Reach SOLAR ENERGY

SSD 18-9237

YARRABEE SOLAR PROJECT

Response to Submissions Report

Prepared for:
Reach Solar énergy

Prepared by:
SLR Consulting Australia Pty Ltd

Ref: 610.17428-R03-v1.0
October 2018

SLR

PREPARED BY

SLR Consulting Australia Pty Ltd
ABN 29 001 584 612
2 Lincoln Street
Lane Cove NSW 2066 Australia
(PO Box 176 Lane Cove NSW 1595 Australia)
T: +61 2 9427 8100 F: +61 2 9427 8200
E: sydney@slrconsulting.com www.slrconsulting.com

BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Reach Solar énergy (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
610.17428-R03-v0.3	17 October 2018	Megan Crowhurst	Steven Crick	Peter Georgiou

DOCUMENT REFERENCES

TABLES

FIGURES

PHOTOS

APPENDICES

1 Introduction

1.1 Report Purpose

This report has been prepared in response to the submissions received by the Department of Planning relating to the Yarrabee Solar Project State Significant Development Application (SSD 18-9237).

An Environmental Impact Statement (EIS) was prepared to support an application by Reach Solar énergy ("Reach Solar") seeking development consent under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the Yarrabee Solar Project. The structure and content of the EIS addressed the Secretary's Environmental Assessment Requirements (SEARs) provided by NSW Department of Planning and Environment (DPE) on 20 April 2018.

The EIS was on public exhibition via the DPE major projects website and Service NSW centres between 27 August and 24 September 2018. Hard copies of the EIS were also available at the following locations during the exhibition period:

Narrandera Shire Council
141 East Street
Narrandera NSW

Nature Conservation Council NSW
14/338 Pitt Street
Sydney NSW

DPE mailed all the adjoining residents directly to notify them of the EIS submission and exhibition period and placed advertisements in the local and regional papers announcing the exhibition period.

This Submissions Report has been prepared to;

1. Consider and respond to the issues raised in the agency and general public submissions in relation to the Project; and
2. Describe any resulting changes to the Project, including a revised set of proposed mitigation measures if applicable.

1.2 Project Summary

Table 1 provides a summary of key elements of the Project.

Table 1 Main Components of the Project

Aspect	Description
Proponent	Reach Solar énergy
Project Summary	Key features of the project include: • 900 Megawatt Alternating Current (MWac) Photovoltaic (PV) solar plant • Approximately 3 million solar panels mounted on single-axis tracking systems, to a maximum height above ground of 4 m. • Approximately 222 inverter stations and low voltage and medium voltage reticulation systems • Potential energy storage with a capacity of approximately 35MW / 70MWhr • A 330 kilovolt (kV) substation • A short grid connection from the new substation to the existing 330 kV Wagga to Darlington Point transmission line which runs along the northern perimeter of the Project site. • The Project is to be built in three stages, each nominally 300 MWac, with a construction period of approximately 18 months per stage.
Project Area	The Project will occupy 2,600 hectares (ha) within an overall 3,000 ha Project site, which lies entirely within the Yarrabee Park property (11,326 ha).
Subject Land	• Parts of 4, 6, 7, 9, 10, 12, 13, 15, 104, 105, 114, 115, 168, 169 & 170 of DP750889 • All & whole of Lots 8, 11, 14, 100, 101, 102, 103, 106, 107, 108, 109, 110, 111, 112 & 113 of DP750889
Project LGA	The Project lies within the Narrandera Shire Council LGA.
Proposed Site Access	Western access via Main Canal Road and Old Morundah Road (intended primarily for heavy vehicle access) Eastern access via Back Morundah Road from Reas Lane at Sturt Highway (intended primarily for light vehicles for the workforce)
Construction	Employment of 150 staff during typical construction periods (up to 450 staff during peak construction days). Standard construction working hours, being: • 7.00 am to 6.00 pm Monday to Friday • 8.00 am to 1.00 pm on Saturdays. Forecast vehicle movements (total to and from site): • Average: 56 = 30 light vehicles + 26 heavy vehicles • Peak: 146 = 52 light vehicles + 94 heavy vehicles
Operation	The project is expected to operate for between 30 to 50 years. 10-15 permanent full-time staff during operations. Normal work hours 7.00am to 6.00pm, Monday to Friday. Forecast vehicle movements (total to and from site): • Typical: 30 light vehicles • Peak: 50 light vehicles + 1-2 heavy vehicles
Capital Investment Value	$956,910,000

1.3 Project Background

Reach Solar is proposing the development of the 900 Megawatt Alternating Current (MWac) Yarrabee Solar Project (the "Project") to be located approximately 23 kilometre (km) southwest of Narrandera in Western NSW (refer to **Figure 1**). The project would connect to the 330 kilovolt (kV) Wagga to Darlington Point Transmission Line. The project site is located in an area that has been identified as a priority renewable energy zone in the recent Independent Review into the Future Security of the National Electricity Market commissioned by the Federal Government ("The Finkel Review"). The scale and location of the project means it can generate electricity at a price competitive with coal fired power generation on a long-run marginal cost basis, provide certain ancillary services that assist the grid, and provide a material contribution to meeting Australia's commitments to the Paris Accord.

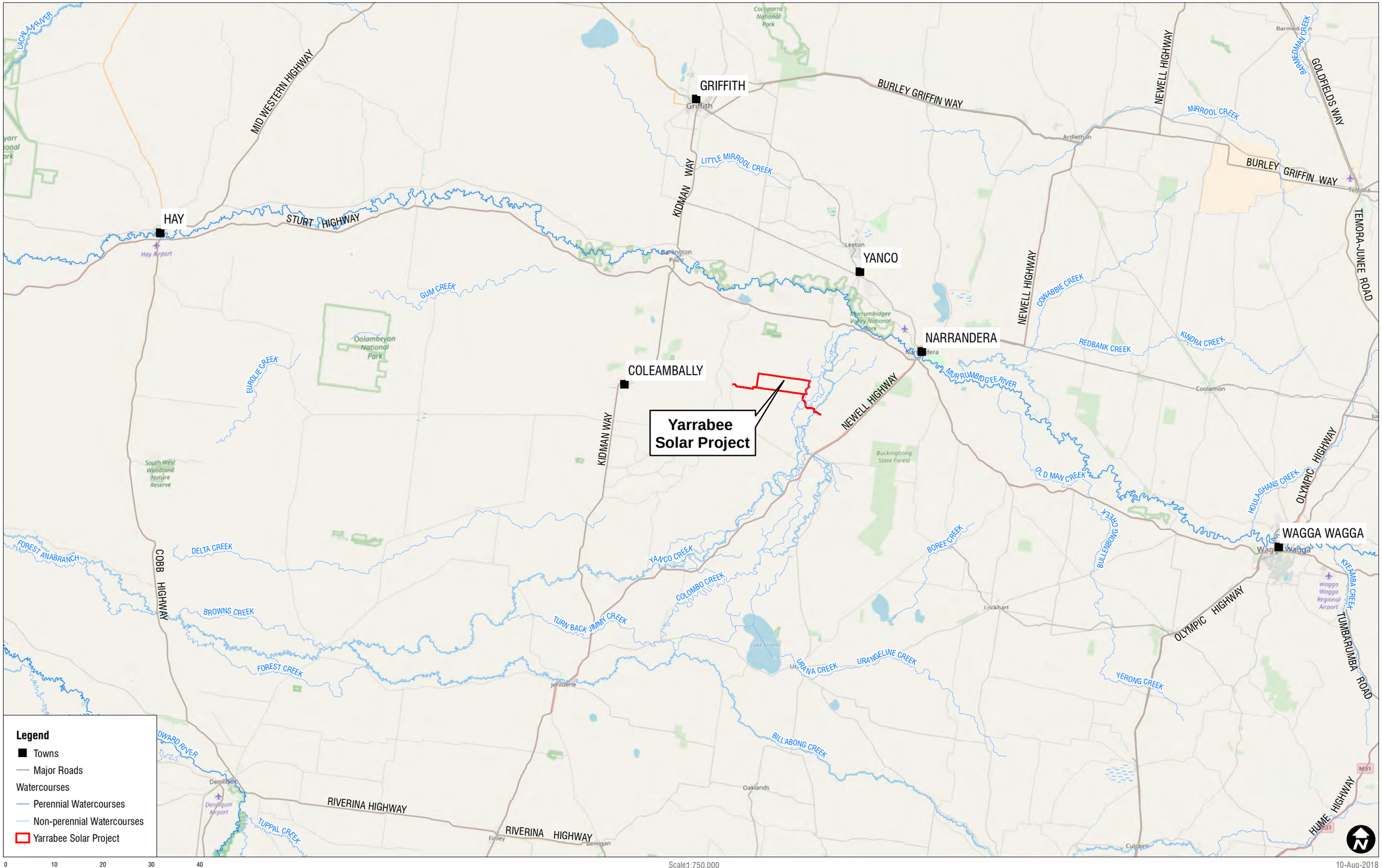
The project will comprise the construction of a 900 MWac PV solar plant to be developed in stages. The number of stages is dependent on factors including:

- the contractual obligations for the purchase of electricity by one or more third parties;
- the capacity of the high voltage transmission network to which the project will be connected for the export of generated electricity; and
- the future schedule for upgrading the high voltage transmission network.

The land required for the project is the subject of constraints identified by site investigation completed prior to the submission of this EIS, including native vegetation, and areas of cultural or heritage significance. A Project concept plan has been developed following assessment of identified constraints and their impact on the projects layout (refer to **Figure 2**).

The Project is expected to include the following elements:

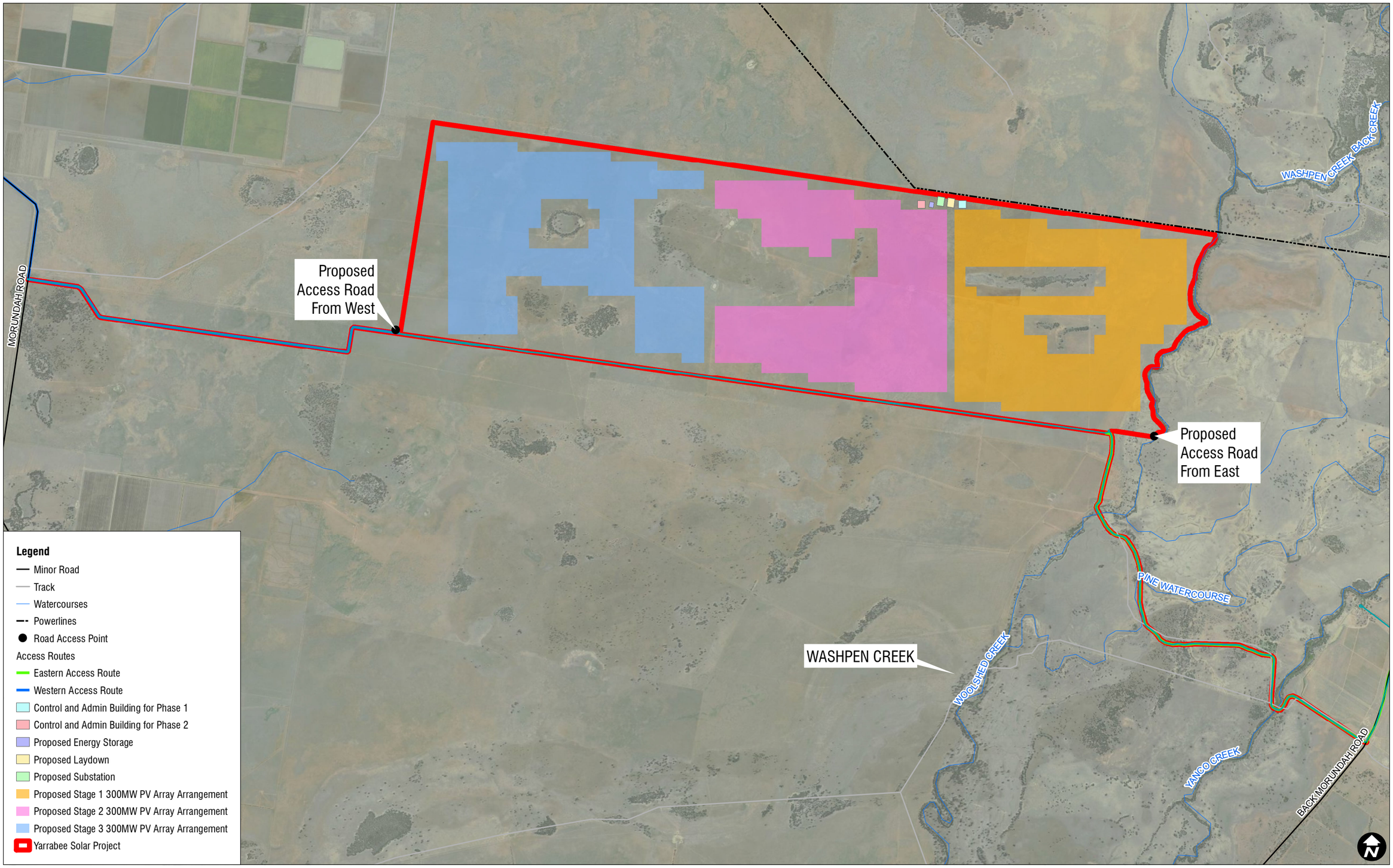
- PV modules using solar panels and single axis tracking system;
- inverter stations and low-voltage and medium voltage reticulation systems;
- ancillary services equipment to assist the grid operations; synchronous condensers may be installed if required by the Transmission Network Service Provider (TNSP);
- a permanent office and maintenance building and security perimeter fencing;
- internal access roads within the project boundary to enable site maintenance, as well temporary access roads used during the construction stage;
- access to the project site primarily from Back Morundah Road, Main Canal Road and Old Morundah Road;
- a 330 kV substation to be constructed within close proximity to the existing 330 kV Wagga to Darlington Point transmission line, including the installation of an underground fibre optic cable for communication purposes;
- a grid connection from the new substation to the existing 330 kV Wagga to Darlington Point transmission line;
- potential energy storage located adjacent to the substation that is likely to have a storage capacity of approximately 35MW / 70MWhr;
- designated buffer zones to areas of confirmed native vegetation and Washpen Creek riparian vegetation; designated buffer zones to areas of confirmed cultural and heritage significance; and
- temporary construction laydown areas and supporting facilities.



