Figure 5 (BDAR page 68), the paddock tree zone would include both zones 1 and 2. 3. Estimate the combined percent foliage cover of the paddock trees within the mapped zone. - Based on a visual assessment of aerial photography available to OEH, tree cover in the paddock tree zone is below 5%.	BDAR updated throughout to reflect this approach to ecosystem credit calculation i.e. ecosystem credit of 41.25. The following sections have been updated: - 2.3.2 - 2.3.3 - 4.4.2 - 6.1 - 6.2 - 6.4 Along with Figure 5 and insertion of new table showing tree classes and credit values as requested. Other changes made throughout to support these changes. Updated spatial data also provided.

Comment	Response
4. Determine the tree cover benchmark for the most likely plant community type and test if "foliage cover for the growth form group is less than 25% of the benchmark for tree cover for the most likely plant community type" (criterion c). - The BDAR assesses the likely plant community type as PCT 76. The proposal site is within the NSW South Western Slopes bioregion (NSS subregion). - The tree cover benchmark for PCT 76 is 321, 25% of benchmark is 8% tree cover. Tree cover for the paddock tree zone at the proposal site is less than 25% of benchmark, so can be assessed using the streamlined assessment module for clearing paddock trees. 5. Map paddock trees and determine the tree assessment class. - Data collected for each paddock tree at the proposal site has been provided as Table 4.3 (page 33-34) in the BDAR. The dataset contains enough information to enable allocation of each tree to a class, as defined in BAM Appendix 1. - The large tree benchmark for PCT 76 is 50 cm1. - Based on the information provided we have provisionally assigned each tree in Table 4.3 to a class. The class of paddock trees is calculated to include 12 x Class 2 and 42 x Class 3. 6. Assess the habitat suitability of class 2 and class 3 paddock trees for threatened species - Apply criteria for determining if ecosystem credit threatened are likely to use the trees as suitable habitat and identify potential entities for serious and irreversible impacts (SAII). - Visually assess class 2 and 3 trees for habitat, including if they are hollow-bearing. This information has been provided in Table 4.3. 7. Determine the offset requirements using the formula in Equation 7 and multipliers for the number of ecosystem credits required as per Table 12, provided in BAM Appendix 1	

Comment	Response
- We used the presence of hollows as recorded in BDAR Table 4.3 to calculate the number of ecosystem credits required for clearing class 2 and 3 paddock trees OEH have calculated a provisional ecosystem credit requirement to be approximately 41 (compared with a credit requirement of six presented in the BDAR). 8. Determine the credit profile including the seven attributes identified in BAM section 11.3 and following the method in Appendix 1. We have not attempted to develop a credit profile based on the new calculations. **Recommendation:** OEH recommend that the vegetation zone assessment is revised and the credit requirement recalculated following discussions with OEH South West Branch. The following steps are likely to need re-assessment: - Assignment of all native vegetation on the site to a vegetation zone. - Inclusion in Table 4.3 of all trees able to be assessed using the paddock tree assessment module. - Assessment of all class 2 and 3 paddock trees for threatened species habitat suitability - Re-calculation of the offset requirement using the streamlined assessment module for clearing paddock trees (BAM Appendix 1). - Impact summary in BDAR Section 6.4.	
In our letter providing OEH assessment requirements to DPE (EIS Appendix A, pages 19-27) we recommended the use of the Central Southern NSW vegetation mapping (VIS 3884). The BDAR used Riverina Regional Native Vegetation PCT Map Version v1.2 - VIS_ID 4469, which is a modified version of the recommended vegetation mapping.	We checked the differences between the two data-sets and differences were negligible. Therefore the contents of the BDAR have not significantly changed, however we have changed the reference to the preferred data source as requested. Reference to vegetation mapping source updated in section 3.2 and revised figures entered into Table 3.3. Map updated
The vegetation zones described in Section 2.1 do not match the zones mapped in Figure 5.	See response to comment relating to section 2.3.1 above. Map updated

