

4 THE PROPOSAL

4.1 PROPOSAL COMPONENTS

The PV Plant proposal would consist of the following components:

- photovoltaic solar modules (up to approximately 170,000 modules);
- single-axis tracking module framing system mounted on a steel piles;
- up to approximately 22 containerised Power Conversion Units (PCUs);
- a substation containing transformers, associated switchgear and control and protection equipment;
- operations and maintenance buildings with associated car parking;
- Development of road intersection between Lachlan valley way and Wilbertroy Lane, being the main access turn off to the PV Plant
- Minimal upgrade and maintenance of Wilbertroy lane and Naroo lane, being the roads used to access the PV Plant;
- above ground and underground cabling;
- internal all-weather access tracks;
- security lighting (infra-red, closed-circuit television (CCTV) system, security fencing;
- native vegetation plantings to provide visual screening; and
- meteorological station(s).
- a 66kV overhead power line (approximately 5km long) connecting the Project substation to the existing West Jemalong Essential Energy substation.
- Subdivision for the project site and for the electrical substation (and switching yard).

The following elements that form part of the Proposal would connect to the Proposal Site:

- A 5 km (approx.) 66kV overhead power line would be installed to connect into the existing West Jemalong Essential Energy substation
- Upgrade works to an unsealed all weather access track, within Jemalong Station, along the route of the existing farm gravel road access (Naroo Lane). This existing road was constructed and is maintained to carry large grain trucks during harvest, and would need only minimal upgrading.

Ancillary facilities would be located within the site boundary and would include:

- Material laydown areas
- Temporary construction site offices
- Temporary car and bus parking areas for construction workers transportation. Once the plant has been commissioned, a small car park would remain for the minimal staff required and occasional visitors
- Basic staff amenities

The Proposal also includes the subdivision of the property to create an approximately 165 hectare lot for the purposes of a lease from the landowner for the main site of the PV Plant and an approximately 0.5

hectare lot for the proposed substation. At the end of the life of the solar plant, once all infrastructure has been removed, it is expected that the leased lot would be reconsolidated back into the property as well as the substation lot, depending on the final requirements of Essential Energy.

4.1.1 Summary table

The key features of the Proposal are summarised in Table 4-1. Note that component specifications are subject to detailed design and product selection.

Table 4-1 Summary of the key features of the Proposal

Proposal element	Description
Proposal	Jemalong Solar PV Plant
Proponent	Vast Solar Pty Ltd
Capacity	Around 50 MW
Proposal Site area	165 hectares of which the PV Plant will occupy approximately 50% of the site and includes the 5km long 66kV Power Line with a 45m wide buffer surveyed for the Biodiversity Assessment
Site description	The land that will be used for the construction and operation of the Project, comprising parts of the following lots: Lot 13 DP753118, Lot 41 DP 753118, Lot 1 DP 652274, the land known as Naroo Lane, Lot 5 DP 1118332, lot 48 753118, Lot 1 DP 1118332, the land comprising the Cadow Channel and Lot 1 DP 441702. This comprises the land required to construct the substation, the solar field, the proposed internal access tracks, and the corridor for the 66kV power line <u>and connection to the existing West Jemalong substation</u>
Local Government	Forbes Shire Council
Subdivision	The property would be subdivided to create the subdivision of the property to create an approximately 165 hectare lot for the purposes of a lease from the landowner for the main site of the PV Plant and an approximately 0.5 hectare lot for the proposed substation.
Solar array	Approximately 170,000 solar panels mounted in rows up to 100m long, with 3-9m row spacing. The panels would have a maximum height of 3m to 3.5m and the 16,750 array posts would be inserted to a depth of up to 2.4m into the ground.
Substation	An on-site substation occupying around 1 ha with gravelled hardstand and security fencing.
Internal access tracks	Access tracks constructed of engineered fill topped with crushed stone pavement would access the PV Plant infrastructure for maintenance. The driving surface would be 4m wide, plus shoulders and any required drainage.
Operations and maintenance buildings	Buildings would be constructed to provide control, switchroom and storage facilities for the PV Plant.
Security fencing, lighting and CCTV	Continuous security lighting and CCTV cameras would be installed on posts up to 3m high adjacent to the perimeter security fencing and around the operation and maintenance buildings. Security fencing installed around the site would indicatively be 2.3m high.
Construction hours	Standard daytime construction hours would be 7.00am to 6.00pm Monday to Friday and 7.00am to 1.00pm on Saturdays.
Construction timing	12 months commencing June 2018
Workforce	Construction – approximately 100 workers Operation - 3-4 full time equivalent staff
Operation period	Up to 30 years
Decommissioning	The site would be returned to its pre-works state. All above ground infrastructure would be removed to a depth of 500mm. The site would be rehabilitated in

	consultation with the landowner consistent with land use requirements.
Capital investment	Estimated \$70.25 million.

4.2 PROPOSAL LAYOUT

The proposed layout has been developed iteratively in tandem with the environmental assessment and consultations to ensure potential impacts are avoided and minimised wherever possible.

A constraints analysis of the Proposal Site was undertaken to assist with designing the PV Plant layout and planning the environmental assessment. Environmental constraints are factors which affect the 'developability' of a site, and include physical, ecological, social and planning aspects. Specific constraints at the site were allocated to three classes; high, medium and low. Environmental constraint classes are described in Table 4-2.

Table 4-2 Identified Environmental Constraints

High constraint
Flood prone land The Jemalong Station is prone to flooding, in specific locations under heavy storm conditions. A two dimensional flood impact study and modelling for 1/25 year events has been undertaken.
TSC Community One TSC Act listed vegetation community (Inland Grey Box Woodland) was recorded adjacent to the proposed transmission line but would not be impacted by the Proposal
Moderate constraint
Isolated paddock trees Isolated trees in cropland (some derived from an EEC and many hollow-bearing) have habitat and connectivity value for native wildlife.
Thurumbidgee lagoon The lagoon is located north of the Project's footprint, and represents a practical constraint for the PV Plant
Low constraint
Cleared, cultivated paddocks with no paddock trees These areas do not carry native vegetation and have low habitat value.

The layout of the proposed PV Plant has been adapted to avoid high constraint areas as far as practicable and to at least minimise impacts to moderate constraint areas (Appendix C1 and C2).

The layout and works have been designed to comply with setback and other requirements in the Essential Energy guidelines (Essential Energy 2013) as well as setback and access requirements obtained from the Rural Fire Service (RFS); refer section

An environmental constraints map has been prepared for the Proposal Site. This map illustrates location of proposed infrastructure and site access. It overlays environmental aspects, including constraints with the proposed infrastructure. Environmental aspects include;

1. Vegetation communities
2. Nearest residents (sensitive receivers)
3. Drainage lines and water bodies
4. Aboriginal heritage sites

The Environmental Constraints Map is included as Appendix C1 and C2.

4.3 SUBDIVISION

The Proposal would require subdivision for lease purposes of the existing lot (Lot 13 DP 753118) (refer Figure 4.1 for indicative proposed subdivisions). Approximately 165 ha of the existing Lot 13 DP 753118 will be subdivided to provide for the PV Plant.

The Proposal will require an additional subdivision also of the existing Lot 13 DP 753118 for an approximate 0.5 hectare lot, for the construction of the substation and the expected transfer of that freehold lot to Essential Energy.

A proposed subdivision plan is provided at Figure 4.1.

Lot 13 in DP 753118 will therefore be subdivided into 3 lots. The lot for the PV Plant and residue lot will be approximately 165ha and 513 ha hectares in size respectively, and will therefore comply with the minimum lot sizes under the Forbes LEP (100 hectares). The lot created for the substation, however, will not comply with the minimum lot size control.

In accordance with section 89E(3) of the EP&A Act, development consent may be granted to the substation ~~is~~ subdivision as part of this SSD application despite the proposed lot size being prohibited under the Forbes LEP. This is addressed in further detail in Section 5 of this EIS.

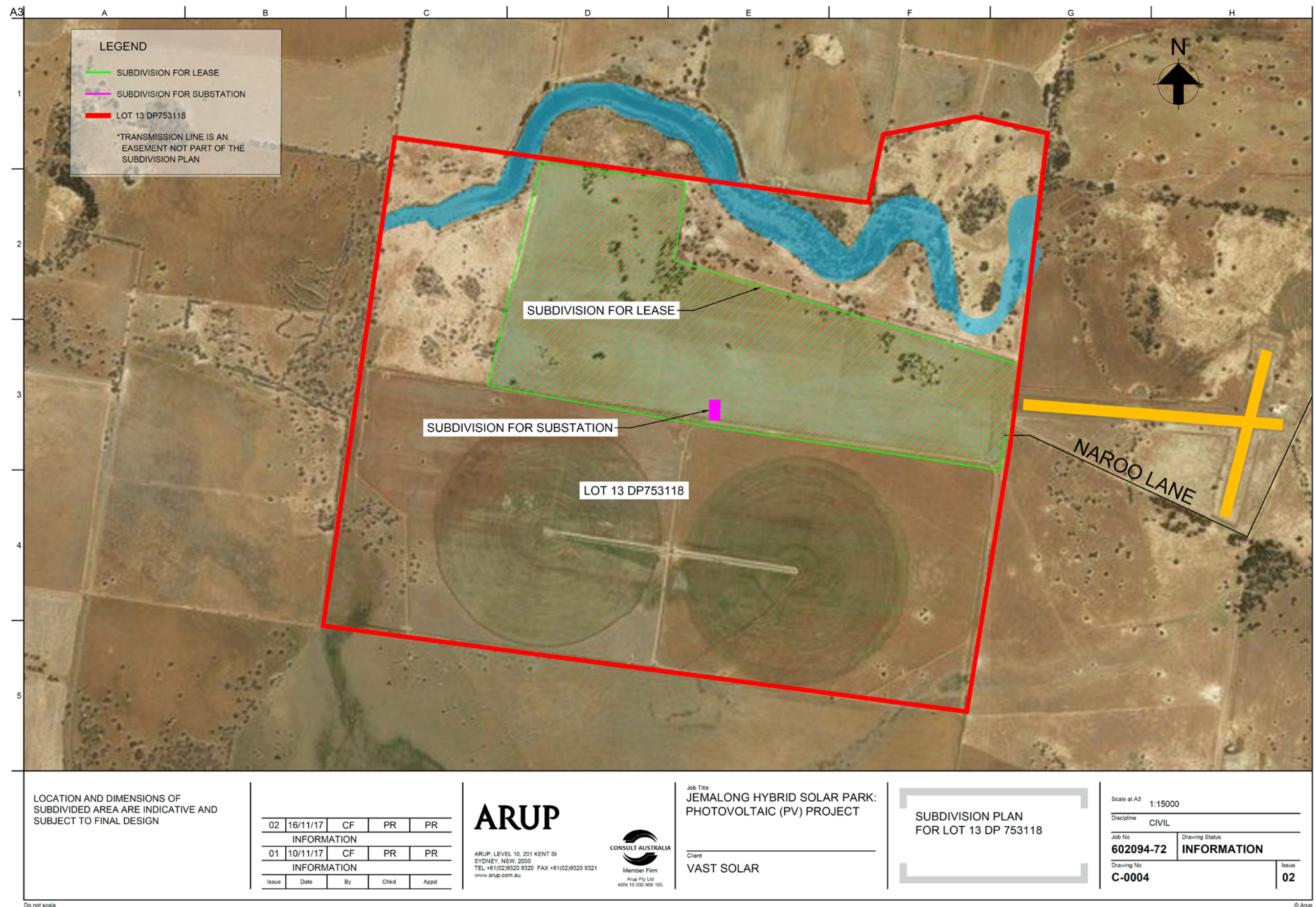


Figure 4-1 Proposed subdivision plan

4.4 PROPOSED INFRASTRUCTURE

The Proposal involves the construction of a ground-mounted solar PV generation equipment, up to 50MWac in capacity. The PV Plant would connect into the existing West Jemalong Essential Energy substation at the junction of Whispering Pines Lane and Lachlan Valley Way, approximately 3.2 km north of the site.

The Proposal infrastructure includes:

- photovoltaic solar modules (up to approximately 170,000 modules);
- single-axis tracking module framing system mounted on a steel piles;
- up to approximately 22 containerised Power Conversion Units (PCUs);
- a substation containing transformers, associated switchgear and control and protection equipment;
- operations and maintenance buildings with associated car parking;
- Development of road intersection between Lachlan valley way and Wilbertroy Lane, being the main access turn off to the PV Plant
- Minimal upgrade and maintenance of Wilbertroy lane and Naroo lane, being the roads used to access the PV Plant;
- above ground and underground cabling;
- internal all-weather access tracks;
- security lighting (infra-red, closed-circuit television (CCTV) system, security fencing;
- native vegetation plantings to provide visual screening; and
- meteorological station(s).
- a 66kV overhead power line (approximately 5km long) connecting the Project substation to the existing West Jemalong Essential Energy substation.

Ancillary facilities would be located within the site boundary and would include:

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

The layout of the infrastructure components is shown in Figure 3-2 and the components are described below. The plans and specifications of the components are subject to detailed design and final product selection.

4.4.1 Solar arrays

It is expected that the array would comprise up to approximately 170,000 solar panels mounted in rows on a fixed or single axis tracking system. A single axis system, illustrated in Plate 4-1 would be powered by one tracker motor per row.