SLR

Regional Locality

FIGURE 1



H:\Projects-SLR\620-BNE\610-SYD\610.17428\01 GIS\ArcGIS\SLR610174281_EIS_Project_boundary_01.mxd

Scale:1:50,000
GDA 1994 MGA Zone 55

13-Aug-2018

SLR

Property Boundary and Indicative Layout

FIGURE 2

The project is expected to operate for between 30 to 50 years providing near and long-term local employment opportunities. As noted above, the project will likely be undertaken in stages with differing MW capacities.

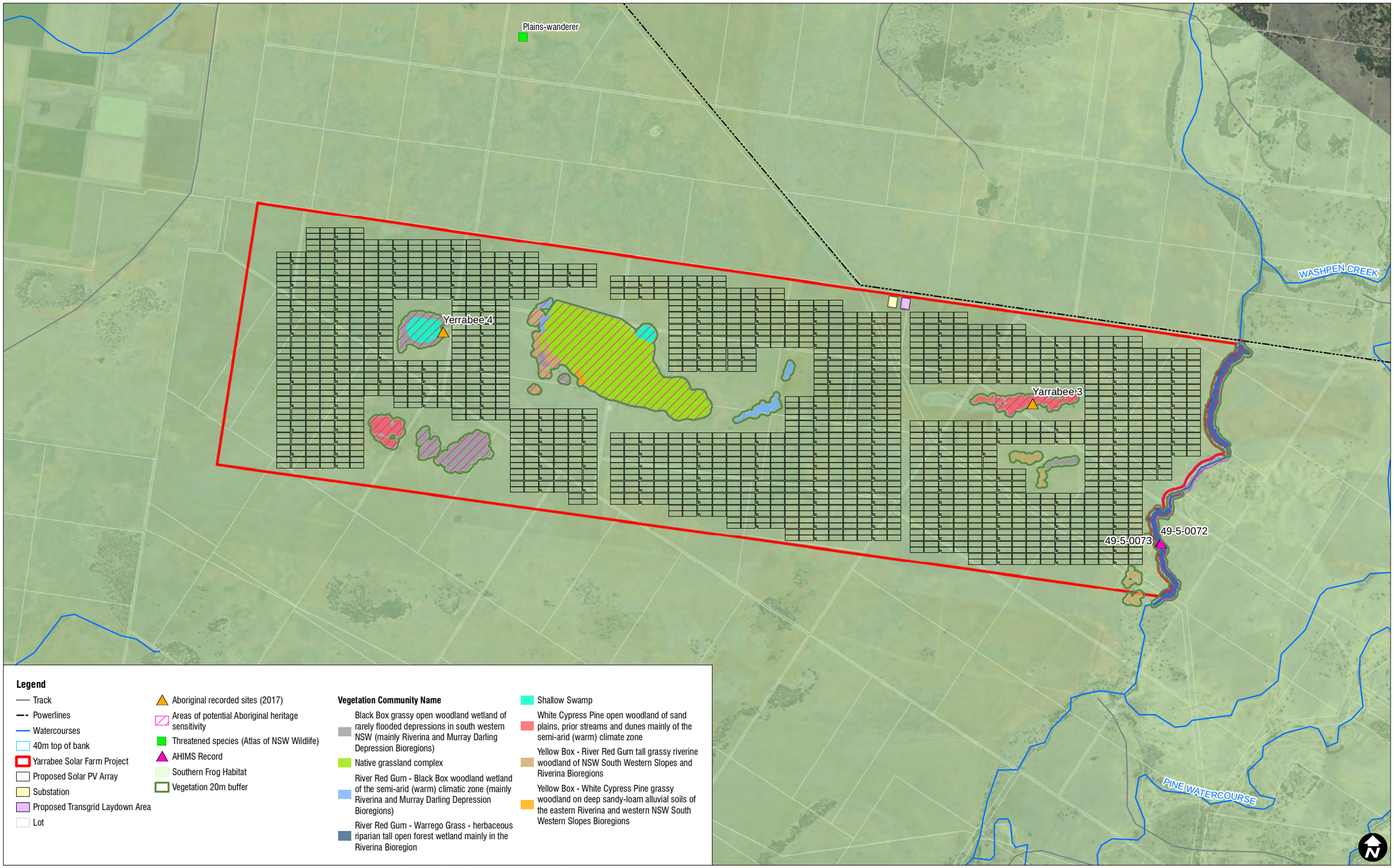
The Proponent would decommission the plant and rehabilitate the site at the end of its operational life if the lease is not renewed. This would remove all above ground infrastructure and return the site to its existing land use.

The assessment of environmental issues associated with the project has been multi-disciplinary and involved consultation with key local and state government agencies and a pre-project risk assessment. Risks were identified for both the construction and operational phase of the project and assessed in relation to their possible consequence and likelihood of occurrence. As facilitated by the risk assessment, where a potential environmental impact/risk was considered unacceptable, or where a knowledge gap was identified, a specialist study was commissioned and appropriate management responses nominated.

Four risk areas of higher potential impact were identified and given particular focus during the EIS phase (refer to **Figure 3**). These four areas are:

- Potential impacts on biodiversity such as native grasslands as well as local habitat for threatened and endangered species;
- Potential impacts on Aboriginal cultural heritage;
- Potential impacts on hydrology and water resources; and
- Land use compatibility.

The project is not anticipated to pose any significant or long-term adverse impact to the local environment or surrounding community. The potential impacts of the project are expected to be a relatively low to moderate risk due to the nature of the project design and proposed construction and operational activities. The project site has a long history of disturbance from current and historic agricultural activities. Reach Solar has adopted a constraints-based approach to the site, ensuring that areas identified as having high environmental and/or social value will be protected for the duration of the project's life.



H:\Projects-SLR\620-BNE\610.17428\01 GIS\ArcGIS\SLR610.17428_Constraints_001.mxd

Scale:1:40,000
GDA 1994 MGA Zone 55

09-May-2018

Sheet Size : A3

SLR

Project Constraints Map

FIGURE 3

2 Submissions

2.1 Submissions Received

DPE received a total of 11 submissions during the public exhibition period. Two late submissions were accepted by DPE. All submissions received were from public authorities/government agencies; no submissions were received from individual members of the public or special interest groups.

In alphabetical order, submissions were received from:

- Fire & Rescue NSW 30/08/18
- Local Land Services – Sustainable Land Management 18/09/18
- NSW Department of Industry – Crown Lands and Water Division 18/09/18
  NSW Department of Industry – Crown Lands and Water Division 19/09/18
- NSW Department of Planning & Environment – Hazards Unit 9/10/18
- NSW Department of Planning & Environment – Resources & Geoscience 19/09/18
- NSW Environment Protection Agency 22/08/18
- NSW Office of Environment and Heritage – Heritage Division 19/09/18
- NSW Office of Environment and Heritage – South West Branch 20/09/18
- NSW Rural Fire Service 12/09/18
- Narrandera Shire Council 08/10/18
- Roads & Maritime Service NSW – South West NSW Branch 19/09/18
- SafeWork NSW 17/09/18
- TransGrid – Network Planning and Operations 11/09/18

2.2 Issues Raised within Submissions Received

Table 2 outlines the issues raised within each submission that was received and the sections within this Submissions Report were responses are provided.

Full copies of submissions are included in **Appendix C** of this report.

Table 2 Issues Raised within Submissions

Respondent	Issues Raised	Response Reference
NSW Department of Planning & Environment – Resources & Geoscience		
	MinView Database findings map is not included in Figure 7.23, instead a repeat of the major projects map is included in the EIS.	Section 3.1
NSW Department of Industry – Crowns Lands and Water		
	A viable and appropriately licensed water supply needs to be confirmed for the construction period. An impact assessment is required where this is to be accessed from a currently unlicensed extraction point or where the current entitlement is inadequate to meet the demands.	Section 4.1
	The project approval should include the following condition: • A Construction Environmental Management Plan (CEMP) should be prepared, including detailed erosion and sediment control measures.	Sections 4.2 & 4.3
	Works within waterfront land should be undertaken in accordance with the Guidelines for Controlled Activities on Waterfront Land (NRAR 2018).	Section 4.4
	The proponent will be required to hold a Crown Land Licence for any improvement works for the bridge and for any improvement works on the access roads to the bridge on Crown Land, i.e. Lot 7320 DP 1166290.	Section 4.5
	No additional works will be permitted on Crown Land unless authorised by the Department prior to any works being undertaken including the assessment of likely impacts.	Comment noted
	Crown roads within the property boundary are currently the subject to a closure and disposal process (nearing completion).	Comment noted
SafeWork NSW, Better Regulation – Department of Finance, Services and Innovation		
	No issues raised.	N/A
NSW Office of Environment and Heritage – Heritage Division		
	An unexpected finds protocol for historical archaeological relics should be included in the CEMP for the project.	Section 5.1
	A requirement to notify the Heritage Council should be included in the project approval if historic archaeological deposits/relics are discovered.	Section 5.2
NSW Office of Environment and Heritage – Regional Operations		

Respondent	Issues Raised	Response Reference
	The EIS does not meet the Secretary's requirements for biodiversity and Aboriginal cultural heritage assessment (ACH) including; • Clarification of ACH survey methods and details • Consultation for long-term artefact disposition • Aboriginal site impact recording forms • Chance or unexpected finds and an Unexpected Finds Protocol • Incomplete application of Section 6 of the BAM • Inconsistent assessment of native grassland in the BAR • Impact Assessment, particularly impacts to Inland Forest Bat • Indirect impacts on native vegetation and habitat • Mitigation measures (Biodiversity)	Section 6.1 (re Biodiversity issues) Sections 6.2 & 5.1 (re ACH issues)
TransGrid		
	The project should include any ancillary electricity transmission works (i.e. all works associated with connection to the National Electricity Market, such as ancillary substation works, transmission line works (direct and upstream), and telecommunications works) that would be necessary for the construction and operation of the project. The EIS should identify all land parcels affected by these works and include them within the project boundary.	Section 7.1
NSW Environmental Protection Agency		
	No issues raised	N/A
NSW Local Land Services		
	No issues raised	N/A
NSW Rural Fire Service		
	A Fire Management Plan (FMP) should be prepared for the proposed facility in consultation with the local NSW RFS District Office.	Section 8.1
	The entire solar array development footprint should be managed as an asset protection zone as outlined within section 4.1.3 of "Planning for Bush Fire Protection 2006" and the NSW RFS document "Standards for asset protection zones".	Section 8.1
	A 10-metre defendable space, managed as an asset protection zone, should be provided around the perimeter of the solar array development site to allow for emergency service personnel to undertake property protection activities.	Section 8.1

Respondent	Issues Raised	Response Reference
	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 asset protection zone.	Section 8.1
NSW Fire and Rescue		
	No issues raised.	N/A
NSW Roads and Maritime Services		
	The Transport Impact Assessment included in the EIS does not address the 20-seater coaster service drop off and pick up points.	Section 9.1
	The submitted documentation does not finalise the preferred route for the delivery of project components to the development site or the source of other products, such as the aggregate, water and sand.	Section 9.2
	The project approval should include the following condition: • Prior to the commencement of construction activities on the development site a Transport Management Plan (TMP) shall be prepared in consultation with the relevant road authorities (Council and Roads and Maritime Services) to outline measures to manage traffic related issues associated with the development, particularly during the construction and decommission processes. RMS has suggested that this plan includes; o finalise details of haulage, including transport routes, volumes, vehicle type and length, timing, and frequency, o finalise details of any required road-specific mitigation measures, o require that all vehicular access to the site be via the approved access route, o details of measures to be employed to ensure safety of road users and minimise potential conflict with project generated traffic, o proposed hours for construction activities, as night time construction presents additional traffic related issues to be considered, o the management and coordination of the movement of vehicles for construction and worker related access to the site and to limit disruption to other motorists, emergency vehicles, school bus timetables and school zone operating times. o the management of construction staff access to the works site is to include strategies and measures employed to manage the risks of driver fatigue and driver behaviour. o measures to address adverse climatic conditions that may affect road safety for vehicles used during construction, operation and decommissioning of the facility (e.g. fog, dust, wet weather), o procedures for informing the public where any road access will be restricted as a result of the project, o any proposed precautionary measures such as signage to warn road users such as motorists about the construction activities for the	Section 9.1