Comment	Response
OEH was provided only with the exhibited EIS and appendices for our assessment. References are made throughout the BDAR to another biodiversity report for the proposal site (Ecolink Consulting Pty Ltd 2017a), particularly in the assessment of threatened species. OEH have not been supplied with a copy of this document, so it should not be relied upon in the BDAR for describing survey techniques or justifying methods or outcomes. The Plains-wanderer map shown in Appendix 10.3 (page 78) is uninformative without clearly identifying the proposal site.	Study area added to Plains-wanderer map. Ecolink Consulting Pty Ltd 2017a report appended to the BDAR. Plains-wander map updated.
OEH support the use of a broad-scale multi-property approach to avoiding biodiversity impacts.	None required
The assessment of impacts lacks detail. Measures to mitigate unavoidable impacts should be directly related to identified impacts. Specific impacts should be related to the description of construction and operation of the proposal. For example: - EIS section 3.4.2 (page 62) describes site preparation. Boundary fences and laydown areas must be within cleared areas. - EIS Section 3.11 (page 30) mentions that the site fence will be topped with barbed wire. Barbed wire is detrimental to birds and bats and should be avoided if possible. - Introduction and spread of weeds due to import of construction vehicles and materials. - Potential impact of inappropriate species being used in site rehabilitation and landscaping.	Final two points of OEH comment added relating to impacts on page 54. EIS biodiversity chapter updated to be more specific to this project.
There does not appear to be survey data to support the assessment (page 55) that the road reserve is of low ecological value. All areas of vegetation clearing need to be assessed for impacts to biodiversity.	More justification is provided in Section 4.4 to support comment relating to the low ecological value of the road reserve Section 4.4 updated.
We support the range of measures provided. Ideally, mitigation measures should be linked to impacts identified in Section 6.2. To ensure that mitigation and management actions are carried out at the appropriate time, OEH - would prefer to see the following details for each mitigation action: - who will be responsible for individual actions (including the position title of the officer responsible) - outcome or measure of success - triggers for an alternative action	The details requested by OEH would be provided in a CEMP prepared for the project. They are beyond the scope of the current project and will depend on the final development plan. We would expect that they become a secondary consent condition to the project. Further detail about the requirements for the CEMP included in section 6.3.2, including the table of responsibilities and timing.

Comment	Response
- when the action will be completed. These details should be completed before the start of construction to clearly identify the proponent's commitments for management and mitigation. This section should clearly link to the EIS section 9.2 statement of commitments (page 143) Each action should be individually identifiable to allow their inclusion in the construction and operational management plans. The Fauna Rescue Protocol (page 55) should also include: Confirming the hollow-dependent species likely to be using hollows and ensuring that construction timing is outside their specific breeding periods. Ensuring that local wildlife rescue organisations are aware in advance that construction is starting and that rescued fauna may need assistance.	Fauna Rescue Protocol updated in the EIS. Owls and possible are likely to be using hollows.
This section will need to be revised after re-calculation of the credit requirement.	EIS biodiversity chapter updated to reflect changes.
B.2 Biodiversity offsets should be in place before clearing for construction begins.	EIS biodiversity chapter updated to reflect changes.
OEH acknowledge that guidance for the newly published BAM is not yet readily available. OEH regional staff and a dedicated email address are available to assist with applying aspects of the new biodiversity legislation, including the BAM.	Noted.

3.2 Department of Industry

Comment	Response
Construction water demands and sources, the security of the proposed sources and relevant licensing requirements and/or agreements should be confirmed.	Approximately 10,000,000 litres would be used over construction period. Options to access water are as follows: - Water tankers to be brought on site, - Temporary dams on construction site, - Bore water – if this option is implemented, the Proponent will seek to obtain all relevant permits and will comply with all relevant requirements
The source of operation water to be transported by truck and relevant licensing requirements and/or agreements should be confirmed.	During operation, approximately 500,000 litres would be used each year. Options to access water are similar to the construction stage.

