SUBMISSIONS REPORT

Tilbuster Solar Farm

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Project Number: 20-729

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ACRONYMS AND ABBREVIATIONS

APZ	Asset Protection Zone
AEMO	Australian Energy Market Operator
BC Act	*Biodiversity Conservation Act 2016* (NSW)
BDAR	Biodiversity Development Assessment Report
BESS	Energy Storage System
Biosecurity Act	*Biosecurity Act 2015* (NSW)
BOM	Australian Bureau of Meteorology
BSAL	Biophysical strategic agricultural land
C	Centigrade
CEMP	Construction environmental management plan
Cwth	Commonwealth
DPIE	Department of Planning, Industry and Environment (NSW)
EEC	Endangered ecological community – as defined under relevant law applying to the proposal
ERP	Emergency Response Plan
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cwth)
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
ESD	Ecologically Sustainable Development
FMP	Fire Management Plan
FM Act	*Fisheries Management Act 1994* (NSW)
FSS	Fire Safety Study
GWh	Gigawatt-hours
ISP	Integrated System Plan
ha	hectares
Heritage Act	*Heritage Act 1977* (NSW)
ISEPP	State Environmental Planning Policy (Infrastructure) 2007 (NSW)
KFH	Key Fish Habitat
km	Kilometres

kV	Kilovolt
LEMC	Local Emergency Management Committee
LEP	Local Environment Plan
LRET	Large-scale Renewable Energy Target
m	Metres
MW	Megawatt
MWh	Megawatt-hour
NEH	New England Highway
NGH	NGH Pty Ltd
NSW	New South Wales
OSOM	Over-Size Over-Mass
PBP	Planning for Bushfire Protection
PV	Photovoltaic
REZ	Renewable Energy Zones
SEPP	State Environmental Planning Policy (NSW)
sp/spp	Species/multiple species
SSD	State Significant Development
WMP	Waste Management Plan

1. Introduction

1.1. Background

Enerparc Australia Pty Ltd (the Proponent) proposes the construction, operation and decommissioning of a ground-mounted photovoltaic (PV) solar array which would generate approximately 150 MW (AC). The power would be supplied directly to the national electricity grid. The Proposal would be located 17 km north of Armidale, NSW in the Armidale Regional Council Local Government Area (LGA) and would be accessed via the New England Highway.

The proposal requires development consent under Part 4 of the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act). The proposal is State Significant Development (SSD) under the EP&A Act as it is development for the purpose of electricity generating works with a capital investment value of greater than $30 million (clause 20, Schedule 1 of the *State Environmental Planning Policy (State and Regional Development) 2011).*

NGH Consulting Pty Ltd (NGH) prepared the Environmental Impact Statement (EIS) on behalf of the Proponent, addressing the key environmental issues as specified in the Secretary's Environmental Assessment Requirements (SEARs). The EIS was submitted to NSW Department of Planning, Industry and Environment (DPIE) in October 2020.

Key environmental issues identified in the EIS were biodiversity, Aboriginal heritage, land and soil resources, compatibility of the proposal with existing land uses and hydrology / flooding. These environmental aspects were investigated and assessed in the EIS via specialist assessments. Detailed mitigation strategies were developed where required.

The EIS was placed on public exhibition from 21st of October 2020 to 18th November 2020. The EIS was available online at the Major Projects section of the DPIE planning portal website: https://www.planningportal.nsw.gov.au/major-projects/project/9796. During this period, submissions from the local community, public authorities and other interested parties and stakeholders were received in relation to the proposal.

1.2. Purpose of Submissions Report

NGH has prepared this Submissions Report on behalf of the Proponent to respond to all issues raised in the submissions. The report is set out as follows:

- Section 2: Summary of the proposal as described in the EIS, its key benefits and justification.
- Section 3: Summary of the submissions received.
- Section 4: Responses to the public submissions. As submissions raised several issues, some of which are repeated in other submissions, each issue raised is addressed, rather than each submission.
- Section 5: Responses to each government agency submission.

The following terms are used in this document:

- **Subject Land:** Any and all lots to be directly impacted, in whole or part, by the Proposal.
- **Development Site:** The area of land that is subject to the Proposal.
- **Development Footprint:** The area of land that would be directly impacted by the Proposal, including perimeter fence, access roads, transmission line footprint and stockpile areas.

1.3. Related reports: Amendment Report

Concurrent with this report, an Amendment Report has been prepared. The proposal remains generally as detailed in Section 4 of the EIS (NGH, 2020) however, in response to submissions, additional assessment and proposal amendments have been made to further reduce the environmental impacts of the proposal.

The Amendment Report details:

- Changes to the proposal, since exhibition of the EIS
- Additional environmental assessment, where required by submissions or amendments to the proposal
- Additional consultation undertaken with regard to amendments and additional assessment
- A consolidated and updated set of mitigation measures to manage the environmental impacts of the proposal.

The details of the Amendment Report are not duplicated in this report.

2. Objectives, benefits and justification for the Tilbuster Solar Farm

2.1. Proposal as described in the EIS and updated in the Amendment Report

Noting that the final location of infrastructure components will depend upon a commercial tendering process during detailed design, the Tilbuster Solar Farm proposal, remains largely as described in the EIS. Minor changes, detailed in the Amendment Report are underlined:

- Installation of approximately 400,000 PV (photovoltaic) solar modules mounted on either fixed or horizontal single-axis tracking system (reduced from 405,888 in the EIS)
- Steel mounting frames with pile foundation
- Installation of up to 30 Power Conversion Units – totalling 60 inverters, 30 transformers and associated ancillary equipment
- Electrical cabling including overhead lines and underground electrical conduits to connect PV modules to outdoor substation
- Outdoor 330 kV (kilovolt) substation including switchgears and ancillary equipment
- Onsite energy storage facility – Storage requirements will be 30 MWh (Megawatt-hour) or less (reduced from 40MWh in the EIS); battery technology is yet to be determined and subject to change based on detail design
- Monitoring container as required for operation and maintenance
- Construction facilities including laydown, parking, site offices and staff facilities
- Storage container (40 ft)
- IB (Combiner) boxes
- Internal access roads and upgrades including primary site access on New England Highway – approximately 18.8km in length
- Perimeter security fencing and tracks
- Security camera poles
- Construction of 11 watercourse crossings.

2.2. Proposal objectives

The objectives of the proposal remain as they were described in the EIS. The proposal objectives are outlined below:

- Developing a utility scale solar electricity generation site with the capability for on-site energy storage to support the high voltage transmission network
- To develop a profitable solar farm with minimal environmental and social impact on the community
- Work collaboratively with key stakeholders to ensure all relevant requirements are considered in the location, design, construction and operation of the facility.
- Provide local and regional employment opportunities and other social benefits during the construction and operation of the facility.
- To obtain a social license to operate by acting as a responsible member of the local community.

The renewable energy generated by the proposal also supports efforts to mitigate the effect of climate change by:

- Assisting the NSW and Commonwealth Governments to meet Australia's renewable energy targets
- Providing a clean and renewable energy source to assist in reducing greenhouse gas (GHG) emissions
- Generation of enough clean, renewable energy for about 48,000 average NSW homes
- Displacement of approximately 250,000 metric tonnes of carbon dioxide, currently generated by non-renewable sources.

2.3. Proposal benefits

The proposal would result in numerous benefits including:

- Supporting Commonwealth and NSW climate change commitments.
- Contributing enough clean renewable energy to provide electricity to about 48,000 average NSW homes and displace approximately 250,000 metric tonnes of carbon dioxide annually.
- Enhancing electricity reliability and security by contributing about 150MW of clean energy to the national grid and supporting the energy transition from coal fired to renewables. Additionally, the proposal incorporates a 30 MWH battery energy storage system (BESS), with a peak output of 15 MW, that allows energy to be released during periods of highest demand.
- Direct and indirect employment opportunities during all phases of the proposal, including around 125 construction jobs during the peak construction phase and around 5 equivalent full-time jobs once the proposal is operational.
- Estimated $174 million in capital expenditure in total.
- Development of a new land use thereby diversifying local land uses within the locality and offering host landholders an alternative income stream.

2.4. Justification

Electricity generation is the largest single emitter of greenhouse gas in Australia, contributing 35% of Australia's total greenhouse emissions. In 2017, over 84% of NSW's energy needs were derived

from fossil fuels, including coal and gas, with only around 16% derived from renewable energy sources. It is to be expected that significant effort will be applied to transition to renewable energy sources of electricity generation in coming years and a number of coal-fired power station operators have already announced closure dates for their power stations. The Independent Review into the Future Security of the National Electricity Market outlines a strategic approach to ensuring an orderly transition from traditional coal and gas fired power generation to renewable energy with lower emissions.

The Tilbuster Solar Farm would help support the orderly transition towards renewables as well as supporting Commonwealth and NSW climate change commitments including:

- United Nations Paris Climate Change Agreements which aim to limit global warming to well below 2°C, with an aspirational goal of 1.5°C. Australia's contribution towards this target is a commitment to reduce greenhouse gas emissions by between 26% to 28% below 2005 levels by 2030.
- The RET scheme, which includes a Large-scale Renewable Energy Target (LRET) component which met its 33,000 GWh target in September 2019. Although the RET has been reached, it continues to provide a framework for investment in renewable energy.
- NSW Climate Change Policy Framework which sets an aspirational objective for NSW to achieve net zero emissions by 2050

The proposal will also contribute to commitments made by the Commonwealth and NSW since the EIS was written including:

- The NSW *Electricity Infrastructure Road Map*
    - Within 15 years, three quarters of our state's electricity supply is expected to reach the end of its technical life (NSW Department of Planning, Industry and Environment, 2020)
    - The proposal will be a part of the state's energy replacement strategy
- The *Net Zero Plan: Stage 1 2020-2030*
    - The proposal would contribute to the NSW governments plan to achieve the objectives for the electricity system which include reliability, affordability and economic growth and sustainability (Department of Planning, Industry and Environment, 2020).
- The Australian National Electricity market
    - The Australian Energy Market Operator (AEMO) released the *2020 Integrated System* Plan (ISP) in July 2020 (Australian Energy Market Operator, 2020). The plan is released every two years and aims to guide industry and government in the investments needed for an affordable, secure and reliable energy future, while meeting prescribed emissions trajectories.
    - The New – England region has been identified in the ISP as a Group 2 Priority Zone. Projects in this area are critical to address cost, resilience and optionality issues.
- Renewable energy zones (REZs)
    - The ISP identified potential Renewable Energy Zones (REZ) locations that can connect to the existing transmission network.
    - The proposal is located in the proposed New England NSW REZ.

The proposal site has a high average daily solar exposure of 19-20 MJ/m^2 (BOM, 2020) and proximity to two existing TransGrid transmission lines; a 132 kV eastern line and a 330 kV central line. This greatly reduces the transmission and distribution loss factor risk. It has few nearby

receivers and can be operated without conflict with adjacent rural land uses. The proposed Tilbuster Solar Farm is ideally situated to provide a meaningful contribution to the transition to renewable energy.

3. Consideration of submissions

3.1. Submissions received

During the exhibition period, DPIE received a total of 26 submissions via the major projects planning portal. These submissions include:

- Nine submissions were received from members of the public. Two supported the Proposal, six objected and one provide comments.
- 17 submissions were received from public authorities commenting on the Proposal. No agency objections to the Proposal were received.

Following the exhibition period, DPIE received additional information from previous submitters, an additional three public agency submissions, and additional agency advice. These submissions include:

- Two members of the public who had previously raised objections provided additional information.
- The Biodiversity Conservation Division raised further concerns. These concerns have been addressed as part of a comprehensive consultation process, detailed in the Amendment Report.
- Essential Energy and DPIE Water made public agency submissions
- Transport for NSW provided additional advice.

The submission received are summarised in in Table 3-1.

Table 3-1 Submissions received.

Category	Number of responses received
Individual members of the public – • Support: 2 • Comment: 1 • Object: 6 Issues raised included: Visual amenity, noise impacts, fire hazard, agricultural land use, land value, construction design, cost to neighbouring properties, foreign ownership and community benefit, consultation process, traffic and road safety, biodiversity values, crime and security, site selection and justification.	9 Submissions
NSW Public Authority submissions • Armidale Regional Council • Department of Primary Industries (DPI) Fisheries • DPI Agriculture • Department of Planning, Industry and Environment (DPIE) Water and Natural Resources Access Regulator (NRAR) (three submissions) • DPIE Biodiversity and Conservation Division (BCD) (two submissions)	19 Submissions One agency advice

• DPIE Crown Lands • Water NSW • NSW Environmental Protection Agency (EPA) • Heritage NSW – Heritage council of NSW • Heritage NSW – Aboriginal cultural heritage (ACH) • Department of Regional NSW – Mining, Exploration & Geoscience (MEG) • Transport for NSW (TfNSW) (one submission and one agency advice) • Rural Fire Service (RFS) • Fire and Rescue NSW (FRNSW) • TransGrid • Essential Energy	
Total	29 submissions 1 agency advice

4. Proponent's response to public submissions

Each issue raised is addressed below. Submission IDs are used to show the number of submissions that raised a particular issue. Where consideration of the issue has led to further investigation or a change to the proposal, this is summarised briefly. The detail of further investigations and proposal changes is included in the Amendment Report.

Table 4-1 Proponent's response to issues raised by the community.

Issue raised	Submission ID	Detail of issue	Proponent's response
Support	SE-10640469 SE-10996339	• The development would create many direct and indirect jobs in the construction, maintenance, and general operation of the solar farm. • The development would provide environmentally friendly energy and would not adversely impact the area. • The development would help Australia's effort to halt global warming by reducing greenhouse gas emissions. • Renewable energy projects such as these are good for the environment and will also benefit the local economy during the construction phase.	**Noted.** No changes to the proposal or mitigation measures are proposed in response to this issue.
Visual Amenity	SE-11213970 SE-11250741	Issues raised related to visual impacts included: • SE-11250741, SE-11119181 and SE-11994459 relate to general visual	**Visual impacts and glare generally** A Visual Impact Assessment (VIA) was prepared for the proposal and is summarised in Section 8.1 of the EIS.