Respondent	Issues Raised	Response Reference
	project, ○ a Driver Code of Conduct to address such items as; appropriate driver behaviour including adherence to all traffic regulations and speed limits, safe overtaking and maintaining appropriate distances between vehicles, etc and appropriate penalties for infringements of the Code, and ○ details of procedures for receiving and addressing complaints from the community concerning traffic issues associated with truck movements to and from the site.	
	The project approval should include the following condition: • Prior to the commencement of construction on-site, the Proponent must undertake all works to upgrade any road, its associated road reserve and any public infrastructure in that road reserve, to a standard suitable for use by heavy vehicles to meet any reasonable requirements that may be specified by the relevant roads authority.	Section 9.1
	Subject to the adoption of the preferred route for access for heavy vehicles to the development site as a minimum the intersections of Main Canal Road or Reas Lane with the Sturt Highway shall be constructed and the roadside maintained to provide the following: a) Sight distance requirements for a reaction time of 2.5 seconds in either direction along the Sturt Highway b) Be constructed to provide an Auxiliary Left Turn - Short (AUL)(s) intersection treatment on the Sturt Highway c) The construction of the local road intersection with the Sturt Highway to provide for 2 travel lanes and be sealed for at least 50 metres from its intersection with the Highway d) Be designed and constructed so as not to interfere with the capacity of the current roadside drainage network and to prevent water from proceeding onto, or ponding on, the carriageway of the Sturt Highway e) Provide a new polymer modified asphalt heavy duty pavement wearing surface across the intersection to accommodate the heavy vehicle turn paths to and from the Sturt Highway	Section 9.2
	The project approval should include the following condition: • A management plan to provide measures to suppress dust generation from the development site and the transportation route shall be prepared and implemented to the satisfaction of Council and Roads and Maritime Services.	Section 9.4
	The project approval should include the following condition: • Any damage or disturbance to the road reserve of the Sturt Highway is to be restored to match surrounding landform in accordance with Council requirements.	Section 10.2

Respondent	Issues Raised	Response Reference
	The project approval should include the following condition: • Works Authorisation Deed (WAD) with Roads and Maritime Services will need to be entered into before finalising the design or undertaking any construction work within or connecting to the road reserve.	Section 10.2
	The project approval should include the following condition: • In the event of glint or glare from the solar plant being evident from a public road, the proponent shall immediately implement glare mitigation measures such as construction of a barrier (e.g. fence) or other approved device to remove any nuisance, distraction and/or hazard caused as a result of glare from the solar panels.	Section 9.5
	The project approval should include the following condition: • Any works within the road reserve of a classified road requires approval under Section 138 of the *Roads Act, 1993* from the road authority (Council) and concurrence from RMS prior to commencement of any such works.	Section 9.6
	The project approval should include the following condition: • Works associated with the development shall be at no cost to RMS.	Comment noted
Narrandera Shire Council		
	Cumulative impacts on the environment when added to other recent, current and foreseeable future projects, including: • the impact of the increased demand on the housing rental market caused by the construction workforce, • the increasing demand on limited resources in the local area, such as health and education services, and • the impact on the region resulting from an increased demand for skilled labour.	Section 10.1
	Roads and Traffic (General) The traffic and transport impact assessment is considered to be deficient in that the local road network in the Project area was not designed to accommodate so many heavy/ large and light vehicles over such a long time period. It also excludes the impacts associated with decommissioning - 30-50 years hence - but indicates that such impacts can be assumed to be similar to the construction phase. Council requests that the Proponent engage with other adjoining councils whose roads will likely be impacted by the project. Greater transparency is required regarding the traffic flows, rather than the average numbers across the three phases within each of the three construction stages; council requests a breakdown of heavy vehicle and light vehicle numbers for each of the three phases. It is unclear how many of the workers will use private vehicles as distinct from being transported by mini bus, with the EIS stating that on-site parking will be provided for 100 vehicles. Council seeks a consent condition commitment to a robust and feasible worker bus transport system	Section 10.2.1

Respondent	Issues Raised	Response Reference
	The likely scope and frequency of periodic upgrades of the technology and equipment, and the implications this will have on road wear and tear is currently not canvassed in the EIS.	
	Road Upgrading Prior to Construction Activity The project approval should include the following condition: a) Prior to construction works commencing on the project site, the proponent must undertake all works necessary to upgrade any road, its associated road reserve and any public infrastructure in that road reserve, to a standard suitable for use by heavy vehicles and special vehicles used during the construction phase and on-going operations of the solar farm. The design and specifications, and construction, of these works must be completed and certified by an appropriately qualified person and agreed to by the Road Authority (NSC). Pavement design shall meet minimum design requirements under Austroad's Guidelines and to the satisfaction of Council. The project approval should include the following condition: Prior to the commencement of construction on site the proponent shall determine and finalise the preferred access route and include in any Transport Management Plan (TPM): b) A detailed condition survey be undertaken (at Proponent's cost) of all local roads (including bridges, culverts, grids, etc.) complete with photographs, and agreement reached with NSC on the survey results; c) Agreement that on completion of Project construction, all local roads experiencing Project traffic will be reinstated to an equivalent or better condition than that found in the abovementioned condition survey (at Proponent's cost); Notification if any other local roads are to be trafficked by Project vehicles, with condition surveys completed beforehand; d) That during the construction phase, the Proponent maintains all local roads utilised by Project traffic in good condition to the satisfaction of NSC, thus providing safe, all-weather access. NSC requires three-monthly inspections of such roads with the Proponent and development of an intervention standard that details when maintenance will occur; e) Adequate advisory signage within road reserves to advise traffic of the route to be taken to access the development. Approval must be gained for the adequacy and intended location of such signage from NSC; f) That the Traffic Management Plan provides suitable strategies to safeguard the safety of school bus activity g) That the Proponent provides NSC with details of all underground cable and overhead powerline locations and shows where they intersect road reserves prior to the commencement of construction. It will be necessary for NSC to approve all submitted details prior to construction; h) An agreement from the Proponent that if, during the life of the Project, NSC finds evidence of significant increases in traffic volumes or vehicle types on other roads in the locality not addressed in the EIS (or in the road condition survey) that can be directly attributable to	Section 10.2.2

Respondent	Issues Raised	Response Reference
	the Project, the Proponent agrees to a negotiated settlement with NSC to provide additional funds for road repair, maintenance or any necessary upgrade works; and i) A Road and Traffic Management Plan for the 12 months of decommissioning and that such a condition is included in any consent. NSC will require the provision of road condition and repair and maintenance arrangements similar to those during the construction phase.	
	Roads and Traffic during Operations As the local Roads Authority, NSC will require annual road maintenance contributions from the Proponent. Such contributions will be expected to commence on acceptance by NSC that the subject roads have been returned to, or exceed, the conditions found prior to construction, after completion of construction of each stage of the solar farm development. Roads maintenance contributions should be in the order of $4,500/km/pa.	Section 10.2.3
	Roads and Traffic during Decommissioning Because of the consequences for wear and tear on the local roads, NSC seeks details regarding the planned traffic flows during the decommissioning phase.	Section 10.2.4
	Water Supply The EIS proposes the Project will require up to 750KL/day of non-potable water for each dry day of the construction works and 5ML/ year of non-potable water during the operation phase. The planned source of this water is yet to be finalized however; Council understands water is to be sourced from existing supplies/allocations that exist on Yarrabee Station.	Section 4.1
	Telecommunications The influx of 150-450 workers during construction will place additional strain and demands on the existing telecommunication services and adversely impact the existing service provided to the local community. NSC requests the Proponent liaise with mobile phone tower providers to secure an upgraded (if required) mobile phone and internet service prior to construction commencement.	Section 10.3
	Noise, Dust and Visual Impacts NSC requests that the seven landholders living in close proximity to the Project are fully protected with respect to noise, dust and visual impacts. If there are any residences within 500m of an unsealed road used by Project traffic, NSC requires the road is to be sealed to a width of 6.0 m for a distance of 150 m either side of the midpoint of the house. On the matter of glare, NSC needs to be assured that no resident living in proximity to the Project will be subjected to significant glare experiences.	Section 9.4 (re Dust issues) Section 9.5 (re Glare issues)

Respondent	Issues Raised	Response Reference
	Employment Matters NSC is of the view that the EIS does not provide adequate consideration of the potential social and economic impacts of the development during the five year construction phase, especially in the light of the other major projects being developed in the region. Also, NSC is committed to seeing projects such as this employ 'locals' to help build economic resilience in the predominantly rural community. To this end NSC seeks an up-front commitment from the Proponent and a condition on the consent regarding: a) The strategy to employ Narrandera 'locals' during the construction phase. Council wishes to see the Proponent commit to a strategy aiming at a minimum of 200 locals being hired during construction. b) The strategy of providing a number of apprenticeships/traineeships provided to Narrandera 'locals'. Council wishes to see the Proponent commit to or facilitating a minimum of 20 annual apprenticeships or traineeships during the five years of construction. c) The strategy to employ a number of Indigenous personnel. Council wishes to see the Proponent commit to employment of Indigenous personnel commensurate with the demographic makeup of our community. For example, Narrandera Shire has an Indigenous population of approximately 10% and this should be the percentage of Indigenous workers employed under point a. above.	Section 10.4
	Accommodation NSC seeks more details from the Proponent regarding Project workforce planning, including accommodation and a strategy to deal with these issues.	Section 10.4
	Waste The EIS proposes to dispose of waste at the Wagga Wagga waste management facility. Has this arrangement been confirmed by Wagga Wagga Shire Council?	Section 10.5
	Biosecurity Recommends the following consent condition: The proponent is to ensure that all inbound containerised material is certified as biosecurity safe.	Section 10.6
	Financial Contributions to Narrandera Shire Council` NSC has indicated that it is their expectation, given the significant potential impact on the Shire, that DPE will include a condition in the granting of any consent that requires a financial contribution to NSC, with agreement as to the details contained within a Voluntary Planning Agreement (VPA) or similar, prior to development consent being granted.	Section 10.7
NSW Department of Planning and Environment – Hazards		

Respondent	Issues Raised	Response Reference
	The EIS has sufficiently identified the hazards and relevant safeguards for the proposed battery energy storage system.	Comment Noted
	The project approval should include the following condition: **Fire Safety Study** 1. At least one month prior to construction of energy storage plant or equipment such as battery storage (except for construction of those preliminary works that are outside the scope of the hazard studies), or within such further period as the Planning Secretary may agree, the Applicant must prepare and submit for the approval of the Planning Secretary a Fire Safety Study of the development. Construction of energy storage plant or equipment, other than of preliminary works, must not commence until approval has been given by the Planning Secretary. The study must: (a) address the relevant aspects of the Department's Hazardous Industry Planning Advisory Paper No. 2, 'Fire Safety Study' guideline; (b) address the New South Wales Government's Best Practice Guidelines for Contaminated Water Retention and Treatment Systems; and (c) describe the final design of any energy storage plant or equipment to be constructed and verify the analysis performed in the Appendix G – Hazards and Risks of the Environmental Impact Statement. Any significant design variations between the final design and the designs considered in Appendix G must be identified and analysed in accordance with the Department's Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis'. **Storage and Handling of Hazardous Materials** 2. The Applicant must store and handle all chemicals, fuels and oils used on-site in accordance with: (a) the requirements of all relevant Australian Standards; and (b) the NSW EPA's Storing and Handling of Liquids: Environmental Protection – Participants Handbook if the chemicals are liquids. (c) In the event of an inconsistency between the requirements listed from (a) to (b) above, the most stringent requirement must prevail to the extent of the inconsistency. **Emergency Plan** 3. Prior to commissioning of the development, the Applicant must develop and implement a comprehensive Emergency Plan and detailed emergency procedures for the development. The Applicant must keep two copies of the plan on-site in a prominent position adjacent to the site entry points at all times. The plan must: (a) be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning'; (b) be prepared in consultation with Fire and Rescue NSW and NSW Rural Fire Service to their satisfaction; (c) identify the fire risks and controls of the development; and (d) include procedures that would be implemented if there is a fire on-site or in the vicinity of the site.	Section 11

The following sections provide detailed responses to all submissions made in relation to the Yarrabee Solar Project EIS.

3 DPE – Division of Resources & Geosciences

3.1 MinView Database Results Map

The MinView Database findings map was omitted from the EIS in error. It is included in this Response to Submissions Report - refer **Figure 4**.