The proponent should confirm whether the upgrade works for the site access road are within waterfront land (ie. within 40m of a watercourse).	The WM Act defines waterfront land as the bed of any river, lake or estuary and any land within 40 meters of the river banks, lake shore or estuary mean high water mark. The site access road to be upgraded does not cross any watercourses and is several hundred metres south of Sandy Creek. Therefore, the upgrade works for the site access road are not within waterfront land.
Where works are to occur within waterfront land it is requested the proponent make a commitment to carry out works within waterfront land in accordance with the Guidelines for Controlled Activities on Waterfront Land (NOW 2012).	For the Sandigo Solar Farm, no works will occur within waterfront land.
The proponent should confirm whether road closure or enclosure permits will be required for Crown roads, and lodge any necessary applications.	Unless required by Council and/or RMS, no road closure or enclosure permits are expected for Crown roads during construction and operation of the Sandigo Solar Farm.
The proponent should prepare a Construction Environmental Management Plan in consultation with DoI Water prior to commencement of activities.	ESCO Pacific accept the inclusion of this as a Permit Condition if the project is approved.
Works within waterfront land should be consistent with the Guidelines for Controlled Activities on Waterfront Land (NOW 2012).	No works will occur within waterfront land.
The EIS indicates that operational water requirements of 500KL/annum and construction water requirements (unspecified volume) will be sourced from on-site rainwater capture or via water trucked to the site. Further detail is required on the construction volumes required and the source of trucked water for both construction and operational phases to confirm a secure supply is available and whether additional licensing, assessment or agreements are required.	Approximately 10,000,000 litres would be used over construction period. Options to access water are as follows: - Water tankers to be brought on site, - Temporary dams on construction site, - Bore water – if this option is implemented, the Proponent will seek to obtain all relevant permits and will comply with all relevant requirements
Further detail is required in relation to the access road to the site to clearly describe scale of upgrade works and impacts to waterfront land (if any). Works associated with watercourse crossings should be undertaken in accordance with the, Guidelines for Controlled Activities on Waterfront Land (NOW 2012).	No works will occur within waterfront land. The access road to be upgraded is the southern portion of Mitchells road. According to Narrandera Shire Council, Mitchells Road is not approved as a Heavy Mass Limit (HML) route and the proponents would need to apply for approval for this level of access. The upgrade should meet the recommended AustRoads road design standard suitable for the proposed HML route, including sealing, potential widening, etc.

	The road upgrade works should be completed prior to construction of the facility.
Infrastructure proposed in the southern extent of the site appears to be in close proximity to a watercourse. It is recommended a vegetated buffer be established in accordance with the Guidelines for Controlled Activities on Waterfront Land (NOW 2012).	No works will occur within 40 metres of a watercourse.

3.3 Roads & Maritime Services

Comment (paraphrased)	Response
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 [...] 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). 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. 4. As a minimum the intersection of the Sturt Highway and Kywong Boree Creek Road is to be constructed and the	ESCO Pacific accept the inclusion of these Conditions if the project is approved. Note 1: Consideration of the traffic volumes against the warrants reveals that the following turn treatments are triggered: - Basic left-turn treatment (BAL) - Basic right-turn treatment (BAR) We note that these volumes do not take into consideration an increase in traffic due to peak harvesting seasons, however we do not expect the increase in traffic volumes associated with this peak to change the warranted turn treatment. The Sturt highway has been constructed with sealed shoulders, which are wide enough to allow vehicles to pass those waiting to turn if required. Kywong-Boree Creek Road has unsealed gravel shoulders which also allow passing if necessary. Given the construction period is relatively short, it is considered appropriate to utilise the shoulders for passing where required in place of more formal BAL and BAR treatment during this time. Note2: Kywong Boree Creek Road is already sealed.

roadside maintained to the satisfaction of Roads and Maritime Services to comply with the following: i) Provide for the required Sight Distance requirements for a reaction time of 2.5 seconds in either direction along the Sturt Highway in accordance with the Austroads Publications [...] ii) A Basic Right Turn (BAR) and Basic Left Turn (BAL) intersection treatment on the Sturt Highway 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. The intersection is to be constructed to the standards required for an approved road train route. iii) Kywong Boree Creek Road to provide for 2 travel lanes and be sealed for at least 50 metres from its intersection with the Sturt Highway. The intersection shall be designed and constructed so that vehicles turning between the Sturt Highway and Kywong Boree Creek Road are not required to cross to the opposing travel lane in order to perform a turn manoeuvre. iv) Kywong Boree Creek Road to provide for 2 travel lanes and be sealed for at least 50 metres from its intersection with the Sturt Highway. The intersection shall be designed and constructed so that vehicles turning between the Sturt Highway and Kywong Boree Creek Road are not required to cross to the opposing travel lane in order to perform a turn manoeuvre. 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. Any damage or disturbance to the road reserve of the Sturt Highway is to be restored to match surrounding	