Issue raised	Submission ID	Detail of issue	Proponent's response
	SE-11119181 SE-11994459)	impacts caused by the development, including to property immediately neighbouring the development site. • SE-11213970: Receiver identified that their residence has been located to have views of the existing valley. Additionally, views from elsewhere on this property may be impacted to a greater extent than the location of their house. This receiver has noted a lookout has been constructed as a memorial. • SE-11994459, requested the preparation or sharing of a Landscape Plan to describe vegetation screening and other measures to address potential visual impacts.	Although the construction of the proposal would add a new element to the existing landscape, the surrounding area is expected to be subject to transformation. The proposal site is located within the proposed New England Renewable Energy Zone. Currently, there are 8 approved solar farms and two wind farms in the zone, about half of which are either under construction or operational. Therefore, this region is transforming to a more mixed land use of rural land and renewable energy generation. The visual impacts associated with the proposal will vary depending on the viewing location. The solar panel arrays are relatively low lying being about 2-3 m in height. The solar plant would be constructed as an array of panels, mounted either fixed or horizontal single axis tracking system. The VIA found that the highest visual effect of the PV panels is likely to be seen from the north and south, where the more surface area is visible to receivers. The VIA concluded that visibility of the solar farm from the east in the near field would be low due to topographic screening. Potential for glare and reflectance to affect dwellings are considered to be very low given the distance between the proposal and the receivers, sun angles throughout the year and corresponding tilt, and low reflectivity as the panels are designed to absorb approximately 90% of the sun's energy and directly convert it to electricity. This effectively reduces reflectivity, glare and reflectance within the general landscape. **Additional consideration** To consider additional receivers not captured by the EIS, and to provide more detail regarding specific locations, further visual impact assessment was subsequently completed and is presented in the Amendment Report. These assessments included preparation of a photomontage and wireframe models, which was completed by Moir Landscape Architecture (attached as Appendix J of the EIS and amendment presented in the Amendment Report). In response to submission, SE-11213970, the location of the lookout has been estimated from the photos provided in the submission. This lookout is about 2 km from the nearest solar array. From the location of the lookout, about 50% of the development would be visible. The outlook from this lookout to the north and south would remain unchanged. Due to the distance

Issue raised	Submission ID	Detail of issue	Proponent's response
			between development and receptor, the relatively small section of the outlook that would be impacted and considering the at this location the receiver is not residential / subject to prolonged views, this impact is considered to be minor and no further mitigation is proposed. In response to SE-11250741, landscaping within the Development Site was considered an ineffective mitigation measure for this receiver. The receiver has an elevated viewing position and therefore would not be screened by onsite vegetation. Further visual assessment completed as part of the Amendment Report has found that the visual impact of the proposal would be low for this receiver. This rating was based on the distance between the receiver and the Proposal, the presence of screening topography and the presence of existing screening vegetation. None the less, the Proponent has undertaken further consultation and has committed to providing funding towards completing a vegetation screen within the receiver's property to ensure it is targeted and effective. This mitigation now forms a commitment of the Proposal and is included in the Amendment Report. **The additional visual investigations and an updated set of mitigation measures are included in the Amendment Report, Section 6.2.**
Noise impacts	SE-11250741	One submission raised concerns regarding noise during construction, supporting that construction noise should be enforced according to the DPIE's regulations.	A Construction and Operation Noise and Vibration Assessment was prepared for the proposal and is included in Appendix H of the EIS. The assessment determined noise emissions by modelling the noise sources, receiver locations, topographical features of the intervening area, and possible noise control treatments surrounding the study area. The assessment found that noise levels would be compliant with the relevant noise criteria at all receiver locations. The existing mitigation strategy for noise centres on the development of a Noise Management Plan. **Therefore, no changes to the proposal or mitigation measures are proposed in response to this concern.**
Fire Hazard	SE-11119181	Three submissions raised concerns regarding fire hazard. Key concerns include:	**Site access** Mitigation measures have been provided in Section 8.7 of the EIS which

Issue raised	Submission ID	Detail of issue	Proponent's response
	SE-11215470 SE-11119181 SE-11994459	• the suitability of the access road to account for firefighting access and gate arrangements, • if solar development would alter fire threat conditions • if fire hazards from the development would translate into high insurance premiums for landholders.	address the fire hazards identified during the assessment. The mitigation measures include requirements for the perimeter access track to comply with the requirements for Fire Trails in the Planning for Bushfire Protection (PBP) guidelines. Following further consultation, the access road would be constructed in accordance with Armidale Regional Council engineering code requirements (refer to the Amendment Report for details) and would be suitable for access for heavy and light vehicles. Access gate arrangements would detail in the Emergency Response Plan (ERP) for the Proposal. The existing mitigation measures also require for all access and egress tracks on the site to be maintained and kept free of parked vehicles to enable rapid response for firefighting crews and to avoid entrapment of staff in the case of bush fire emergencies. These access tracks would be constructed as through roads as far as practicable. Dead end tracks would be signposted and include provision for turning fire trucks. **Fire threat** Electrical energy generation, transmission and storage facilities can pose fire ignition risks. Therefore, numerous environmental safeguards have been provided in Section 8.7.3 of the EIS to address the risk which also include requirements for all electrical infrastructure to be constructed in accordance with the relevant standards and regulations, which ensure safety of all electrical infrastructure in Australia. Subject to the appropriate implementation of these measures, this risk is considered to be low and highly manageable. Additionally, access improvements, establishment of asset protection zones and groundcover management are expected to reduce bushfire risks from current levels. As the risks have been evaluated and deemed highly manageable there would not appear to be a basis for premium increases **Therefore, no changes to the proposal or mitigation measures are proposed in response to this concern.**

Issue raised	Submission ID	Detail of issue	Proponent's response
Agricultural Land Use	SE-11158546 SE-11215470 SE-11119181 SE-11994459	Submissions raised concerns that the proposal could impact agricultural production as some respondents considered the site fertile and with agricultural value.	**Agricultural land** Section 7.4 of the EIS assessed the proposal's impact on agricultural land, Biophysical Strategic Agricultural Land (BSAL) and agricultural production. The EIS found that the Proposal would not reduce the potential agricultural productivity of the Development Site (as it would be returned to agricultural production following decommissioning) and would not impact production on neighbouring properties. Regarding the regional economy, the EIS found that approximately 310 ha of agricultural land (0.005% of the agricultural holdings within the New England and North West region of NSW) would be displaced at the site during the life of the proposal (approximately 30 years). This does not significantly reduce the availability of land for primary production in the region and that the land was not exceptional agricultural land given its dry sheep equivalent (DSE) (DPI Agriculture, 2021). Additionally, The EIS indicated that 577.4 ha of residual land owned by the associated landowner would be subdivided from the proposal site and available for agricultural use **Biophysical Strategic Agricultural Land (BSAL) and fertility** BSAL is land that has been identified as the highest agricultural productivity in NSW. Within the Development Site, only 0.21ha of BSAL would be impacted by the Development Footprint. This equates to less than 1% of the mapped BSAL within the Armidale Regional LGA. During a site inspection undertaken on 14 August 2019, the area mapped as BSAL was rocky, had little groundcover and appeared to be in a degraded condition. The soils were found to be susceptible to rill and sheet erosion. The soil surveys noted the land could not sustain high levels of productivity. As such, the proposal would not impact high yielding land and the agricultural resting period (the life of the proposal) is likely to improve soil biota, as ground cover will be maintained during operation. A full documentation on the survey can be found in Section 7.3 of the EIS. No impacts on adjacent properties or their land use practices would occur. Further, the Proposal would be highly reversible, committing to return the

Issue raised	Submission ID	Detail of issue	Proponent's response
			land to its current land capability post decommissioning, for continued grazing and cropping or some alternative land use. Finally, the EIS includes a commitment of preparing a Rehabilitation Plan after decommissioning the proposal. The plan would ensure the array site is returned to its pre-solar plant land capability, which is likely to be an improved condition. The plan would be developed with reference to the base line soil testing and with input from an agronomist to ensure the site is left stabilised, under a cover crop or other suitable ground cover. **Therefore, no changes to the proposal or mitigation measures are proposed in response to this concern.**
Land Value	SE-11213970 SE-11250741 SE-11119181	Three submissions noted concern over the potential devaluation and loss of business opportunity of adjoining properties once the proposal is constructed. • On submission questioned how negative impacts on land value and business opportunities would be compensated. • One submission expressed concern that the solar farm development would impact their plans to build a cabin as guest accommodation, specifically as a result of view and glare.	**Land Value** The Proponent acknowledges that renewable energy can be a polarising and subjective issue and that it may affect decisions made by individuals regarding property purchase and other investment decisions. Section 8.5 of the EIS investigated the key land value drivers for lands surrounding the proposed solar farm. These are considered to be for the New England region, the agricultural productivity of the area, visual amenity and rural lifestyle and proximity to Armidale, a key service centre. Solar farms and wind farms are considered to have some similarities in terms of their potential to impact surrounding property prices. It should be noted that wind farms are higher impact from a visual impact, noise and development footprint size perspective. Previous studies on windfarms and property value have found no conclusive evidence to support the claim that windfarms devalue nearby property on the basis of visual impacts (e.g. refer Henderson & Horning Pty Ltd 2006 *Land Value Impact of Wind Farm Development - Crookwell New South Wales and OEH 2016 Review of the Impact of Wind Farms on Property Values).* Regarding the site's agricultural value, the EIS notes that the proposed solar plant is a highly reversible development, involving relatively small areas of excavation for driven pile mounts (for the solar panels) perimeter access track and footings for inverters. After the operational life of the Proposal

Issue raised	Submission ID	Detail of issue	Proponent's response
			(expected to be around 30 years), the site can be returned to its existing agricultural capacity or alternative land use. Proposal commitments include a Rehabilitation Plan, based on onsite soil testing, which will ensure the site is returned to pre solar plant land capability. The proposal would not impact agricultural productivity of neighbouring land. Regarding visual amenity and lifestyle values, as discussed above, there are relatively few receivers with a substantive view of the proposal and these are at some distance. Further studies have been presented in the Amendment Report. The Proposal would have a minor to negligible for all receivers, with the exception of R15 (who is supportive of the proposal). Compensation in the form of funding for landscape treatments on private land are being offered to one additional property. Visual amenity appears to be the key impact on rural lifestyle values. No other activities or values are expected to be impacted with regard to land value drivers. **Loss of future business opportunity** Impacts can only be assessed against known developments. Future plans may or may not be approved and cannot be considered with any accuracy. Regarding the cabin that was mentioned, a review of the Armidale Regional Development Application tracker found that no application has been lodged. Residential sites and other sensitive receptors have been identified in Section 8.7 of the EIS, as is required by the *NSW Government: A guide to preparing planning proposals* (DPE, 2018). The proposed solar plant has potential to create an economic stimulus for the local economy including income for the area (accommodation and retail) which the cabin could benefit from if constructed; job creation and alternative income stream for the area. Given the high degree of confidence in mitigating impacts to agricultural and visual impacts and the potential for positive impacts on access and tourism, no compensation is proposed for any properties. **Therefore, no changes to the proposal or mitigation measures are proposed in response to this concern.**

Issue raised	Submission ID	Detail of issue	Proponent's response
Construction design	SE-11119181 SE-11119181	The submissions raised specific questions regarding the detailed design of the solar farm, these included: • The location of the perimeter fence, • Replacement of existing gates and floodgates • How the new perimeter fence will remain stock proof during the construction phase. • If additional transmission lines would be constructed on neighbouring property.	It is noted that the indicative infrastructure layout presented in this EIS is lacking detail that will be developed post approval and will depend upon a commercial tendering process. The proposal does not involve construction of additional transmission lines on neighbouring land however. A connection to the existing transmission line would be constructed within the development footprint. This is one of the features of the site that make it highly suitable for this proposal. A security fence approximately 2.4m high would be constructed around the perimeter of the site infrastructure areas. The final location of the security fence would be dependent on the detailed design of infrastructure. Details of the perimeter fence construction can be found in section 4.4.8. of the EIS. An additional mitigation measure has been identified in Section of this report to address maintaining stockproof condition of fencing throughout the proposal. This covers gates and floodgates, where required. **This recommendation now forms a commitment of the Proposal. The following safeguard has been added to the Proposals environmental management commitment.** **LU6** Any fencing disturbed during construction of the proposal would be maintained to the existing condition throughout construction. This may involve constructing temporary fencing during the construction period. Following construction, boundary fences around the development site would be reinstated to precondition condition, or better
Cost to Neighbouring properties	SE-11119181 SE-11119181	Two submissions raised concerns about landowner incurring in additional costs on biosecurity weed control and maintenance of fences and roads.	Mitigation measures that will negate the need for neighbouring landowners to front any costs relating to the solar farm have been provided in the EIS. More specifically, mitigation measure 9 in Section 7.1.3 of the EIS relates to biosecurity. In addition, mitigation measures 1, 2 and 3 in Section 8.6.3 of the EIS details the work that will be undertaken to maintain and upgrade roads at the Proponent's expense. A construction costs such as fence replacements will be covered by the Proponent.

Issue raised	Submission ID	Detail of issue	Proponent's response
			Therefore, no changes to the proposal or mitigation measures are proposed in response to this concern.
Foreign Ownership and Community benefit	SE-11119181 SE-11994459	Two submissions raised concerns that it did not support foreign ownership of essential services such as power, in part due to the lack of local knowledge or local community connection held by foreign companies.	The development application has been lodged by Enerparc Australia Pty Ltd. This is a company registered in New South Wales, Australia which requires them with fiscal obligations on its earnings in Australia Enerparc Australia Pty Ltd is owned by Enerparc AG which is a European company with significant expertise in the development construction and operation of large PV systems since 2008. Enerparc has installed more than 2,200 megawatts of solar power in 20 countries and are one of the top global solar developers. Current Australian policy such as the Commonwealth Renewable Energy Target (RET) and the NSW Climate Change Policy Framework, are designed among other goals, to attract investment for the renewables sector. Section 5 in the EIS provides further detail on how these policies works. Enerparc Australia received Foreign Investment Review Board approval for this project on the 19th December 2020. Foreign investment allows for companies to be created in Australia, be operated by Australian, own real state in Australia, and abide with Australian regulations. Should this proposal be approved, it would provide state and local benefits to the community through at least: • Stimulation of the job market by providing additional work opportunities during the construction stage and therefore triggering a flow on effect into the local economy. • Generation of real state by providing rental income for the local landowner on which the farm will be located. • Contribution to cheaper power throughout Australia by increasing competition in the National Energy Market and thereby driving down prices; being solar the cheapest form of new electricity generation currently.

Issue raised	Submission ID	Detail of issue	Proponent's response
			Refer to Section 1.2.4 of the EIS for more details. **No changes to the proposal or mitigation measures are proposed in response to this concern.**
Consultation process	SE-11994459 SE-11119181	Two submissions expressed dissatisfaction with the consultation process undertaken in preparation and assessment of the proposed Tilbuster Solar Farm. Both are near neighbours of the Proposal site and indicated they had not been consulted during the EIS process.	Due to discrepancies between postal addresses and residential addresses, early consultation information sent by the Proponent was not received by two landowners nearby to the Development Site. Following the exhibition period of the EIS, the Proponent has met onsite with the landowners and has maintained communication since. Complete details of the post exhibition consultation are presented in the Amendment Report.
Traffic and road safety	SE-11119181	One submission expressed concerns over the potential for traffic and road safety impacts, particularly during the 12-month construction period. They cite recent road accident and fatalities on the New England Highway near their property and enquired into the following: • What mitigating factors are being implemented to reduce the risk of vehicle accidents?	During construction, the proposal would involve increased heavy and light vehicle traffic to and from the site. While the construction phase will last for 12 months, the peak construction phase where most construction traffic will be generated is a much shorter duration of 3 months. In consultation with roads authorities, further work has been undertaken on intersection treatments and road upgrades since the EIS. As part of the amended Traffic Impact Assessment, presented in the Amendment Report, a line of site assessment was conducted from the proposed intersection on New England Highway. This assessment was completed to determine if entry and exits from the site would have clear line of sight to see oncoming traffic. The assessment found the intersection was sited in a favourable location with ample lines of site both north and south along New England Highway. As described in the EIS, during construction of the proposal, a Traffic Management Plan would be included as part of the Construction Environmental Management Plan. This management plan would detail and additional site-specific traffic conditions, for example, onsite speed limits. **Updated access arrangements and traffic management mitigation**

Issue raised	Submission ID	Detail of issue	Proponent's response
			measures are presented in the Amendment Report.
Biodiversity values	SE-11994459	One submission expressed concern over the timing of the biodiversity assessment, citing the fact that it took place during an extreme drought period. They raise concerns over the assessment of impact to Koalas, noting they've recorded numerous koalas on their property and indicated that it was inconsistent with the *NSW Koala Strategy*.	Ecological site inspections were completed in 2019 and 2020 following periods of rain. While the initial surveys were completed during a period of drought, follow up work allowed the site to be understood across spring, summer and autumn. NGH's approach to implementing the prescriptive Biodiversity Assessment Method is to ensure a precautionary approach is adopted and seasonal limitations are considered as part of this. A joint site visit between the Biodiversity Conservation Division and NGH was completed in autumn of 2021, to assist the agency's assessment of the specialist report. The findings of the biodiversity assessment (updated and presented in the Amendment Report), were endorsed by the Biodiversity Conservation Division following the joint site inspection. Targeted surveys for Koala across the development site were undertaken in August and November 2019; faecal pellets and one nocturnal call were detected. Potential breeding habitat was also noted. For the purpose of the EIS and Biodiversity Assessment, Koalas were assumed to be present within the development site. Approximately 12.5ha of breeding habitat would be removed under the Proposal and generates an in perpetuity offset obligation under the NSW Biodiversity Conservation (BC) Act. Additionally, impacts to Koalas were assessed against the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999,* and 'referred' to the Department of Agriculture, Water and Environment. The Department determined the Proposal to be a controlled action require a separate Commonwealth approval. This is discussed further in the updated BDAR attached to the Amendment Report. Establishment of physical in perpetuity offset or stewardship sites are the preferred method to offset impacts of development under the NSW BC Act. A Biodiversity Offset Strategy (BOS) aiming to maximise this potential is included in the Amendment Report. It is noted that the NSW Biodiversity Offset Scheme is endorsed by the Commonwealth for assessing and offsetting threatened entities, including the Koala.