4 DI – Crown Lands and Water Division

4.1 Water Supply During Construction & Operation

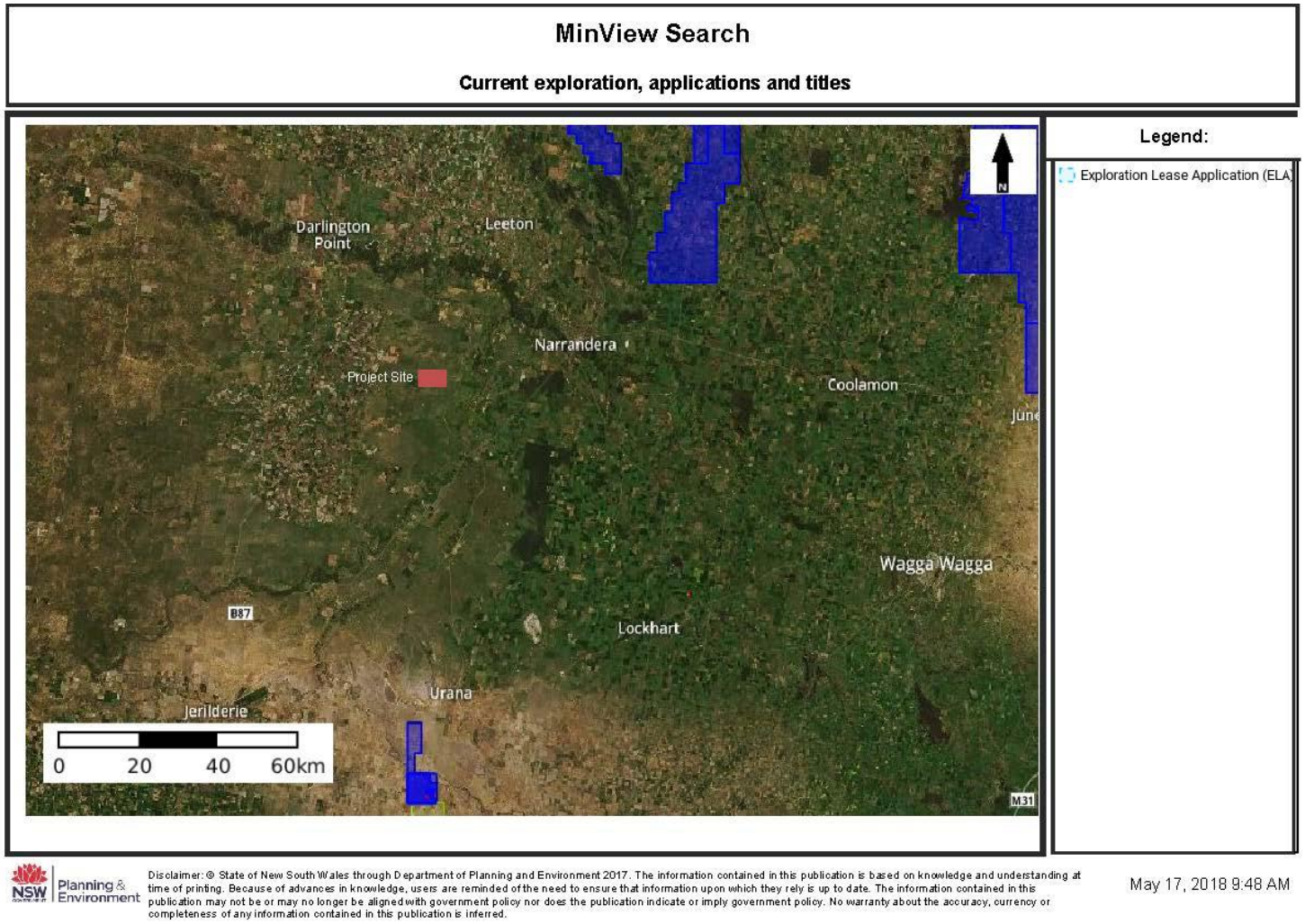
Section 7.2.1.2 of the EIS describes how water will be sourced during the Project construction phase if required:

> *"During the construction phase potable water may be transported to site in water trucks and stored in temporary water tanks for use by the construction work force. Options for non-potable water supply being considered include:*
>
> - *Groundwater from the existing site bore, may be utilised subject to landowner agreement;*
> - *Purchase of water from adjoining landholders;*
> - *Trucking water in;*
> - *Harvesting of site surface water (within harvestable rights); and*
> - *Recycled grey water.*
>
> *Non-potable water use during construction would be mainly for dust suppression on unsealed roads and watering to re-establish vegetation on disturbed areas. Based on a staged construction of 100 ha per month, with up to 15% disturbance by area, and a dust suppression/watering application depth of 5 mm per day, then the daily demand for construction water may be up to maximum of 750 kL/day during dry weather. Since water usage would be less during and following rainy days, average water usage over the construction period may be less. Wastewater and greywater during construction will be captured and removed from site for off-site treatment. The provision of potable water, grey water and wastewater infrastructure would be confirmed during the detailed design phase of the project."*

Land owners of the Yarrabee Park Property, the Morundah Land Trust and its Manager, 'GoFarm', currently hold a works approval (approval number 40CA405005) under the *Water Management Act 2000* for 'Water Supply Works and Water Use' which is valid until March 2028. This licence allows for extraction from the Murrumbidgee Regulated River Water Source.

The Construction Environmental Management Plan (CEMP) to be developed for the Project will provide additional detail regarding how water would be accessed and used during the construction period.

Figure 4 MinView Database Results Map



4.2 Construction Environmental Management Plan (CEMP)

As described in Section 3.15 of the EIS, a CEMP will be completed as a post-consent action to meet the requirements of the Department of Infrastructure, Planning and Natural Resources (DIPNR's) (now DPE) Guideline for the Preparation of Environmental Management Plans (2004) and any relevant approval requirements.

4.3 Erosion & Sediment Control Measures

Section 7.1.4.9 of the EIS states that a site-wide Erosion and Sediment Control Plan (ESCP) will be prepared as part of the CEMP for the project. The ESCP will be prepared in accordance with *Managing Urban Stormwater: Soils and Construction, Volume 1, 4th Edition* (Landcom 2004).

4.4 Waterfront Land

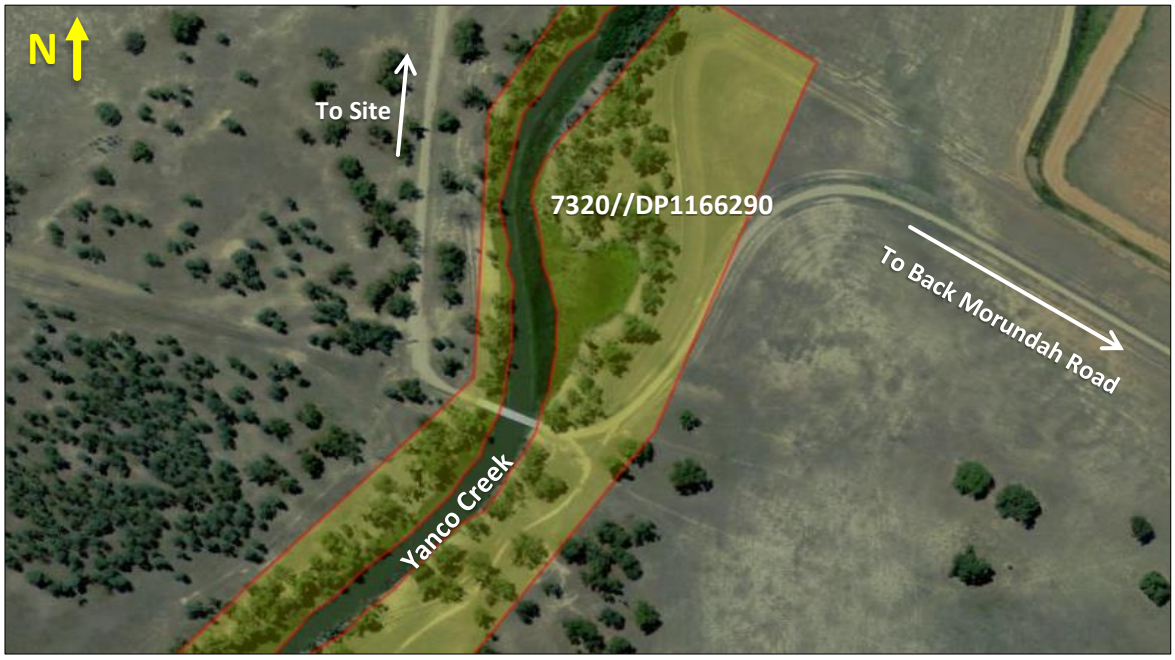
Section 7.1.4.8 of the EIS directly addresses the potential for proposed works within waterfront land stating:

"The Project site falls away from Washpen Creek and has been set-back via a dedicated buffer zone from ground areas which fall towards Washpen Creek. The Project would maintain a riparian zone of 40 m to the top of bank of Washpen Creek, and would not alter the distribution of flows, or involve any works that would directly impact on mainstream hydrology or flood behaviours along Washpen Creek."

4.5 Crown Land Licence

A portion of the access road from the east of the site is located on Crown Land (Lot 7320 of DP 1166290) as shown in **Figure 5**. A licence over Crown Land is a contractual agreement that grants the licensee a personal right to occupy and use Crown Land for a particular purpose. A Crown Land Licence will be sought for use of the eastern access road prior to commencement of works.

Figure 5 Crown Land Parcel



5 NSW OEH - Heritage Division

5.1 Aboriginal Cultural Heritage Assessment

The Aboriginal Cultural Heritage Assessment Report - refer **EIS Appendix C** - has been revised to address the issues raised by OEH. The revised report is included in this Response to Submissions Report as **Attachment A**.

A summary of changes is outlined below:

- Text has been edited for clarification in Section 5.1.1 & Section 5.3 regarding survey coverage of flat plains (pg. 24, 28-29);
- Calculations regarding flat plains have been revised in Table 5-1 & Table 5-2 (pg. 29). This was a calculation error and has now been fixed;
- Aboriginal Heritage Information Management System (AHIMS) site numbers have been included in Table 5-6, Table 5-7 and Table 6-1 (pg. 67-69, 78-79);
- Recommendation 4 has been updated – it is now recommended that the proposed Aboriginal Cultural Heritage Management Plan (ACHMP) include a section on the long-term management of artefacts (pg. vi & 80-81);
- A commitment that Aboriginal Site Impact Recording Forms (ASIRFs) will be completed for each site following impact has been added to Section 6.3.1 (pg. 77); and
- Recommendation 5 has been augmented to include an Unanticipated Finds Protocol (pg. vi & pg. 81).

The long-term management of artefacts will be covered in the Aboriginal Cultural Heritage Management Plan (ACHMP). Submitting ASIRFs for sites harmed or destroyed would be included as part of the ACHMP.

Recommendation 4 of Section 7.1.2.5 of the EIS stated that the ACHMP be agreed to between the proponent, RAPs and DP&E. Section 6-1 of the EIS also states Aboriginal community consultation will be undertaken to determine the future management of artefacts and preparation of the ACHMP.

5.2 Historic Heritage Considerations

If historic archaeological deposits/relics are discovered, the Heritage Council will be notified in writing in accordance with Section 146 of the *Heritage Act 1977*. Works will cease in the affected area(s) and the find will be managed in accordance with the Project's Unexpected Finds Protocol.

6 NSW OEH - Heritage Division

6.1 Biodiversity Assessment

The Biodiversity Development Assessment Report (BDAR) has been revised to address the issues raised by OEH and is included in this Response to Submissions Report as **Attachment B**. A summary of changes to the BDAR are outlined in the following sections.

6.1.1 Section 6 of the BAM

Section 6 of the Biodiversity Assessment Methodology (BAM) contains a methodology for assessing habitat suitability for threatened species within the development site. This section is presented in Section 3.5 of the BDAR and includes information retrieved from the Threatened Biodiversity Data Collection (i.e. via the BAM Credit Calculator). This information is also presented in Appendix G of the BDAR in two output reports known as the BAM Predicted Species Report and the BAM Candidate Species Report.

The information identified as lacking from Section 3.5 of the BDAR includes a discussion of threatened species sensitivity class and biodiversity risk weighting. These values are produced as an output report from the BAM credit calculator in the form of a report known as the BAM Credit Summary Report. This report could not be generated for the BDAR given that the Project will not directly impact any areas of native vegetation or fauna habitat and the BAM calculator does not allow the assessor to proceed to the 'habitat suitability' section if zero values are entered into the vegetation assessment. Mock data was entered into the BAM calculator so that Section 6 of the BAM could be applied more completely. Two detailed tables have now been included to discuss predicted threatened species and candidate threatened species and how the assessment assessed habitat suitability for these species.

In regard to missing information related to threatened species polygons, it should be recognised that the occurrences of threatened species within the development site consists of the occurrence of single individuals of two threatened species, which are 'ecosystem credit' species (not 'species credit species'). In accordance with the BAM, threatened species polygons are not required for ecosystem credit species.

The BDAR aims to discuss all foreseeable potential direct and indirect impacts on biodiversity values within the development site. The development site is described in Section 1.2 of the BDAR and is shown in Figures 1, 2 and 3. The development site includes the main area containing the proposed solar panels (including internal roads and other ancillary works), as well as the access road that runs from Back Morundah Road. The BDAR was also revised to assess access requirements. On this basis, the assessment covers the full development site.