The single-axis tracking system will orient the solar modules to follow the sun from east to west each day. The tracking structures will be mounted on piles, which will be screwed or pile driven depending on final geotechnical analysis. This eliminates the need for concrete and foundations which significantly reduces the impact of construction. In turn, this enables the retention of native grasslands and habitats under the array.

A single axis tracker would have a typical height of 3m to 3.5m, based on a two metre vertical height panel and 3.5metre high support posts. Row lengths will depend on the detailed design but could be up to 100 metres. Spaces between rows (edges of panels) may vary between three metres and nine metres. The indicative size of each PV panel is two metres by one metre, installed in either portrait or landscape orientation.

The PV module mounting structures will be raised an additional 0.5m in flood sensitive affected areas to ensure no impact to operational performance and longevity. All critical infrastructure will be located in non flood sensitive areas of the Proposal Site.

Up to approximately 17,000 piles would be driven or screwed into the ground to support the solar array's single axis tracker mounting system and solar modules. The pile depth would be determined following detailed geotechnical site investigation; depths are typically 1.5 - 1.7m, but may be up to 2.4m. Pile heights will vary according to topography.



Plate 4-1 Example of the single axis tracking system solar array at the Moree Solar Plant (NSW)

4.4.2 Power Conversion Units (solar)

Subject to detailed design and equipment selection, approximately 22 solar PCUs would be installed across the site, each containing:

- a transformer to step the AC voltage up to high voltage for transmission to the substation
- inverters
- High voltage (HV) switchgear
- communications and ancillary equipment.

The PCUs would measure approximately 12m long, three metres wide and three metres high, and would be delivered fully containerised or skid mounted. The PCUs would be placed on concrete footings, with the floor level set approximately 300mm above ground level. A typical PCU is shown in Plate 4-2.

Each power station will be interlinked via a buried 33kV circuit for reticulation to the solar plant substation and switchyard.



Plate 4-2 Typical Power Conversion Unit (PCU) housing transformer, inverters and switchgear (SMA system)

4.4.3 Underground cabling

All underground cabling would be installed at a depth of at least 500mm with the electrical reticulation buried to either 600mm (low voltage) or 800mm (high voltage) depth, in accordance with the relevant Australian Standard (AS).

Prior to excavating the cable trench, the topsoil would be stripped and stockpiled for use in rehabilitating the trenchline. Depending on the quality of the excavated material, sand may be used in the trench to create a cable bed. Once the cables are installed another layer of sand may be placed above the cable prior to the trench being backfilled with excavated material. Cables would be protected in accordance with AS 3000.

4.4.4 Substation

A new substation would be constructed on the Proposal Site, to step up the solar plant electrical output to facilitate connection to the transmission network. While the design is yet to be finalised, it is expected that the substation would occupy an area approximately 80m by 80m and contain transformers, associated switchgear and control and protection equipment, and may include a control building, switchroom and drainage and oil containment system. The substation would be surrounded by a security

fence. Gravel hardstand would be placed under and around the substation compound to restrict vegetation growth and provide a safe working environment in accordance with the relevant Australian Standards.

4.4.5 Transformer station and switchgear

The 66kV transformer station and switchgear area would be approximately 50 m wide x 70 m long. It would contain a small number of typical switchyard components (Plate 4-3). It would also be fenced. Gravel substrate would be maintained to prevent vegetation regrowth in this area.



Plate 4-3 Typical fenced transformer station showing typical transformer and switchgear arrangement

4.4.6 Control room, switchroom and storage shed

Separate buildings will be required to provide control, switchroom and storage facilities for the PV Plant. Indicative descriptions of these buildings are provided below and the locations of the buildings at the Proposal Site are shown on Figure 3-2 Proposal Layout. The control room, switchroom and storage shed will each contain essential fire safety equipment, including fire extinguishers and hose reels.

Control room and site office

A single storey building approximately 30m long, 20m wide, would be constructed on concrete footings to house control facilities. The building would have a skillion roof and be clad in fibre cement sheeting. Guttering and a water tank would be installed to collect rainwater. The control room building would contain an office and staff amenities (toilet, kitchen, first aid, potable water supply, etc.).

The control room and site office facility will include Static water supply for firefighting/bushfire management (may be part of above water supply) as well as a septic system. Permanent parking facilities will be provided adjacent to the control building to facilitate up to 10 cars and light vehicles on site. The parking ground cover will be formed of crushed granite or similar.

Adequate rubbish waste/facilities will be established via on site skip bin, which will be emptied weekly or as required. No permanent or long-term storage of rubbish or waste will be on site.

Switchroom

A building approximately 29.5m long, 5.5m wide and 4.5m high would be constructed for the HV switchroom, with services, protection and control facilities. The skillion-roofed building would likely be clad in Colorbond sheeting. A communications tower would be installed adjacent to the building, approximately 20m high.

Storage shed

A gable roofed storage shed measuring approximately 20m long, 15m wide and 6m high would be constructed at the Proposal Site. The shed would likely be clad in Colorbond monoclاد sheeting and include steel roller doors and windows with fixed metal louvers. Guttering and a water tank would be installed to collect rainwater. A fire extinguisher and hose reel would be installed at the shed.

4.4.7 Transmission line

A new overhead 66kV transmission line would be constructed to connect the Proposal to the existing West Jemalong Substation at the junction of Whispering Pines Lane and Lachlan Valley Way, located approximately 3.2km to the north of the site (Figure 3.1). The length of the transmission line will be approximately 5km. The alignment has been selected to avoid impacts to native vegetation and land uses as much as possible, while avoiding identified aboriginal heritage sites.

The design, would be similar to the 66kV transmission line recently installed by Essential Energy from the West Jemalong Substation to Forbes with steel poles approximately 22m high and spaced approximately 200m apart (Plate 4-4Plate 4-4). The transmission line would be located within an easement approximately 30m wide, as described in the TransGrid Easement Guidelines for third party developers. The easement location has been selected to minimise visual impacts to residents on Whispering Pines Lane.

Visual indicators will be added to the line close to the airstrip to ensure the line is clearly visible for pilots. The private airstrip is only used during daylight hours in good weather. The landowner is satisfied with the location of the transmission line.

The line will be run underground for the section from the Solar PV substation to the diversion point from the existing fence line as shown in the attached map.



Plate 4-4 66kV transmission line recently installed by Essential Energy in the vicinity (in foreground)

4.4.8 Site access and internal tracks

A single construction and operation access point would be developed off Lachlan Valley Way, 3.6kms north of the Proposal Site. The point of exit from the Lachlan Valley way will be onto Wilbertroy Lane, followed by a turn onto Naroo Lane to enter the Proposal Site. Although the final design for the Wilbertroy Lane intersection with Lachlan Valley Way has not yet been completed, the location and form of the access road intersection would be developed to provide adequate sightlines for vehicles entering and exiting the site, in accordance with Austroads (Rural Basic BAR and BAL turn treatment, Guide to Road Design, Austroad 2010) and RMS guidelines. The final intersection designs would be completed in consultation with RMS and Forbes Shire Council following approval of the Proposal. Where required the final design would incorporate any road upgrade requirements associated with any DA for the SSD CSP Plant.

Wilbertroy Lane and Naroo Lane will also be maintained along the alignment to the connection with the Proposal Site. These lanes are designed to carry large grain trucks during harvest, and would need only minimal upgrading.

The internal access roads would involve a network of tracks accessing the solar plant infrastructure for maintenance. Approximately 10kms of new access track would be constructed at the site. The internal tracks would be constructed of engineered fill topped with crushed stone pavement. The crowned driving surface would be nominally four metres wide, plus shoulders and any required drainage. The locations of proposed internal tracks are shown in Figure 3-2.

Passing lanes and turning circles will be provided to internal tracks in line with the bushfire management plan. Access tracks will be clearly marked on the site environmental management plan and all construction roads not retained as internal access tracks will be removed and remediated.

The site access road and all internal tracks would be maintained throughout the construction and operation of the PV Plant. Water trucks would be used as necessary to suppress dust on unsealed access roads and tracks during construction. Additional stabilising techniques and/or environmentally acceptable dust control would also be applied if required.

Parking areas for maintenance vehicles are proposed near the control and amenities kiosk, within the project site. Preliminary plans for the site propose parking for approximately 30 vehicles. The proposed

timeline for the Proposal indicates that approximately 30 employees would be required during the first month rising to 100 employees during the peak nine-month construction period. Three to four full time equivalent staff will be required for the ongoing day-to-day operation of the facility.



Plate 4-5 Typical unsealed access track on Jemalong Station

4.4.9 Security CCTV, lighting and fencing

Continuously operating CCTV cameras (possibly with a pan function) would be installed with night time security lighting (infra-red) on posts up to 3m high adjacent to the perimeter security fencing and around the operation and maintenance buildings. The number of cameras would be sufficient to cover the perimeter of the site and building areas.

4.4.10 Landscaping and revegetation

Landscaping and screen planting will be undertaken in some sections of the perimeter of the site as described in the draft Landscape Management Plan (Refer Appendix F). This would entail planting rows of native tree and shrub species to break up views of the infrastructure from specific receivers. Native tree and shrub species suited to site conditions would be used, placed and selected to avoid shading impacts on the array and to achieve effective screening of the PV Plant infrastructure. Potential screening opportunities are discussed in section 8.3.

The solar array would be mounted above the ground and suitable perennial ground cover would be established and maintained beneath the panels. Groundcover vegetation over approximately 33% of the total site area would be affected by shading, varying according to time of day and time of year. Groundcover grass species would be selected which are tolerant of these shading conditions and suitable for the soil type and climate at the Proposal Site.

The 10m minimum bushfire protection setback from PV Plant infrastructure would be applied to any woody vegetation plantings undertaken around the perimeter of the PV Plant, as well as remnant woodland vegetation, in accordance with Planning for Bushfire Protection guidelines (RFS 2006). The setback area would include a 4m wide (plus shoulders and required drainage) perimeter access track.

Areas disturbed during the construction phase would be stabilised and revegetated with suitable perennial grass species immediately after construction. Groundcover species would be selected to facilitate sheep grazing at the site to control grass height and bushfire hazard.

4.4.11 Temporary construction facilities

Temporary facilities established at the site during the construction phase would include:

- material laydown areas, approximately 120m by 120m
- temporary construction site offices
- temporary car and bus parking areas for construction workers
- staff amenities (kitchen and toilet/s) and adequate shelter for all workers
- temporary security lighting and CCTV at construction compound.

Temporary access tracks may be instated for construction. These roads will be formed for all-weather access and will be approximately 4m subject to construction management plan and final design.

All temporary access roads not being retained in the final site design will be remediated following the commissioning of the PV Plant. Similarly, temporary hardstand required for the laydown and storage of construction materials will be revegetation/remediated following commissioning.

A fenced construction compound would be developed in the same location as the future control building (dimensions approximately 20m by 30m). The compound will include:

- containers for the use of subcontractors
- bunded area for refuelling
- storage area
- generator for construction compound power supply
- skips with wind shield and lid
- parking area
- staff amenities (kitchen and toilet/s)
- offices and meeting room.

Chain link fencing up to two metres high would surround the construction compound. Hardstand in the compound would consist of compacted stone to provide a clean, firm, level and free draining surface suitable for cabins and heavy traffic. Temporary staff amenities would be designed to accommodate the number of workers at the peak of the construction period (estimated at 100 workers). An indicative plan for the construction compound is provided in Appendix B.



Plate 4-6 Example of the hardstand area at Moree, NSW

4.5 CONSTRUCTION

4.5.1 Construction activities

The construction phase is expected to last approximately 12 months with a nine month peak construction period. The main construction activities would include:

- Site establishment and preparation for construction - fencing, ground preparation, construction of the internal track system, upgrade of existing access points/intersections, preliminary civil works and drainage
- Installation of steel post and framing system for the solar panels
- Installation of underground cabling (trenching) and installation of inverter stations
- Installation of PV panels
- Construction of control room and storage building
- Construction of the substation and connections
- Construction of the 66kV transmission line, switch gear and equipment, and interconnection of the generator to the substation.
- removal of temporary construction facilities and access tracks, and rehabilitation of disturbed areas.

Pending the construction schedule, it is expected some stages of construction will occur concurrently.

4.5.2 Site preparation and earthworks

Soils within the development envelope have been heavily disturbed by farming activities. Ground disturbance resulting from earthworks associated with the Proposal would be minimal and limited to:

- the installation of the piles supporting the solar panels, which would be driven or screwed into the ground to a depth of 1.5 -2.4m

- construction of internal access tracks and access points and associated drainage
- substation bench preparation
- concrete or steel pile foundations for the inverter stations, substation and maintenance building
- cable trenches up to 1,000mm deep
- establishment of temporary staff amenities and offices for construction
- construction of perimeter security fencing, and CCTV.

Topsoil under the footprint of the array area will remain in-situ during the construction of the PV Plant. Topsoil salvaged from the construction of the access tracks and other works would be securely stored for use in site rehabilitation.

Where required weed treatments will be undertaken prior to earth works commencing in order to reduce the potential for spread of these species within the Proposal footprint.