Issue raised	Submission ID	Detail of issue	Proponent's response
			Regarding ways to further minimise impacts, Section 7.1.3 of the EIS identifies biodiversity safeguards and mitigation measures. In particular, these safeguards include: • Development of a Construction Flora and Fauna Management Plan (B11) • Hollow bearing tree removal procedures (B1, B2 and B3) • Management of displaced fauna (B2) • No use of barbed wire fencing (B12) A key mandate of the BC Act's Biodiversity Assessment Methodology is to avoid impacts wherever possible. Extensive field surveys and analysis have informed the design of the proposal which has avoided impacts to good condition native vegetation and habitat resources as much as possible. This includes further layout iterations undertaken with BCD following the public exhibition of the EIS. These changes are detailed in the Amendment Report. In summary and additional 14.0 hectares of the highest quality vegetation was avoided.
Crime and security	SE-11119181	One submission raised concern over the perceived increase of rural crime on neighbouring properties due to the Proposal and presence of an out-of-area workforce during the construction period. Specifically, they asked: • What security measures will be put in place to protect the neighbouring properties?	The Proposal would utilise up to 125 full time equivalent skilled employees during the peak construction of around 3 months. While the Proponent acknowledges the security concerns of near neighbours, the majority of employees will be sourced from the local area. This is an existing commitment of the proposal. Only where skills are unable to be met locally, will professional staff be sourced from out of the area. All staff would be hired through formal employment contracts and work will be managed strictly under a series of environmental management plans that, include specifications regarding site access, no go zones and parking. For example, the development site and access routes would be clearly delineated in site plans and at induction meetings. "No-go" areas would be established as part of the heritage and biodiversity mitigation measures and would ensure staff are aware of the Proposal boundaries, to prevent inadvertent trespass. It is noted that energy sector works are skilled contractors, paid

Issue raised	Submission ID	Detail of issue	Proponent's response
			approximately 65% above the Australian average. Most non-local staff would travel to and from Armidale accommodation via a mini-bus provided by their employer, and would only be present on site during work. No work camps are part of the proposal. Once in operation, the proposal would be fenced with an approximately 2.4-meter-high security fence, and security measures would be in please to ensure the security of the proposed infrastructure. Staffing at this point would be limited to about 5 persons, for the 30 year project life. Section 8.5.3 pf the EIS details mitigation measures and safeguards for potential community impacts, including steps to receive and respond to complaints and issues as they arise well as liaison with local industry representatives to maximise the use of local contractors and businesses. **No changes to the proposal or mitigation measures are proposed in response to this concern.**
Site selection and justification	SE-11994459	One submission expressed concern over the location of the proposal and the lack of detailed assessment of alternative sites in the EIS.	Site selection and justification is outlined in section 3 of the EIS. The site selection for a large-scale renewable energy Proposal is an iterative process. Sites are initially identified using a Geographical Information System (GIS) model before being reviewed for suitability of grid connection and development constraints. Key considerations during the initial site investigations include: • Availability of suitable land and willing and interested host landowners • Access to grid connection • Existing land use • Site vegetation • Locality of nearby sensitive receivers • Flood risk management • Location of Renewable Energy Zones.

Issue raised	Submission ID	Detail of issue	Proponent's response

			Enerparc reviewed a large number of sites on which to develop a solar farm before selecting the Tilbuster Solar Farm Proposal Site. Numerous sites surrounding the New England region were considered including sites in Wee Waa, Narrabri and Moree which were investigated as alternatives. These sites were assessed based on the objective of developing a profitable Proposal with minimal development impacts before selection of the Tilbuster Solar Farm as the preferred site location for the following reasons:
			• Connection and capacity:
			  ○ The site is located approximately 17 km from the Armidale 330 kV substation and as such, a suitable location for connecting new energy generation.
			  ○ An existing 330 kV transmission line traverses the site which means the that the connection to the high voltage network can be made without the need to construct any transmission lines.
			  ○ Located within the proposed New England Renewable Energy Zone.
			• Solar exposure:
			  ○ The site has high solar exposure measuring 19 MJ/m^2 (BOM, 2020)
			  ○ There will be a meteorological station onsite throughout the operation of the plant
			• Stakeholder interest:
			  ○ Very few non-associated dwellings would be impacted by the development.
			• Land suitability:
			  ○ The site has already been cleared and heavily disturbed by cultivation and grazing.
			  ○ The terrain of the development footprint is relatively flat.

Issue raised	Submission ID	Detail of issue	Proponent's response
			○ The land is not highly productive nor excessively subject to erosion. **No changes to the proposal or mitigation measures are proposed in response to this concern.**
Carbon offsets	SE-11119181	One submission questioned the carbon footprint of the Proposal and the potential for carbon credit offsetting. Specifically, they requested information regarding the carbon footprint of the proposal throughout the Proposal lifecycle and whether carbon offsets have been purchased.	The Proponent has not purchased carbon credits for the Tilbuster Solar Farm. A complete life cycle analysis of carbon emissions for the proposal has not been completed, which is entirely consistent with similar proposals in New South Wales. The Proposal involves the construction and operation of a utility scale solar farm, which will generate renewable solar energy for about 30 years. It's estimated that the Proposal would generate enough renewable energy to power approximately 48,000 average NSW homes. This equates to displacing approximately 250,000 metrics tons of carbon dioxide per year that would otherwise be generated by fossil-fuel sources to meet that same demand. This is roughly equivalent to taking 100,000 cars off Australian roads (GreenVehicleGuide, 2021) for the lifetime of the Proposal. The Proposal would involve some clearing of woody vegetation within the development site. This impact would be offset under Biodiversity Stewardship Agreements and onsite rehabilitation of vegetation. Overall, the area and quality of native vegetation would be increased as a result of this proposal. The proposal would have a 30-year operational life; however the Biodiversity Stewardship Agreements are in force for perpetuity. The Proponent has committed several million dollars to biodiversity rehabilitation and offsets. Therefore, in this respect, the proposal is considered to have a net positive impact on carbon emissions. In addition, stock would no longer be grazed within the development footprint during the lifetime of the proposal. Greenhouse gas emissions associated with grazing stock would be avoided within the development site. It should be noted that utility scale renewable energy Proposals, such as this Proposal, are a critical part of achieving Australia and New South Wales's reduction emissions targets.

Issue raised	Submission ID	Detail of issue	Proponent's response
			No changes to the proposal or mitigation measures are proposed in response to this concern.
Future growth	SE-11119181	One submission inquired into the future developments and growth associated with the Proposal, specifically the new substation, and renewable energy more broadly in the region. Specifically: • Is the substation capable of processing electricity from additional solar and/or wind farms, which may be added in the future, or will it be at full capacity with the current proposal? • What environmental, economic and social plans are in place to manage the future growth of renewable energy development in the New England Region? • Is there consideration of future solar and/or wind farm expansion and the negative visual, environmental, social and economic impact this would have on neighbouring properties and the local area's agri/eco-tourism industry?	The growing recognition for the need to mitigate the adverse environmental effects associated with traditional methods of energy generation has supported the growth of clean and sustainable energy projects globally, including in Australia. The proposed Tilbuster Solar Farm would add to secure, affordable and clean energy generation for the state of NSW whilst also contributing to the NSW Net Zero Plan Stage 1: 2020 – 2030. Section 2 of the EIS outlines the strategic energy context in which the proposed Tilbuster solar farm is situated. It includes discussion on the Commonwealth Renewable Energy Target Scheme, the NSW Net Zero Plan Stage 1: 2020-2030 and Renewable Energy Zones (REZs). The New England region is considered an excellent province for solar energy generation due to its solar irradiance capabilities. It has been identified strategically as a an Immediately Optimal REZ Development Area. Furthermore, the Australian Renewable Energy Agency (ARENA) and NSW Government have recently appointed funding to TransGrid - the proprietors of the high voltage electricity transmission network in NSW - in order to explore the possibility of developing a Renewable Energy Hub in the New England region to optimise the transmission network for renewable energy sources. In addition, the New England North West Regional Plan includes goals to: • strong and dynamic regional economy: ○ New England North West as the renewable energy hub of NSW. • A healthy environment with pristine waterways:

Issue raised	Submission ID	Detail of issue	Proponent's response
			○ Adapt to natural hazards and climate change. The Regional Plan considers environmental, economic and social issues and factors in the strategic roadmap it sets out for the New England region, including the development of renewable energy. The proposed Tilbuster Solar Farm is well placed within the New England REZ and is consistent with New England's Regional Planning It's difficult to speculate at a project level on the impacts of possible future renewable energy developments. However, any future project will need to consider and address cumulative impacts. **No changes to the proposal or mitigation measures are proposed in response to this concern.**
Contamination	SE-11119181	One submission express concern over potential contamination impacts to human health, soil and water due to potential cadmium leachate. Specifically, they asked: • What contaminates are the solar panels and batteries? Do they contain lead and cadmium? • Cadmium is a known carcinogenic. It is noted that cadmium can be washed out of solar modules by rainwater and leaching from broken panels damaged during nature events e.g. hail storms. Is this the case? • The proposed site includes water ways, what risk is there that they can be contaminated by these chemicals? • What is in place to prevent soil and water contamination during the construction, operation and	The energy producing part of solar panels contain a mix of metal components and silicon. These components are enclosed in glass and are not able to mix with air or water in the atmosphere. Therefore, there is negligible risk of chemical release from a solar panel. Typically, PV panels are made of tempered glass. Solar panels pass tests that simulate common environmental conditions and events, such as hail. A study on the potential for leaching of heavy metals and metalloids from crystalline silicon PV systems from the Journal of Natural Resources and Development (Robinson & Meindl, 2019) was conducted to determine whether potentially toxic elements could have the potential to leach into the surrounding environment. Soils were analysed from beneath panels against a control site, away from panels. This was done to determine if soils were being enriched by metals such as lead, cadmium, lithium, strontium etc. and metalloids such as selenium. The results of the findings concluded that there were no significant differences in lead or cadmium levels, with only minor concentration differences in other metals between soil samples under PV panels and the control sample. Despite the minor concentration differences, there would be negligible risk to nearby ecosystems and therefore negligible risks to

Issue raised	Submission ID	Detail of issue	Proponent's response
		decommission phases? • Decommissioning of the site, including the removal and disposal of toxic, heavy metals and chemicals in the panels and batteries.	residences or to current (proposed) or future farming activity. Solar panels would be regularly inspected during operation of the proposal. Damaged panels would be replaced as part of the operation and maintenance phase of the proposal. The proposal would be constructed using modular and sealed components. During decommissioning, each component would be removed from the site in a similar process to construction. No changes to the proposal or mitigation measures are proposed in response to this concern.
Aboriginal Heritage	SE-11119181	One submission expressed concern that the EIS does not adequately address Aboriginal heritage and cultural values. Specifically: • What is being put in place to preserve and protect the cultural integrity of this site?	An Aboriginal Cultural Heritage Assessment (ACHA) Report was summaries Section 7.2 of the EIS, and subsequently updated and presented in the Amendment Report, which details the consultation undertaken with the Armidale Local Aboriginal Land Council and other interested Aboriginal parties. Section 7.2.4 of the EIS summaries the safeguards and mitigation measures that will be implemented to managing cultural heritage. It includes the preparation and implementation of a detailed Cultural Heritage Management Plan for the protection and management of all heritage sites, items and places. This will include protection of certain Aboriginal sites and salvage and recollection of other sites, in consultation with registered Aboriginal parties. No changes to the proposal or mitigation measures are proposed in response to this issue.

5. Proponent's response to Public Authorities submissions

This section considers all issues raised in the government agency submissions. Where consideration of the issue has led to further investigation or a change to the proposal, this is summarised briefly. The detail of further investigations and proposal changes, however, is included in the Amendment Report.

Table 5-1 Agency submissions and Proponent's response

Issue	Detail of issue	Proponent response
Armidale Regional Council		
Cumulative Impacts	EIS does not appear to have addressed the cumulative impacts of a number of Regionally Significant Developments (RSD) determined by the Northern Regional Planning board and SSD renewable projects such as the Rangoon Wind Farm, Doughboy Wind Farm, Winterbourne Wind Farm and the Oven Mountain Pumped Hydro proposal + others.	Section 8.12 of the Proposal EIS outlines the potential cumulative impacts of surrounding developments. Listed potential impacts included: • Biodiversity impacts • Visual and landscape character impacts • Noise impacts • Traffic impacts • Pressure on local facilities, goods and services; and • Land compatibility impacts As concluded in the EIS, all potential cumulative impacts have been determined as not significant. The large distances between major projects in the region avoid the potential for most cumulative impacts. The nearest major project to the proposal site is the UNE New Wright Block construction which is over 10km away. In consideration of the SDD and RSD, the key cumulative impacts from this proposal are expected to be transport and haulage. A detailed assessment of cumulative impacts on haulage routes and traffic have been considered in Section 3.4 of the updated TIA (refer to the Amendment Report). Cumulative traffic impacts will be short term (peak construction period is approximately 3 months; from late 2021 to late 2022. The following provides an assessment of the cumulative impacts of major projects that are proposed in the surrounding area. A summary of the updated traffic cumulative impact assessment is provided below in Table 5-2.

Issue	Detail of issue	Proponent response

Table 5-2 Summary of traffic and haulage cumulative impacts.

Project	Description	Potential Vehicle Conflict
Doughboy Wind Farm (Prepare EIS)	The project is located about 40 km east of Armidale and involves the construction of approximately 52 wind turbines. Access to the site is proposed from Waterfall Way and Guyra Road. The site is expected to generate approximately 40 vehicle movements during the morning and evening peak hours during the peak construction period, and 138 vehicle movements per day.	The construction periods for the projects could potentially overlap. Both projects are anticipated to have staff located in Armidale and Guyra.
New England Solar Farm (Determination)	New England Solar Farm is located approximately 6 kilometres east of the township of Uralla. Construction will take approximately 32-36 months and the project's construction workforce will be in the order of 300 people. The project is expected to generate 912 daily vehicle movements (760 by light vehicles and 152 by heavy vehicles) during the peak construction periods.	There is potential for construction of both projects to overlap. The traffic generated by the projects may interact within the township of Armidale where staff for both projects are proposed to be located.
Armidale School Redevelopment (Determination)	The proposed development is a major redevelopment of the existing Armidale High School with a capacity of approximately 1,580 students and 110 FTE teaching staff. The new school will combine students of Duval High School and Armidale High School. The construction work for the new school will be starting by 2019 and expected to be completed in November 2020, for the school start Term 1 in 2021.	The school is expected to be operating prior to construction commencing for the wind farm. Accordingly, the peak construction of the wind farm will not overlap with the school redevelopment. There is anticipated to be minimal interaction between construction traffic and vehicles accessing the school given the school is located in the north-western portion of the Armidale township.
UNE New Wright Block (Recommendation)	The proposed development will include the construction of four new buildings, which will deliver approximately 342 new beds for the existing Wright College. The traffic assessment	There is anticipated to be minimal interaction between construction traffic and vehicles accessing the College.

