

# Maryvale Solar Farm

SSD 8777  
Response to Submissions

transport | community | mining | industrial | food & beverage | energy



**Prepared for:**

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**Date:**

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Rev00

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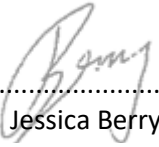
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# 1. Introduction

Maryvale Solar Farm Pty Ltd (MSF) is owned by Photon Energy NV (Photon Energy), Canadian Solar Energy Holdings Singapore 4 Pte Ltd (Canadian Solar) and Polpo Investments Ltd (Polpo) (referred to herein as MSF). MSF propose to develop and operate a 125-megawatt (MW AC) (160 MW DC) solar photovoltaic (PV) facility including ancillary works and associated infrastructure at 121 Maryvale Road and 801 Cobbora Road, Maryvale NSW 2820 (“the Proposal”). The land subject to the development and the proposed subdivision is shown in Figure 3-1.

The facility would operate for a duration of approximately 25 years following which MSF would reassess the viability and either continue operations, upgrade the infrastructure or undertake decommissioning of the facility. Decommissioning would include removal of all ancillary works, associated infrastructure and remediation of land (as required) to enable continued agricultural use. However, the substation may remain following decommissioning of the solar farm to continue to service the region.

An Environmental Impact Statement (EIS) was prepared by pitt&sherry on behalf of MSF and submitted to the Department of Planning and Environment (DP&E) in November 2018. The EIS, including all the specialist reports were made available for download on the DP&E Major Projects Website during Public Exhibition from Wednesday 21 November to Wednesday 19 December 2018. During this period submissions were sought from members of the local community, government stakeholders and other interested parties.

The project overview and site constraints for Maryvale Solar Farm are shown in Figure 1-1.

## 1.1 Purpose of this Submissions Report

As per the letter received from DP&E on 21 December 2018, DP&E requested that the proponent (MSF) prepare and submit a report detailing a response to the matters and recommendations raised in the submissions.

This submissions report has been prepared by pitt&sherry on behalf of MSF to meet the requirements of DP&E, and is structured as follows:

- **Section 1: Introduction.** Provides a summary of the key issues
- **Section 2: Exhibition and Consultation.** Provides detail of the consultation undertaken during the preparation of the EIS and public exhibition period
- **Section 3: Actions since the exhibition period.** Provides detail of the amendments to the Proposal and assessment undertaken subsequent to the closing of the public exhibition period, during the preparation of the submissions report
- **Section 4: Submissions received and responses.** Provides summaries of the submissions received by government agencies, interested parties and the community with associated responses and any changes to the proposal or revised mitigation measures.