4.5.3 Materials and resources

Key resourcing requirements for the Proposal would include labour, machinery and equipment, steel, electrical components (including PV panels and cables), water, gravel and landscaping materials.

Labour, machinery and equipment

It is anticipated that approximately 100 construction personnel would be required on-site during the nine month peak construction period. Construction supervisors and the construction labour force, made up of labourers and technicians, would be hired locally where possible. Based on the past staffing requirements for the CSP Pilot Plant construction workers came from:

- 50% Parkes
- 40% Forbes
- 10% Condobolin

As such, it is anticipated that most workers would use existing accommodation within the local area. Bus transfer points will be provided from Forbes and Parkes to minimise traffic volumes and transit risks during construction. The pick up/drop-off points will be determined following the completion of the Traffic Management Plan, coordination with the Contractor and subcontractors and consultation with RMS.

Equipment used during construction would include:

- earth-moving equipment for civil works (excavators, graders)
- small piling or drilling rigs for installation of the posts of the solar arrays
- diesel generators
- trucks (refer to Table 9-14 for types of trucks that would be used)
- light vehicles
- large transit vehicles, including delivery and waste removal vehicles
- forklifts and/or manitoux
- cable trencher or excavator
- cable laying equipment
- cranes including 50T mobile crane.

Materials

Forbes is the closest town which is a possible source of the bulk of the aggregate material required for construction. Approximately 18,000 m³ of gravel would be required to surface the access road and internal service track network, PCU and substation hardstand. Sand may be required for the bedding of underground cables, depending on electrical design and ground conditions.

Approximately 800 m³ of concrete would be required to construct the building and substation foundation. A local cement batching Plant in Forbes is likely to be used as the main source of concrete.

Up to 3.4 megalitres (ML) of non-potable water would be required during construction, namely for roadbed preparation and associated construction activities, but also for cleaning, on-site amenities and establishing landscaping. A proportion of this water may be sourced from a Jemalong Station bore located southeast of the Proposal Site, which currently supplies the centre pivot fields. The channel supplying the pivot field runs along the southern boundary of the Proposal Site, as such, a portion of the channel could be used as a retention pond for road wetting water, and water trucks would be able to directly pump the water from the Proposal Site. This strategy would significantly reduce the number of truck road trips on Wilbertroy Lane and Lachlan Valley Way.

The water allocation for this bore is 1,000ML and is licensed to Twynam Pastoral Co Pty Limited (the owner of the Proposal Site). Access to the bore water will require final agreement to be reached with Twynam Pastoral Co Pty Limited and would be carried out in consultation with Office of Environment and Heritage (OEH). No new water entitlements or licences would be required.

Should bore water be unavailable, an allocation may be able to be purchased from Jemalong Irrigation Limited and delivered to the site via the Jemalong No 1 Channel. If that was not possible then bulk water tankers would be used to supply non-potable water to site. Based on a typical 27.5KL truck capacity, approximately 125 truck-trips would be required over the course of construction.

A small amount of potable (drinking) water (approximately 0.09 ML) would be imported to the site during the construction period.

4.5.4 Transport and access

The bulk of the imported and manufactured components of the PV Plant will be sourced from Sydney or arrive across the docks at Botany Bay. The majority of these materials will be transported by rail arriving into the Mountain Industries rail siding and yards at Forbes.

From Forbes the materials will be transferred to trucks for road transport to the PV Plant site.

Trucks travelling from the Mountain Industries yards would travel south on Newel Highway to the intersection with Lachlan Valley Way, covering an approximate distance of 8km. Once trucks have turned onto Lachlan Valley Way, they will travel a distance of 26km to the intersection of Wilbertroy Lane, turning left off Lachlan Valley Way. The distance from Wilbertroy Lane to Naroo Lane is approximately 4km, and upon turning right onto Naroo Lane the trucks will travel another 1.5km to enter the PV Plant Proposal Site.

The remainder of constructions materials, will be sourced locally, including from Forbes, Parkes, Orange and Bathurst using the major road networks of Parkes/Escort Way and Newell Hwy leading to Lachlan Valley Way. Gravel and concrete will be sourced from Forbes

Traffic management would be undertaken during the construction phase to manage haulage traffic. The proposed timeline for the project indicates that approximately 30 employees would be required during

the first month rising to 100 employees during the peak construction period while the solar panels are erected and commissioned concurrently. The delivery trucks would predominantly be Medium Rigid and would not be larger than typical trucks using the existing local roads in the area.

Vast Solar will develop a Driver Behaviour Code in line with their corporate statement and policy for employee safety. All construction and operation staff would be inducted to the Driver Behaviour Code.

guideline All construction and operational staff would be inducted with the

Construction activities would be undertaken during standard daytime construction hours (7.00am to 6.00pm Monday to Friday and 7.00am to 1.00pm on Saturdays). Any construction outside of these normal working hours would only be undertaken with prior approval from relevant authorities.

Traffic volumes and requirements are discussed in detail in Section 9.5.

Road condition surveys

Prior to construction, a pre-condition survey of the relevant sections of the existing road network would be undertaken, in consultation with Forbes Shire Council. During construction the sections of the road network utilised by the proposal would be monitored and maintained to ensure continued safe use by all road users, any faults attributed to construction of the PV Plant would be rectified in consultation with Forbes Shire Council. At the end of construction, a post-condition survey would be undertaken to ensure the road network is left in the consistent condition as at the start of construction.

4.5.5 Personnel and work hours

Over the nine month peak of construction activity the PV Plant is expected to require approximately 100 workers. Construction activities would be undertaken during standard daytime construction hours (7.00am to 6.00pm Monday to Friday and 7.00am to 1.00pm on Saturdays). Any construction outside of these normal working hours, if required, would only be undertaken with prior approval from relevant authorities, or unless in emergency circumstances e.g. to make work safe.

4.6 OPERATION

4.6.1 Operation activities

Operation activities would include:

- routine visual inspections, general maintenance and cleaning operations of the solar arrays as required
- routine visual inspections, general maintenance and cleaning operations of the substation
- vegetation management, likely using grazing to control grass growth beneath the panels. Groundcover vegetation would be maintained over the site to minimise erosion, dust and weeds (subject to climatic conditions). Groundcover would be monitored and remediation (such as reseeding or soil protection) undertaken as required
- site security response (24hr) if required
- site operational response (24hr) if required
- replacement of equipment and infrastructure as required
- maintenance of landscaping and screening plantings as required

- pest plant and animal control as required.

4.6.2 Materials and resources

During operation, non-potable water would be required for cleaning panels, landscaping and animal care. Up to 250KL per year would be required for cleaning, likely sourced from collected rainwater, or bore water from adjacent paddocks, if water quality meets PV panel maintenance guidelines. Water for animal care (such as sheep grazing on site) and landscaping would be sourced from irrigation channels at present under the landowner's farm rights. A steel or concrete tank would be installed at the site to store water for bushfire protection and other non-potable water uses, with a minimum of 20,000 litres reserved for fire-fighting purposes.

Potable water would be required for staff using imported supplies or rain water collected from tanks beside site buildings.

4.6.3 Transport and access

It is expected that the three to four full time equivalent staff based at the site during the operation phase would primarily use light vehicles (4x4). The delivery trucks would likely be medium rigid vehicles and would not be larger than typical trucks using the existing local roads in the area.

In the even that bore water is not suitable for panel cleaning, then water tankers would supply water periodically during operation, topping up water storage reserves used for panel cleaning and staff amenities. Tanking requirements will vary with rainfall, which provides for rainwater capture as well as natural panel cleaning, however it is anticipated that no more than 10 standard 27.5KL tanker visits would be required annually.

Traffic associated with the operation and maintenance of the PV Plant would also use the routes specified for the construction phase (refer section 4.5.4).

4.6.4 Personnel and work hours

The PV Plant would be monitored and operated remotely and would require a small number of maintenance personnel (three to four full time equivalent staff) to be based at the site. An asset management team likely located in Sydney would undertake the remote operation activities.

The majority of plant maintenance including inverter station, transformer and HV switchgear, PV arrays and the trackers would be conducted by site staff on a rolling basis with activities scheduled consistently throughout the year. On some occasions, such as during a major substation shut down, additional maintenance staff may be required on site. If required, the staff would work out of the operations building at the site and additional traffic would be minimised through car pooling.

Daily operations and maintenance by site staff would be undertaken indicatively during standard working hours of:

- Monday – Friday 7am to 6pm
- Saturday 8am to 1pm.

Outside of emergencies or major asset inspection or maintenance programs, night works or work on Sundays or public holidays would be minimised. During summer months, the PV panels would produce electricity prior to 7am and after 6pm. Tracker units would similarly operate outside standard hours in summer.

4.6.5 Lighting

There would be no permanently lit night lighting installed within the array but lighting would be included in each inverter station for maintenance purposes. There would also be maintenance lighting installed at the substation that would only be used in case of emergency, and continuous security lighting at the operation and maintenance building. All operational lighting would be designed to reduce disturbance to neighbouring properties and would be utilised only when there are staff on site or during emergency situations.

Continuously operating security lighting (likely infra-red) and CCTV cameras would be installed on posts up to 3m high adjacent to the security fencing and operation and maintenance buildings.

4.6.6 Refurbishment and upgrading

The PV plant operator may replace or upgrade solar panels or other infrastructure within the existing development envelope during the projected 30 year life of the PV Plant. If any upgrade works during the life of the PV Plant would extend beyond the existing impact footprint or alter the nature or scale of environmental impacts, the proponent would consult DP&E regarding the need for further assessment or approval. The proponent would also consult DP&E regarding the need for further assessment and approval to continue the operation of the PV Plant beyond the 30 year timeframe.

4.7 DECOMMISSIONING AND REHABILITATION

The PV Plant is expected to operate for up to 30 years. After this period the PV Plant would either be upgraded (pending any additional approval requirements) or decommissioned.

Decommissioning would see the site returned to its pre-works state. All above ground infrastructure would be removed to a depth of 500mm, and the land will be returned to the pre-construction condition. All disturbances will be made good and signed off by the environmental consultant.

Key elements of decommissioning would include:

- the solar arrays would be removed, including the full foundation posts. Materials would be sorted and packaged for removal from the site for recycling or reuse wherever possible
- all site amenities and equipment would be removed including buildings, inverter stations and (subject to Essential Energy's requirements) substation, and materials recycled or reused wherever possible
- cabling installed within 500mm of the surface would be removed and recycled, equipment below this depth, such as cabling, would be left in situ
- fencing would be removed including small concrete footings.

All areas of soil disturbed during decommissioning would be rehabilitated in consultation with the landowner consistent with post-PV Plant land use requirements. Traffic required for decommissioning would be similar in type but of shorter duration than that required for the construction phase. Wherever possible and practicable, materials removed from the site would be either re-used or recycled; refer section 9.11.

A DEMP with an indicative timeline would be prepared and submitted to DP&E for approval prior to the decommissioning works. A Decommissioning Traffic Management Plan would be captured as part of the DEMP.

4.8 INDICATIVE TIMELINE

An indicative timeline for the proposal is outlined in Table 4-3. The commissioning of the solar PV plant would take approximately 3 months from the end of the 12 month construction period.

Table 4-3 Indicative timeline

Phase	Approximate commencement	Approximate duration
Construction	June 2018	12 months
Operation	Winter 2019	30 years
Decommissioning	2049	6 months

4.9 CAPITAL INVESTMENT

Based on the initial design and the current solar engineering, procurement and construction (EPC) market the estimated gross capital expenditure cost of the proposal would be approximately \$70.25 million (Refer Appendix M).

5 PLANNING CONTEXT

5.1 STATE LEGISLATION

5.1.1 Environmental Planning and Assessment Act 1979

The EP&A Act and its associated Regulations and instruments set the framework for development assessment in NSW. The PV Plant proposal will be assessed under Part 4 of the EP&A Act. The relevant objects of the Act are to encourage:

- *the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment*
- *the promotion and co-ordination of the orderly and economic use and development of land*
- *the protection, provision and co-ordination of communication and utility services*
- *the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats*
- *ecologically sustainable development*
- *increased opportunity for public involvement and participation in environmental planning and assessment.*

Development assessment provisions are contained in Part 4 and Part 5 of the EP&A Act. Developments requiring consent under a planning instrument (such as State Environmental Planning Policies and LEPs) are assessed under Part 4.

Section 79C identifies matters to be considered in determining a development application, including:

- (a) the provisions of any relevant environmental planning instrument, development control plan, planning agreement, regulation, coastal zone management plan*
- (b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality*
- (c) the suitability of the site for the development*
- (d) any submissions made in accordance with this Act or the regulations*
- (e) the public interest.*

These matters are considered in relevant sections of this EIS and specifically in section 11.

Section 89C of the EP&A Act provides that a development will be SSD if it is declared to be SSD by a State Environmental Planning Policy (SEPP); refer section 5.1.2. Section 78A (8A) of the Act requires an SSD development application to be accompanied by an EIS prepared in accordance with the EP&A Regulation. This EIS is intended to meet the objects and assessment requirements of the EP&A Act, the Regulation and *State Environmental Planning Policy (State and Regional Development) 2011*.