Issue	Detail of issue	Proponent response		
			prepared for the project demonstrates that the road network will continue to be provided with a good level of service.	
		Oxley Solar Farm (Prepare EIS)	Amber Organisation has assisted in the preparation of a Traffic Assessment for the solar farm, which is located approximately 10km southeast of Armidale, to the south of Waterfall Way. Construction workers are proposed to be located in Armidale, with access proposed via Waterfall Way and Gara Road. No detailed traffic information has been provided and a Traffic Impact Assessment is proposed as part of theEIS.	There is potential for construction of both projects to overlap. Construction traffic generated by the projects may interact within the township of Armidale where staff for both projects are proposed to be located. During operation the projects are both expect d to generate a minimal level of traffic.
		Thunderbolts Energy Hub and Wind Farm (SEARs)	The proposed Thunderbolt Energy Hub is located in the Kentucky Area approximately 40km northeast of Tamworth adjacent to New England Highway. The Thunderbolt Energy Hub is proposed to include wind and solar electricity generation and battery storage. The overall capacity of the Thunderbolt Energy Hub will be approximately 500MW plus a 400MW battery. No detailed traffic information has been provided and a Traffic Impact Assessment is proposed as part of the EIS.	The construction periods for the projects could potentially overlap. Both projects are anticipated to have staff located in Armidale.
		Rangoon Wind Farm (Prepare EIS)	The wind farm is located near the villages of Ben Lomond and Glencoe NSW approximately 60km north of Armidale and 40km south of Glen Innes. The proposal involves construction of approximately 25 wind turbines. No detailed traffic information has been provided and a Traffic Impact Assessment is proposed as part of the EIS.	The construction periods for the projects could potentially overlap. Both projects are anticipated to have staff located in Armidale and Guyra.
		Alisbury Solar Farm (Prepare EIS)	Salisbury Solar Farm is located on both sides of Thunderbolts Way approximately 10km south of Uralla. Traffic impacts include increased traffic movements from the nearby towns associated with staff and increased truck volumes delivering plant and equipment. The solar farm is	There is potential for construction of both projects to overlap. The traffic generated by the projects may interact within Armidale where staff for both projects are proposed

<table>
<tr><th>Issue</th><th>Detail of issue</th><th>Proponent response</th></tr>
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<tr><td></td><td>anticipated to generate increased turning movements to/from Thunderbolts Way associated with vehicles accessing the site. A scoping report has been prepared for the development which indicates construction will occur between 2021 and 2023. No detailed traffic information has been provided and a Traffic Impact Assessment is proposed as part of the EIS.</td><td>to be located.</td></tr>
<tr><td>Winterbourne Wind Farm (Prepare EIS)</td><td>Amber Organisation is currently preparing the Traffic Impact Assessment for the project which is located 7km east of Walcha and involves the construction of approximately 133 wind turbines. Access to the site is proposed from a number of local roads which link with Jamieson Street, which connects to the State road network via Thunderbolts Way.</td><td>The construction periods for the projects could potentially overlap. Both projects are anticipated to have staff located in Armidale and will utilise a similar transport route with plant for the wind farm to be delivered from the Port of Newcastle.</td></tr>
<tr><td>Oven Mountain Pumped Hydro (SEARs)</td><td>Armidale is approximately 60km north west of the proposed Oven Mountain Pumped hydro proposal site. Site access is proposed via the New England Highway via Armidale or the Pacific Highway via Kempsey.</td><td>There is a potential for the project construction periods to overlap with construction aiming to commence in 2023.
If the chosen haulage route utilises the Pacific Highway option there would be no cumulative impact on Proposal from this proposal</td></tr>
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The Traffic Impact Assessment found the cumulative impact of the site traffic with nearby developments is expected to be minimal and would be readily managed by implementing the Construction Traffic Management Plan, as proposed in the EIS.

Therefore, no additional assessment, changes to the proposal or mitigation measures are proposed in response to this concern.
</td></tr>
<tr><td>Biodiversity</td><td>The development will have impacts on local biodiversity, namely on areas of assumed habitat for the following:
• Bluegrass,</td><td>Targeted surveys were conducted by NGH for Bluegrass in December 2020 with no individuals observed. In contrast to the previous summer, the areas of assumed habitat were lush with growth of grasses. This in fact revealed that the habitat value is definitely suboptimal for the species. The areas of highest likelihood were searched, with no individuals observed, as mentioned. The scope and results of the Bluegrass targeted surveys are included in the updated BDAR, attached to the Amendment</td></tr>
</table>

Issue	Detail of issue	Proponent response
	• Pale-headed Snake, • Koala habitat and • the Southern Myotis, • and have an impact on 86 hollow bearing trees. If biodiversity impacts are unavoidable, Council would like a detailed vegetation/tree clearing plan focussing on measures to be implemented for development i.e vegetation clearing, hollow bearing tree removal protocols for the management of displaced fauna. Fencing should include scratch barriers and they raise concern about the use of barbed wire for birds.	Report. Habitat that would be removed for Southern Myotis is minimal. As a microbat species that relies on waterbodies for forage, the construction of panels on grassland is of little consequence as the species would not be prevented for flying between areas of habitat. A number of farm dams, that may provide foraging habitat, would however, be removed. Duval Creek, another and arguably the more valuable foraging resource for the species, would be avoided save for two water crossings. The long-term viability of Duval Creek as a foraging resource would not be jeopardised by the proposal. Where possible, tree hollows and other habitat resources have been avoided by the siting of the solar infrastructure. Extensive field surveys and analysis have informed the design of the proposal which has avoided, minimised and mitigated biodiversity impacts as far as practicable. This includes further layout iterations undertaken with BCD following the public exhibition of the EIS. These changes are detailed in the Amendment Report. Section 7.1.3 of the EIS identifies biodiversity safeguards and mitigation measures. In particular, these safeguards include: • Development of a Construction Flora and Fauna Management Plan (B11) • Hollow bearing tree removal procedures (B1, B2 and B3) • Management of displaced fauna (B2) • No use of barbed wire fencing (B12) The management plan would require endorsement by BCD and DPIE prior to construction. These plans will be available on the Major Projects website, should Council wish to view these details. **Therefore, no changes to the proposal or mitigation measures are proposed in response to this concern.**
Waste Generation	Concern as to the capacity Council's landfills will have space, given that the region is experiencing substantial growth in new developments. Council would like a focus to be on separating recycling and landfill waste and recommend that any consent should require submission of a waste management plan, outlining all waste management principles	Section 8.10 of the EIS addresses waste management and provides a full list of mitigation measures, which require the Proponent to develop and implement a Waste Management Plan (WMP). The WMP will be developed preconstruction as part of the of Construction Environmental Management Plan to be submitted to DPIE. The WMP would include the identification of opportunities to avoid, reuse and recycle, in accordance with the waste hierarchy. Section 8.10 of the EIS outlines what wastes would be produced during to construction, and how the waste would be managed. These include: • Identification of opportunities to avoid, reuse and recycle, in accordance with the waste hierarchy. • Quantification and classification of all waste streams.

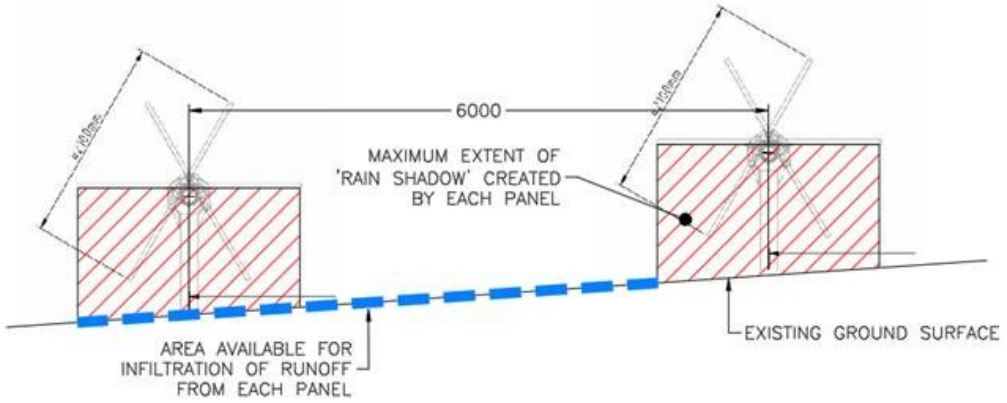
Issue	Detail of issue	Proponent response
	and practices relevant to the proposal to reduce waste and recover resources.	• Provision for recycling management onsite. • Provision of toilet facilities for onsite workers and identify that sullage would be disposed of (i.e., pump out to local sewage treatment 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). Separation of waste would occur in accordance with waste hierarchy principles. **Therefore, no changes to the proposal or mitigation measures are proposed in response to this concern.**
Land Contamination	Local level concerns with regards to potential contamination of land and water courses in the event of faulty/damaged/or deteriorating panels, particularly after storm, bush fire events or other significant events. These matters should be addressed in an OEMP.	**Risk of Contamination** The energy producing part of solar panels contain a mix of metal components and silicon. These components are enclosed in glass and are not able to mix with air or water in the atmosphere. Therefore, there is negligible risk of chemical release from a solar panel. Typically, PV panels are made of tempered glass. Solar panels pass tests that simulate common environmental conditions and events, such as hail. A study on the potential for leaching of heavy metals and metalloids from crystalline silicon PV systems from the Journal of Natural Resources and Development (Robinson & Meindl, 2019) was conducted to determine whether potentially toxic elements could have the potential to leach into the surrounding environment. Soils were analysed from beneath panels against a control site, away from panels. This was done to determine if soils were being enriched by metals such as lead, cadmium, lithium, strontium etc. and metalloids such as selenium. The results of the findings concluded that there were no significant differences in lead or cadmium levels, with only minor concentration differences in other metals between soil samples under PV panels and the control sample. Despite the minor concentration differences, there would be negligible risk to nearby ecosystems and therefore negligible risks to residences or to current (proposed) or future farming activity. **Bushfire** Bushfire management is addressed in Section 8.7 of the EIS. As part of this assessment, 14 safeguards have been developed that will avoid, minimise and mitigate bushfire impacts. This includes the preparation of a detailed bushfire management plan in accordance with safeguard BF3 in the EIS. The implementation of these safeguards is expected to dramatically reduce the risk of fire damage to solar infrastructure. However, in the unlikely event damage occurs, this will be managed in accordance with the Spill and Contamination Response Plan, identified in safeguard LS5 of section 7.3.5. of the

Issue	Detail of issue	Proponent response
		EIS. Therefore, no changes to the proposal or mitigation measures are proposed in response to this concern.
Decommissioning	Given the focus on this region as a renewable's hub, there is also some concern regarding the future decommissioning of these facilities should they ever become unviable during the operational phase, end of lease or if the development/land is on sold or simply the applicant/developer goes into liquidation. As such, it is recommended that any decommissioning of the facility be not only the responsibility of the developer but also the landowner and that if the solar farm ceases or becomes inactive for more than 12 months then it is to be decommissioned and returned to agricultural use. Such measures would hopefully prevent such renewable projects from becoming idle and potentially becoming a blight on the landscape.	As identified in Section 4.8 of the EIS, the proposal is expected to operate for up to 30 years until which the solar farm would either be upgraded (pending additional approvals) or decommissioned. The key tasks of decommissioning would include: • The removal of solar arrays including piling foundations. The materials will be properly sorted for recycling or reused if appropriate • Cabling works installed would be removed and recycled where appropriate • All site amenities and solar farm equipment would be removed including buildings, PCUs, energy storages, onsite substation and associated equipment. • Perimeter fencing would be removed At the decommissioning stage of the proposal, the rehabilitation plan would return the site to agricultural use. The solar farm would produce 150 MW of electrical energy and would be supported by a 30 MWH battery energy storage system, which will enable the Proponent to sell energy during periods of highest demand. While the development of solar farms requires considerable capital outlay, once operational ongoing costs are comparatively minimal. The proposal has strong strategic justification (as outlined in Section 2 of this report and Section 2 of the EIS). Therefore, it is considered unlikely the proposal would remain idle during operation. The Proponent have contributed over 3,000 megawatts of photovoltaic power to the grid worldwide, in more than 20 countries with over 400 projects. The Proponent has a strong track record of delivering viable developments. For these reasons it is considered unwarranted for special agreements to be formulated between the Proponent and the lessee. **Therefore, no changes to the proposal or mitigation measures are proposed in response to this concern.**
Proposal Details: Capital investment figures	There appears to be inconsistencies with the capital investment figures throughout EIS. Page 9 of the EIS estimates the	The Capital Investment Value of the Proposal has been estimated by a Quantity Surveyor to be $174 million. This cost estimate has now been shared with Armidale Regional Council. The Proponent will make contributions to Armidale Regional Council, as required under the Council's s7.12 Contributions Plan.

Issue	Detail of issue	Proponent response
	CIV of the Proposal as $1 million, page 20 states $152 million while Part 4.10 on page 37 states the CIV as $174 million. A quantity surveyors report did not appear to be attached. In this regard, the proposed development would attract contributions under Council's s7.12 Contributions Plan and calculated at 1% of the estimated cost of construction including GST.	**No changes to the proposal or mitigation measures are proposed in response to this concern.**
Proposal Details: SEARs	Even though Council provided comment in response to the SEARs on 12 October 2018, these matters do not appear to have been addressed under Table 6-3 of Part 6.1.4 of the EIS.	Section 6.1.1 and 6.1.2 of the EIS address the Secretary's Environmental Assessment Requirements (SEARs) and supplementary SEARs in full. **No changes to the proposal or mitigation measures are proposed in response to this concern.**
Community consultation	Please ensure that adequate consultation has been undertaken with the Armidale Local Aboriginal Land Council regarding Aboriginal Cultural Heritage matters.	As set out in the EIS, the consultation with Aboriginal stakeholders was undertaken in accordance with clause *80C of the National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010* (NSW). The assessment was guided by the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011) and the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales* (OEH, 2010a). **No changes to the proposal or mitigation measures are proposed in response to this issue.**
Bush Fire Hazard	Further consideration needs to be given with regards to battery storage and panel location on the site given that part of the site has been identified as being potentially bushfire prone land.	Section 8.7 of the EIS addresses bushfire risks to the proposal. As shown in Figure 8-16 of the EIS, the development has been sited to avoid Category 1 vegetation and largely avoid buffer zones. Section 8.7.3 of the EIS identifies safeguards to manage bushfire risk, including: • Developing a bushfire management plan (BF3) • Maintaining asset protection zones (BF4) • Constructing the lithium-ion energy storage facility as far as practicable from any sensitive receptors or large stands of vegetation (BF13)

Issue	Detail of issue	Proponent response
		No changes to the proposal or mitigation measures are proposed in response to this concern.
Traffic	The EIS notes the need for the creation of a compliant intersection access to the New England Highway (NEH). If access is required via currently unformed road reserves or formed road reserves then consideration of upgrades to council road network must be considered to ARC engineering code requirements, suitable for the traffic loads during construction and operation. Pg. 20 of the EIS proposes access to the site via an "unnamed crown road" (refer to figure 1-4). However, Parish maps and Council's GIS identifies this as a Public Road. Thus, approval will be required from Council as the roads authority for all construction and all required upgrade and maintenance works along this section of public road. Road design to be in accordance with Council's engineering code and works approved by Council as the roads authority. Council is concerned with the ability for heavy articulated vehicles being able to access the "public road" off the New England Highway due to the angle of the intersection. With reference to figures 8-14 and 8-15, the realignment of the intersection for heavy articulated vehicles access will most likely protrude into	A review of parish maps has revealed the access road to the Development Site is partly within an unnamed Crown Road, and partly within an unnamed Council Road. The proponent has completed further consultation with Council (detailed in the Amendment Report) and will construct the access road in accordance with Armidale Regional Council engineering code requirements. This recommendation now forms a commitment of the Proposal. The following safeguard has been added to the environmental management framework of the proposal: The unnamed Council road between the New England Highway and the Development Site would be upgraded accordance with the design requirements of a 'Rural Access Minor' road as provided by Armidale Regional Council. The intersection upgrade, as it is currently designed, will be completed with the Road Reserve and would not require private land acquisition. A swept path and line of sight assessment has been completed, and found the intersection is suitable and compliant with the relevant design criteria. Further consultation with TfNSW and Armidale Regional Council will be completed, post approval, once the Proposal is at the detailed design stage.