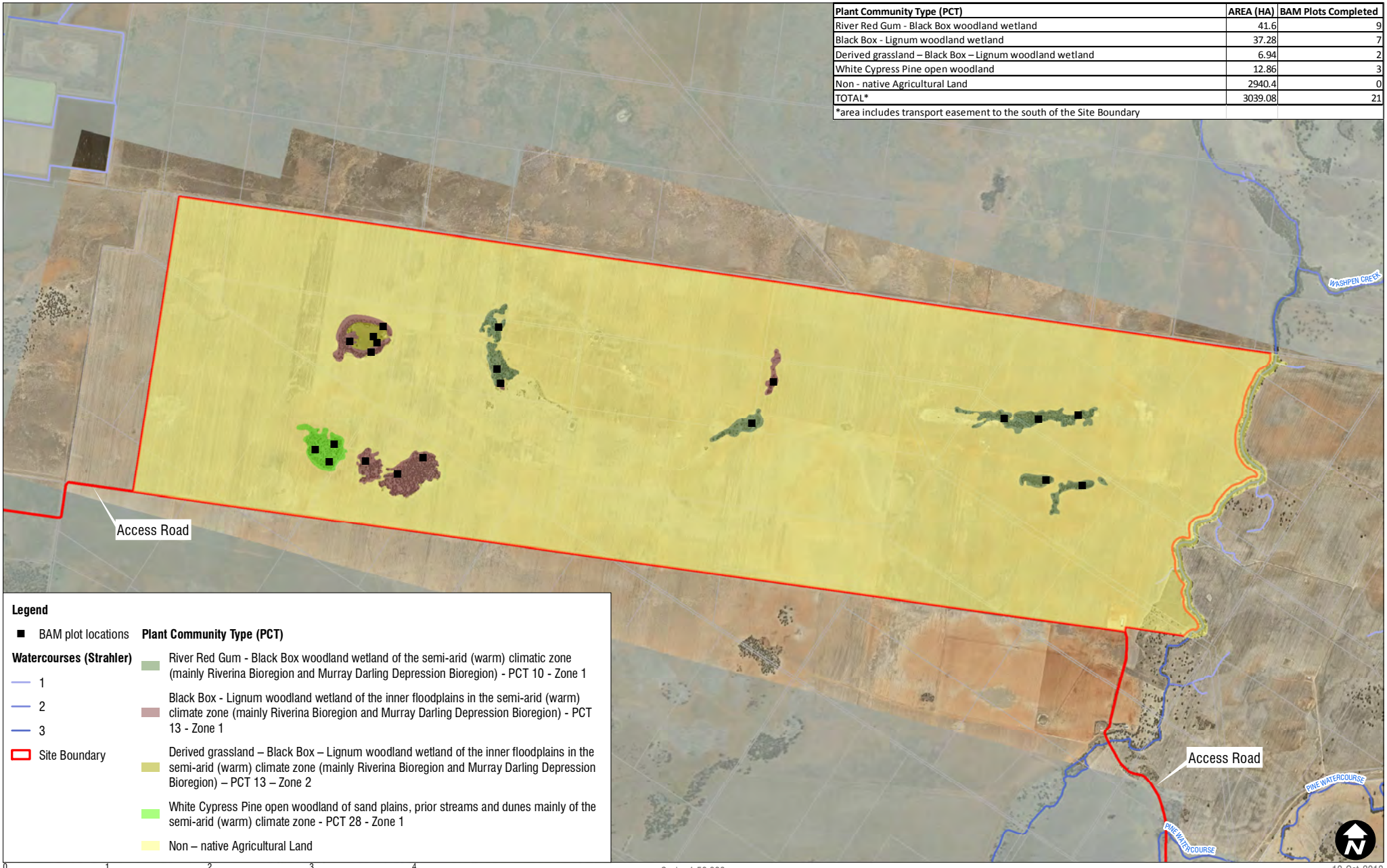
In the absence of field survey data during the recommended survey period for a number of threatened species, these species are assumed to be present. The BDAR has been amended accordingly. It should be noted that this change does not affect the impact assessment or credit calculations in the BAM, as habitat for these species will not be directly affected by the Project.

6.1.2 Assessment of Native Grassland

Section 3.5.3 of the BDAR states that native grasslands are restricted to a very small area outside the development footprint. The extent of this habitat was not mapped in the previous Figure 7 (vegetation mapping) although it was accurately mapped in Figure 8 (habitat features). Figure 7 has been amended to show the grassland patch and is now consistent with Figure 8. A copy of the BDAR Figure 7 can be seen below in **Figure 6**.

Section 3.3.5 of the BDAR states that the grassland habitat within the Project site is too tall and dense to be considered suitable habitat for the Plains-Wanderer (*Pedionomus torquatus*). This section specifically cites the research of Parker and Oliver 2006, which was thoroughly reviewed as part of the assessment. More detail has now been added to this section to demonstrate that habitat for the Plains-Wanderer was assessed in accordance with this research. A more detailed discussion of habitat availability has been also been included in Section 3.3.1 of the BDAR. More photographs of the agricultural areas and native grasslands have been included in Attachment E of the revised BDAR, as well as below on pages 30 and 31.

Plant Community Type (PCT)	AREA (HA)	BAM Plots Completed
River Red Gum - Black Box woodland wetland	41.6	9
Black Box - Lignum woodland wetland	37.28	7
Derived grassland – Black Box – Lignum woodland wetland	6.94	2
White Cypress Pine open woodland	12.86	3
Non - native Agricultural Land	2940.4	0
TOTAL*	3039.08	21
*area includes transport easement to the south of the Site Boundary		



Legend

- BAM plot locations
- Site Boundary

Watercourses (Strahler)

- 1
- 2
- 3

Plant Community Type (PCT)

- River Red Gum - Black Box woodland wetland of the semi-arid (warm) climatic zone (mainly Riverina Bioregion and Murray Darling Depression Bioregion) - PCT 10 - Zone 1
- Black Box - Lignum woodland wetland of the inner floodplains in the semi-arid (warm) climate zone (mainly Riverina Bioregion and Murray Darling Depression Bioregion) - PCT 13 - Zone 1
- Derived grassland – Black Box – Lignum woodland wetland of the inner floodplains in the semi-arid (warm) climate zone (mainly Riverina Bioregion and Murray Darling Depression Bioregion) – PCT 13 – Zone 2
- White Cypress Pine open woodland of sand plains, prior streams and dunes mainly of the semi-arid (warm) climate zone - PCT 28 - Zone 1
- Non – native Agricultural Land

0 1 2 3 4 Kilometers

Scale: 1:50,000
GDA 1994 MGA Zone 55

10-Oct-2018

H:\Projects-SLR\620-BNE\610-SYD\610.17428\01 GIS\ArcGIS\Ecology\SLR610174 28_F07_Survey_Vegetation_Mapping_001.mxd

Sheet Size : A4

SLR
www.slrconsulting.com.au

Plant Community Type (PCT) Mapping

FIGURE 6

Photo 1 Native Grassland Patch Within Project Site

Photo 2 Coverage of Grasses, Herbs and Leaf Litter (Dead Grass) within the Native Grassland Patch within the Project Site

Photo 3 Constructed Dam within the Project Site

6.1.3 Impacts to the Inland Forest Bat

Potential indirect impacts of the Project on the Inland Forest Bat such as artificial lighting were discussed in the BDAR. A more detailed discussion of potential indirect impacts of the development (i.e. including fencing) on the Inland Forest Bat has been prepared in Section 4.3 of the revised BDAR. Additional mitigation measures have been included in Section 5.2 to reduce the potential for adverse impacts resulting from the security fencing. This involves implementation of a monitoring program to assess the potential for adverse impacts of the fences on fauna species.

6.1.4 Indirect Impacts on Native Vegetation and Habitat

Measures to mitigate the introduction and spread of exotic plant species (particularly during mitigation or landscaping works), in areas adjacent or uphill of the 'Sandhill Pine Woodland in the Riverina, Murray-Darling Depression and NSW South Western Slopes bioregions' TEC will be included in the Construction and Operational Management Plans. Weed Management is addressed in Section 5.1.4 of the BDAR and states:

Priority weeds, environmental weeds and HTE species were identified within the Development Site (see Section 3.2). Measures to prevent the spread of weeds should include the following weed hygiene procedures:

- *all vehicles, equipment, footwear and clothing should be clean and free of weed propagules prior to entering the Development Site; and*
- *any weeds that are removed during the construction phase should be composted, buried on site or disposed of via an appropriate waste facility.*

6.1.5 BDAR and EIS Mitigation Measure Inconsistencies

The EIS document did not include several mitigation measures that were included in the BDAR, such as dust control during the construction phase and artificial lighting in the operational phase.

Construction Phase – Dust Control

Specific measures to minimise the generation of dust and associated impacts on adjacent natural environments should include:

- setting maximum speed limits for all traffic within the Project site to limit dust generation;
- use of a water tanker or similar to spray unpaved access tracks during the construction phase where required; and
- application of dust suppressants or covers on soil stockpiles.

Operational Phase – Artificial Lighting

Artificial lighting has the potential to disrupt the natural behaviour of nocturnal fauna species such as arboreal mammals, large forest owls and microbats. To reduce impacts to these species, including the vulnerable Inland Forest Bat (*Vespadelus baverstocki*), artificial lighting should be reduced where possible within the Project site. Lights should be turned off at night and any essential lighting should be directed away from fauna habitats such as woodland areas.

7 TransGrid

7.1 Ancillary Electricity Transmission Works

Reach Solar have been in discussions with TransGrid as the Transmission Network Service Provider for the Project since its early planning stages. As described in Section 3.4.6 of the EIS, Reach Solar commissioned TransGrid to prepare a feasibility study to identify the ancillary activities required to connect the Project to TransGrid's transmission network. This report was prepared in accordance with the National Electricity Rules and TransGrid's requirements were subsequently included in the scope of the EIS.

Project scope description in the EIS includes ancillary electricity transmission works (i.e. works associated with connection to the National Electricity Market, such as ancillary substation works, transmission line works (direct and upstream), and telecommunications works that would be necessary for the construction and operation of the Project.

The EIS should identify all land parcels affected by these works and include them within the project boundary – refer EIS **Appendix B**.

8 NSW Rural Fire Service

8.1 Bushfire Risks and Fire Management

Section 7.3.2.2 o the EIS states that a Construction Bushfire Management Plan (CBMP), Operational Bushfire Management Plan (OBMP) and Emergency Response Procedure (ERP) will be prepared for the project, detailing how fire risks and emergencies will be addressed. These will be prepared in consultation with the local NSW RFS District Office.

The EIS states that:

"adequate access tracks throughout the entire facility will be maintained for the lifetime of the Project. This will include perimeter set-backs allowing emergency vehicle access both around the site (but within the Project site boundary) and within the site, with low grade inclines (the site is essentially flat) and adequate passing bays and turning area widths."

- As per RFS feedback, a 10-m defendable space, managed as an Asset Protection Zone (APZ), shall be provided around the perimeter of the solar array development site to allow for emergency service personnel to undertake property protection activities.

The EIS states that:

"In accordance with NSW Rural Fire Service (RFS), "Planning for Bush Fire Protection" (2006) and the recent 2017 Draft Update of this policy, a firefighting water supply of 20,000 litres will be maintained on the site."

- As per RFS feedback, a 20,000 litre water supply (tank) fitted with a 65 mm Storz fitting will be located adjoining the internal property access road within the required asset protection zone.

9 NSW Roads and Maritime Services

9.1 Transport Management Plan (TMP)

As described in Section 7.3.9.3 of the EIS, prior to the works commencing, a Transport Management Plan (TMP) will be developed and adopted which will address all site access and greater network transportation issues. The TMP will be prepared in consultation with the relevant road authorities (Narrandera Shire Council, Murrumbidgee Council and RMS) to outline measures that will manage traffic related issues associated with the development, particularly during the construction and decommission processes.

In addition to the suggestions made by RMS, the TMP will:

- identify the bus coaster service drop-off and pick-up points;
- finalise the preferred route for the deliveries;
- consider the capacity and current standard of the local road network;
- identify areas of concern within the local road network based on the level of use required;
- provide further information on the traffic flows of light and heavy vehicles during all phases of the project (construction, operation and decommissioning);

- consider all underground cable and overhead powerline locations potentially affected by transport movements;
- provide details around advisory signage;
- provide comment around safeguarding the safety of school bus activity;
- be used as the foundation of a road works program of works; and
- facilitate the design of a worker bus transport system.

If specified by the relevant roads authority, works will be completed to upgrade roads (including road reserves and any public infrastructure) to a standard suitable for use by heavy vehicles. Proposed road upgrades are summarised in Table 36 of the EIS.

During construction roads will be maintained to a good condition facilitating safe, all-weather access. Damage or disturbance to the road reserve of the Sturt Highway or local roads as a result of the works will be restored to match surrounding landform in accordance with Council requirements.

9.2 Heavy Vehicle Site Access

The EIS outlines that the proposed access strategy is for heavy vehicles to enter and exit the site via the Western Access Route (via Main Canal Road and Old Morundah Road) and for light vehicles and buses to access the site via the Eastern Access Route (via Back Morundah Road).

The Proponent agrees with RMS's recommendations and commits to undertaking the following actions if heavy vehicles access to the development site is required via the intersections of Main Canal Road or Reas Lane with the Sturt Highway:

- maintaining sight distance requirements for a reaction time of 2.5 seconds in either direction along the Sturt Highway;
- providing an Auxiliary Left Turn - Short (AUL)(s) intersection treatment on the Sturt Highway;
- construction of the local road intersection with the Sturt Highway to provide for 2 travel lanes and be sealed for at least 50 metres from its intersection with the Highway;
- designing and constructing the intersections so as not to interfere with the capacity of the current roadside drainage network and to prevent water from proceeding onto, or ponding on, the carriageway of the Sturt Highway; and
- a new polymer modified asphalt heavy duty pavement wearing surface across the intersection to accommodate the heavy vehicle turn paths to and from the Sturt Highway.

Additionally, the EIS states that a Community Consultation and Stakeholder Engagement Management Plan will provide a schedule of activities when there may be heavy vehicles accessing the site.