The PV Plant site was the subject of a number of detailed studies undertaken for the EIS prepared for the CSP Plant Development Application, submitted in 2016 (SSD 14_6588, refer section 1.1). These studies included:

- Part One: Biodiversity Assessment, Jemalong Solar Station, July 2015 (prepared by NGH Environmental)
- Part Two: Biodiversity Assessment, Jemalong Solar Station: Potential Operational Impacts on Bird Populations and Recommendations for Bird Hazard Risk Management, July 2015 (prepared by Ambrose Ecological Services Pty Ltd).
- Aboriginal Cultural Heritage Assessment
- Hydrology Report (including flooding)
- Glare and Glint Analysis Report
- Visual Impact Assessment

Environmental Planning and Assessment Regulation 2000

Schedule 2 of the EP&A Regulation specifies the form and content of EIS's, which provide the basis for the SEARs issued for the Proposal. The relevant sections in the EIS are referenced against each of the SEARs in section 1.2.

Clauses 82 to 85B of the EP&A Regulation addresses public participation in SSD proposals. This application and accompanying information (including this EIS) will be placed on public exhibition by DP&E for a period not less than 30 days.

5.1.2 State Environmental Planning Policy (State and Regional Development) 2011

SSD's are major projects which require approval from the Minister for Planning and Environment or delegate (Planning Assessment Commission, Secretary or other public authority). An EIS must be prepared in accordance with environmental assessment requirements (SEAR) issued by the Secretary of the Department of Planning and Environment. The SSD assessment process and the SEARs issued for this proposal are summarised in section 1.2.

Under section 89J of the EP&A Act, SSD developments do not require the following authorisations:

- (a) *concurrence under Part 3 of the Coastal Protection Act 1979*
- (b) *a permit under section 201, 205 or 219 of the Fisheries Management Act 1994*
- (c) *an approval under Part 4, or an excavation permit under section 139, of the Heritage Act 1977*
- (d) *an Aboriginal heritage impact permit under section 90 of the National Parks and Wildlife Act 1974*
- (e) *(Repealed)*
- (f) *a bush fire safety authority under section 100B of the Rural Fires Act 1997*
- (g) *a water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the Water Management Act 2000.*

Under section 89K of the EP&A Act, several other authorisations cannot be refused if they are necessary for and consistent with an approved SSD, including a consent under section 138 of the *Roads Act 1993* (refer section 5.1.6).

State Significant Development status

Clause 20 of Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* defines SSD as including:

Development for the purpose of electricity generating works or heat or their co-generation (using any energy source, including gas, coal, biofuel, distillate, waste, hydro, wave, solar or wind power) that:

- (a) has a capital investment value of more than \$30 million, or*
- (b) has a capital investment value of more than \$10 million and is located in an environmentally sensitive area of State significance.*

The Proposal has an estimated capital investment cost greater than \$30 million and is therefore considered SSD under Part 4 of the EP&A Act.

The application and Scoping Report for the Project proposal was submitted to DP&E on 9 October 2017. SEARs for the assessment were issued by DP&E on 26 October 2017 (refer Appendix A). A summary of the SEARs and corresponding sections in the EIS are provided in Table 1 1.

5.1.3 State Environmental Planning Policy (Infrastructure) 2007

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) was introduced to facilitate the effective delivery of infrastructure across the State by improving regulatory efficiency through a consistent planning regime for infrastructure and services across NSW.

Part 3 Division 4 of ISEPP relates to electricity generating works. Clause 34(1) states that development for the purpose of electricity generating works may be carried out by any person with consent on land in a prescribed zone. 'Electricity generating works' are defined in Clause 33 as:

'a building or place used for the purpose of making or generating electricity.'

And a 'prescribed rural zone' is defined in Clause 33 as:

any of the following land use zones or a land use zone that is equivalent to any of those zones:

- a) Zone RU1 Primary Production,*
- b) Zone RU2 Rural Landscape,*
- c) Zone RU3 Forestry,*
- d) Zone RU4 Rural Small Holdings.*

Clause 34(1) of the ISEPP provides that development for the purpose of a solar energy system may be carried out by any person with consent on any land (except land in a prescribed residential zone). The Proposal is located within the RU1 Primary Production zone and is therefore considered permissible with consent under the ISEPP.

The development is partly prohibited in relation to the subdivision of the substation lot – see section 5.2.2 of this EIS.

Traffic generating development

Clause 104 of the ISEPP requires certain developments (identified in Column 1 of the Table in Schedule 3 and known as traffic generating development) to be referred to Roads and Maritime Services (RMS). The consent authority would then be required to take into account any submission made by Roads and Maritime in relation to the development.

Power generation is not included in column 1 in the table. Section 104 of the ISEPP applies to other development where there are 200 or more motor vehicles. Since the Proposal would result in the generation of fewer than 200 vehicles per day during construction or operation, the requirements under clause 104 of the SEPP do not apply. Section 9.5 of the EIS assesses the impact of the Proposal on traffic and transport.

5.1.4 State Environmental Planning Policy (Rural Lands) 2008

The aims of this SEPP include:

- *to identify Rural Planning Principles and the Rural Subdivision Principles to assist in the proper management, development and protection of rural lands for the purpose of promoting the social, economic and environmental welfare of the State*
- *to implement measures designed to reduce land use conflicts*
- *to identify State significant agricultural land for the purpose of ensuring the ongoing viability of agriculture on that land, having regard to social, economic and environmental considerations.*

Subdivision

Details of the proposed subdivision for the on-site substation are provided in section 4.3. It is considered that the proposed subdivision is in accordance with the rural planning principles given the proposal will continue to provide the opportunity for a rural lifestyle that contributes to the social welfare of the rural community whilst accommodating a productive, sustainable economic activity in the rural area.

This proposed development will facilitate the establishment of a SSD that is consistent with the principles of strategy endorsed by the DP&E.

Following decommissioning of the PV Plant, the infrastructure would be removed (to a depth of 500mm) and the site returned to its pre-works agricultural capability (refer section 9.1).

The subdivision and PV Plant are also not likely to adversely affect other land uses on land adjoining the site or in the vicinity of the site. Noise, visual and other potential impacts on neighbouring properties are assessed in section 8. The property is sited within a rural (RU1 Primary Production) zone under the Forbes LEP, and is located a considerable distance from the nearest rural residential or urban zones.

State significant agricultural land

The objects of the State significant agricultural land provisions in the SEPP are:

- a) *to identify State significant agricultural land and to provide for the carrying out of development on that land,*
- b) *to provide for the protection of agricultural land:*
 - (i) *that is of State or regional agricultural significance, and*
 - (ii) *that may be subject to demand for uses that are not compatible with agriculture, and*
 - (iii) *if the protection will result in a public benefit.*

Clause 13 of this SEPP identifies land as being State significant agricultural land if it is listed in Schedule 2. Schedule 2 does not currently identify any land. The PV Plant site is also not located on land that is identified as Strategic Agricultural Land.

State Environmental Planning Policy No 33—Hazardous and Offensive Development

This SEPP defines and regulates the assessment and approval of potentially hazardous or offensive development. The SEPP defines 'potentially hazardous industry' as:

...development for the purposes of any industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development

on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would pose a significant risk in relation to the locality:

(a) to human health, life or property, or

(b) to the biophysical environment,

and includes a hazardous industry and a hazardous storage establishment.

‘Potentially offensive industry’ defined as:

...a development for the purposes of an industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would emit a polluting discharge (including for example, noise) in a manner which would have a significant adverse impact in the locality or on the existing or likely future development on other land, and includes an offensive industry and an offensive storage establishment.

SEPP 33 provides for systematic assessment of potentially hazardous and offensive development for the purpose of industry or storage. For development proposals classified as ‘potentially hazardous industry’ the policy requires a preliminary hazard analysis (PHA) to determine risks to people, property and the environment.

A checklist and a risk screening procedure developed by DP&E is used to help determine whether a development is considered potentially hazardous industry (DOP 2011). Appendix 3 of the *Applying SEPP 33* guidelines list industries that may fall within SEPP 33; the lists do not include PV Plants. The hazardous development status of the proposal is assessed in section 9.6.

5.1.5 Other State Environmental Planning Policies

State Environmental Planning Policy No 55 - Remediation of Land

SEPP No. 55 aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment. The SEPP applies to the whole of the State.

Clause 7 of SEPP No. 55 requires that the remediation of land be considered by a consent authority in determining a development application.

A search of the NSW EPA contaminated land public record (NSW Government, 2015a) was undertaken for contaminated sites within the Forbes LGA on 5 June 2015. There was one record returned, Forbes Gas works. This contaminated site is located within the Forbes township, approximately 36 km east of the Proposal Site. The online List of NSW contaminated sites notified to EPA (NSW Government, 2015b) was also searched on 5 June 2015. There are no sites listed in the Jemalong area, however there were seven sites found in the Forbes area, these are all located within the Forbes township.

There is a risk that contamination associated with agricultural activities (e.g., pesticides) could be present on the site however, given no contaminated sites are recorded on or adjacent to the Proposal Site. The Proposal Site contains an area where waste has been placed including scrap metal. There was no evidence of contamination observed during the site visit or mentioned during conversations with the proponent, it is considered highly unlikely that significant contamination exists in areas that would be affected by the proposal. Furthermore, the construction activities would not significantly disturb soil or groundwater at the site.

State Environmental Planning Policy No. 44 – Koala Habitat Protection

State Environmental Planning Policy No. 44 – Koala Habitat Protection (SEPP 44) encourages the conservation and management of natural vegetation that provides habitat for Koalas. Koalas are listed under the *Biodiversity Conservation Act 2016* (BC Act) as a vulnerable species. The Forbes LGA is subject to this SEPP and cannot approve development in an area affected by the policy without an investigation of core koala habitat. SEPP 44 aims to identify areas of potential and core Koala Habitat. These are described as follows:

- Potential Koala Habitat: areas of native vegetation where the trees listed in Schedule 2 of SEPP 44 constitute at least 15% of the total number of trees in the upper or lower strata of the tree component; and
- Core Koala Habitat: an area of land with a resident population of Koalas, evidenced by attributes such as breeding females, and recent and historical records of a population.

This Biodiversity assessment (Appendix E) and its summary in Section 8.1 consider address SEPP 44. While “potential Koala habitat” as defined by SEPP 44 occurs in the study area, the fragmented nature of habitat in the locality, the lack of primary feed tree species, and the lack of local records of Koala suggest that the Proposal Site is unlikely to provide habitat that would be utilised by Koalas.

5.1.6 Roads Act 1993

The *Roads Act 1993* (Roads Act) establishes a system of ‘classified roads’, comprising the following categories; main road, highway, freeway, controlled access road, secondary road, tourist road, tollway, transitway and a State work. RMS groups these road classes into a three tier administrative system of State, Regional and Local Roads.

The Roads Act provides for the declaration of RMS and other public authorities as roads authorities for both classified and unclassified roads. Freeways, State Highways and Main Roads (‘State Roads’) are generally the responsibility of RMS. For State Roads other than Freeways, the local council generally has responsibility for footpaths and road reserves. Councils are roads authorities for less important classified roads and for roads not classified under the Act. Regional Roads may be classified or unclassified, and Local Roads are unclassified under the Act. The Lands Minister is the authority for Crown roads, including ‘paper roads’ (refer below).

The Roads Act regulates the carrying out of various activities in, on and over public roads. Under section 138, the consent of the appropriate roads authority is required to:

- (a) *erect a structure or carry out a work in, on or over a public road*
- (b) *dig up or disturb the surface of a public road*
- (c) *remove or interfere with a structure, work or tree on a public road*
- (d) *pump water into a public road from any land adjoining the road*
- (e) *connect a road (whether public or private) to a classified road.*

Consent in relation to a classified road requires the concurrence of RMS. Section 138 also applies to works undertaken by roads authorities. Under section 89K of the EP&A Act; a consent under section 138 of the Roads Act cannot be refused if it is necessary for and consistent with an approved SSD.

Lachlan Valley Way is a classified Road. Any works such as intersection upgrades cannot be undertaken with respect to a classified road except with the concurrence of RMS.

Wilbertroy Lane, Naroo Lane and Whispering Pines Lane are public roads. Any works, such as upgrades that interfere with the structure of the road, require consent of the appropriate roads authority. The appropriate roads authority is Forbes Shire Council. However, RMS has the ability to exercise the functions of the roads authority in respect to classified roads. Section 138 consent for road works on classified roads is usually incorporated into a works authorisation deed which is entered into between RMS and a proponent, and sets out the proponent's obligations with respect to completing certain road works required to mitigate the impact of a proposal on the road network.

5.1.7 Water Act 1912

Works that were managed through the Water Act 1912 were known as 'controlled works', which are generally earthworks, embankments or levees or other works that are likely to affect the flow of water. The Lachlan River, Jemalong Gap to Condobolin, Floodplain Management Plan (OEH 2012) declares 'controlled work' to be:

any work that is situated, or proposed to be constructed on land that is, or forms part of, the bank of a river or lake, or, is within a designated floodplain.

Modifications in and around floodways in the western rural areas of NSW were previously managed through Part 8 of the Water Act 1912. The Water Act 1912 requires that all flood control works within a designated floodplain be assessed for approval.