Issue	Detail of issue	Proponent response
	private land. How does the applicant propose to address this potential issue?	
Runoff	An assessment of the impact of increased rainfall runoff from the site on downstream localities from the site must be considered.	The proposal's solar panels will not cause an increase in imperviousness and consequently generate addition runoff. When viewed in isolation the ground surface area under each panel will theoretically not be able to accept runoff from that panel and will therefore not have an opportunity to infiltrate that runoff. However, as the solar panels are proposed to be arranged in linear arrays separated by a distance of 6m, runoff from upslope panels will run under immediately downslope panels thereby affording the opportunity for infiltration under each panel (as demonstrated in Figure 1), with the exception of those panels which are most upslope (i.e. only the highest row of panels). Therefore, when viewed as a whole, the ground surface area underneath the solar panel arrays available for infiltration is almost identical to that which currently exists and therefore any increase in runoff from the site for the arrays would be negligible. The existing ground surface area beneath the solar panel arrays should not be disturbed through scraping or excessive compaction but rather existing vegetation slashed to facilitate construction and then actively managed through grazing and/or slashing to maintain good vegetative cover. On the above basis the proposed solar arrays would result in a negligible increase in runoff and therefore would not warrant the inclusion of stormwater management devices (such as on-site detention basins) to limit post development peak discharge rates to pre-development levels, which can act to concentrate flows resulting in increased erosion potential.

Issue	Detail of issue	Proponent response
		 **No changes to the proposal or mitigation measures are proposed in response to this concern.**
Voluntary Planning Agreement (VPA)	Council would like to discuss and explore a possible VPA with DPIE and the Applicant.	The Proponent consulted with Armidale Regional Council regarding the possibility of entering into a Voluntary Planning Agreement. An agreement was reached to instead make contributions to the Council, under Council's Section 7.12 plan. **No changes to the proposal or mitigation measures are proposed in response to this concern.**
Department of Primary Industries (DPI) Fisheries		
Water Crossings	The EIS states that it is likely that there will be 11 access tracks across watercourses. Construction of waterway crossings or services through waterways should reference DPI Fisheries Policy & Guideline document: Policy and Guidelines for Fish Habitat Conservation and Management (Update 2013). This is to ensure that the works are designed and constructed in accordance with best management	The DPI Fisheries Policy & Guideline document: Policy and Guidelines for Fish Habitat Conservation and Management (Update 2013) will be referenced and included in a new mitigation measure and will engage with the DPIE to include or reference additional requirements through the appropriate mechanisms in the conditions of consent if the Proposal is approved. **This recommendation now forms a commitment of the Proposal. The following environmental management measure has been added to the Proposal:** **HF7** Construction of waterway crossings or services through waterways would be designed and constructed in accordance with *DPI Fisheries Policy & Guideline document: Policy and Guidelines for Fish Habitat Conservation and Management (Update 2013)*

Issue	Detail of issue	Proponent response
	practice and with minimal impact on the aquatic environment. DPI Fisheries policy also advocates the use of riparian buffer zones as per the Policy and Guidelines for Fish Habitat Conservation and Management (Update 2013) available on the Department's website at www.dpi.nsw.gov.au/fishing/habitat/publications/pubs/fish-habitatconservation in order to maintain the riparian buffer zone and limit disturbance and susceptibility to bed or bank erosion.	
Water NSW		
No Comment	Water NSW provided no comments on the EIS.	**No changes to the proposal or mitigation measures are proposed in response to this concern.**
NSW Environmental Protection Agency (EPA)		
No Comment	Water NSW provided no comments on the EIS.	**No changes to the proposal or mitigation measures are proposed in response to this concern.**
Biodiversity and Conservation Division (BCD)		
Biodiversity (BDAR)	The currency of the BDAR is important to ensure the most relevant biodiversity updates have been included during the assessment of the proposal. As it stands, the current BDAR is invalid because it does not accord with s6.15(1) of the BC Act and this must be addressed before we can complete our review of the BDAR:	An amended Biodiversity Development Assessment Report (BDAR v1.4) has been prepared to reflect the changes to the layout. This section will reference the updated BDAR, provided as Appendix C of the Amendment Report. 1. The BAM-C calculations have been updated; all relevant entities listed under BC Act as at 1st August 2021 have been considered. 2. A statement certifying the BDAR is included under the document verification table of the BDAR. All calculations have been finalised and submitted as 1st August 2021. 3. The BDAR has been submitted within 14 days of the BAM-C being finalised, the submission date is 13th August 2021.

Issue	Detail of issue	Proponent response
	BCD Requirements: 1. The BDAR is to be updated to address any relevant threatened entities listed on the schedules of the Biodiversity Conservation Act 2016 since 28 April 2020 2. The BAM calculations are to be finalised and submitted by the Accredited person 3. An updated BDAR is to be lodged with the Planning and Assessment Group in support of the development application within 14days of the credit calculations being finalised and submitted 4. The updated BDAR should be referred to the BCD for review after it is lodged	4. The BDAR will be provided to DPIE as part of the Amendment Report, who will forward it to BCD for their review.
Candidate species	"Further justification should be provided in the BDAR for excluding the following species credit species as candidate species: Flora • Small Snake Orchid (*Diuris pedunculata*) • Tall Velvet Sea-berry (*Haloragis exalta* subsp. Velutina) • Aromatic Peppercress (*Lepidium hyssopifolium* • Hawkweed (*picris evae*) • Silky Swainson-pea (*Swainsona sericea*) • Austral Toadflax (*Thesium austral*)	Further justification for the exclusion of these species is detailed Table 4-1 of the BDAR, in consideration of habitat constraints for these species and onsite habitat. Key reasons for the exclusion of these species is summarised below: Small Snake Orchid (*Diuris pedunculata*) Habitat degraded such that the species is unlikely to occur. Unlikely the species would persist through years of stock grazing. Tall Velvet Sea-berry (*Haloragis exalta* subsp. Velutina) Habitat degraded such that the species is unlikely to occur Aromatic Peppercress (*Lepidium hyssopifolium)* Habitat degraded such that the species is unlikely to occur. Species unlikely to persist through years of stock grazing. Low number of forbs (4) recorded in PCT 704. Threats include grazing and exotic pasture species, both prevalent within PCT 704. Hawkweed (*picris evae*) Habitat degraded such that species is unlikely to occur. Species unlikely to persist through years of stock grazing. Low number of forbs (4) recorded in PCT 704. Threats include grazing

Issue	Detail of issue	Proponent response
	• Fauna • Tusked Frog (*Adelotus brevis*) (Tusked Frog Population in the Nandewar and New England Tableland Bioregion • Glandular Frog (*Litoria subglandulosa*)" Consider if above should be included as species credit species (may need surveys)	which is prevalent. Silky Swainson-pea (*Swainsona sericea*): Habitat degraded such that species is unlikely to occur. Species unlikely to persist through years of stock grazing. Low number of forbs generally recorded. Threats include grazing and exotic pasture species, both prevalent within PCT 704 and 567. Austral Toadflax (*Thesium austral*) Habitat degraded such that species is unlikely to occur. Kangaroo grass extremely rare. Grazing by livestock is a main threat to the species which is prevalent. Tusked Frog (*Adelotus brevis*) (Tusked Frog Population in the Nandewar and New England Tableland Bioregion: Habitat degraded such that the species is unlikely to occur. The nature of Duval Creek varied greatly across the surveys conducted and is highly ephemeral; from completely dry to some flow and pooling evident. The recent drought is likely to have presented conditions that the species could not persist through due to a lack of refuge locations. Water quality would also be poor outside of rainy periods.
Greater Glider	BAM must be used to assess the Greater Glider, as per requirements of the bilateral agreement. It must be included as a candidate species credit species in the BDAR and the BAM-C	A species polygon for the Greater Glider has been prepared (Figure 4-3 of the BDAR). Since initial submission, Greater Glider has become selectable in the BAM-C and the species was added in this manner. Greater Glider has been added to all sections relevant to candidate species credit species. A credit offset calculation was calculated using the BAM-C.
Flora survey effort	BDAR must document the details of all targeted threatened plant surveys undertaken, including the techniques adopted, as well as the survey effort and timing, rather than simply stating that the surveys were consistent with the survey guidelines. In addition, location of field traverses should be illustrated on a map and included within BDAR.	Further detail of flora survey effort, including techniques adopted, as well as the survey effort and timing, has been added to Section 4.2.5 of the BDAR. Figure 4-4 in the BDAR has been added to show the location of the Bluegrass of field traverses.
Koala	Koala species polygon must be	The Koala species polygon has been revised within the BDAR as per advice from the BAM Support

Issue	Detail of issue	Proponent response
	revised in the BDAR so that it is mapped in accordance with the advice from the BAM Support Team set out in Attachment 1 to this letter. Update Koala impacts on pgs 73 and 81 to reflect new Koala species polygon.	Team. The species polygon now includes all treed vegetation zones. Impacts, including the offset obligation for this species, have been adjusted accordingly.
Avoiding impacts on native vegetation and habitat	Further consideration should be given to avoiding impacts on high quality stands of the CEEC White Box Yellow Box Blakely's Red Gum Woodland that have a veg score of at least 33. Development footprint should be revised to avoid the severing of connectivity at the location illustrated by the red circle in Figure 2 of Attachment 1 to this letter.	Since initial submission, the development footprint has been revised to avoid a further 14 ha of the highest condition CEEC, Zones 1 and 5. A consultation process with BCD was implemented to refine the development footprint. This process was detailed in Section 2.2 of the Amendment Report and included a site inspection with BCD and agreement on changes to the layout to reduce the CEEC zones with VI scores above 30. Key areas of connectivity, as highlighted by BCD through this consultation process, have also been retained by the revised Development Footprint.
Serious and Irreversible Impacts	"SAII (a) (a) 49.5 hectares of this CEEC will be retained on site, much of which has an intact canopy. There is no proposal outlined within the BDAR as to how this retained vegetation will be protected and actively managed to sustain or improve its condition."	Further detail in relation to the Biodiversity Management Plan has been added to Section 8.2 of the BDAR. This includes a recommended outline for the document, recommended restoration management actions and performance targets. This now forms a commitment of the project, if approved. In addition, further avoidance of the CEEC has been committed to by the amended Development Footprint.
	SAII (d) While the BDAR provides an estimated extent of the CEEC within 1,000 and 10,000 hectares of the development site, there is no indication of the condition of this vegetation. The assessor must determine, as accurately as possible, the condition of extant	The BDAR states that Box-gum Woodland CEEC, in the context of the broader locality surrounding the development site, is likely to have be heavily modified due to human land use and be in poor condition. More so on valley floors where the land is arguably more fertile and accessible. Areas of Box-gum Woodland CEEC that grade into PCTs of higher elevations, may be in better condition due to less historical clearing and ongoing grazing pressure. Given data deficiency, it is difficult to provide detail other than general statements such as ‘poor’, or

Issue	Detail of issue	Proponent response
	patches of this vegetation in the required areas and document the results in the BDAR. Based on our examination of aerial photographs of the surrounding areas, it appears that the condition of much of the extant vegetation within those areas is likely to be poor to very poor.	'very poor'. It is feasible that VI scores for the CEEC across the required area are similar to that of the Subject Land.
	SAII(e) The information presented for this part has extrapolated from information available in relation to an adjoining sub-region. The assessor is required to determine, as accurately as possible, the area and condition of extant patches of this vegetation across the Armidale Plateau sub region and document the results in the BDAR. Based on our examination of an aerial photograph of this IBRA Sub-region, there appears to be little extant native vegetation remaining and most of what remains appears highly degraded.	The Assessor has not been able to attain reliable vegetation mapping of the Armidale Plateau IBRA sub-region, hence the extrapolation methodology previously applied. The Assessor acknowledges that much of the extant area of the CEEC within the sub-region is likely to be highly degraded, however, this is not able to be quantified due to the data (reliable reference mapping) not being available.
	SAII (f) The assessor is required to determine, as accurately as possible, the extent of the CEEC in the NSW reserve system in the IBRA bioregion and subregion. While we acknowledge that there is a paucity of data to easily determine this, we suggest examining plans of management for the reserves located within these areas to determine if the	Where such information was available for the reserve system, details have been added to the BDAR.

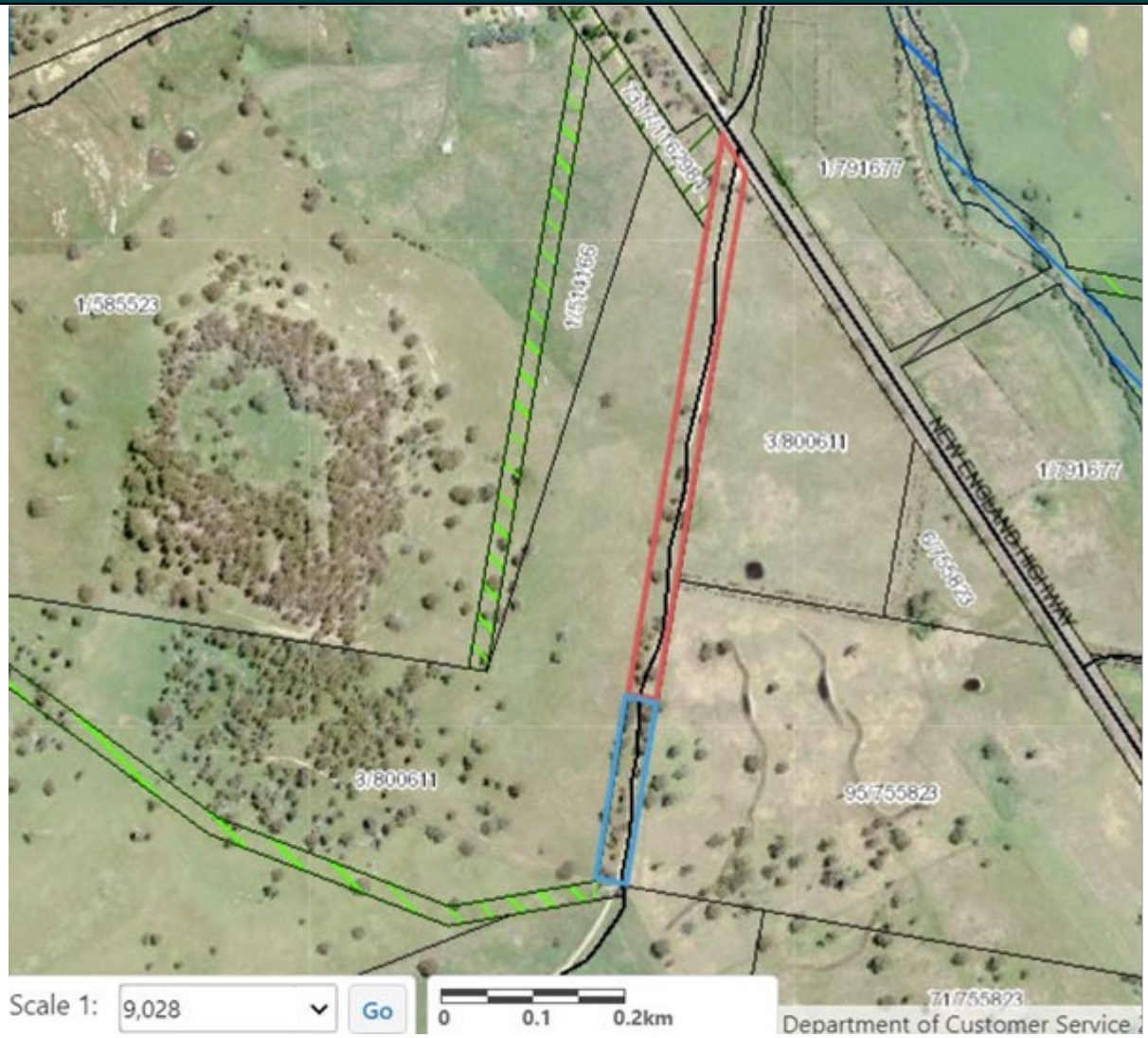
Issue	Detail of issue	Proponent response
	CEEC occurs within those reserves.	
	SAII (g) We disagree that with the assessor's view that no characteristic or functionally important species would be lost as result of the development. The removal of large mature trees, nectar and other feeding resources, foraging and roosting habitat, along with the identified number of hollows to be lost, for example, is likely to be of significance, as well as the loss of contiguity and connectivity and a reduction in patch size. The development site is known habitat for the koala, southern myotis and greater glider, all of which are threatened and facing decline, in part from the ongoing piecemeal clearing of grassy white box woodlands	BCD comments are acknowledged and the BDAR has been updated accordingly. The BDAR now reflects the reduced impact on SAII, as a result of further layout refinement in consultation with BCD.
	SAII (h) We are of the view that any patch of this CEEC in good condition is of importance, particularly given the significant reduction in extent and condition of this community across its range. Whilst we recognise that the vegetation across the development site is relatively fragmented and somewhat degraded, consideration should be given to making efforts to avoid higher condition patches of vegetation and enhancing connectivity, habitat and vegetation	As above, since initial submission, the development footprint has been revised to avoid a further 14 ha of the highest condition CEEC, Zones 1 and 5, in consultation with BCD.