landform in accordance with Council requirements. 7. As the Sturt Highway is part of the State Road network works on the carriageway of the highway will require the developer 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. 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. Any works within the road reserve of the Riverina Highway 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. 10. Works associated with the development shall be at no cost to the Roads and Maritime Services.	

3.4 Department of Planning & Environment – Resource & Geoscience

Comment	Response
The proponent has addressed mining, exploration and minerals in the EIS, and has reviewed DRGs online MinView database, identifying that there are no mining or exploration titles or applications indicated over or in the vicinity of the Project site. GSNSW notes that an assessment of current available data confirms that at this stage of the Project, there are no current mineral, coal or petroleum titles or applications, or extractive industires in the vicinity of the project site. Accordingly, GSNSW are satisfied the	ESCO Pacific acknowledges DPE – Resource & Geoscience Response.

proponent has addressed these specific requirements.	

3.5 NSW Rural Fire Service

Comment	Response
The NSW Rural Fire Service has no objection to the proposal and provides the following recommended conditions to be included 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 [...] 2. The entire solar array development footprint to be managed as an Asset Protection Zone as outlined in section 4.1.3 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 with the required APZ. 4. To allow for emergency service personnel to undertake property protection activities, a 10 metre defendable space (APZ) that permits a minimum 4 metre wide, unobstructed vehicle access is to be provided around the perimeter of the solar array and associated infrastructure.	ESCO Pacific accept the inclusion of these Conditions if the project is approved.

3.6 Fire & Rescue NSW

Comment	Response
Should a fire or hazardous material incident occur, it is important that first responders have ready access to information which enables effective hazard 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.	ESCO Pacific accept the inclusion of these Conditions if the project is approved.

2. That the ERP specifically addressed foreseeable on-site and off-site fire events and other emergency incidents. 3. That the ERP detail the appropriate risk control measures that would need to be implemented to safely mitigate potential risks to the health and safety of firefighters and other first responders [...]. 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 be stored in a prominent 'Emergency Information Cabinet' 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 contacts the relevant local emergency management committee (LEMC) [...].	

3.7 Department of Planning and Environment – Hazards and Risks

Comment	Response
The information provided in the EIS is insufficient to determine if SEPP 33 will apply to the development. In addition, the hazards related to storage and use of Li-ion batteries are not identified. Hence, the potential risk is not considered and appropriate control measures to minimise the risk are not identified. As a minimum, the following information should be provided by the Applicant to enable the department to finalise the hazards and risk review: - The quantities of Dangerous Goods (DG) proposed to be stored. Section 7.6.1 of EIS lists only the types of DG likely to be present, but not their quantities. Hence, the conclusion that the development is not potentially hazardous cannot be verified; - Details on Li-ion battery storage The analysis excludes DG Class 9 as not applicable to SEPP 33 screening test. It should be noted, that although DG Class 9 materials are excluded from the screening test, the	An updated Hazards and Risks assessment – SEPP 33 screening is provided in Appendix 4.