9.3 Private Vehicle Access

As stated in Section 3.10.1 of the EIS on-site parking provided for 100 vehicles, including bus parking bays. During operation it is estimated that up to 25 staff and contractors will need to access the site on a daily basis. The provision of 100 parking bays on site will provide sufficient parking capacity and allow higher numbers of vehicles to be parked at the site in the event of major maintenance activities or the ultimate decommissioning of the site.

Further details on private vehicle assess will be developed during the construction planning process and described in the TMP.

9.4 Dust Management

Table 40 of the EIS outlines a range of mitigation measures that would be implemented to manage the generation of dust from vehicle, plant and equipment operation during construction of the project. This includes the use of water trucks on unsealed roads, minimising vehicle movements and cleaning vehicles on a regular basis. During operation, water will also be used for dust suppression on unsealed site access roads and vegetation cover will act as a simple means for dust suppression between solar panel rows.

A Construction Traffic Management Plan will be prepared (as part of the overall TMP) and implemented to assist with the management of vehicle generated dust.

9.5 Glare Mitigation Measures

A detailed landscape and visual impact assessment was undertaken for the EIS (see Section 7.3.6) and included the findings of a reflective and illumination glare impact assessment (which is provided as **EIS Appendix I**). This study found that, in all cases, the potential for adverse glare from the proposed facility will be negligible. No resident living within proximity to the project will be subjected to significant glare experiences, nor will any public road.

Measures to manage potential glare issues from the project are outlined in Table 41 of the EIS and include the following:

- the project will use single-axis tracking arrays which tilt to follow the sun as the sun tracks east to west through the day to maximise the amount of sunlight available to the panels;
- the maximum height of the panels will be approximately 4 m above the natural ground level and arrays will likely be spaced either 5 m apart for the likely candidate (NEXTracker) portrait system or 10 m apart for the likely candidate (SunPower) landscape system;
- light spill from the project onto the facades of the surrounding residential dwellings should be kept below 1 lux during curfew hours; and
- AS 4282-1997 *Control of the Obtrusive Effect of Outdoor Lighting* sets out general principles that should be applied when designing outdoor light to minimise any adverse effect of the light installation.

9.6 Section 138 of the Roads Act 1993

As per section 5.1.1 of the EIS, it is noted that pursuant to Clause 4.42 of the EP&A Act, approval under certain legislation (including the *Roads Act 1993*) cannot be refused if it is necessary for carrying out an approved State Significant Development (SSD) and must be granted "substantially consistent" with the SSD consent, including consent under Section 138 of the *Roads Act 1993*. The EIS then goes on to stipulate which actions require this consent and that it will be obtained from the RMS or Council if required.

As outlined in Section 5.1.6 of the EIS, approval under Section 138 of the *Roads Act 1993* will be sought for any works within the road reserve of a classified road.

10 Narrandera Shire Council (NSC)

10.1 Cumulative Impacts

The potential cumulative impacts of the project were considered throughout the EIS. Specifically, the following matters were investigated:

- Aboriginal cultural heritage;
- Biodiversity;
- Noise;
- Socio-economic impacts including workforce and accommodation;
- Traffic on local roads;
- Landscape and visual amenity; and
- Waste.

Section 7.4 of the EIS provides detailed consideration of the cumulative impacts associated with these matters and describes mitigation measures that would be implemented to address any issues identified. This section of the EIS identifies that pressure would be placed on short-term accommodation options and labour sources in the Narrandera LGA during the construction period and states that the key to ensuring potential issues are minimised is to engage with DPE and relevant Councils during the construction planning stage.

Section 7.4 of the EIS provides a commitment to developing focused employment and accommodation strategies during the pre-construction phase to further address opportunities and constraints regarding these issues.

The reader is referred also to **Section 10.4** which includes a commitment by Reach Solar to develop an Accommodation and Employment Strategy in consultation with NSC prior to the commencement of construction addressing employment and accommodation issues.

10.2 Roads and Traffic

10.2.1 Roads and Traffic - General

NSC Submission Extract: *The traffic and transport impact assessment is considered to be deficient in that the local road network in the Project area was not designed to accommodate so many heavy/large and light vehicles over such a long time period. The local roads in the main are narrow and rudimentary. Intersections are of a similar low standard, commensurate with the type and volume of local traffic.*

In response to this submission item the following clarifications are provided:

- The TIA is not considered to be deficient. It has included a comprehensive assessment undertaken in accordance with standard assessment requirements and includes detailed consideration of the traffic generation potential of the Project, potential impacts and proposed mitigation measures.
- It is acknowledged that portions of the road network will be significantly impacted by traffic associated with construction of the Project with this being previously identified within the TIA.

- It is further acknowledged that during the Project's construction phase the quantum and nature of vehicles generated by the Project will necessitate the implementation of a range of mitigation measures including but not limited to increased maintenance, enhanced intersection forms and traffic management planning. The mitigation measures identified within the TIA were developed cognisant of the existing standard of the road network servicing the Project and are considered to remain appropriate.

NSC Submission Extract: *Council requests that the Proponent engage with not only NSC, but also other adjoining councils whose roads will likely be impacted by the Project. It is important that all local roads in vicinity of the Project site are considered in totality. If a road is, or is not, upgraded that may well influence the Project's traffic flow patterns and could result in an unfair impost on one LGA to the benefit of the adjoining LGA.*

In response to this submission item the following clarifications are provided:

- The proponent has engaged with councils adjoining NSC throughout and subsequent to the development of the EIS whose roads will likely be impacted by the Project, in particular Murrumbidgee Council.
- In relation to the routing of the traffic demands associated with the Project, this will be determined at a project level and not dictated by individual driver preferences. In this regard the preliminary plan is for heavy vehicles to enter and exit the site via the Western Access Route, via Main Canal Road and Old Morundah Road, and for light vehicles and buses to access the site via the Eastern Access Route, via Back Morundah Road and a short section of Reas Lane.
- Reach Solar will contract with an EPC Contractor who will have substantial control over the routing of construction vehicles to the site. For example, the contractor could refuse material deliveries that arrive at an alternative access point and hence have utilised an alternative route to access the site. The future Transport Management Plan (TMP) will establish the expectations in relation to driver's conduct.
- Should an alternative transport route be identified for use by construction-related Project traffic, agreement would be sought from the relevant road authority as part of an amendment to the Project TMP.
- SLR remains of the view therefore that the proposed mitigation approach provides sufficient flexibility to allow planning to change in response to any road upgrades that may eventuate unrelated to the Project but still ensures that individual road authorities are not unfairly burdened as a result of any upgrades to the benefit of other road authorities.

NSC Submission Extract: *It is understood from evaluating the EIS that each of the three construction stages (installing 300 MW each time) will have three phases therein. Each stage is expected to take about 18 months to build, resulting in approximately five years of construction activity.*

As noted in **Section 1.2** of this report:

The Project comprises the construction of PV solar plants (total capacity 900 MWac) to be developed in stages. The number of stages is dependent on factors including:

- *the contractual obligations for the purchase of electricity by one or more third parties;*
- *the capacity of the high voltage transmission network to which the project will be connected for the export of generated electricity; and*

- *the future schedule for upgrading the high voltage transmission network.*

For the purposes of the TIA (refer EIS Appendix M), a nominal construction scenario was assessed whereby it was assumed, as described above, that the Project will be constructed in three stages with each stage taking approximately 18 months to complete. The assumed construction scenario was developed in consultation with Reach Solar who advised that it is feasible and realistic, albeit with the ultimate staging possibly varying dependant on market conditions.

NSC Submission Extract: *NSC notes that the Traffic Impact Assessment excludes the impacts associated with decommissioning - 30-50 years hence - but indicates that such impacts can be assumed to be similar to the construction phase. NSC requires the decommissioning impact to be factored in as it is especially relevant, not only to road maintenance aspects, but also for workforce accommodation services.*

In response to this submission item the following clarifications are provided:

- The TIA prepared for the Project considered the impact of the Project over a design horizon that extends 10 years past the assumed date of full completion of construction activity (i.e. 2033). This approach is consistent with the typically adopted traffic engineering development assessment practice.
- It is not practical to quantify what the specific traffic impacts of a project might be in 50 years' time simply because there is so much uncertainty in relation to aspects outside the proponent's control and therefore such an assessment would provide very little value, if any, and is therefore not a typical development assessment requirement.
- Aspects outside the proponent's control include for example:
    . *Uncertainty in Relation to the Future Road Network Form* - It is highly unlikely that an accurate forecast of the form and condition of the road network can be made over a 50-year period as part of a development assessment. As an example of the significant change to the road network infrastructure that occurs over such a long duration it was just over 50 years ago (1966) that there were no traffic signals installed in NSW outside the Sydney-Wollongong-Newcastle area. It is quite possible 50 years from now, just as traffic signals are now commonplace, that the road network will include devices that relay real-time road information to vehicles. The degree to which such changes might occur and the impact they will have on the road network is highly uncertain and therefore the quantification of impacts to the distant future road form is not practical.
    . *Uncertainty of Technology and Legislation Changes* - It is extremely difficult to accurately predict as part of a development assessment the impact that emerging technologies and related legislation will have on the transport system over the next 50 years. It is likely for example that autonomous vehicles will comprise a large component of the vehicle fleet within this period; however the degree to which this technological change will occur, the degree to which it will be mandated by legislation and the impact of this on the transport system is very uncertain at this time. An example of the technology change and associated legislation that has occurred within a 50-year period relates to the introduction of seat belt technology and the associated legislation. Provision of seat belt mounting points (front only) was only mandated in new vehicles sold in Australia just over 50 years ago (1964) with world-first legislation relating to seat belt use introduced in Australia less than 50 years ago in the early 1970s. Since then, the technology in vehicles has significantly advanced and it is difficult to predict with any degree of certainty the degree to which technological and legislative changes will affect the transport system over the 50-year period that NSC has asked be considered within the submission.

- It is for the above reasons in addition to others that proponents are not required to quantify specific impacts over such long time periods as it is simply not practical.
- It is however acknowledged that the transport demands associated with the future decommissioning activity could still have impacts on the road network and therefore it would be appropriate for the proponent to be required to prepare a separate Transport Management Plan (Decommissioning) as part of the broader planning for the decommissioning of the site. It would be appropriate for this plan to be prepared in advance of any significant decommissioning activities commencing and for the plan to include mitigation measures including potential make good obligations for any significant impacts to the condition of the road pavement at that point in time.
- The approach of requiring the future preparation of a Transport Management Plan (Decommissioning) overcomes the current difficulties of forecasting the form of the transport system over such a long horizon whilst also minimising the risk to Council that it will be burdened by significant pavement maintenance or rehabilitation obligations in the distant future.

NSC Submission Extract: *To provide greater transparency regarding the traffic flows, rather than the average numbers across the three phases within each of the three construction stages, NSC requests a breakdown of heavy vehicle and light vehicle numbers for each of the three phases.*

In response to this submission item the following clarifications are provided:

- The requested breakdown was provided in Section 5.2 of the TIA in the right-hand column of Table 13. This table for example identifies that during the Establishment of Site Compounds Phase that on average there would be less than three heavy vehicles per day (excluding buses) but that up to 17 heavy vehicles per day (excluding buses) might occur on any given day.

NSC Submission Extract: *Council notes heavy vehicles are to enter and exit the site via the Western Access Route (via Main Canal Road); light vehicles and buses will access the site via the Eastern Access Route (via Back Morundah Road). It is also noted that there is restricted access for B-doubles on Main Canal Road and Old Morundah Road.*

In response to this submission item the following clarifications are provided:

- The existing restrictions in relation to B-double use of Main Canal Road and Old Morundah Road were noted in Section 3.4 Table 8 of the TIA and the assessment was prepared cognisant of these restrictions.
- In response to these restrictions it was proposed that an 8m seal on Old Morundah Road with a pavement capacity suitable for the design traffic demands would be provided should all-weather access be sought along the Western Access Route (i.e. should this be the primary point of access for any construction stage).

NSC Submission Extract: *From our assessment of the data in the EIS it appears that the traffic types and volumes are as summarised in Table 2 below.*

In response to this submission item the following clarifications are provided:

- NSC have raised queries in relation to the forecast traffic generation. Based on the annotations in bold in the table within NSC's submission it is understood that these queries relate to the proportion of light vehicles associated with construction of the project and the number of bus movements.

- In relation to the light vehicles SLR has assessed the workforce logistics arrangements proposed by the proponent which would result in approximately 90% of the workforce being bused to site during the construction phase with the remainder travelling in light vehicles. Provided this description of the Project is representative, then the traffic modelling presented within the TIA remains valid.
- SLR's experience with other major projects in rural locations is that this assumed workforce logistics arrangement is practical but only if supported by effective strategies within the TMP. Such strategies may include morning toolbox meetings being conducted at the designated marshalling points in town for example. On other projects, these marshalling point procedures have also included random alcohol and drug testing on occasion as the commute to site has been considered part of the working day for these other projects.
- In relation to the calculation of bus movements which is the second item flagged in bold text in NSC's submission, SLR believes the mechanics of its calculations are correct.
- It appears in preparing the submission that NSC may have made a transposition error having quoted the value of 15 from a subsequent row which relates to the number of Engineers/Supervisor staff (i.e. 15 persons).
- The calculations presented within the TIA were as follows:
    - The typical workforce will be 150 persons with 90% of the workforce (i.e. 135 persons) traveling to site in buses and 10% of the workforce (i.e. 15 persons) traveling to site in light vehicles.
    - The 135 persons traveling to site per day in buses will result in 14 daily bus movements (i.e. 7 buses to site from the marshalling point in the morning and 7 buses back from the site to the marshalling point in the evening).
    - Assuming 14 daily movements for 4.5 years (1,642 days) results in a total of 22,996 bus movements (i.e. 11,498 bus trips to site and 11,498 bus trips from site).
    - Given the commute distance, duration of construction activity and the nature of the labouring activity at site (i.e. the workers may potentially return to buses dirty) it is expected that the buses would be dedicated to the project and would remain on-site during the day. Such an arrangement is typical for major rural projects.
- It is therefore asserted that the calculations presented within the TIA are correct and the outcomes remain valid.