Since 21 September 2015, however, the construction and use of a work defined as a flood work requires a flood work approval under the Water Management Act 2000 unless an exemption applies. Further, all existing (former) controlled works under the Water Act 1912 have been replaced with a flood work approval under the Water Management Act 2000. Replacement flood work approvals reflect the controlled works which were formerly authorised by those licences.

While controlled work approvals were approved for a period of five years under the Water Act 1912, the flood work approvals which have replaced these controlled work approvals will have effect until either:

- •21 September 2017 (ie two years from the commencement of the relevant provisions of the Water Management Act 2000); or
- •the balance of the period for which the former controlled work approval would have been in effect,

whichever is the longer period.

The proposed development site is located within a designated floodplain area and is located adjacent to zone A and zone B (discussed in detail in Section 5.5). In general, works within the floodway of these areas would not be approved. Accordingly, no works within these areas are proposed. In any event, the Proposal would not require a flood works approval due to the operation of section 89J(g) of the EP&A Act.

5.1.8 Native Vegetation Act 2003, Local Land Services Amendment Act 2016

The *Native Vegetation Act 2003* (NV Act) was repealed by the *Local Land Services Amendment Act 2016* on 25 August 2017.

The clearing of native vegetation is now regulated under the *Local Land Services Act 2013* (LLS Act) and the BC Act. Under the LLS Act, clearing is permitted if it is authorised under other legislation, including

development consent under Part 4 of the EP&A Act. The Proposal, including vegetation clearing, is being assessed under Part 4 of the EP&A Act.

5.1.9 Water Management Act 2000

The aim of the *Water Management Act 2000* (WM Act) is to ensure that water resources are conserved and properly managed for sustainable use benefiting both present and future generations. It is also intended to provide formal means for the protection and enhancement of the environmental qualities of waterways and in-stream uses, as well as to provide for the protection of catchments. Freshwater sources throughout NSW are managed via Water Sharing Plans (WSPs) under the WM Act. Key rules within the WSPs specify when licence holders can access water and how water can be traded.

Under section 89J of the EP&A Act, SSD developments do not require a water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the *Water Management Act 2000*.

The PV Plant site is located in an area subject to the following water sharing plans:

- Water Sharing Plan for the Lachlan Unregulated and Alluvial Water Source
- Water Sharing Plan for the Lachlan Regulated River Water Source.

Water entitlements within the locality are held by Jemalong Irrigation Ltd (JIL). This private corporation holds a Water Supply Work Approval and Water Use Approval licence under the Water Management Act 2000. Jemalong Station has an existing 20 ML allocation of water under the water extraction licence held by Twynam Pastoral Co Pty Ltd. The Proposal would not require modification to existing licences or entitlements, including irrigation water access and dam storage.

Potential impacts on water resources are assessed in section 9.2, and on waterways in section 8.4. Guidelines and approval requirements in relation to JIL infrastructure (irrigation and drainage channels) are detailed in section 5.1. The Proposal would comply with JIL Transformation Policy Works Policy (JIL 2014).

5.1.10 Other State legislation

Biodiversity Conservation Act 2016

The BC Act commenced on 25 August 2017, repealing and replacing the *Threatened Species Conservation Act 1996*. The BC Act establishes a new regulatory framework for assessing and offsetting the biodiversity impacts of proposed developments and activities. The Act contains provisions relating to flora and fauna protection (repealing parts of the *National Parks and Wildlife Act 1974*), threatened species and ecological communities listing and assessment (repealing the *Threatened Species Conservation Act 1995* and section 5A of the EP&A Act), a biodiversity offsets scheme (BOS), a single biodiversity assessment method (BAM), calculation and retirement of biodiversity credits and biodiversity assessment and planning approvals.

On the basis of the detailed studies that have previously been undertaken for the Site, DP&E has confirmed that the Proposal is appropriately assessed under the former framework. Refer Appendix A, letter from DPE providing the transitional arrangement.

National Parks and Wildlife Act 1974

Under the *National Parks and Wildlife Act 1974*, the Director-General of the National Parks and Wildlife Service is responsible for the care, control and management of all national parks, historic sites, nature reserves, Aboriginal areas and state game reserves. The Director-General is also responsible under this legislation for the protection and care of native fauna and flora, and Aboriginal places and objects throughout NSW. Under Section 89J of the EP&A Act, an Aboriginal Heritage Impact Permit under Section 90 of the *National Parks and Wildlife Act 1974* would not be required for a State Significant Development.

The closest nature reserve is the Lachlan Valley National Park. The Lachlan Valley National Park is comprised of multiple land parcels, of which the closest to the Proposal Site is approximately 2.2 km to the south. Another parcel of the Lachlan Valley National Park is located approximately 5km north of the Proposal Site. No impacts to the Lachlan Valley National Park are expected.

The potential impacts to Aboriginal heritage and native fauna and flora are discussed in sections 8.1 and 8.2 of this report

Biosecurity Act 2015

The *Biosecurity Act 2015* repealed the *Noxious Weeds Act 1993* and provides a framework for the prevention, elimination and minimisation of biosecurity risks. The Act and supporting Biosecurity Regulation 2017 provide for the establishment and functions of Local Control Authorities for weeds (LGA or County Councils), and weed control obligations on public and private land. The EIS provides for the control of noxious weeds occurring at the Proposal Site as part of the proposed works (refer section 8.1).

Heritage Act 1977

This Act aims to conserve heritage values. The Heritage Act defines 'environmental heritage' as *those places, buildings, works, relics, moveable objects, and precincts, of State or local heritage significance*. A property is a heritage item if it is listed in the heritage schedule of the local Council's Local Environmental Plan or listed on the State Heritage Register, a register of places and items of particular importance to the people of NSW. Under Section 89J of the EP&A Act, an approval under Part 4 or a permit under Section 139 of the *Heritage Act 1977* would not be required for a State Significant Development. The proposal is unlikely to directly or indirectly affect any items of heritage significance (refer section 9.8).

Crown Lands Act 1989

Crown land includes leased Crown lands, Crown roads, Crown reserves managed by local councils and community trusts, Crown land retained for environmental purposes, many non-tidal waterways and most tidal waterways, and unallocated Crown land (NSW Trade and Investment 2014). Approval from the Lands Minister is required to reside, erect a structure or graze or drive stock on Crown land, or clear, dig up or cultivate or enclose Crown land. There is no Crown land present at the Proposal Site and approval under the Act would not be required.

Aboriginal Land Rights Act 1983

The Aboriginal Land Rights Act 1983 provides a mechanism for compensating Aboriginal people of NSW for loss of their land. The role of the Department of Aboriginal Affairs is to administer the Act on behalf of the Minister for Aboriginal Affairs.

As above, the proposed works are not located on Crown land. However, if Vast Solar proposes to have any impact on Crown land, an Aboriginal Lands Claims search should be undertaken.

Contaminated Land Management Act 1997

Section 60 of the Contaminated Land Management Act 1997 ('CLM Act') imposes a duty on landowners to notify OEH, and potentially investigate and remediate land if contamination is above levels set by the Environmental Protection Authority ('EPA').

The CLM Act also contains provisions relating to the regulation of 'significantly contaminated land' by the EPA. The potential for contamination at the site is discussed in Section 9.1.

Mining Act 1992

The main objective of the *Mining Act 1992* is to encourage and facilitate the discovery and development of mineral resources in New South Wales, having regard to the need to encourage ecologically sustainable development. A database search conducted on November 8, 2017 of the Resource and Energy Title Services portal revealed no current exploration applications or licences, assessment lease applications or leases, or mining or production applications or leases for the site or locality in the DP&E (Resources and Energy) Minview database or Common Ground Viewer, including for coal, minerals, petroleum and gas (Reference Appendix N). The area has however been the subject of previous energy (petroleum) exploration licences (DP&E 2017b,c).

Protection of the Environment Operations Act 1997

The *Protection of the Environment Operations Act 1997* (POEO Act) provides an integrated system of licensing for certain polluting activities within the objective of protecting the environment:

- Section 148 of this Act requires notification of pollution incidents
- Section 120 of this Act provides that it is an offence to pollute waters
- Schedule 1 of the POEO Act describes activities for which an Environment Protection Licence is required.

Under section 48 of the POEO Act, premises-based scheduled activities (as defined in Schedule 1 of the POEO Act) require an Environment Protection Licence (EPL). Clause 17 of Schedule 1 of the POEO Act concerns electricity generation works, however does not include solar power. The proposal would not be a scheduled activity under the Act and an EPL is not required.

The proposal would be managed to ensure pollution risks are minimised during the construction and operation phases. Measures have been incorporated into the EIS to ensure risks to soils, waterways and air quality are avoided or minimised. The Environment Protection Authority would be notified if a 'pollution incident' occurs that causes or threatens 'material harm' to the environment.

Legal requirements for the management of waste are also established under the POEO Act and the *Protection of the Environment Operations (Waste) Regulation 2005*. Unlawful transportation and deposition of waste is an offence under Section 143 of the POEO Act. Waste minimisation and management is addressed in section 9.11 of the EIS.

Waste Avoidance and Resource Recovery Act 2001

Waste management during the proposed works would be undertaken in accordance with the *Waste Avoidance and Resource Recovery Act 2001* (WARR Act). The objectives of the Act are:

- a) to encourage the most efficient use of resources and to reduce environmental harm in accordance with the principles of ecologically sustainable development,
- b) to ensure that resource management options are considered against a hierarchy of the following order:

- i. *avoidance of unnecessary resource consumption,*
- ii. *resource recovery (including reuse, reprocessing, recycling and energy recovery),*
- iii. *disposal,*
- c) *to provide for the continual reduction in waste generation,*
- d) *to minimise the consumption of natural resources and the final disposal of waste by encouraging the avoidance of waste and the reuse and recycling of waste,*
- e) *to ensure that industry shares with the community the responsibility for reducing and dealing with waste,*
- f) *to ensure the efficient funding of waste and resource management planning, programs and service delivery,*
- g) *to achieve integrated waste and resource management planning, programs and service delivery on a State-wide basis,*
- h) *to assist in the achievement of the objectives of the Protection of the Environment Operations Act 1997.*

Waste minimisation and management is addressed in section 9.11 of the EIS.

Noxious Weeds Act 1993

This Act aims to control noxious weeds in NSW. Part 3 of this Act outlines the obligations of a public authority to control noxious weeds. The EIS provides for the control of noxious weeds occurring at the Proposal Site as part of the proposed works (refer section 8.1). The Act is to be replaced by the Biosecurity Act 2015.

5.1.11 Policies and guidelines

Non-statutory State policies and guidelines used in the environmental assessment, and relevant sections in the EIS, are identified in Table 5-1.

Table 5-1 State Policies and Guidelines relevant to the assessment of the proposal

Guideline	EIS section
Biodiversity	
Framework for Biodiversity Assessment (OEH)	Section 8.1
NSW Biodiversity Offsets Policy for Major Projects (OEH)	
Heritage	
Aboriginal Cultural Heritage Consultation Requirements for Proponents (OEH)	Section 8.2
Code of Practice for Archaeological Investigations of Objects in NSW (OEH)	Section 8.2
Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH).	Section 8.2
NSW Heritage Manual (OEH)	Section 9.8
Land	
Primefact 1063: Infrastructure proposals on rural land (DPI)	Section 9.10
Establishing the social licence to operate large scale solar facilities in Australia: insights from social research for industry (ARENA)	Sections 8.3 and 9.4
The land and soil capability assessment scheme: second approximation (OEH)	Section 9.1
Noise	
NSW Industrial Noise Policy (EPA)	Section 9.3

Guideline	EIS section
Interim Construction Noise Guideline (EPA)	
NSW Road Noise Policy (EPA)	
Transport	
Guide to Traffic Generating Development (RTA)	Section 9.5
Road Design Guide (RMS) & relevant Austroads Standards	
Dangerous goods	
Hazardous and Offensive Development Application Guidelines Applying SEPP 33 (DOP)	Section 9.6
Fire	
Planning for Bush Fire Protection (RFS 2006)	Section 9.6
Planning for Bush Fire Protection. Draft for Public Consultation. (RFS 2017b)	Section 9.6
Water	
Managing Urban Stormwater: Soils & Construction (Landcom)	Sections 9.1 and 9.2
Floodplain Development Manual (OEH)	Section 9.2
Guidelines for Controlled Activities on Waterfront Land (DPI Water)	
Water Sharing Plans (DPI Water)	
Waste	
Waste Classification Guidelines (EPA)	Section 9.11

5.2 LOCAL GOVERNMENT

5.2.1 Forbes Local Environmental Plan 2013

The Proposal Site is located within the Forbes LGA and is subject to the provisions of *Forbes Local Environmental Plan 2013* (LEP). The LEP aims:

- a) to encourage and manage ecologically sustainable development in Forbes,
- b) to reinforce the existing urban character of Forbes as the urban focus,
- c) to reinforce the rural character of Forbes while promoting sustainable development,
- d) to protect the agricultural land of Forbes for continued agricultural production while allowing for planned expansion at the urban fringe,
- e) to promote Forbes as a premier tourist-destination building on its unique heritage and environmental attributes as well as sporting and leisure facilities,
- f) to protect, enhance and conserve the natural environment, including the Lachlan River, Lake Forbes, wetlands, native vegetation, environmentally sensitive land and other natural features that provide habitat for fauna and flora, provide scenic amenity and that may prevent or mitigate land degradation,
- g) to provide a range and variety of housing choices to cater for the different needs and lifestyles of residents.