hazards related to these materials should be considered by the consent authority as explained in Appendix 4 of Applying SEPP 33 Guidelines. In addition to the screening test, all risk factors, associated with a development, should be considered to determine if a development will be considered as potentially hazardous. Li-ion batteries present a hazard as they can spontaneously ignite (or even explode) as a result of heating and overloading. As mentioned above, these hazards have not been identified and the potential risks are not considered. The level of risk arising from the battery storage depends on the quantity and type of batteries, the storage arrangements and proposed control measures (including fire prevention, protection and mitigation measures). The information on the battery storage is insufficient to allow evaluation of the extend and the magnitude of the risks associated with the battery storage and the Applicant should provide: - Total capacity of the battery storage; - Distance from the battery storage location to the nearest residence and to the office building; - Details on storage arrangements, including minimum separation distances between the containers (if available); - The hazards arising from the storage of Li-ion batteries should be identified and appropriate safeguards should be listed; and - Details on the proposed control measures to minimise the risks. The following clarification is also provided on the reference to Appendix 3 of Applying SEPP 33 Guidelines. Section 7.6.1. of the EIS correctly notes that Solar Power Plants are not listed in this Appendix. However, the list of industries that may fall within SEPP 33 is provided for illustration purpose only and it is not exhaustive. As stated in Applying SEPP 33, "Consent authorities need to consider the details and merits of each proposal in deciding if a particular use should be subject to the policy". Furthermore, the current edition of "Applying SEPP 33" Guideline was published in 2011, when the solar technology in Australia was in its initial stages and as such, it was not considered for inclusion in the list.	

3.8 Narrandera Shire Council

Comment	Response
Primary Production Lands The EIS state that the Sandigo Solar Farm is expected to operate for 40 years. The final proposal needs to consider how the development will maintain the viability of the land and its contribution to the agricultural production of the region. The EIS states that the proposed site is not considered state significant agricultural land; however the Department of Primary Industries mapping classifies the area as regionally important agricultural land. The proposal would displace cropping at the site for the life of the solar farm. The EIS identifies that there may be an opportunity for grazing to occur on the site. Narrandera Shire Council supports any measures that contribute to maintaining the viability of the primary production land.	The solar farm leased area represents up to 231 hectares of the 1800 ha of the total farm, which is less than 15% of the entire farming property. There is a potential opportunity for the livestock grazing beneath the solar arrays.
Access and Traffic Mitchells Road, linking the development site to the Sturt Highway, is currently constructed to a gravel road standard. It is necessary for the proponent to upgrade the length of Mitchells Road to accommodate all traffic generated from the development, including construction traffic. Mitchells Road is not approved as a Heavy Mass Limit (HML) route and the proponents would need to apply for approval for this level of access. The upgrade should meet the recommended AustRoads road design standard suitable for the proposed HML route, including sealing, potential widening, etc. The road upgrade works should be completed prior to construction of the facility. The EIS indicates that the proponent will undertake a pre-construction condition audit of Mitchells Road, Boree Creek Road and Kywong Road. The standard of measurement should be undertaking a Level 3 Road Safety Audit. A post-construction Level 3 Road Safety Audit should also be undertaken, with the proponent required to return Mitchells Road, Boree Creek Road and Kywong Road to pre-construction condition.	ESCO Pacific acknowledges Council's response. Prior to construction, the proponent will seek to obtain relevant approvals for Mitchells Road between Kywong Road and the proposed access point. Note: all traffic movements will be via the intersection of Sturt Highway and Boree Creek Road, which was assessed to be safer than the intersection of Sturt Highway and Mitchells Road.