Issue	Detail of issue	Proponent response
	condition in all retained areas of the CEEC across the development site.	
	SAII (i) While we recognise that offsets are proposed to compensate for the loss of this vegetation, this is not a satisfactory response to this part. The assessor should examine the targeted strategies for managing this community, developed as part of the Saving our Species program and that can be accessed via the threatened species profile for this community on our website at www.environment.nsw.gov.au. Consideration should then be given to adopting some of these strategies to assist in the recovery (rehabilitation) of the community within the development site.	In addition to increased avoidance of Zones 1 and 5, further mitigation measures have been added with respect to the Biodiversity Management Plan, which is detailed in Section 8.2 of the BDAR. Additionally, an offset strategy has been prepared to show the feasibility of securing similar CEEC for in perpetuity management on adjacent lots. The BDAR and Offset strategy are provided with the Amendment Report.
Mitigation and Managing Impacts	BMP to include: • A requirement to the proponent to actively manage CEEC White Box Yellow Box Blakely's Red Gum Woodland to improve the condition and connectivity of this native vegetation and assist in minimising biodiversity losses. This may be achieved by increasing the quality of this vegetation and other native vegetation present, including the extent and quality of habitat available to TS impacted by proposal. Rehabilitation should also consider including	These details have been added in Section 8.2 of the BDAR.

Issue	Detail of issue	Proponent response
	,measures to exclude stock grazing and enhance connectivity with adjoining native vegetation • Consideration to protecting the above rehabilitated areas through an appropriate mechanism, such as a Conservation Agreement under the BC Act	
Offset Requirements	An offset requirement must be determined where indirect impacts cannot be avoided or adequately minimised, as described at Section 2.4.1 of the BAM Operational Manual- Stage 2, noting that Box 2 (page 18) of the manual provides an example	As stated in Section 7.2 of the BDAR, given that areas of native vegetation proposed to be retained will be actively managed (via a Biodiversity Management Plan) to improve its condition and ecological function, this is deemed to nullify any potential requirement to offset indirect impacts.
MNES	Parts of the BDAR relevant to EPBC Act MNES must be amended as required, once the recommendations above have been addressed	The Assessor confirms that the BAM has been applied to all EPBC Act listed threatened species and communities that occur on the project site or in the vicinity.
	• Further justification is required in the BDAR for excluding the following EPBC Act listed threatened plant species credit species Small Snake Orchid (Diurus pedunculata) • Tall Velvet Sea-berry (Haloragis exalta subsp. velutina) • Aromatic peppercress (Lepidium hyssopifolium) • Hawkweed (Picris evae) • Austral Toadflax (Thesium australe)	Further justification has been added to Table 4-1 of the BDAR. These species are addressed in the comment above.
	As stated on page 63 of the BDAR,	Assessments of Significance have been undertaken for these species at Appendix G.5 of the BDAR. In

Issue	Detail of issue	Proponent response
	'five listed migratory species were returned from the protected matters report. None of these species are considered likely to occur at the site on a regular basis or rely on the habitats present'. However, our review of the EPBC Act Protected Matters Report indicates 12 species are predicted to occur. Out of these 12, we are of the view that the following species may occur within the development site, on occasion, based on their known distribution and habitat preferences • Fork-tailed Swift • White-throated Needletail • Black-faced Monarch • Satin Flycatcher • Rufous Fantail.	summary, for the assessment found: • The proposal would result in the loss of 169.2 ha of potential foraging and roosting habitat for these species. However, an abundance of available intact habitat exists to the west of the development site. Contextually, this is a small component of available habitat and unlikely to modify, destroy or isolate an area of important habitat for these species. • The proposal would be unlikely to generate an increase in invasive species harmful to the species. • The proposal would be unlikely to seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of these species.
	The following further information is required from the proponent for the assessment of MNES: • The BAM has not been applied to the Greater Glider (Petauroides volans), so the BDAR does not include an assessment of the greater gilder, which was recorded on the development site. The BDAR must be amended to apply the BAM to the greater gilder. • The Koala species polygon must be revised in the BDAR so	As set out above, the BDAR demonstrates the BAM has been fully applied to Greater Glider The Koala species polygon has been revised in accordance with the advice from the BAM Support Team Further justification has been given for the exclusion of the species listed in Table 4-1 of the BDAR.

Issue	Detail of issue	Proponent response
	that it is mapped in accordance with the advice from the BAM Support Team. • Further justification is required in the BDAR for excluding the following EPBC Act listed threatened plant species credit species as candidate species under the BAM: o Small Snake Orchid (Diurus pedunculata) o Tall Velvet Sea-berry (Haloragis exalta subsp. velutina) o Aromatic peppercress (Lepidium hyssopifolium) o Hawkweed (Picris evae) o Austral Toadflax (Thesium australe)	
Heritage NSW – Heritage council of NSW		
No Comment	The Heritage council provided no comments on the EIS.	**No changes to the proposal or mitigation measures are proposed in response to this concern.**
Crown Lands		
Crown Roads Access	Crown Lands request an assessment of the potential impacts of the proposal on the use of Crown roads for access and provision of an overlay of infrastructure identifying its impact on Crown roads so that advice can be offered on the possible road	A review of parish maps and public gazettes has identified that the majority of the access road from the New England Highway to the development site is under council management, and a small section to the south is remains managed by the Crown. This is shown in Figure 5-1 below.

Issue	Detail of issue	Proponent response
	closing applications and licensing. The Proponent will also need to clarify the status (Crown or Council) of the access track to the Proposal site from New England Highway	 Figure 5-1 Management of road reserves. Red area under council management, blue area under Crown

Issue	Detail of issue	Proponent response
		management. Further consultation with Crown Lands has confirmed that the only infrastructure proposed to be located on Crown road reserves would be access roads and service connections. Once development approval has been granted to the proposal, the Proponent would licence the use of Crown Land until road closure applications have been determined. Once road closures have been determined Crown Lands then has no further need to be involved in the Proposal on these areas. **No changes to the proposal or mitigation measures are proposed in response to this concern.**
Land use impact	Crown Lands request an assessment of the potential impacts of the proposal on Crown land bisecting the proposal shown as 'unidentified Crown land (reserved for aqueduct)' so that Crown Lands may provide further advice on the use of this land. The EIS did not identify potential impacts on this land adequately and requires further information.	A small section of the 'unidentified Crown land (reserved for aqueduct)' falls within the development footprint. The development would cause minor direct impacts to this parcel of land. Two access roads, about 9 meters wide and 47 meters long would cross the unidentified Crown land. In the same location, underground cabling and service connections may also be required. **No changes to the proposal or mitigation measures are proposed in response to this concern.**
Native Title	Crown Lands has requested an assessment on land status and Native Title status of the 'unidentified' Crown land and expects further consultation with the Proponent on this parcel.	Correspondence with Crown Lands has revealed the 'unidentified land' falls within Crown Plan 3261-1660, and is now considered to be parish reserve land (Reserve 755819 for purpose of Future Public Requirements) Gazette 29 June 2007. Further communication with Crown lands has revealed there is no evidence to hand of a Pervious Exclusive Possession Act (PEPA) to extinguish Native Title over this Crown land, and while no Native Title claim applies within this area, Native Title is considered by Crown Lands to exist on this land. Once development approval has been granted the use of the unidentified Crown land would be licenced from Crown Lands and a Non-Claimant application would be lodged under the *Native Title Act 1993* to establish an easement or enable purchase of the land. **No changes to the proposal or mitigation measures are proposed in response to this concern.**
Natural Resources Access Regulator (NRAR)		

Issue	Detail of issue	Proponent response
Revised layout	NRAR indicated that the revised layout that reduces the extent of solar panels rases no concerns for them.	**No changes to the proposal or mitigation measures are proposed in response to this concern.**
Watercourse buffers	NRAR provided general advice on buffer requirements to watercourses for any future layout revisions to the Tilbuster Solar Farm. Specifically, they advised that: • Vegetated buffer widths based on stream order are set out in the *Guidelines for Controlled Activities on Waterfront Land*. • Standard buffer widths include 10m for a first order, 20m for a second order, 30m for a third order and 40m for all higher order watercourses and should be applied from the high bank on either side of the watercourse. • There is the potential to construct non-riparian works in the outer 50% of the buffer, provided this is offset based on the averaging rule as defined in the guideline. • Further consideration can be given to reduce buffer widths (for relevant watercourses) or to determine if buffers are not required (only for first or second order streams) based on a merit assessment of the characteristics and values of	The indicative layout presented in the EIS applied the results of the *Guidelines for Controlled Activities on Waterfront Land* to set buffers to be avoided by panel infrastructure and to guide rehabilitation requirements, where crossings were required. The EIS included hydrological assessment to demonstrate no negative flooding or water flow impacts. Subsequently however, further consideration was given to some of the mapped first and second order streams within the Development Site which lacked the characteristics of "streams" as described in the *Guidelines for Controlled Activities on Waterfront Land.* Namely, they lacked a stream bed, stream banks or other watercourse characteristics. Moving panels into these areas, where hydrologic function and soil erosion would not be impacted due to the lack of channel structures, allowed more areas of ecological value to be avoided; this process was completed in consultation with the Biodiversity Conservation Division, with the aim of reducing the ecological impacts of the proposal. The updated Hydrological assessment was completed to inform decisions regarding placing ground mounted solar panels on certain mapped low order "streams". This report is appended to the Amendment Report and summarised within it. It includes an onsite ground-truthing exercise as part of its methodology. **No changes to the proposal or mitigation measures are proposed in response to this concern.**

Issue	Detail of issue	Proponent response
	the watercourse.	
DPI Agriculture		
Soil and Land Assessment	The EIS notes the commitment to a baseline soil survey prior to consultation to inform the CEMP and sub plans, rehabilitation and operational aspects of soils and groundcover management. It is important that the pre-development land and soil capabilities that can be measured can at least be attained at the current level or better with the closure and rehabilitation of the solar farm. The benefits of 'resting land' are discussed in the EIS. To achieve these claims groundcover types, quantities and management, soil chemical and moisture testing, including organic matter are all parameters that can be measured to substantiate the major outcomes of the solar farm's land resting phase. These should be reported on annually to every three years (depending on the parameters). (page 254-5).	The EIS commits to soil survey prior to construction and are covered in sections 7.3 and 7.4 of the EIS. Relevant mitigation measures include: 1. Undertake a base line soil survey prior to construction to inform the CEMP and sub-plans, rehabilitation and operational aspects of soil and groundcover management. As part of the CEMP, and in accordance with safeguard B2 in the EIS, a Soil and Water Management Plan (SWMP) (with erosion and sediment control plans) would be prepared, implemented and monitored during the proposal, in accordance with Landcom (2004), to minimise soil (and water) impacts. These plans would include provisions to: • Install, monitor, and maintain erosion controls. • Ensure that machinery leaves the site in a clean condition to avoid tracking of sediment onto public roads which may cause risks to other road users through reduced road stability. • Manage topsoil 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. • Minimise the area of disturbance from excavation and compaction; rationalise vehicle movements and restrict the location of activities that compact and erode the soils as much as practical. Any compaction caused during construction would be treated such that revegetation would not be impaired. • Manage works in consideration of heavy rainfall events; if a heavy rainfall event is predicted, the site should be stabilised, and work ceased until the wet period had passed. • Areas of soil disturbed by the Proposal would be rehabilitated progressively or immediately post-construction, reducing views of bare soil. An ongoing soil monitoring program throughout the operation phase of the proposal that incorporates yearly soil surveys is considered unwarranted and unfeasible. However, baseline soil monitoring will be completed in accordance with safeguard LS1 of the EIS, and a Groundcover Management Plan will be prepared in accordance with safeguard SL3 of the EIS. These measures will prevent soil loss and maintain groundcover. In addition, and in accordance with safeguard LS8 in the EIS, a Rehabilitation Plan would be prepared to ensure the array site is returned to at least or better than pre-solar farmland and soil capability. The plan would be developed with reference to the base line soil testing and with

Issue	Detail of issue	Proponent response
		input from an agronomist to ensure the site is left stabilised, under a cover crop or other suitable ground cover. The soil survey would be based on: • *Australian Soil and Land Survey Handbook* (CSIRO, 2009) • *Guidelines for Surveying Soil and Land Resources* (CSIRO, 2008) • *The land and soil capability assessment scheme: second approximation* (OEH, 2012) **No changes to the proposal or mitigation measures are proposed in response to this concern.**
Groundcover and Weed Management	The Groundcover Management Plan development in consultation with an agronomist to ensure perennial pasture is maintained across the site, is noted. Weed control will form part of this planning. A pest and weed management plan will also be developed with Armidale Regional Council and NSW DPI. This should also involve the New England Weeds Authority who deal with noxious and other priority weed species in the area. This should be considered in relation to the Groundcover Management Plan where a weed management procedure can be developed to prevent and minimise the spread of weeds that are noxious, priority, environmental etc.	Safeguard LS9 of the EIS commits to the preparation of a Pest and Weed Management Plan in accordance with Armidale Regional Council and NSW DPI requirements. The New England Weeds Authority will be included in the development of the Groundcover Management Plan and the Weed management procedure. **This recommendation now forms a commitment of the Proposal. Safeguard LS9 will be updates as follows (additional text underlined).** **LS9** A pest and weed management plan would be prepared to manage the occurrence of priority weeds and pest species across the site during construction and operation. The plans must be prepared in accordance with Armidale Regional Council and NSW DPI requirements. <u>The New England Weeds Authority will be consulting during the development of the plan.</u>
Consultation	Consultation will take place with adjacent landholders regarding groundcover activities and access. This should be extended to the overall construction and future operating environment of the solar farm.	The proposal would not change access to adjacent landholders who are not involved in the Proposal during the operation of the proposal. During construction, and in accordance with safeguard TTS2, a Traffic Management Plan would be prepared to manage traffic impacts. Therefore, ongoing consultation with adjacent landholders regarding access is not considered warranted. A Groundcover Management Plan would be developed in accordance with safeguard B3 of the EIS. The management plan will be developed in consultation with an agronomist, to achieve the objectives of this plan as set out in the EIS. Ongoing consultation with adjacent landholders regarding

Issue	Detail of issue	Proponent response
		groundcover activities is not considered warranted. However, it is expected the advice from the consultant agronomist will result the development and implementation of a plan appropriate for the site. **No changes to the proposal or mitigation measures are proposed in response to this concern.**
Decommissioning	With decommissioning, all underground infrastructure should be removed to 500mm below the surface, not just cabling. (Page 247). A closure strategy should also be included especially if a return to agriculture use is anticipated. This is where the baseline soil assessment and soil health monitoring program will assist in returning land to a similar or improved land capability.	Section 4.7 of the EIS outlines that the decommissioning of the proposal would include the removal of infrastructure and rehabilitation of the land to its pre-works state. As a commitment of the Proposal, all solar plant infrastructure would be removed during decommissioning to a depth of approximately 500mm. Infrastructure deeper than 500mm below the ground may be left in place to minimise surface disturbance during decommissioning activities. This provides certainty that infrastructure would be removed appropriately. **No changes to the proposal or mitigation measures are proposed in response to this concern.**
Regional NSW – Mining, Exploration & Geoscience (MEG)		
Mining Leases	The Proponent states that no current Mining Act titles intersected the project area. Since November 7, 2019, a new Exploration Licence Application (ELA6077) was submitted by Kooky Resources Pty Ltd. MEG requests the Proponent to contact Kooky Resources Pty Ltd to determine their level of interest. As stated in the SEARs (DOC18/733180), the titles search referenced in the Preliminary Environmental Assessment (PEA) should be updated for the EIS. This is to	Several attempts have been made to contact Kooky Resources Pty Ltd in relation to a mining exploration tenement they hold over the western portion of the Development Site, as recommended by Mining, Exploration and Geoscience. Kooky Resources Pty Ltd has not provided any additional feedback in relation to this proposal. **No changes to the proposal or mitigation measures are proposed in response to this concern.**

<table>
<tr><th>Issue</th><th>Detail of issue</th><th>Proponent response</th></tr>
<tr><td></td><td>ensure that other title holders with interests in the subject area are made aware of the solar farm Proposal.</td><td></td></tr>
<tr><td>Biodiversity Offset</td><td>The Proponent states retirement of ecosystem and species credits are required to offset the residual impacts of the Proposal. We request to be consulted in relation to the proposed location of any biodiversity offset areas (both on and off site) or any supplementary biodiversity measures to ensure there is no consequent reduction in access to prospective land for mineral exploration, or potential for sterilisation of mineral or extractive resources.</td><td>Under the BC Act the Proponent will have options to either pay out credits, purchase credits or set up a stewardship site to meet the offset obligation. Mineral lease searches are part of the latter process. Offset investigations have commenced in terms of finding suitable ‘like for like’ vegetation and habitat but have not progressed to the searches of licenses.