This EIS takes into account the proposal's compatibility with ecologically sustainable development, rural character, agricultural land use and other alternative land uses and the natural environment. The proposal is generally permissible with development consent in the RU1 - Primary Production zone, except for the subdivision of the substation lot. Permissibility of the proposal is discussed in Section 5.4 below.

Land zoning

The LEP states that the consent authority must have regard to the development objectives of planning zones identified in the LEP when determining development applications. Although for SSD developments this does not act as a prohibition, the consent authority should still have regard to these objectives. The Proposal Site is located on land zoned RU1 - Primary Production under the Forbes LEP.

The objectives of this zone are:

- a) to encourage sustainable primary industry production by maintaining and enhancing the natural resource base*
- b) to encourage diversity in primary industry enterprises and systems appropriate for the area*
- c) to minimise the fragmentation and alienation of resource lands*
- d) to minimise conflict between land uses within this zone and land uses within adjoining zones*
- e) to provide opportunities for intensive and extensive agriculture in appropriate locations consistent with the environmental capability of the land*

For the life of the proposal, the Proposal Site would harness a natural resource (solar energy). While the activity would impact on land availability for primary production, the land would meet the second and third objects as identified above; it would allow for diversity in land use, appropriate to the area and it would not fragment resource lands. Being fully reversible and involving limited ground disturbance, it would not remove the potential to use the land for primary production in the medium to long term.

Permissibility of the proposal is discussed in Section 5.4 below.

5.2.2 Subdivision

Under clause 23F of the *Conveyancing Act 1919*, the Registrar-General can refuse to register a transaction in relation to the lease of part of an existing lot unless the boundaries of each part into which the land is divided follows the boundaries of an existing lot. There is an exception for a lease where the term does not exceed 5 years.

As such, because the lease of the PV Plant land will exceed 5 years, the Registrar-General will not register the lease unless the leased lot is subdivided so that the lease is for the whole of that lot.

Therefore, the Proposal includes a subdivision of Lot 13 in DP 753118 to create a lot for the purposes of the PV Plant lease.

A second lot will also be created from Lot 13 in DP 753118 to accommodate the substation.

The third lot, which will comprise the residue of Lots 13, will be approximately 513 hectares in size.

Clause 2.6 of the Forbes LEP provides that "Land to which this Plan applies may be subdivided, but only with development consent". However, clause 4.1(2) states that "The size of any lot resulting from a subdivision of land to which this clause applies is not to be less than the minimum size shown on the Lot Size Map in relation to that land". The minimum lot size which applies to the Proposal Site is 100 hectares. Therefore, the creation of a lot which is less than 100 hectares is prohibited under the Forbes

LEP. This prohibition applies to the substation lot. The PV Plant lot and residue lot are permissible with development consent.

While the Forbes LEP therefore prohibits the subdivision of land to create the substation lot, section 89E(3) of the EP&A Act allows DPE to grant development consent to development which is partly prohibited.

Consent for State significant development

.....

(3) Development consent may be granted despite the development being partly prohibited by an environmental planning instrument.

A subdivision plan is shown in Figure 4.1, and a copy of the Landholders consent for the lodgement of Application SS 8803 is provided in Appendix K

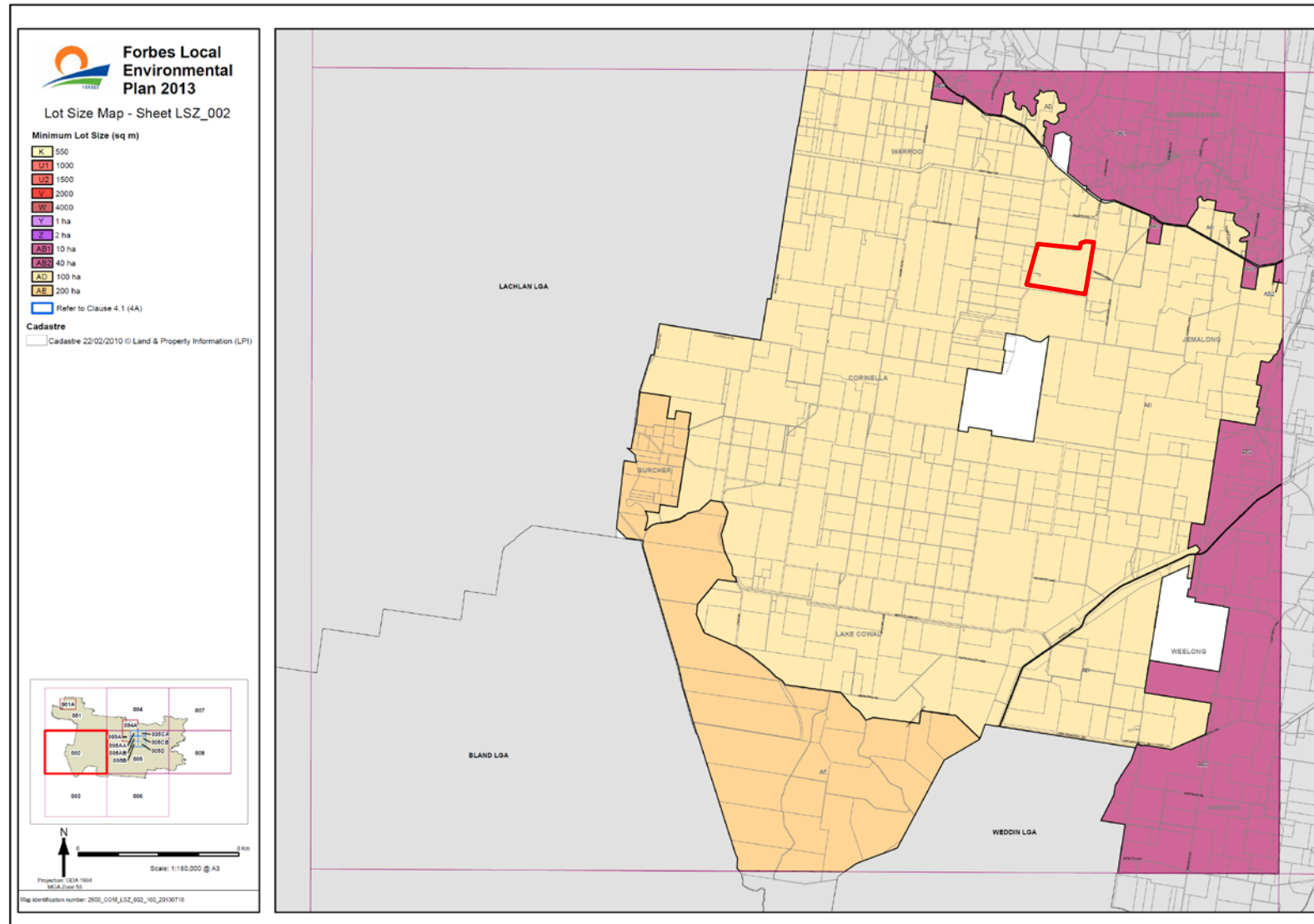


Figure 5-1: Forbes LEP Minimum Lot Size, with Lot 13 DP 753118 identified in Red

5.3 COMMONWEALTH LEGISLATION

5.3.1 *Environmental Protection and Biodiversity Conservation Act 1999*

The EPBC Act provides an assessment and approval process for actions likely to cause a significant impact on Matters of National Environmental Significance (MNES). The nine MNES are:

- World Heritage properties
- National Heritage places
- Wetlands of international importance (listed under the Ramsar Convention)
- Listed threatened species and ecological communities
- Migratory species protected under international agreements
- Nuclear actions (including uranium mines)
- Commonwealth marine areas
- The Great Barrier Reef Marine Park
- A water resource, in relation to coal seam gas development and large coal mining development.

Approval by the Commonwealth Environment Minister is required if an action is likely to have a significant impact on a MNES. Assessments of significance based on criteria listed in Significant Impact Guidelines 1.1 issued by the Commonwealth (Commonwealth of Australia 2013) are used to determine whether the proposed action is likely to have a significant impact (ie is likely to be considered a 'controlled action').

A search of matters protected by the EPBC Act was undertaken in September 2017 using the EPBC Act Protected Matters Search Tool (PMST) (DEE, 2017a). A search radius of 5km was applied. The results of the search are summarised in Table 5-2.

The potential impacts to listed threatened species and communities are assessed in the Biodiversity Assessment Report (Appendix E) and summarised in section 8.1. These conclude that the proposal is not likely to have a significant impact on threatened species and communities, migratory bird species and marine species listed under the EPBC Act. Assessments of Significance under the EPBC Act for affected species are provided in Appendix E.

Table 5-2 Summary of EPBC Act Protected Matters Report search results

Matters of National Environmental Significance	
World Heritage Properties	None
National Heritage Places	None
Wetlands of International Significance (Ramsar)	4 (note the closest Ramsar site is 400-500km upstream)
Great Barrier Marine Park	None
Commonwealth Marine Area	None
Listed Threatened Ecological Communities	3
Listed Threatened Species	18
Listed Migratory Species	11
Other Matters Protected by the EPBC Act	
Commonwealth land	None
Commonwealth Heritage places	None
Listed Marine Species	17 (note the site is not near a marine environment)
Whale and Other Cetaceans	None
Critical habitats	None
Commonwealth reserves Terrestrial	None
Commonwealth reserves Marine	None

If further investigations identify that the proposal is likely to have a significant impact on a MNES, a referral will be submitted to the Commonwealth Department of the Environment and Energy (DEE). DEE will then determine whether the proposal is a 'controlled action' requiring approval from the Commonwealth Environment Minister or their delegate.

5.3.2 Native Title Act 1993

The *Native Title Act 1993* provides a legislative framework for the recognition and protection of common law native title rights. Native title is the recognition by Australian law that Indigenous people had a system of law and ownership of their lands before European settlement. Where that traditional connection to land and waters has been maintained and where government acts have not removed it, the law recognises the persistence of native title.

People who hold native title have a right to continue to practise their law and customs over traditional lands and waters while respecting other Australian laws. This could include visiting to protect important places, making decisions about the future use of the land or waters, and hunting, gathering and collecting bush medicines. Further, when a native title claimant application is registered by the National Native Title Tribunal, the people seeking native title recognition gain a right to consult or negotiate with anyone who wants to undertake a proposal on the area claimed.

Native title may exist in areas such as:

- vacant Crown land
- some national parks, forests and public reserves
- some types of pastoral leases
- some land held for Aboriginal communities
- beaches, oceans, seas, reefs, lakes, rivers, creeks, swamps and other waters that are not privately owned.

A search of the National Native Title Tribunal Registers in November 2017 found no Native Title Claims or active applications over the proposal area.

5.3.3 Renewable Energy (Electricity) Act 2000

The *Renewable Energy (Electricity) Act 2000* (RE Act) aims to:

- *encourage the additional generation of electricity from renewable sources*
- *reduce emissions of greenhouse gases in the electricity sector*
- *ensure that renewable energy sources are ecologically sustainable.*

Section 17 of the RE Act defines renewable energy sources eligible under the Commonwealth Government's RET; this includes solar energy.

Certificates for the generation of electricity are issued using eligible renewable energy sources. This requires purchasers (called liable entities) to surrender a specified number of certificates for the electricity that they acquire. In January 2011, renewable energy certificates were reclassified as either large-scale generation certificates or a small-scale technology certificates following changes to the RET scheme.

The proposal is the subject of application to the Clean Energy Regulator under the RE Act.

5.3.4 Policies and guidelines

Non-statutory Commonwealth, national and international policies guidelines used in the environmental assessment, and relevant sections in the EIS, are identified in Table 5-3.

Table 5-3 Commonwealth, national and international policies and guidelines relevant to the assessment

Guideline	EIS section
Biodiversity	
Significant Impact Guidelines 1.1 (Commonwealth of Australia 2013)	Section 8.1
<i>Environment Protection and Biodiversity Conservation Act 1999</i> Environmental Offsets Policy. October 2012.	
Policy statement: Advanced environmental offsets under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> . February 2016.	
Outcomes-based conditions policy. <i>Environment Protection and Biodiversity Conservation Act 1999</i> . March 2016.	
Heritage	
Engage early – guidance for proponents on best practice Indigenous engagement for environmental assessments under the <i>Environment Protection and Biodiversity</i>	Sections 6 and 8.2

Guideline	EIS section
<i>Conservation Act 1999</i> (DoE 2016)	
Social	
Establishing the social licence to operate large scale solar facilities in Australia: insights from social research for industry (ARENA)	Sections 6.3 and 8.3
Land	
Australian Soil and Land Survey Handbook (CSIRO)	Section 9.1
Guidelines for Surveying Soil and Land Resources (CSIRO)	
Transport	
Austrorads Guide to Traffic Management Part 12: Traffic Impacts of Development (2016)	Section 9.3
Australian Code for the Transport of Dangerous Goods by Road and Rail. Edition 7.5, 2017 (NTC Australia)	Sections 9.6 and 9.7
Electromagnetic interference	
ICNIRP Guidelines for limiting exposure to Time-varying Electric, Magnetic and Electromagnetic Fields	Section 9.6.1

5.4 OTHER RELEVANT POLICIES AND MATTERS

5.4.1 Ecologically Sustainable Development

Ecologically Sustainable Development (ESD) involves the effective integration of social, economic and environmental considerations in decision-making processes. In 1992, the Commonwealth and all state and territory governments endorsed the *National Strategy for Ecologically Sustainable Development*.