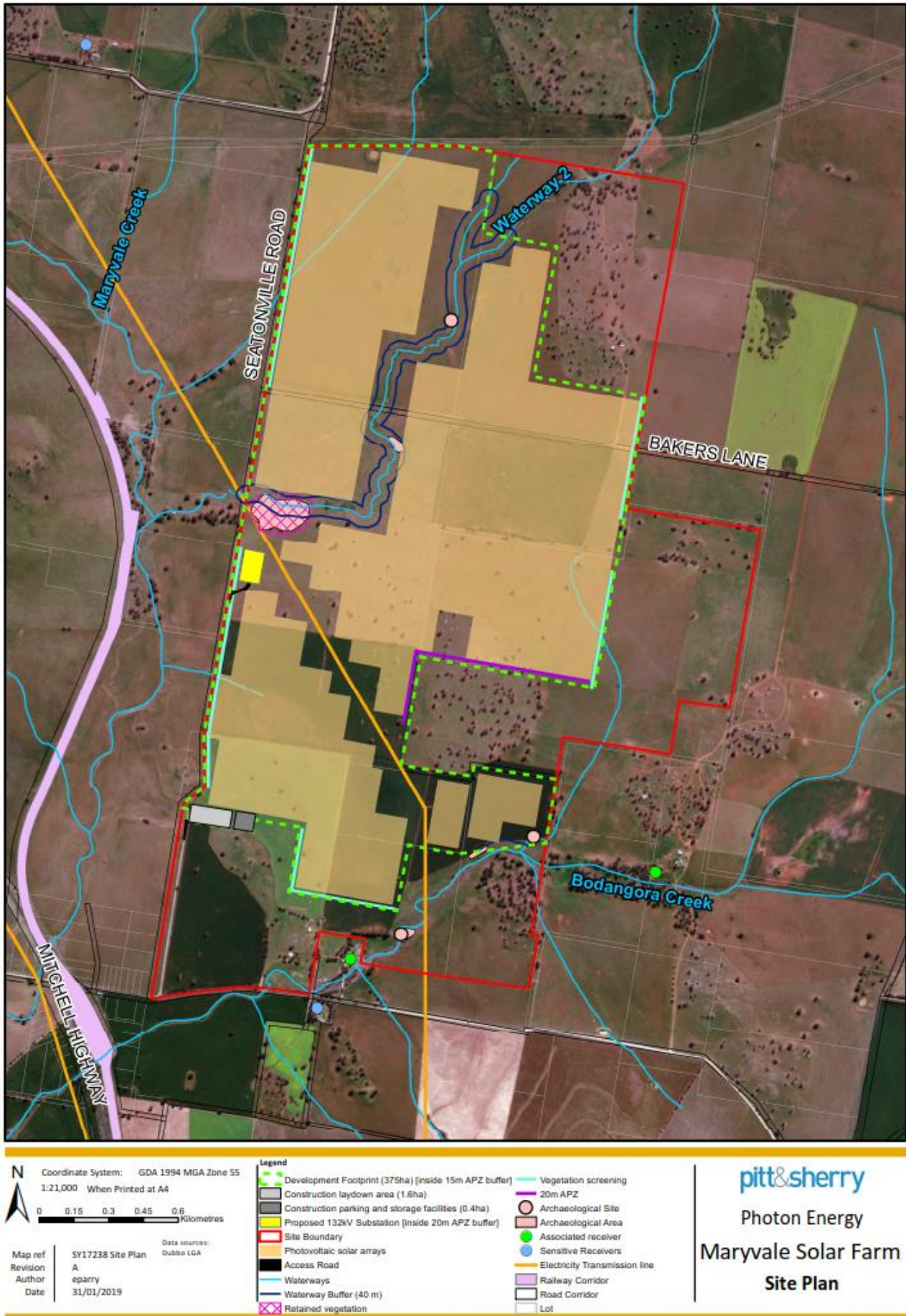


Figure 1-1 Overview of Project and Site Constraints

pitt&sherry ref: Maryvale Solar Farm Submissions Report/JB/km



## 1.2 Summary of Key Issues

A total of 12 submissions were received from government stakeholders, organisations and the community identifying aspects including:

- Land use compatibility
- Water Supply & Use
- Road Safety
- Bushfire
- Subdivision of Land

Each of the submissions has been responded to individually, covering each of the aspects, within Section 4 of this report. Further information has been provided and in some instances mitigation measures have been revised or new mitigation measures proposed to address the aspect raised in the submission.

## 1.3 Assessment and Determination Process

*The Environmental Planning and Assessment Act 1979* (EP&A Act) is the principal piece of legislation covering assessment and determination of development proposals in NSW. It aims to encourage the proper management, development and conservation of resources, environmental protection and ecologically sustainable development. The development assessment and approval system in NSW is set out in Parts 4 and 5 of the EP&A Act.

Under Schedule 1, Part 20 of the State Environmental Planning Policy (State and Regional Development) 2011 electricity generating works with a capital investment value of more than \$30million, or a capital investment of more than \$10 million and located in an environmentally sensitive area of State significance, are deemed State Significant Developments (SSDs). The Proposed solar farm exceeds the \$30million capital investment value and is therefore declared SSD. Development consent for the Proposal is therefore being sought under Part 4 of the EP&A Act.

On 25 September 2017, MSF submitted a Preliminary Environmental Assessment (PEA) along with a request to the Secretary for Environmental Assessment Requirements (SEARs), as required by clause 3 of Schedule 2 of the EP&A Act Regulations 2000. The PEA provided information about the proposed development and preliminary assessment of the potential environmental impacts. In formulating the SEARs, requests were sent to relevant public authorities and agencies to inform the key issues raised in Section 6 of the EIS. The SEARs were issued to MSF on the 13 October 2017.

An Environmental Impact Statement (EIS) was prepared by pitt&sherry on behalf of MSF and submitted to DP&E in November 2018. The EIS was put on Public Exhibition from Wednesday 21 November 2018 to Wednesday 19 December 2018. Following the closing of the Exhibition period, DP&E issued a letter Request for Response to Submissions (RTS) to MSF in December 2018.

pitt&sherry have prepared a RTS report on behalf of MSF in response to DP&E request.