Delineating the offset areas pre approval is not a requirement. Further investigation and appropriate consultation would be undertaken as part of addressing the Proposal’s offset requirements, pending approval.

No changes to the proposal or mitigation measures are proposed in response to this concern.</td></tr>
<tr><td colspan="3">Transport for NSW (TfNSW)</td></tr>
<tr><td>Traffic Data and & Traffic generation</td><td>TfNSW notes the following inaccuracies and / or contradictory information provided in the Environmental Impact Statement (EIS) and Traffic Impact Assessment (TIA).

• Throughout the EIS, in particular in Sections 4.6.4 and 8.6.2 and Tables 4-5 and 8-33 and in the TIA, there are contradictory statements with regards to the estimated and calculated numbers of traffic generated by the development</td><td>The Traffic Impact Assessment (TIA) report has been updated in response to the feedback provided by TfNSW. Accordingly, vehicle movements per day estimates have been updated.

It is understood that 25-seater shuttle buses will be provided that can accommodate approximately 80% of staff, with the remaining staff to access the site using private vehicles. For the purposes of this assessment a vehicle occupancy of 1.35 people per car has been adopted to calculate the staff traffic generation, with staff expected to be encouraged to carpool to the site. Overall, it is anticipated that during peak construction the site could generate up to 35 heavy and 66 light vehicle movements per day (a total of 101 vehicle movements per day). Table 5-3 summarises the traffic movements generated during the construction period of the solar farm.

Table 5-3 Traffic generation during peak construction periods

<table><tr><th>Vehicle Type</th><th>Average Vehicle Movements perDay</th><th>Peak Vehicle Movements per Day</th></tr></table></td></tr>
</table>

<table>
<tr><th>Issue</th><th>Detail of issue</th><th>Proponent response</th></tr>
<tr><td></td><td>including number of vehicles required and the associated vehicle movements. This is particularly evident for the peak construction period with regards to the movements to and from site for the 125 employees. These contradictions include, but may not be limited to:

○ The number of shuttle buses and light vehicles required to transport the staff, including the occupancy rates for both vehicle types, the accuracy of the calculations and the total number of daily vehicle movements the site will generate (102 or 140).

○ There is confusion over the total numbers provided per vehicle type and if they represent the number of vehicles (one way) or the total two-way movements of the vehicles arriving and departing from site.</td><td>
<table>
<tr><th></th><th>Daily (vpd)</th><th>Peak Hour (vph)</th><th>Daily (vpd)</th><th>Peak Hour (vph)</th></tr>
<tr><td>Light Vehicle (car / 4WD)</td><td>30</td><td>15</td><td>58</td><td>29</td></tr>
<tr><td>Shuttle Bus</td><td>2</td><td>1</td><td>8</td><td>4</td></tr>
<tr><td>MRV/HRV</td><td>2</td><td>0</td><td>16</td><td>2</td></tr>
<tr><td>AV/B-Double</td><td>12</td><td>2</td><td>19</td><td>3</td></tr>
<tr><td>Total</td><td>46</td><td>18</td><td>101</td><td>38</td></tr>
</table>
Vehicle Movements per day (vpd) is a measure of total movements along the road per day.

No changes to the proposal or mitigation measures are proposed in response to this concern.</td></tr>
<tr><td>Traffic Data and & Traffic generation</td><td>• TfNSW notes that the background traffic data Annual Average Daily Traffic (AADT) volume provided is not robust enough to complete an</td><td>The 2013 date cited in the TIA (included in the EIS as Appendix I), has been identified as an error. 2011 is the correct year of the sourced traffic volume data and is referenced in the updated TIA appended to the Amendment Report.

Accordingly, the growth rate has been updated and recalculated traffic volumes are presented in the</td></tr>
</table>

<table>
<tr><th>Issue</th><th>Detail of issue</th><th>Proponent response</th></tr>
<tr><td></td><td>assessment on for the development. The background AADT sourced via the RMS Traffic Volume Viewer website for Station ID: 92065, appears to be 2011 data and not 2013 as stated throughout the report. Once the proposed growth rate has been applied in the report, the current year's estimate appears to be incorrect.

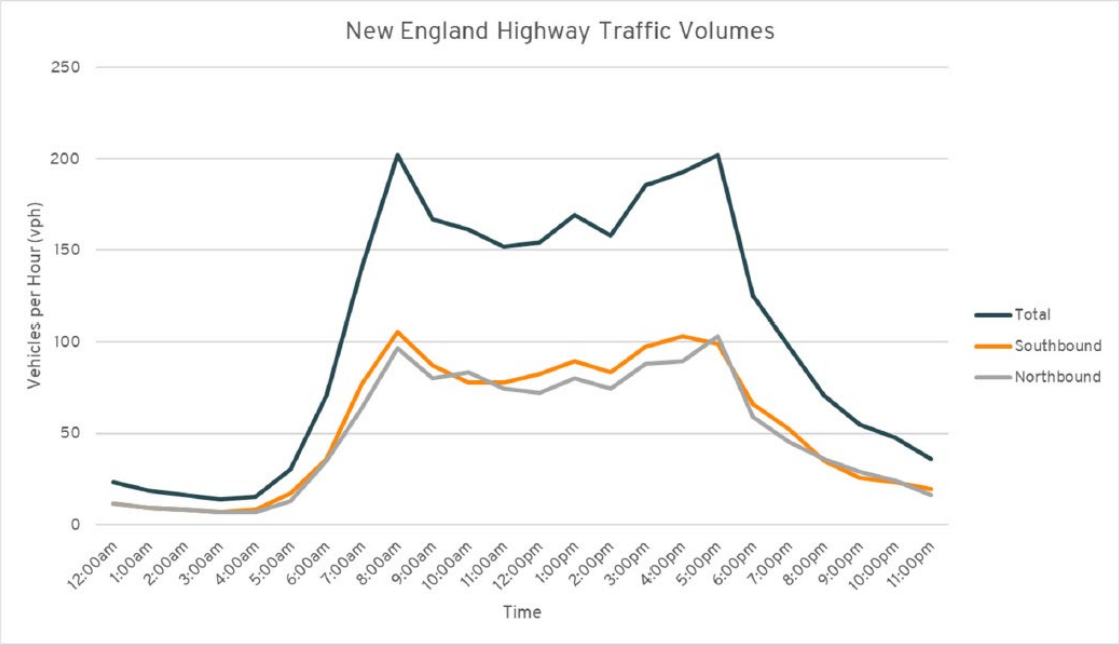
Furthermore, the AM and PM peak data for Station ID: 92065 was also available along with the AADT, but has not been used in the EIS or TIA. These values are higher than those presented in the estimated the Peak Hour volumes. Further assessment is required to be undertaken on the higher values with both the proposed generated and background traffic has been to ensure all safety issues and risks associated with the development have been addressed.</td><td>table below.

Table 5-4 New England Highway traffic volume data

<table>
<tr><th>Road</th><th>Survey Location</th><th>Survey Year</th><th>Recorded Volume</th><th>Peak Hour</th><th>Growth Factor</th><th>Current Traffic Volume</th></tr>
<tr><td>New England Highway</td><td>50m south of Blanches Road</td><td>2011</td><td>2,143 vpd
83% light
17% heavy</td><td>AM - 174 vph
PM - 174 vph</td><td>1.5%</td><td>2,487 vpd
202 vph (AM)
202 vph (PM)</td></tr>
</table>

AM and PM peak data has also been incorporated into the updates assessment. The total number of vehicles during the AM peak between 6am and 10am is 552 which equates to 138vph during the peak. The total number of vehicles during the PM peak between 3pm and 7pm is 648 which equates to 162vph. Thus, the estimates of 174vph used for AM and PM peak vehicle volumes are sufficient to estimate future volumes using the 1.5% Growth factor in the TIA.

The 2021 traffic volumes have also been calculated for each hour and separated in to north and southbound movements. The traffic volumes are shown below in Figure 5-2.</td></tr>
</table>

Issue	Detail of issue	Proponent response
		 Figure 5-2 New England Highway traffic volume data calculated to 2021 The updated TIA has not recommended any changes to safeguards and mitigation measures be implemented in light of the updated traffic volume calculations. **No changes to the proposal or mitigation measures are proposed in response to this concern.**
Traffic Data and & Traffic generation	TfNSW recommend that the Consent Authority request further assessment be undertaken which reflects the updated background traffic data, including AADT and peak hour traffic, specifically addressing the period in which the construction is proposed to be undertaken. This assessment should also clearly identify the	The Traffic Impact assessment report has been updated in response to the feedback provided by TfNSW. Updated assessment has been undertaken that addresses updated background traffic data including AADT and peak hour traffic. Refer to responses above and the Amendment Report. **No changes to the proposal or mitigation measures are proposed in response to this concern.**

Issue	Detail of issue	Proponent response
	correct values, calculations and volume of traffic generated by the development.	
Site Access and Intersection Upgrades	TfNSW understands that the development proposes to realign the existing site access off of the New England Highway, at approximately 90 degrees to the road alignment. It is also understood that an Austroads turn warrant assessment was undertaken for this site access road intersection, determining that a Basic Right Turn (BAR) and an Auxiliary Left Turn (AUL) were required to upgrade the intersection for the use of the development. • It is noted that the development proposes to build a lower order turn treatment, a Basic Left Turn (BAL) instead of the Austroads required AUL treatment. TfNSW have previously advised that a lower order treatment would be considered for the Proposal, if it could be supported with sufficient justification and mitigation measures to manage the traffic generated by the development. The EIS and TIA propose to create a Construction Traffic Management Plan (CTMP) in which such mitigation	The updated intersection design is included in Appendix B of the TIA appended to the Amendment Report The updated design takes into account updated traffic data as suggested by TfNSW. The turning treatment at the intersection has been reassessed as follows. *Austroads Guide to Traffic Management Part 6: Intersections, Interchanges, and Crossings* specifies the turning treatments required at intersections. Based on the road traffic volumes (102 vph), the number of left turns from the south (31 vph) and number of right turns from the north (7 vph) the intersection would require a Basic Left Turn (BAL) and a Basic Right Turn (BAR) treatment. No turn facilities are currently provided at the intersection and as such, it is proposed to provide both the basic left and right turn treatments in accordance with the Austroads Guideline. The traffic assessment can be seen in full, appended to the Amendment Report. **An updated intersection design has been prepared and is presented in the Amendment Report.**

Issue	Detail of issue	Proponent response
	measures would be addressed, but do not present clear defined measures that can be assessed at this time to support the lower order treatment. • TfNSW also notes that the turn warrant assessment was undertaken based on the identified inaccurate background AADT, lower volume (estimated) peak hour traffic and the lower volume of traffic generated by the development.	
Site Access and Intersection Upgrades	TfNSW recommend that the Consent Authority request that the applicant undertake further Austroads turn warrant assessment/s with the updated background traffic and development generated traffic volumes. Furthermore, TfNSW request a CTMP be included in the EIS prior to determination, to address all proposed mitigation measures to support the applicant's proposal. • The internal access road, site access intersection, manoeuvring areas and parking areas should be suitable for the relevant design vehicles. It should be noted that the Swept Paths provided for the site	**Construction Management plan** The updated TIA outlines what details and additional mitigation measures will be included in the CTMP prior to determination by the consent authority. The CTMP will provide additional information regarding the traffic volumes and of construction vehicles that is not available at this time including: Road transport volumes, distribution and vehicle types broken down into: • Hours and days of construction • Schedule for phasing/staging of the project • The origin, destination and routes for: • Employee and contractor light traffic • Heavy vehicle traffic • Oversize and overmass traffic Additional factors to consider in the CTMP have been recommended by the TIA, and have been incorporated into an amended safeguard T2, shown below. Internal access roads will be designed to be suitable for construction and operation vehicles. The design of the intersection from the access road and the New England Highway has been updated. Accordingly, new swept path analysis has been undertaken. This is shown in Appendix B of the TIA appended to the Amendment Report. An excerpt is shown in Figure 5-3 below. The new design allows

Issue	Detail of issue	Proponent response
	access intersection are for a 19m Single Articulated Vehicle (AV), however, a 19m B-Double is often referred to throughout the EIS and TIA as an alternate design vehicle. • The Single AV swept path appears to demonstrate very little room for readjustment or clearance between vehicles when a Single AV is turning into the site access and another is in a stationary position preparing to exit. The swept path of a B-double will be different to the Single AV and is required in addition to the Single AV to clearly demonstrate that the vehicle can successfully complete the required movements without crossing the centre-line of both the New England Highway and the site access road, therefore ensuring the proposed upgrades will accommodate both of the key proposed design vehicle/s. TfNSW recommend that the Consent Authority request further Swept Path assessments be undertaken for the B-Double vehicle (and any other OSOM vehicle, if applicable). The site access design should be amended, if warranted by the additional swept path/s and the internal realigned	greater clearance for both AV and B-Double vehicle movements.  Figure 5-3 Amended intersection access showing b-double engagement

Issue	Detail of issue	Proponent response
	road be widened to comfortably accommodate the clear movement of two way traffic for the largest design vehicles. It should be noted that the proposed intersection upgrade is state works and is subject to the terms of a Works Authorisation Deed (WAD). Please note that TfNSW will assume the role of the Roads Authority in granting any consents required by Section 138 and Section 61 of the Roads Act 1993.	
Heavy vehicle haulage routes	TfNSW seek further clarification in regards to the vehicles proposed for the transportation of the components, construction and infrastructure materials and / or machinery. • TfNSW notes, that the Transformer(s) and 200 Tonne Crane(s) will require Over-Size Over-Mass (OSOM) specialist vehicles to be transported to site, however the vehicle types, dimensions, weights and configurations of the loads have not been provided or clarified. Furthermore, it is unclear if the OSOM items will also be transported along the same proposed haulage route as the bulk of the materials from Port Botany. This information should	As requested, the types, dimensions, weights and configurations of OSOM vehicles will be confirmed during the tendering process and construction, post approval. These will be detailed in the CTMP. OSOM vehicles will use a haulage route that is suitable for their size and weight, as permitted by the relevant permits and licences. **This recommendation now forms a commitment of the Proposal. An amended version of safeguard T2 (changes in underlined text) is identified in the EIS is presented below and forms a commitment of the Proposal.** **T2** A Traffic Management Plan would be developed and implemented during construction and decommissioning. The plan will be prepared in consultation with the relevant road authority and the appointed transport contractor. The plan would include, but not be limited to: • The designated routes and vehicular access of construction traffic (both light and heavy) to the site. This will include the management and coordination of movement of vehicles for construction and worker related access to limit disruptions to other motorists, emergency vehicles, school buses and other public transport. • Procedure for informing the public where any road access will be restricted as a result of the Proposal. • The designated routes of construction traffic to the site. Carpooling/shuttle bus arrangements to minimise vehicle numbers during construction. • ID Safeguards and mitigation measures

Issue	Detail of issue	Proponent response

	be included in the CTMP, addressing any pinch points (including a Route Assessment and bridge assessment, if applicable), providing explanation on how risks and movements will be mitigated.
	