In NSW, the concept has been incorporated in legislation such as the EP&A Act and EP&A Regulation. For the purposes of the EP&A Act and other NSW legislation, the Intergovernmental Agreement on the Environment (1992) and the *Protection of the Environment Administration Act 1991* outline principles which can be used to achieve ESD. These principles are presented below along with a description of how the proposal and this EIS have considered each principle.

- a) *The precautionary principle, namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:*
- i. *careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and*
 - ii. *an assessment of the risk-weighted consequences of various options.*

The precautionary principle has been adopted in the assessment of impact. All potential impacts have been considered and mitigated where a risk has been identified. Mitigation is commensurate with risk. Where uncertainty exists, measures have been included to address the uncertainty.

- b) *Inter-generational equity, namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.*

The majority of the potential impacts of the proposal are likely to be localised and would not diminish the options regarding land and resource uses and nature conservation available to future generations. Particularly, pollution risks have been addressed and decommissioning would see all above ground infrastructure removed, such that the majority of the site could be returned to primary production or other compatible land use. It is also noted that the proposal would address the need to minimise the risk of climate change to current and future generations by reducing carbon emissions that result for electricity generation. Proposals such as JSS1 are an important part of the transition to a low emission future.

c) Conservation of biological diversity and ecological integrity, namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration.

The impacts of the proposal on biodiversity, including EPBC listed species, have been assessed in detail in the Biodiversity Assessment in Appendix E and are summarised in Section 5.2 This has included avoidance of areas of higher conservation value areas and management prescriptions to minimise, manage and offset residual impacts. The impacts have been deemed acceptable and justifiable by this assessment.

d) Improved valuation, pricing and incentive mechanisms, namely, that environmental factors should be included in the valuation of assets and services, such as:

- i. polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,*
- ii. the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,*
- iii. environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.*

Attributes of the Proposal Site such as the existing native vegetation, soil and hydrology have been valued in terms of their broader contribution to the catchment and catchment processes. Pollution risks have been assessed and would place any cost of remediation solely upon the proponent.

The aims, structure and content of this EIS have incorporated these ESD principles. The mitigation measures in Section 7.3 set out an auditable environmental management commitment by the proponent. Based on the social and environmental benefits accruing from the proposal at a local and broader level, and the assessed impacts on the environment and their ability to be managed, it is considered that the development would be ecologically sustainable within the context of ESD.

5.5 PERMISSIBILITY AND APPROVALS SUMMARY

5.5.1 Permissibility

The ISEPP provides that development for the purpose of a solar energy system may be carried out by any person with consent on any land (other than on land in a prescribed residential zone if the system has the capacity to generate more than 100kW). A 'solar energy system' includes a photovoltaic electricity generating system. The Proposal would be located within a rural zone (RU1 Primary Production) and the

construction, operation, upgrade and decommissioning of the PV Plant may be carried out with development consent.

The Proposal is classified as SSD under the S&RD SEPP and as such, the consent authority is the Minister for Planning. The development application is assessed and determined in accordance with those provisions in the EP&A Act relating to SSD.

5.5.2 Approvals and licences

The approvals and licence requirements for the Proposal are summarised in Table 5-4. Any additional licences or approvals that may be required would be obtained prior to the commencement of relevant activities.

Table 5-4 Summary of licences and approvals required for the proposal

Legal instrument	Approving authority	Approval or licence
<i>Environmental Planning and Assessment Act 1979</i>	DP&E	Development consent Subdivision approval
<i>Roads Act 1993</i> , Section 138 approval for work within a public road reserve	RMS, Forbes Shire Council	<ul style="list-style-type: none"> Lachlan Valley Way; Roads and Maritime. Wilbertroy Lane, Naroo Lane and Whisperings Lane; Forbes Shire Council.
<i>Electricity Supply Act 1995</i>	Essential Energy	Connection to transmission network

Note, if it is determined that additional licenses or approvals are required, Vast Solar would obtain these prior to commencement of relevant activities.

6 CONSULTATION

Agency consultation, Aboriginal community consultation and Community consultation activities were carried out in the spring of 2014 for the original proposal of the CSP Plant within the current Proposal Site. Given that several aspects of the two design proposals overlap, namely identical site location (subject site) and consequently identical background environmental and social issues, the comments and requirements raised by the various stakeholders are considered valid. As such, this chapter has addressed the comments from 2014 in relation to the new design proposal of a photovoltaic station.

6.1 AGENCY CONSULTATION

During the 2014 agency consultation, NGH Environmental contacted several Agencies to seek further advice regarding the comments raised. These have been summarised in the following table. The detailed responses for all agencies can be accessed on the DP&E SSD weblink:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=6588

Table 6-1 Summary of Agency Consultation for Jemalong CSP Plant, dated 2014

Agency	Comment Raised	Relevance
Department of Planning and Environment	Scope of the Aboriginal heritage assessment and requirement for subsurface testing in respect to the subject site	Section 8.4 of the EIS assesses the need for subsurface testing
Department of Planning and Environment	Photomontage of the CSP park to assess the visual impact of the Heliostats	No longer applicable to current proposal of a PV station.
Department of Environment and Heritage	The EIS must address: <ul style="list-style-type: none"> Fauna, flora, and habitat impact Impacts to threatened species, and ecological communities Impact on Birds Management of Flora and Fauna impacts during construction and operation Cumulative impacts Aboriginal heritage impacts 	Assessment of impacts to birds is no longer applicable for the design of the PV park. All other comments have been addressed in Sections 8.1 Biodiversity, 8.2 Aboriginal heritage and 9.12 Cumulative Impacts
Department of Defence	<ul style="list-style-type: none"> Aviation safety due to height of receiver towers Requirement for obstacle lighting Assessment of heliostat glare effect on pilots 	Note: Receiver towers and heliostats are not a component of this proposal Section 5.6 of the EIS addresses glare impacts from the PV panels and support frame.
Environment Protection Agency	<ul style="list-style-type: none"> Jemalong Irrigation Corporation to comply with the requirements of EPL 5102. Dust generation and management Noise, construction and operation Blasting, chemical and hazardous materials Waste management Soils and Water 	No blasting is required. Chemicals and hazardous materials are not used in the PV park. All other comments have been addressed in the Sections 9.1 Soils, 9.9 Air quality, 9.3 Noise, 9.11 Waste Management, 8.4 Hydrology
Department of Primary Industries	Assess and discuss demand and supply of water, licenses, impact to surface and water and mitigation measures	Sections 8.4 and 9.2.
Department of	Consultation would be required with Crown lands if	Vast Solar would not purchase the site. No

Agency	Comment Raised	Relevance
Primary Industries	Vast Solar Pty Limited purchase Lot 13 DP 753118.	impacts are proposed on Crown land.
Roads and Maritime Services	Prepare a traffic impact study in accordance with section 2 of the RTA's Guide to Traffic Generating Developments 2002	Traffic and transport impacts are assessed in Section 9.5.
Forbes Shire Council	Pre and Post construction dilapidation survey of the Lachlan Valley Way, Wilbertroy Lane and Naroo Lane. Responsibility of developer to carry out repairs resulting from construction traffic. Consultation with RMS during assessment process	Addressed in Section 9.5
Central West Local Land Services	<ul style="list-style-type: none"> Native Vegetation (and biodiversity values) Water (surface and ground water) Biosecurity Emergency management Cultural Heritage and engagement with the Aboriginal community Community engagement in an ongoing capacity 	<ul style="list-style-type: none"> Section 8.1. Section 8.4 and 9.2. Section 8.1 Section 9.6 and 9.7. Section 8.2 and 9.8 Section 6

In late 2016 subsequent to the submission and exhibition of the CSP Plant EIS, DP&E received submissions from Agencies about a range of issues. No submissions were received from neighbours or members of the general public.

In late 2016 Vast Solar met with DP&E to discuss matters raised by Agency submissions and clarification of key issues was gained. This input has helped to inform additional expert studies (geology, survey, and further hydrology and flood modelling work) as well as augmentation of expert studies (Aboriginal Heritage, Biodiversity) that have been undertaken in 2017 to support the proposed PV Plant proposal as well as ongoing planning of the Jemalong Solar Hybrid Park and the CSP Plant.

In 2017 Vast Solar consulted with the DP&E to seek input about the proposed PV Plant and staged approach to development of the Jemalong Hybrid Solar Park inclusive of the CSP Plant.

Vast Solar has also consulted in person with:

- the Roads and Maritime Services office, Parkes, to discuss traffic and transport planning matters and related scheduling and infrastructure upgrades for the PV Plant.
- The Office of Environment and Heritage, Dubbo, to discuss and update them about biodiversity studies and design approaches that have been taken to avoid sensitive areas including Potential Aboriginal Deposits in the PV Plant's overall plat and infrastructure design and layout.
- The Forbes Shire Council to provide a presentation to Council members about the PV Plant and how it relates to Vast Solar's ongoing research, development and CSP technology commercialisation plants at Jemalong – the current CSP Pilot and proposed CSP Plant (30MW).

The above discussions raised no significant new issues. Forbes Shire Council expressed strong support for the PV Plant proposal and for Vast Solar's ongoing CSP technology commercialisation plans. Forbes Shire Council requested the opportunity to again visit the CSP Pilot Plant and a date has been scheduled in March 2018.

6.2 ABORIGINAL COMMUNITY CONSULTATION

Local Aboriginal Land Council and Registered Aboriginal Parties

In order to identify, notify and register Aboriginal people who may hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/or places in the area of the proposed project, NSW Archaeology undertook a consultation procedure where correspondence dated 7 October 2014 was sent to:

- NSW OEH Dubbo office.
- Condobolin Local Aboriginal Land Council (LALC).
- The Registrar, *Aboriginal Land Rights Act 1983*.
- The National Native Title Tribunal, requesting a list of registered native title claimants, native title holders and registered Indigenous Land Use Agreements.
- Native Title Services Corporation Limited (NTSCORP Limited).
- Forbes Shire Council.

In addition an advertisement was placed in the local newspaper (*Forbes Advocate*) on 11 October 2014. Section 5.3 and Appendix D of the EIS provide detailed information regarding this consultation.

Responses were received from the Office of the Registrar *Aboriginal Land Rights Act 1983* indicating that there does not appear to be Registered Aboriginal owners for the project area. The Native Title Services Corporation responded, indicating that due to their privacy guidelines they would forward our correspondence to any parties who may have an interest in the area in question. The National Native Title Tribunal responded indicating that because the area in question was freehold land, they were unable to action the request. Correspondence was received from OEH furnishing a list of six Aboriginal parties who may have an interest in the area and correspondence dated 13 October 2014 was sent to these groups. A response was received from Forbes Shire Council with a list of four Aboriginal parties who may have an interest in the area and correspondence dated 27 October 2014 was sent to those parties.

There are two Registered Aboriginal Parties (RAPs) in the formal process of consultation:

- Joy Russell
- Aileen Allen.

Section 8.2 and Appendix G of the EIS provide details of this consultation process and results.

Representatives of the Condobolin LALC participated in field investigations. A cultural heritage and archaeological survey for Aboriginal areas, objects and places was conducted over two days in December 2014 by archaeologists Julie Dibden and Tom Knight, NSW Archaeology Pty Ltd. Richard Coe, representing the Condobolin LALC, was involved in the field survey.

6.3 COMMUNITY CONSULTATION

6.3.1 Community Consultation Plan

A Community Liaison Plan was developed early in the planning stages of the CSP Plant proposal and has been updated during the development of the PV Plant proposal to reflect Vast Solar's project priorities and ongoing commitment to engagement and open and transparent communication with neighbours, community groups and other stakeholder groups. The Community Liaison Plan remains in draft form as it is a live document and is provided in Appendix D.

Aims and structure of the plan

The aim of the Community Liaison Plan is to provide a framework for positive ongoing relationships with the local community. The plan has been developed for the early planning and assessment stages of the PV Plant and also incorporates information about consultation undertaken, and issues identified for the PV Plant and preceding consultation undertaken with the community for the CSP Pilot Project and CSP Plant. If the PV Plant proposal is approved, the plan will be updated and augmented to incorporate further consultation activities that will be undertaken during the pre-construction, construction and operational phases of the project.

Vast Solar aims to provide a meaningful and inclusive approach for community consultation activities and ensure that community issues are identified and addressed appropriately prior to the construction and operation of the proposal. The plan aims to:

Inform the community – Ongoing communications to provide balanced and objective information to assist the understanding throughout the proposal's planning approval process and delivery.

Consult with the community – Provide ongoing opportunities for open communications between Vast Solar and stakeholders in order to obtain public feedback about ideas on rationale, and alternatives in order to demonstrate influence into the decisions.

Involve the community - Identify issues and views to ensure that concerns and aspirations are understood and considered in the proposal's planning approval process and delivery.

Collaborate with the community - Work together to develop understanding of all issues and interests to work out alternatives and reflect these preferred solutions.