All traffic movements, other than light vehicles, should be via the intersection of Sturt Highway and Mitchells Road. NSW Roads and Maritime Services should review the road intersection and advise any necessary upgrades.	
Lot reconfiguration It is noted that the proposed lot configuration does not comply with the Narrandera Local Environmental Plan 2013. Council requires that no dwelling entitlement shall be attached to any newly created lots that are under the minimum lot size.	ESCO Pacific accept the inclusion of this Condition if the project is approved.
Construction Management A construction management plan should be implemented as part of the proposed project. The plan should ensure that impacts on the community and public during construction are minimised and that work to the public road network as noted above is completed prior to commencement of any work on the site.	ESCO Pacific accept the inclusion of this Condition if the project is approved.
Accommodation for Workers during Construction The proposal is expected to require 150 workers at the construction peak. Some detail should be provided in the Operation Environmental Management Plan in relation to how the proponent will handle accommodation requirements during peak tourism times.	Prior to commencement of construction, ESCO Pacific shall prepare an Accommodation and Employment Strategy for the development in consultation with Narrandera Shire Council and to the satisfaction of the Department of Planning & Environment.
Work within the Public Road Reserve Any work within the public road reserve shall require approval from Council prior to commencement via a road opening permit.	ESCO Pacific acknowledges Council's response. Prior to construction, the proponent will seek to obtain relevant approvals for all works within the public road reserve.
Disposal of Waste It is noted that majority of waste generated during construction activities would be generally classified as general waste. The Narrandera Landfill is generally able to accept this type of waste.	ESCO Pacific acknowledges Council's response.
Nuisance Glint and Glare The EIS has stated that the risk of nuisance glint and glare is unlikely, and screening has not been recommended as necessary. NSW Roads and Maritime Services should review the possible effects upon road users and advise any necessary action.	NSW Roads and Maritime Services have recommended that: *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. ESCO Pacific have accepted the inclusion of this Condition if the project is approved.
Voluntary Planning Agreement (VPA) The EIS does not flag any significant contribution to the local area. Council's Section 94A Development Contribution Plan 2014 applies to the proposed site area and levies are payable at the rate of 1% of the proposed development cost. Council acknowledges that, following the initial construction phase, there is likely to be a negligible impact upon the road network and other public amenities and services. Given the scale of the project, Council suggests that a VPA should be considered to offset potential impacts.	ESCO Pacific will prepare a community Benefit Fund and will provide it to Council in the first instance for feedback. The plan will set up a procedure to offer a fund of money towards community projects. The fund will be jointly administered by representatives of Council, elected members of the community and a representative of the project. It is intended to favour initiatives which benefit the broadest number of local members of the community and neighbours closer to the solar farm, as opposed to groups further away. Council's Section 94A Development Contribution Plan 2014 applies to applications for development consent and applications for complying development certificates under Part 4 of the Environmental Planning and Assessment Act 1979 (the Act). Part 4 of the EP&A Act (Division 4.2 Consent Authority) states that the Minister is the consent authority in the case of State Significant Developments for developments such as the Sandigo Solar Farm project. Unless the Minister (or the Secretary) requires payment of a specific contribution to the local area, ESCO Pacific believe Council's VPA is not applicable to the Sandigo Solar Farm proposal.
Weeds and Pest Animals The EIS states that the proposal has the potential for an increase in the spread of weeds and pest animals. The facility should be managed so as to minimise weeds and pest animals on site.	The EIS proposes the following mitigation measures regarding management of Weeds and Pest animals: - Biodiversity: Development of Environmental Management Plans (EMPs) to mitigate potential impacts to biodiversity including a Weed and Pest Management Plan to be prepared prior to construction as outlined in the Soil, landuse and agriculture section, - Bushfire and electrical fire: Measures for reducing fuel loads on the site (e. g.) grazing regime, slashing, ploughing and weed control, etc.) - Soil, landuse and agriculture: o Implementing a vehicle hygiene protocol when entering and leaving the site to ensure vehicles and earthmoving

	machinery are free of debris, sediment and weeds, o Ensuring any fill brought to site is weed and pathogen free. Grazing pressure through the use of sheep and maintenance of grasses under and surrounding the PV panels will also reduce cover for pest species. ESCO Pacific will also accept the inclusion of Conditions related to Weeds and Pest Management if the project is approved.
Project Decommissioning The EIS states that a Decommissioning Management Plan (DMP) would be prepared prior to the commencement of decommissioning activities. Decommissioning is required to be appropriately conditioned to ensure that if happens in a manner and the rehabilitation requirements and productivity targets for the re-establishment of agricultural production can met.	At the end of the solar farm operation, the site will be decommissioned and the land rehabilitated to its existing conditions as far as practical to continue the existing farming land use on the site. All infrastructure above and below ground (up to 1 metre) will be removed unless: - The landowner wishes the applicant to leave all or any part of the equipment; or - The removal of equipment is in breach with any law or requirements of Authority.

Appendices:

- Appendix 1: Final Aboriginal Cultural Heritage Assessment Report
- Appendix 2: Updated Biodiversity Development Assessment Report (BDAR)
- Appendix 3: Updated EIS Biodiversity chapter
- Appendix 4: SEPP 33 Preliminary Risk Screening