	TfNSW recommend that the Consent Authority request the OSOM loads be addressed further in the CTMP and that further assessment be undertaken to provide additional information in regards to the proposed haulage of components, construction materials and / or machinery from the two identified regions. This should include but not be limited to, the vehicle specifications, load dimensions & weights (for OSOM), the expected haulage routes, including assessment of any key intersections or bridges where applicable, and the trips generated by the identified haulage activities. This additional information should be included in the EIS, TIA and CTMP for further review prior to determination.
		• Scheduling of deliveries.
		• Community consultation regarding traffic impacts for nearby residents.
		• Consideration of cumulative impacts.
		• Traffic controls (speed limits, signage, etc.), and any proposed precautionary measures to warn road users such as motorists about the construction activities for the Proposal, especially at the access site along New England Highway.
		• Procedure to monitor traffic impacts and adapt controls (where required) to reduce the impacts.
		• Details of measures to be employed to ensure safety of road users and minimise potential conflict.
		• A driver Code of Conduct to address such items as appropriate driver behaviour including adherence to all traffic regulations and speed limits, driver fatigue, safe overtaking and maintaining appropriate distances between vehicles, etc. and appropriate penalties for infringements of the Code.
		• Details of procedures for receiving and addressing complaints from the community concerning traffic issues associated with truck movements to and from the site.
		• Providing a contact phone number to enable any issues or concerns to be rapidly identified and addressed through appropriate procedures.
		• Water to be used on unsealed roads to minimise dust generation through increased traffic use.
		• Following construction, a post condition survey of the relevant sections of the existing road network to be undertaken to ensure it is of similar condition to that prior to construction.
		• Neighbours of the solar farm be consulted and notified regarding the timing of major deliveries which may require additional traffic control and disrupt access.
		• Loading and unloading is proposed to occur within the work area. No street or roads will be used for material storage at any time.
		• Delivery of larger plant to occur outside of school bus service times to prevent larger vehicles interacting with the school bus.
		• All vehicles will enter and exit the site in a forward direction.
		• Management of vehicular access to and from the site is essential in order to maintain the safety of the general public as well as the labour force. The following code is to be implemented as a measure to maintain safety within the site:
		  ○ Utilisation of only the designated transport routes.
		  ○ Construction vehicle movements are to abide by finalised schedules as agreed by the relevant authorities.

Issue	Detail of issue	Proponent response
		• Implementation of a proactive erosion and sediment control plan for on-site roads, hardstands and laydown areas. • All permits for working within the road reserve must be received from the relevant authority prior to works commencing. • A map of the primary haulage routes highlighting critical locations. • An induction process for vehicle operators and regular toolbox meetings. • A complaint resolution and disciplinary procedure. • Local climatic conditions that may impact road safety of employees throughout all project phases (e.g. fog, wet and significant dry, dusty weather). • Over-Size Over-Mass vehicles will service the project in accordance with their Over-Size Over-Mass permits/licences. Routes will be analysed to locate potential pinch points or bridges.
Heavy vehicle haulage routes	In addition to seeking further information about the OSOM items, TfNSW seek further information in regards to the proposed haulage route/s from the Port of Botany and the local regions. It is unclear which vehicle types will be used, or how many vehicles & associated movements will be required to transport the bulk of the imported and manufactured materials from Port Botany as opposed to those transporting materials locally. This information is required to understand the impacts of the development on the safety, efficiency and ongoing operation of the classified state road network.	Port Botany has been identified as the preferred port where the solar farm equipment will be imported. The proposed construction traffic access route from Port Botany to the site is proposed as follows; Friendship Road, Bumborah Point Road, Beauchamp Road, Denison Street, Wentworth Avenue, M1, Hunter Expressway, New England Highway, and the unnamed Road. The access route utilises roads that are designated for B-Double vehicles as outlined within the TfNSW Restricted Access Vehicle Map. Accordingly, the access route is able to accommodate the loads and type of vehicle movement to be generated during construction of the solar farm. Accordingly, all vehicles under the current traffic assessment will use the haulage route outlined suggested in the EIS, with the exception of OSOM vehicles which will be assessed later in the Proposal timeline as a part of the CTMP. **No changes to the proposal or mitigation measures are proposed in response to this concern.**
Line of sight from proposed intersection upgrade	The applicant update the 2D strategic drawing of the proposed access treatment identifying the available and required sight distances in both directions from	Updated line of sight diagrams have been presented in the updated TIA, appended to the Amendment Report. **No changes to the proposal or mitigation measures are proposed in response to this concern.**

Issue	Detail of issue	Proponent response
	the drivers perspective	
Heritage NSW – Aboriginal cultural heritage (ACH)		
Aboriginal Heritage	We have reviewed the ACHAR and concur with the findings and support the recommendations therein. We note that the current Development Footprint includes a number of Aboriginal scar trees which will be directly or indirectly harmed by the proposal. Heritage NSW considers all Aboriginal scar trees to be of high scientific and cultural value. We note the recommendations in Section 9 of the ACHAR to redesign the Proposal footprint so as to avoid harm to all Aboriginal scar trees and we support those recommendations. Heritage NSW strongly opposes any approval which would result in direct, or indirect, harm to any Aboriginal scar trees.	The recommendations of the ACHA were incorporated into the design layout of the solar farm, as shown in Appendix B of the EIS. The ACHA has been updated to reflect the changes and is attached an appendix to the Amendment Report. **No changes to the proposal or mitigation measures are proposed in response to this concern.**
Rural Fire Service (RFS)		
Conditions of Consent	A Fire Management Plan (FMP) shall be prepared in consultation with NSW RFS Northern Tablelands Fire Control Centre. The FMP shall include: • 24 hour emergency contact details including alternative telephone contact; • Site infrastructure plan;	In accordance with safeguard BF12 in the EIS, an emergency response plan (ERP) would be developed in consultation with the RFS and FRNSW. The ERP will address all items identified in Rural Fire Services' submission, with the exception of APZ maintenance. APZ will be maintained in accordance with safeguard BF4 identified in the EIS. **No changes to the proposal or mitigation measures are proposed in response to this concern.**

Issue	Detail of issue	Proponent response
	• 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).	
	The entire solar array development footprint, including associated buildings, to be managed as an Asset Protection Zone as outlined in Appendix 5 of 'Planning for Bush Fire Protection 2019' and the NSW Rural Fire Service's document 'Standards for Asset Protection Zones'.	Safeguard BF4 in the EIS requires an APZ of minimum 10 m would to be maintained between remnant or planted woody vegetation and solar farm infrastructure. The APZ around the perimeter of the site would incorporate a 4 m wide gravel access track. Strictly maintaining 5 cm on average throughout the October-March fire season (and 15 cm or less during other times of the year) is considered counterproductive to the objectives of the Ground Cover Management Plan which would seek to avoid and minimise impacts to future agriculture, dust Impacts, water quality impacts and biodiversity impacts. Vegetation would be maintained to be neat and controlled throughout the proposal lifecycle. **No changes to the proposal or mitigation measures are proposed in response to this concern.**
	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.	**This recommendation now forms a commitment of the Proposal. The following safeguard has been added to the Proposals environmental management commitments:** **BF15** A 20,000 litre water supply (tank) fitted with a 65mm storz fitting shall be suitably located along a property access road to the development within the APZ.

Issue	Detail of issue	Proponent response
	To allow for emergency service personnel to undertake property protection activities, the following separation distances are required to permit unobstructed vehicle access around the perimeter of the solar array development site(s) including associated infrastructure. • a 10 metre defendable space (APZ) for grassland hazard • a 20 metre defendable space (APZ) for woody vegetation hazard.	In accordance with safeguard BF9 identified in the EIS, the perimeter access track would comply with the requirements for Fire Trails in the PBP guidelines. **No changes to the proposal or mitigation measures are proposed in response to this concern.**
Fire and Rescue NSW (FRNSW)		
Hazardous material incidents	In the event of a fire or hazardous material incident, 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) requirements of Clause 43 of the Work Health and Safety Regulation 2011 (the Regulation), the following matters are recommended to be addressed: 1. That a comprehensive Emergency Response Plan (ERP) is developed for the site. 2. That the ERP specifically addresses foreseeable on-site	In accordance with safeguard BF12 in the EIS, an emergency response plan (ERP) would be developed in consultation with the RFS and FRNSW. The ERP will address all items identified in Fire and Rescue NSW's submission. In accordance with safeguard BF14 in the EIS, A Fire Safety Study (FSS) will be undertaken and developed in accordance with the requirements of Hazardous Industry Planning Advisory Paper No. 2 (HIPAP No.2) **No changes to the proposal or mitigation measures are proposed in response to this concern.**

Issue	Detail of issue	Proponent response
	and off-site fire events and other emergency incidents (such as fires involving solar panel arrays, battery energy storage systems, bushfires in the immediate vicinity) or potential hazmat incidents. 3. That the ERP details 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 (including electrical hazards). Such measures will include the level of personal protective clothing required to be worn, the minimum level of respiratory protection required, decontamination procedures to be instigated, 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	

Issue	Detail of issue	Proponent response
	above) 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). The LEMC is a committee established by 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 and non-government agencies can proactively develop comprehensive inter agency local emergency procedures for significant hazardous sites within their local government area. The contact details of members of the LEMC can be obtained from the relevant local council. 7. FRNSW further recommends that as a Condition of Consent a Fire Safety Study (FSS) be prepared for the 40 MWh Battery Energy Storage System (BESS) (page 28 of the EIS report) part of the site and submitted to FRNSW for review and determination. The FSS should be developed in consultation with and to the	

Issue	Detail of issue	Proponent response
	satisfaction of FRNSW.	
TransGrid		
No Comment	TransGrid provided no comments on the EIS.	**No changes to the proposal or mitigation measures are proposed in response to this concern.**
DPIE Water		
Water security	The location of the harvestable rights dams and a re-calculation of the maximum harvestable rights based on the size of the continuous land holding	Water use during construction is addressed in Section 8.3 of the EIS. The EIS states that the water required during the 12 month construction period is estimated to be approximately 7 ML and that water sources would be subject to determination by the construction contractor. The maximum Harvestable Right capacity for the 310 ha land holding for the proposal was calculated using the WaterNSW "Maximum harvestable rights dam capacity calculator". This was a recalculation from the method used in the EIS. The result of the calculator indicates that 24.8ML is the maximum harvestable right of the development site. This represents approximately 354% of the non-potable water usage required for the construction. 310 ha is the area of the development site and the area of land that will be leased by The Proponent. **No changes to the proposal or mitigation measures are proposed in response to this concern.**
	The Proponent's ability to obtain Water Access Licences to account for water taken from the Commissioners Waters Water Source and the Dura Water Source prior to the take of water occurring, and	The Proponent does not propose to obtain a Water Access Licence. Water will be sourced as part of construction procurement contracts and provided by a suitably licenced contractor. Discussion in the EIS relating to unregulated river supply intended to demonstrate there may be some available allocations, which would be accessed by a suitably licenced contractor engaged by The Proponent. **No changes to the proposal or mitigation measures are proposed in response to this concern.**
	Compliance with water sharing plan rules. The Proponent should demonstrate secure supply of water for the Proposal, including contingency measures for when unregulated river supply may be reduced or unavailable.	354% of the forecast water requirement would be available harvestable rights within the property. An in-principle commercial agreement between Armidale Regional Council and the Proponent has been reached to supply construction water, if required. Enerparc has entered into an in-principle commercial agreement to purchase water from Armidale Regional Council, if required. **No changes to the proposal or mitigation measures are proposed in response to this concern.**

Issue	Detail of issue	Proponent response
Essential Energy		
Essential Energy infrastructure	Essential Energy has an 11kV powerline that dissects the Development Site. These assets have protection under s53 of the *Electricity Supply Act 1995.*	Enerpac have consulted with Essential Energy and agreed that no above ground solar infrastructure will be constructed within 20 meters of the Essential Energy transmission line. The layout of the Proposal's infrastructure has been updated and is presented in the Amendment Report, however the Development Footprint includes this transmission line as disturbance is likely in this area during construction. **This recommendation now forms a commitment of the proposal. The following safeguard has been added to the environmental management framework:** **LU5** No above ground built infrastructure will be constructed within 10 m either side (20m corridor total) of the existing Essential Energy transmission line.

6. Conclusion

6.1. Submissions raised

This Submissions Report has been prepared by NGH on behalf of the Proponent, The Proponent Australia Pty Ltd. It has addressed community and public authority submissions:

- Nine public submissions were received: two in support, one raising comments and 6 objecting. General comments included:
    - Provision of clean renewable energy.
    - Contribution to Australia's climate change commitments.
    - Creation of training and job opportunities.
    - Negative visual impacts.
    - Potential for noise impacts.
    - Fire hazards.
    - Impacts to agricultural land.
    - Impacts to land values.
    - Costs to neighbouring properties and fencing arrangements.
    - Foreign ownership.
    - Community benefits.
    - Dissatisfaction with the community consultation process.
    - Crime and security.
    - Traffic and road safety.
    - Contamination risk.
    - Strategic issues: site selection and justification, future renewable energy development in the New England region.
    - Carbon offsets.
- 20 submissions from public authorities were received. Key issues, some of which required further assessment and mitigation, included:
    - Traffic impacts including road access and upgrades and cumulative impacts.
    - Biodiversity impacts.
    - Bushfire, fire and hazards.
    - Waste management.
    - Decommissioning and rehabilitation.
    - Agricultural compatibility.
    - Water use.

Further clarifications have been provided in this report to address these concerns. In general, the environmental management framework set out in the EIS addresses the concerns raised. Six mitigation measures have been added or modified however, to provide additional rigour. These address traffic and transport, pest and weed management, fire and safety risks, fencing, water crossings and land use impacts. The Amendment Report includes the full consolidated updated set of mitigation measures, replacing those provided in the EIS.

6.2. Justification for the proposal

The benefits of the Proposal remain unchanged. The proposed Proposal would result in numerous benefits including:

- Supporting Commonwealth and NSW climate change commitments.
- Enhancing electricity reliability and security by contributing 150 MW of clean energy to the national grid and supporting the energy transition from coal fired to renewables.
- Direct and indirect employment opportunities during all phases of the proposal, including around 150 construction jobs during the peak construction phase and around 5 equivalent full time jobs once the proposal is operational.
- Investment of about $174 million in capital expenditure in total.
- Development of a new land use thereby diversifying local land uses within the locality and offering host landholders an alternative income stream.

In consideration of the assessment of the impacts from the proposal contained in the EIS, and the updated assessments contained in this report, it is considered that the proposal offers a number of significant benefits and can be constructed with minimal impact to the existing environment. These are underpinned by the updated mitigation measures outlined in full in the Amendment Report.

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