Empower the community – Where possible, provide a variety of opportunities and resources for stakeholders to contribute to solutions to the proposal's planning approval process and delivery.

Key aspects of the Community Liaison Plan include:

- A list of the key objectives of planned consultation activities.
- A list of relevant stakeholders which include:
 - Neighbours - three adjoining properties to the Proposal Site including three residences
 - Residences within five km of the Proposal Site
 - Local community and businesses - the nearest towns (primarily Forbes)
 - Local council - Forbes and Parkes Shire Councils
 - Local media - Local newspapers, television networks and local radio stations – *Forbes Advocate* newspaper, ABC Regional Radio Orange, Channel 7/Prime Orange
 - Special interest groups - Including Indigenous representative groups, country fire services and medical services, engineering interest groups, seniors groups such as Probus, wildlife/conservation groups and sporting groups.
- A summary table of issues, including risks and opportunities and the strategies to effectively address these.
- A summary table of the consultation activities and aims specific to each project stage. The community consultation reflects the seven key project stages:
 - Early site investigation
 - Detailed assessment and refinement of project description
 - Environmental assessment on public display

- Submission Report on public display.

As noted above, if the project is approved further community consultation and engagement activities will be scheduled and undertaken for the following project stages:

- Pre-Construction
- Construction
- Operation.

The Community Liaison Plan is considered a 'live' document, in that it is intended to be updated and revised in close relationship with the more detailed development of the PV Plant proposal.

Consultation activities

The community consultation process will employ a range of consultation activities as set out below.

Table 6-2 Consultation activities for Jemalong Solar PV Plant

Consultation activity	Details	Target audience	IAP2 Spectrum *
Community information sessions and morning teas for neighbours	Community forums/information sessions to be held over the course of the proposal's life.	All stakeholders	Inform/Consult
Feedback form	Feedback forms to be made available at community information sessions.	All stakeholders	Consult
Face to face meetings	Direct meetings with directly affected stakeholders (nearby residents) to discuss and address issues.	Directly affected community members including nearby residents	Consult/Collaborate
Media release	Issue as relevant such as advertise project information session, invitations to tender for local businesses and updating community on proposal.	All stakeholders	Inform
Website updates	Update website with project information as required. Ensure contact details and complaints and enquiries procedure available. List website on all communications.	All stakeholders	Inform
Presentations	Targeted presentations may be developed for specific stakeholders groups where required.	Key service and agency personnel	Inform/Involve/Collaborate
Site tours	Arrange tours of the Proposal Site and/or existing sites.	Nearby residents ARENA Media Council	Inform
Telephone information line /	Ready access to information channels for people to	All stakeholders	Inform/Consult

Consultation activity	Details	Target audience	IAP2 Spectrum *
email address	enquire/lodge complaints about the proposal.		
Complaints and enquiries procedure	Phone and email based procedures to respond to enquiries about Vast Solar and the proposal (emails and phone).	All stakeholders	Consult
Project news and update information provided and updated	Provided at Community Forums / Information Sessions and available at website to keep community informed as project progresses.	All stakeholders	Inform

* IAP2's Public Participation Spectrum is designed to assist with the selection of the level of participation that defines the public's role in any community engagement program. The Spectrum show that differing levels of participation are legitimate depending on the goals, time frames, resources and levels of concern in the decision to be made. The Spectrum is widely used and is quoted in most community engagement manuals.

6.3.2 Community consultation activities to date

In accordance with the Community Liaison Plan, several activities were undertaken prior to the lodgement of the public exhibition of the EIS for the CSP Plant proposal that relates to the same site as the Solar PV Plant. In accordance with the updated Community Liaison Plan that also addresses the Solar PV Plant several activities were undertaken in 2017 prior to the lodgement and public exhibition of the EIS for the Solar PV Plant.

Background: Consultation for the CSP Plant

Formal consultation for the proposal commenced in late 2014. The Jemalong CSP project would be the first commercial scale CSP plant built by Vast Solar. It would be constructed using knowledge gained from over seven years of Australian research and development. These activities include the construction of Vast Solar's 6 MWth CSP pilot plant, also located at Jemalong.

The following community consultation activities were undertaken between late 2014 and mid 2016:

- Information sessions and community forums.
- Feedback forms.
- Face to face meetings.

Information presentations

Two information presentations were hosted by Vast Solar, in the lead up to a formal community consultation session seeking feedback.

An information presentation was made to the Forbes Probus Club on 24 January 2014. This session was attended by a large combined group of the Men's and Women's Probus groups.

A similar information session was held with the Dubbo Seniors Group at Dubbo Workers Club in November 2014. While outside the Forbes/Parkes region, Dubbo has become a centre for solar power development and there is strong interest from stakeholders in Western NSW in large-scale solar development.

The strong interest shown by these groups and the positive feedback received provided reassurance for Vast Solar that the proposal is likely to receive good and broad support across the spectrum of ages and community interests, even among traditionally very conservative community bodies.

Community consultation session November 2014

The Community Consultation session for the CSP Plant proposal was held in Forbes, on 12 November 2014. The event was advertised in the *Forbes Advocate* newspaper and invitations sent to Forbes and Parkes Shire Councils. It was held at the Jemalong Regional Education Centre over 2.5 hours with over 2 hours being questions and answers and interaction between stakeholders present and the Vast Solar team.

Attendees included Vast Solar presenters, who introduced the project and answered questions, as well as 12 participants from the community that included a representative from local media. Several participants were from the business community in Forbes and Parkes and were interested in exploring opportunities that might exist for their businesses as part of project delivery. In addition to the public community meeting held on the 12 of November, an additional Vast Solar update briefing meeting was also held on the same day with Forbes Shire Council at Council Chambers. This meeting was chaired by the Mayor and attended by the Deputy Mayor and several other councillors, along with senior Council executives.

Materials distributed at the event included:

- A fact sheet (provided in Appendix D), setting out information on:
 - The proponent, Vast Solar
 - Concentrating solar technology including thermal storage benefits
 - The 6MWth pilot plant
 - The 30MW proposal and its proposed location
 - The business case for the 30MW proposal and proposed project timelines
 - The ability of the project to avoid flora and fauna constraints
- A consultation feedback sheet (see Appendix D), was provided to:
 - Gauge the level of understanding about the proposal (particularly the look of the project and technology employed)
 - Gauge the level of understanding about the proposal's potential benefits and compatibility with other regional industries
 - Seek general feedback from the public.
- The Community Liaison Plan as of November 2014.

(Note: The Community Liaison Plan as at November 2014 was a living Draft document that indicated it would be updated as the project developed. The updated plan, as at June 2016, is provided in Appendix D).

Attendees were encouraged to provide feedback that would be utilised in the assessment of the proposal and further refinement of the project design and development. Feedback was received in the form of completed consultation feedback sheets and verbal statements of interest in and support for the project.

Completed consultation feedback forms

Five feedback forms were returned. All feedback was positive with regard to the potential development of the project.

Distribution of attendees

The list of attendees included residents from:

- Canowindra
- Parkes
- Forbes.

Understanding of the proposal and CSP technology

The feedback demonstrated that attendees already had some understanding of the concentrating solar thermal energy and of the project itself (four out of five). Most stated that the event had given them a greater understanding of how the plant would look and work and that the materials and information presented were clearly presented and relevant.

Expected benefits of the project were listed by attendees as:

- Potential to create a hub for renewable energy in the area.
- Financial benefits for local suppliers.
- Future power generation to the local area.
- Employment, through construction and operation.
- Creation of an image of sustainability that would be linked to the area.
- Demonstration of the areas suitability for other similar projects.
- Tourism.
- Environmental benefits for the broader society.

Compatibility with existing industry

All respondents noted that the proposal appeared to be compatible with existing industry in the area, including agriculture and mining.

Further feedback

Asked to provide any additional feedback or questions that could be addressed in the EIS, attendees listed:

- Interesting project.
- Better than wind energy project.
- Efficient project for our climate.

The relationship of the proposal to the local and broader climate is discussed in Section 9.4.

- General support for renewable energy project's while noting the value of coal to economy is high, despite environmental damage it causes.

The environmental impacts of the project are set out and assessed in Section 5 and 6 of this

EIS.

- Requires a guarantee of purchase of the power to be generated.

The requirements of the project, regarding electricity purchase and connection are discussed in Section 9.6 of this EIS.

Regular Engagement with Neighbours

In the lead up, and subsequent to the public community consultation session (November 2014) described above, Vast Solar representatives have met with (and/or corresponded with) all the near neighbours of the proposal. This includes three neighbours whose properties immediately border the Proposal Site boundary and those who live within three km of the Proposal Site boundary. Personal communications by phone and in person were also undertaken with neighbours located within a broader radius of the Proposal Site. Without specifically identifying neighbours and their comments, it is noted that all neighbours at this time either confirmed support for the project or were disinterested in the development. None raised any objection to the development proposal.

Contact and consultation with neighbours is undertaken on an ongoing basis to provide them with updates and information about project developments at Jemalong. Communications are by face to face meetings and by phone calls to neighbours by Vast Solar personnel. In 2015 some of these communications related to the incident of a small fire at the 6 MWth pilot plant in June 2015 and were undertaken with the intention to notify, consult and reassure neighbours that there were no offsite risks or damage to persons or adverse implications for the pilot project and this proposal.

Further liaison with neighbours has been undertaken as part of ongoing community consultation. During 2016 this has included further face to face morning tea meetings with near neighbours at their homes and invitations were extended to meet in person by phone to all neighbours whose properties border on the Jemalong property (some 12 – 15 neighbours) which contains the Proposal Site. These in-person meetings and discussions by phone have enabled neighbours to receive friendly project updates and the opportunity to ask questions about the project and associated Vast Solar activities occurring in their local community. In 2016 and 2017 Vast Solar has liaised closely with neighbours adjacent to the CSP Pilot Plant site to detail and confirm landscape screening plantings along Whispering Pines Lane associated with the DA for the CSP Pilot Plant (issued by Forbes Council) and that complement landscape screening plantings for the Hallidays paddock. The neighbour directly affected/benefitting from these plantings is very satisfied with the outcome.

In 2017 near neighbours were contacted in person to inform and update them about operational testing of the CSP Pilot plant that may involve noise or emission of steam from testing of the CSP turbine. Similarly, near neighbours were consulted about and involved in preparation of local bush fire plans that Vast Solar contributes to as part of our commitment to the community and as part of our operational commitment to safety and risk management.

In October 2017 a morning tea was held onsite at Vast Solar's CSP Pilot Plant to which neighbours within a wide catchment (0-15km) were invited. Some 15-20 neighbours attended the morning tea, site tour and presentation during which Vast solar CEO provided an update about the CSP projects and introduced the Solar PV Plant proposal.

Subsequent to the morning tea, person to person meetings have also been held with 3 neighbouring families who own properties directly adjacent to Jemalong and the Proposal Site to provide an opportunity for more detailed discussion about the Solar PV Plant proposal and to provide an opportunity for questions/issues to be discussed.

Strategic presentations.

Vast Solar personnel have undertaken person to person consultation with senior staff from key agencies who have an interest in understanding the proposal project and technology. Several site visits to the Proposal Site and related Vast Solar plants by senior NSW departmental and agency staff were conducted in 2016.

Craig Wood, Vast Solar CEO, makes regular presentations to the Forbes Council. He made a presentation to Forbes Shire Councillors and senior staff on May 2 2016 to provide an update on the CSP Plant project and to provide a further opportunity to Councillors to ask questions about the proposal and associated social and economic benefits for the community. The Mayor and Councillors expressed strong interest in and support for the CSP Plant proposal. Mr Wood has met with and/or presented to Council several times during 2017, most recently in November 2017 to provide details about the proposed Solar PV plant and longer term vision for the Jemalong Hybrid Solar Park.

In early July 2016 Vast Solar provided support for and input into a Fire Training and Demonstration Day that was hosted by Vast Solar research partners at the Australian National University in association with ACT Fire and Rescue Services. The purpose of this day was to share information and build industry and strategic stakeholder understanding, knowledge and confidence in the management of sodium – an industrial material that is used widely overseas but is quite novel in the Australian context and is integral to Vast Solar's CSP technology. The day delivered i) training to researchers and fire and rescue professionals in the ease of extinguishment of sodium fires and management of sodium in industrial applications and ii) the opportunity for strategic stakeholders to observe, learn and ask questions. The day was well attended and valued by diverse attendees.

Vast Solar is committed to the Jemalong and Bedgerabong area in which we do business. Several staff have lived and worked in this community for over five years. Wherever possible Vast solar contributes to local events and activities. For example, Vast Solar has sponsored the Bedgerabong Show on an annual basis for over five years. Bedgerabong is a small community, that incorporates a local primary school, tennis club and other community facilities and activities and is located opposite Jemalong Station across the Lachlan Valley Way.



Picture: Vast Solar is pleased to sponsor Bedgerabong Show in our community.

6.3.3 Continued engagement

Engagement activities would continue throughout the determination period, as set out in the CLP. The CLP would be reviewed regularly, as well as during key transitions between different phases of the proposed development (e.g. prior to construction or operation). The Plan would continue to guide engagement activities at all phases of the proposal, ensuring that engagement is appropriate and in line with good practice, and maintains community support for the proposal.