NSC Submission Extract: *With reference to light vehicles, aside from the 15 vehicles/day (30 movements/day) used by engineers/managers, it is unclear how many of the workers will use private vehicles as distinct from being transported by mini bus.*

NSC also seeks a consent condition commitment to a robust and feasible worker bus transport system.

The EIS indicates that on-site parking will be provided for 100 vehicles. NSC queries the requirement for such a large car park. Is it due to an expectation that many workers will drive their own private vehicles?

In response to this submission item the following clarifications are provided:

- In relation to light vehicles SLR has assessed the workforce logistics arrangements proposed by the proponent which would result in approximately 90% of the workforce being bused to site during the construction phase with the remainder travelling in light vehicles.
- NSC's request that a consent condition be imposed obliging the proponent to achieve a robust and feasible worker bus transport system will be addressed by the TMP developed for the Project.

NSC Submission Extract: *Given is it intended for the Project life to be in the order of 30-50 years, clearly there will be periodic upgrades of the technology and equipment. NSC seeks advice from the Proponent as to the likely scope and frequency of such activities, given it will have significant implications on road wear and tear currently not canvassed in the EIS.*

In response to this submission item the following clarifications are provided:

- Section 3.7.2 of the EIS states that the major activities that would occur during operation of the project would include: monitoring of plant performance; routine inspections; preventative maintenance; vegetation management and cleaning. A maintenance management system would be implemented to ensure plant is satisfactorily maintained.
- Section 7.3.8.2 of the EIS identifies that maintenance activities associated with the project would be irregular and seasonal in nature, with up to 5 heavy goods vehicles and 5 light vehicle movements being required for such activities per day. Regular maintenance activities described in the EIS include: solar panel replacement, inverter maintenance, panel cleaning, vegetation management and fencing.
- No major upgrades of technology or equipment associated with the project are anticipated. However, if the need for major upgrades arises, additional approvals may be required.

10.2.2 Road Upgrading prior to Construction Activity

NSC Submission Extract: *Local roads to be impacted by Project-related traffic include Reas Lane, Back Morundah Road, Main Canal Road, Old Morundah Road, Browley Street, Yamma Road, Morundah Road.*

Roads that lie within the Narrandera Shire Council and for which NSC is the roads authority are Reas Lane and Back Morundah Road.

Reas Lane and Back Morundah Road are sealed roads with varying quality of gravel substrate and seal, primarily designed to cater for low volume local traffic. It is considered there is a high likelihood this development will increase the deterioration rate of these roads that would not otherwise be expected.

In response to this submission item the following clarifications are provided:

- It is acknowledged that portions of the road network will be significantly impacted by traffic associated with construction of the Project and that the Project will likely increase the deterioration rate of several roads servicing the Project.
- As a result the TIA previously identified that the proponent should be required to *"Enter into make good agreements for the pavement damage that occurs to the Council-controlled road networks during the duration of construction activity"*
- At this point in time it is expected that the majority of accelerated deterioration will occur on the Western Access Route which includes Main Canal Road and Old Morundah Road as this is the route proposed to facilitate heavy vehicle movements. It is however acknowledged that the Eastern Access Route should still be subject to a make good agreement to ensure that Council does not bear a significant maintenance burden associated with the Project.

NSC Submission Extract: *Due to the use of Back Morundah Road by local traffic and its status as a school bus route, it is considered that a certain amount of upgrading work will be required prior to construction commencing.*

The following condition should be included in any approval:

a. Prior to construction works commencing on the Project site, the proponent must undertake all works necessary to upgrade any road, its associated road reserve and any public infrastructure in that road reserve, to a standard suitable for use by heavy vehicles and special vehicles used during the construction phase and on-going operations of the solar farm. The design and specifications, and construction, of these works must be completed and certified by an appropriately qualified person and agreed to by the Road Authority (NSC). Pavement design shall meet minimum design requirements under Austroad's Guidelines and to the satisfaction of Council.

In response to this submission item the following clarifications are provided:

- The requested requirement is considered reasonable provided that it relates only to the sections of the road network that are intended to facilitate heavy vehicle activity associated with haulage of materials and equipment to site – this is currently anticipated to be the Western Access Route. Pavement design shall meet minimum design requirements under Austroads's Guidelines.

NSC Submission Extract: *Aside from the above condition, as the local Roads Authority, NSC requires the Proponent to meet with Council as soon as possible to jointly develop a comprehensive road works program. The following conditions are to be added to any consent to complement any conditions already specified by RMS and form the basis (but do not limit) of the scope of a TMP:*

b. A detailed condition survey be undertaken (at Proponent's cost) of all local roads (including bridges, culverts, grids, etc.) complete with photographs, and agreement reached with NSC on the survey results.
c. Agreement that on completion of Project construction, all local roads experiencing Project traffic will be reinstated to an equivalent or better condition than that found in the abovementioned condition survey (at Proponent's cost).
d. Notification if any other local roads are to be trafficked by Project vehicles, with condition surveys completed beforehand.
e. That during the construction phase, the Proponent maintains all local roads utilised by Project traffic in good condition to the satisfaction of NSC, thus providing safe, all-weather access. NSC requires three-monthly inspections of such roads with the Proponent and development of an intervention standard that details when maintenance will occur.
f. Adequate advisory signage within road reserves to advise traffic of the route to be taken to access the development. Approval must be gained for the adequacy and intended location of such signage from NSC.
g. That the Traffic Management Plan provides suitable strategies to safeguard the safety of school bus activity.
h. That the Proponent provides NSC with details of all underground cable and overhead powerline locations and shows where they intersect road reserves prior to the commencement of construction. It will be necessary for NSC to approve all submitted details prior to construction.
i. An agreement from the Proponent that if, during the life of the Project, NSC finds evidence of significant increases in traffic volumes or vehicle types on other roads in the locality not addressed in the EIS (or in the road condition survey) that can be directly attributable to the Project, the Proponent agrees to a negotiated settlement with NSC to provide additional funds for road repair, maintenance or any necessary upgrade works.
j. A Road and Traffic Management Plan for the 12 months of decommissioning and that such a condition is included in any consent. NSC will require the provision of road condition and repair and maintenance arrangements similar to those during the construction phase.

In response to this submission item the following clarifications are provided:

- The above requirements are considered reasonable subject to the following rewording:

  Item C Agreement that on completion of Project construction, all local roads experiencing ***significant*** Project traffic will be reinstated to an equivalent or better condition than that found in the abovementioned condition survey (at Proponent's cost).

  Item E That during the construction phase, the Proponent maintains all local roads ***significantly*** utilised by Project traffic in good condition to the satisfaction of NSC, thus providing safe, all-weather access. NSC requires three-monthly inspections of such roads with the Proponent and development of an intervention standard that details when maintenance will occur.

- It is considered appropriate that the proponent is only responsible for the maintenance of roads significantly utilised by traffic that is directly attributable to the Project which is likely to include the sections of the local road network connecting the Project site to the highway network.
- It is identified that the proponent however should not be responsible for the maintenance of sections of the road network remote from the Project site for which the traffic demands relate to already approved uses. As an example of this responsibility restriction the proponent should not be responsible for a section of local road connecting a hypothetical motel in Narrandera to the highway remote from the Project site. This is because provided that the hypothetical motel continues to operate within its current approvals the impacts of the traffic accessing the motel from the highway would have already been considered as part of the development assessment process associated with the motel and hence it would be *"double-charging"* to apply maintenance obligations against the Yarrabee Solar Project for traffic accessing the motel. It is recognised that this double-charging exclusion would not likely be relevant to the sections of the local road network near the Project site connecting the site to the highway network such as Back Morundah Road and Reas Lane.

10.2.3 Roads and Traffic during Operations

NSC Submission Extract: *During the 30-50 years' operational life, local roads including Reas Lane and Back Morundah Road, and possibly other minor roads will be accessed by Project traffic.*

As the local Roads Authority, NSC will require annual road maintenance contributions from the Proponent. Such contributions will be expected to commence on acceptance by NSC that the subject roads have been returned to, or exceed, the conditions found prior to construction, after completion of construction of each stage of the solar farm development. Roads maintenance contributions should be in the order of $4,500/km/pa.

In response to this submission item the following clarifications are provided:

- The requested contribution during operation of the Project, based on the description of the Project assessed by SLR, is not reasonable given Reach Solar's intention to enter into a Voluntary Planning Agreement (VPA) with NSC that will provide a financial benefit to NSC at the commencement of each stage of the Project.
- The proponent has advised that outside of the construction and decommissioning phase that there will be very limited heavy vehicle demands associated with the ongoing operation of the site.
- The contribution arrangement requested by NSC might be appropriate for an alternative development type such as a quarry that would generate significant heavy vehicle movements during its operation phase associated with the haulage of product and hence generate additional pavement maintenance obligations. The "product" however from the proposed Yarrabee Solar Project is electricity that will be distributed via the electricity grid not via the road network as would be the case with product from a quarry.

- The Project is likely to generate up to 50 daily light vehicle trips (total, to and from the site) associated with staff movements. Typical daily light vehicle movements will be less. Light vehicle traffic does not significantly accelerate pavement deterioration and hence NSC is unlikely to be exposed to a significantly increased maintenance requirement because of this traffic.
- Furthermore, the suggestion appears to be that the Project should assume the full existing maintenance obligation for Reas Lane and Back Morundah Road (i.e. $4,500/km/pa). Such an imposition is unreasonable as these roads are existing (not new roads proposed to service the Project) and hence NSC already carries this maintenance obligation and would continue to do so if the Project did not proceed.
- The submission suggests that the costs associated with this existing obligation (i.e. $4,500/km/pa) should be transferred to the proponent; however it is only reasonable for the proponent to be obligated to cover the marginal increase in costs that NSC might bear because of the Project.

10.2.4 Roads and Traffic during Decommissioning

NSC Submission Extract: *Because of the consequences for wear and tear on the local roads, NSC seeks details regarding the planned traffic flows during the decommissioning phase.*

In response to this submission item the following clarifications are provided:

- A response has been provided earlier herein to a similar item that identified that the scale of traffic demands during the decommissioning phase are likely to be no more than those experienced during the construction phase.
- A more precise consideration of decommissioning traffic demands will occur as part of preparing the future Transport Management Plan (Decommissioning).

NSC Submission Extract: APPENDIX 1: LOCAL ROADS UPGRADE REQUIREMENTS

Considering the proposed Project will generate intense use of local roads during the approximately five years of construction, 30-50 years of operations and approximately 12 months of decommissioning, NSC as the Roads Authority for local roads requires the Proponent to fund and deliver the following:

A. Road Upgrades prior to Commencement of Construction

1. Upgrade of Back Morundah Road from the intersection of Reas Lane to 100m past the entrance of the solar farm:
- *Provide a minimum of 100mm compacted gravel (gravel to be minimum CBR 30 material)*
- *Maintain 7m wide seal (currently 6m) with 1m gravel shoulder on either side*
- *Provide a 20/14 seal*

In response to this submission item the following clarifications are provided:

- Preliminary planning is that Back Morundah Road will serve as the Eastern Access Route to the site facilitating light vehicle and light bus movements.
- It is expected that during the Construction Phase the Project will typically result in 7 bus movements to and from the site per day and 15 light vehicle movements to and from the site per day as heavy vehicle haulage is planned to occur via the alternative Western Access Route. It is expected that a similar level of traffic generation would typically also occur during the Decommissioning Phase. It is noted that the proponent has advised that there may be brief periods during the construction phase when the traffic generation of the project may be higher than this.

- During Operations it is anticipated that not more than 50 light vehicle movements (total, to and from the site) per day would occur.
- Assuming that an effective TMP is implemented then this level of additional traffic demand does not warrant the full upgrade of the northern section of Back Morundah Road as suggested within the submission.

2. Reas Lane - Back Morundah intersection upgrade - BAR/BAL:

- *Design as per Austroad's standards for geometry*
- *Provide a minimum 200mm compacted gravel depth (minimum CBR 30 material)*
- *Provide a 20/14 seal*
- *Line mark the BAR/BAL configuration up to 30m off the edge line of the road*

In response to this submission item the following clarifications are provided:

- The request to install BAsic Right Turn (BAR) and BAsic Left Turn (BAR) treatments is considered reasonable.

3. Entry road to solar farm - Back Morundah road intersection - BAR/BAL

- *Design as per Austroad's standards for geometry*
- *Provide a minimum 200mm compacted gravel depth (mininum CBR 30 material)*
- *Provide a 20/14 seal*
- *Line mark the BAR/BAL configuration up to 30m off the edge line of the road*

In response to this submission item the following clarifications are provided:

- The request to install BAsic Right Turn (BAR) and BAsic Left Turn (BAR) treatments is considered reasonable.

B. Road Maintenance during the Construction Phase

Full payment of the repair and maintenance costs on those roads directly impacted by Project-related traffic in accordance with the agreed terms under any TMP.

In response to this submission item the following clarifications are provided:

- The intent that the proponent bear all significant and substantiated increases in maintenance costs that NSC bears as a direct result of the Project's construction activity is reasonable. It is noted that this should however exclude impacts that are associated with already approved land uses servicing the Project as discussed in **Section 10.2.2**.

C. Road Maintenance during the Operation Phase

Payment to NSC of $60,000 per annum, plus CPI, for ongoing repair and maintenance costs.

In response to this submission item the following clarifications are provided:

- There is no basis, nor are we aware of any precedence, for the requested contribution during operation of the Project based on the description of the Project assessed by SLR.
- The proponent has advised that outside of the construction and decommissioning phase there will be very limited heavy vehicle demands associated with the ongoing operation of the site.
- Refer to Section 10.2.1 for further detail on our response to this issue.

D. Road Maintenance during the Decommissioning Phase

The TMP shall include the decommissioning phase of the project with, as a minimum, similar requirements as per the construction phase.

In response to this submission item the following clarifications are provided:

- It is acknowledged that the transport demands associated with the future decommissioning activity could have impacts on the road network and therefore it would be appropriate for the proponent to be required to prepare a separate Transport Management Plan (Decommissioning) as part of the broader planning for the decommissioning of the site. It would be appropriate for this plan to be prepared in advance of any significant decommissioning activities commencing and for the plan to include mitigation measures including potential make good obligations for any significant impacts to the condition of the road pavement at that point in time.
- The approach of requiring the future preparation of a Transport Management Plan (Decommissioning) overcomes the current difficulties identified earlier herein of forecasting the form of the transport system over such a long horizon whilst also minimising the risk to Council that it will be burden by significant pavement maintenance or rehabilitation obligations in the distant future.

SLR confirms its opinion that the assessment presented within the TIA presents a conservative assessment of the likely traffic impacts associated with the Project and that the mitigation measures previously identified within the report remain appropriate.

10.3 Telecommunications

As part of developing the accommodation strategy for the Project (refer to Section 10.4 of this report and Section 7.4.2 of the EIS), consideration would be given to the limits of services available for construction staff and any pressures that they may place on existing services such as telecommunications.

The strategy would be developed in consultation with relevant Councils and service providers to identify potential service limitations and to develop feasible mitigation measures, such as temporary upgrades, etc.

10.4 Social & Economic Impacts: Employment and Accommodation

Section 7.3.8 of the EIS provides comprehensive consideration of the social and economic environment that the Project is located in, as well as a detailed assessment of the potential social and economic impacts of the Project.

These include:

- Existing conditions in Narrandera;
- Narrandera's population;
- Employment and industry patterns;
- Housing and accommodation; and
- Local and regional strategies such as Narrandera Shire's Economic Development Strategy 2017-2020, and Riverina Murray Regional Plan 2036.

Section 7.3.8.2 of the EIS provides a detailed analysis of the social and economic impacts and benefits of the project during the construction period. This section identifies that the Project will have a temporary impact on the township of Narrandera during construction, with adverse impacts such as short-term pressure on accommodation and some retail services being balanced by benefits associated with direct and indirect employment and flow-on of expenditure through the local economy.

A local employment strategy will be developed prior to construction to ensure that an appropriate proportion of the project workforce is "local". Additionally, the strategy will address actions to employ local Indigenous personnel, in line with their representation within the overall community, as well as investigating an opportunity for a local apprenticeship/traineeship scheme with an annual intake.

Additionally, an accommodation strategy would be developed early in the project planning stage to identify suitable accommodation options available to support a percentage of the workforce that might need to be sourced from outside the Narrandera region.

10.5 Waste

A detailed Waste Management Study was prepared for the project and is summarised in Section 7.3.10 and included as **EIS Appendix N**. This study found that … *"Gregadoo Waste Management Centre* [at Wagga Wagga] *is the largest landfill in the region. The facility will accept a range of waste and recyclables, including most of those generated by this development, and hence appears to be the most likely destination for waste generated during construction. Other available sites are very small and designed to receive waste only from local residents and small businesses. These sites would only be suitable for disposing of small amounts of waste during ongoing operations."*

The Waste Management Study predicts that about 8,000 tonnes of waste will be generated during construction of each nominal 300 MWac stage of the project. Waste quantities and disposal methods outlined in the Waste Management Study are provided in **Table 3** below. As outlined in the study, there is limited capacity of waste disposal facilities at Narrandera and a range of recycling and disposal options exist and may be available at the Gregadoo Waste Management Centre (GWMC)..

Further details around waste disposal, including more definition of how different waste streams will be managed and the timing of disposal will be included in the CEMP. Engagement with Wagga Wagga Shire Council, GWMC and other relevant facilities will occur during planning for the construction phase of the project, when timing of waste disposal activities is clearer. Reach Solar will seek to encourage the EPC Contractor for the Project to recycle all waste materials wherever possible.

Table 3 Waste Quantities and Disposal Methods

Phase	Waste Type	Estimated Quantity	Handling Method	Disposal or Recycling	Locations
Construction	General waste	1500 L – 2700 L per week	Front lift bins collected by a contractor	Disposal	Likely Wagga Wagga
	Food waste	150 kg – 270 kg per week	In with general waste	Disposal	Likely Wagga Wagga
	Contaminated soil	Nil	N/A	N/A	N/A
	Chemicals and hazardous waste	Small quantities	Clinical waste to a hospital	Disposal	Possibly Narrandera District Hospital
	Road construction waste	5,800 t or 3,800 m^3 total	Taken off site by contractors	Recycling	Likely Wagga Wagga

Phase	Waste Type	Estimated Quantity	Handling Method	Disposal or Recycling	Locations
	Car park waste	119 t or 73.5 m^3 total	Taken off site by contractors	Recycling	Likely Wagga Wagga
	Fencing	375 kg total	Taken off site by contractors	Recycling	Likely Wagga Wagga
	Timber pallets	842 kg per day (3 m^3 per day chipped)	Chipped, some used on site, remainder collected by contractor	Recycling	Likely Wagga Wagga
	Cardboard	178 kg per day	Baled and stored for collection by a contractor	Recycling	Wagga Wagga
	Plastic film	90 kg per day	Baled and stored for collection by a contractor	Recycling	Wagga Wagga
	Excavated soil	N/a	Reused on site	Reuse	On-site
	Concrete	20 t total per year	Taken off site by contractors	Recycling	Likely Wagga Wagga
	Metals	95 kg per day	Taken off site by contractors	Recycling	Wagga Wagga
Operations	General waste	100 L per week	Taken to landfill by staff	Disposal	Narrandera waste facility
	Food waste	10 kg per week	Placed in worm farm by staff	Vermiculture	On-site
	Office paper	5 kg per month	Taken to waste facility by staff	Recycling	Narrandera waste facility
	Chemicals and hazardous waste	Small quantities	Handled according to OEMP		
	Timber, cardboard and plastic film	37.4 kg 8 kg 4 kg	Taken to waste facility by staff	Recycling	Narrandera waste facility
	Concrete	Small amounts	Taken off site by contractors	Recycling	Likely Wagga Wagga
	Metals	Small amounts	Taken off site by contractors	Recycling	Likely Wagga Wagga

10.6 Biosecurity

10.6.1 Importation of Goods to Australia

The act of importing any goods to Australia is subject to the Commonwealth *Biosecurity Act 2015*. This act is administered by the Department of Agriculture and Water Resources who employ a range of mechanisms to screen and inspect goods that are imported to the country from overseas. These methods include: research, shared international resources and intelligence and screening mechanisms such as x-ray machines, surveillance and detector dogs.

All goods imported to Australia go through a quarantine clearance process. This process is implemented to ensure that relevant import requirements have been adhered to.

The Australian Biodiversity Import Conditions database (BICON) (https://bicon.agriculture.gov.au/) is used to determine if any specific import conditions apply to imported goods and if an import permit is required. Requirements vary based on a number of risk factors that are under constant review by the Department of Agriculture and Water Resources.

General requirements for imported goods are provided at: http://www.agriculture.gov.au/import and include:

- Sea container cleaning standards and inspection program;
- Sea container hygiene system;
- Mandatory treatments for packing materials; and
- Prohibition of certain packing materials such as straw or used sacks.

10.6.2 Biosecurity Certification

The NSW *Biosecurity Act 2015* provides for the certification of any work that involves the use of biosecurity matter. A biosecurity certificate confirms that the matter:

- is free from a specified pest, disease or contaminant;
- is in a specified condition;
- is from an area that is free from a pest or disease;
- has been the subject of a specific treatment;
- meets specific requirements; and
- complies with any other matters set by the Biosecurity Regulations.

Biosecurity matter is defined by the *Biosecurity Act 2015* as:

(a) any living thing, other than a human, or

(b) any part of an animal, plant or living thing, other than a human, or

(c) a product of a living thing, other than a human, or

(d) a disease, or

(e) a prion, or

(f) a contaminant, or

(g) a disease agent that can cause disease in another living thing (other than a human) or that can cause disease in a human via transmission from a non-human host to a human, or

(h) any thing declared by the regulations to be a biosecurity matter.

Section 3.4 of the EIS outlines the various components of the project, none of which include a biosecurity matter. A biosecurity certificate is therefore considered to be unnecessary for the project.

10.7 Financial Contributions to NSC

To ensure that the economic benefits of the Project are appropriately invested into the Narrandera LGA, Reach Solar suggests that a Voluntary Planning Agreement (VPA) or similar mechanism is entered into with Narrandera Shire Council.

This agreement would include:

- an upfront contribution as each of the proposed stages of the overall Project commences (based on a percentage of the MW capacity of that stage); and
- financial contributions to support local community projects.

The VPA would need to be agreed with NSC prior to construction of the Project commencing.

11 NSW DPE – Hazards Division

Reach Solar agrees to implementing the conditions of approval recommended by DPE's Hazard Team.

These include the following specific elements as described in the DPE Hazard Team's submission:

Fire Safety Study

Storage and Handling of Hazardous Materials

Emergency Plan

It is noted that the Hazards and Risks Study undertaken within the EIS (Appendix G) envisioned these elements.

12 Conclusion

This response to submissions report has been prepared to meet the requirements of DP&E and Section 75H of the *Environmental Planning and Assessment Act 1979*.

As per Section 2 of this Submissions Report, DPE received a total of 13 submissions related to the Project.

No submissions were received from individual members of the public or special interest groups with all 13 submissions being received from public authorities/government agencies. No objections were received.

Sections 3-12 of this report addressed items of concern raised by the various stakeholders, with most needing to be completed as post consent actions.

In consideration of the assessment presented in both the EIS and this response to submissions report, the issues raised from submissions have been addressed and on this basis the Project should proceed for approval by the Minister.

13 References

NSW Department of Planning and Environment, Guideline for the Preparation of Environmental Management Plans (2004).

NSW Rural Fire Service (RFS), *"Planning for Bush Fire Protection"* (2006).

ATTACHMENT A

Revised Aboriginal Cultural Heritage Assessment Report

ATTACHMENT B

Revised Biodiversity Development Assessment Report

ATTACHMENT C

Submissions

ASIA PACIFIC OFFICES

BRISBANE
Level 2, 15 Astor Terrace
Spring Hill QLD 4000
Australia
T: +61 7 3858 4800
F: +61 7 3858 4801

CANBERRA
GPO 410
Canberra ACT 2600
Australia
T: +61 2 6287 0800
F: +61 2 9427 8200

DARWIN
5 Foelsche Street
Darwin NT 0800
Australia
T: +61 8 8998 0100
F: +61 2 9427 8200

GOLD COAST
Ground Floor, 194 Varsity Parade
Varsity Lakes QLD 4227
Australia
M: +61 438 763 516

MACKAY
21 River Street
Mackay QLD 4740
Australia
T: +61 7 3181 3300

MELBOURNE
Suite 2, 2 Domville Avenue
Hawthorn VIC 3122
Australia
T: +61 3 9249 9400
F: +61 3 9249 9499

NEWCASTLE
10 Kings Road
New Lambton NSW 2305
Australia
T: +61 2 4037 3200
F: +61 2 4037 3201

PERTH
Ground Floor, 503 Murray Street
Perth WA 6000
Australia
T: +61 8 9422 5900
F: +61 8 9422 5901

ROCKHAMPTON
rockhampton@slrconsulting.com
M: +61 407 810 417

SYDNEY
2 Lincoln Street
Lane Cove NSW 2066
Australia
T: +61 2 9427 8100
F: +61 2 9427 8200

TAMWORTH
PO Box 11034
Tamworth NSW 2340
Australia
M: +61 408 474 248
F: +61 2 9427 8200

TOWNSVILLE
Level 1, 514 Sturt Street
Townsville QLD 4810
Australia
T: +61 7 4722 8000
F: +61 7 4722 8001

AUCKLAND
68 Beach Road
Auckland 1010
New Zealand
T: +64 27 441 7849

NELSON
5 Duncan Street
Port Nelson 7010
New Zealand
T: +64 274 898 628

NEW PLYMOUTH
Level 2, 10 Devon Street East
New Plymouth 4310
New Zealand
T: +64 0800 757 695