## 1.4 Project Benefits

The key benefit of the Proposal is the production of renewable electricity reducing our greenhouse gas emissions and reliance on fossil fuels. The production of renewable electricity will help contribute to the NSW Governments' Renewable Energy Action Plan and other schemes and agreements made. On an annual basis, the Proposal will produce enough electricity to meet the needs of approximately 36,900 households.

Additionally, the proposal will reduce greenhouse gas emissions by over 325,000 tonnes of carbon dioxide (CO<sub>2</sub>) equivalent per annum (based on 0.948t/MWh from fossil fuels).

The Proposal would also provide the following national benefits:

- Assist in reducing the reliance on fossil fuels in Australia and provide a cleaner and sustainable substitute
- Develop the solar power industry and supply chain in Australia
- Develop Australian intellectual property and expertise in solar power
- Assist with Australia's commitments under national and international agreements
- Diversify sources of income for the agricultural sector, allowing financial resilience for farmers
- Improve energy security.

The proposal would also generate regional and local benefits including:

- Generating employment:
  - 150 construction jobs (at peak) as well as indirect supply chain jobs
  - Support up to ten operational jobs.
- Encouraging regional development:
  - Employee expenditure in the Wellington region (fuel supply, vehicle servicing, uniform suppliers, hotels/motels, B&B's, cafés, pubs, catering and cleaning companies)
  - Maximising the use of local contractors and equipment hire
  - Increasing local skills and trades through project experience.

## 2. Exhibition and Consultation

A Community and Stakeholder Engagement Plan (CSEP) was prepared in October 2017 in accordance with *The Community and Stakeholder Engagement Draft Environmental Assessment Guidance Series June 2017* (Draft Guidelines) prepared by DP&E. The CSEP documented the objectives of engagement, identification of relevant stakeholders, as well as the community and potential issues associated with the development. The CSEP also included an implementation plan which was updated as required through the duration of the community and stakeholder engagement. Table 6 from the CSEP, attached as Appendix C1 in the Maryvale Solar Farm EIS, outlines the implementation plan, which was used as the guiding document throughout stakeholder engagement.

### 2.1 Consultation during and after EIS public exhibition

#### *Community*

Following the display of the EIS for public exhibition, MSF sent correspondence (email 26 November 2018) to the 13 registered community members to advise them of the public exhibition period.

#### *Aboriginal Heritage*

No further consultation was undertaken with Aboriginal stakeholders during the exhibition period.

#### *Agency Stakeholders*

##### Department of Planning & Environment (DP&E)

pitt&sherry on behalf of MSF continued ongoing consultation with DP&E, to supply information requested.

In accordance with DP&E requirements hard and soft copies of the Maryvale Solar EIS were provided to the following:

- One hard and one soft copy to DP&E
- Three hard and one soft copy to Dubbo Regional Council

- One soft copy to Nature Conservation Council.

#### Office of Environment and Heritage

Further consultation occurred with OEH and as a result of this consultation an invitation for a Site Visit prior to construction will be undertaken with interested local aboriginal stakeholders as identified by OEH.

### **3. Actions since Exhibition Period**

#### **3.1 Waterway crossing (cable)**

The Maryvale Solar Farm EIS identified that some electrical cabling may be above ground to enable crossing of waterbodies on Site and that any low voltage cabling required for auxiliary loads on site may be installed at a depth of between 500-600mm (subject to detailed design).

Further consideration of the design has identified that up to five crossings for cabling may be required across Waterway 2. The cabling would connect the solar panels separated by Waterway 2 and its associated 40m buffer (see Figure 1-1). These crossings may be above ground or below ground (requiring trenching). The crossings would be located outside of the identified Aboriginal archaeological sites and would avoid the area of native vegetation to be retained in the west of the site. The depth of any trenches will be determined based on the depth of the waterway at the selected location. The height of any above ground crossings would be equal to or less than existing electrical infrastructure on the Site.

Waterway 2 is an unnamed 2nd order waterway which in the north of the Site is a well-defined watercourse, approximately 20m wide in some locations and 2-3m deep with a catchment area of approximately 500ha. The Proponent has proposed to leave this waterway as a primary flow channel, stabilised with vegetation where necessary.

The waterway at the location proposed for trenching is in the form of an open depression surrounded by existing agricultural use (cropping/pasture) and retained native vegetation (towards Seatonville Road).

The waterway would be returned to its previous condition after trenching works are completed. The works would be addressed in the Soil and Water Management Plan as part of the CEMP as outlined in Section 6.6 of the Maryvale Solar Farm EIS.

Additionally, MSF commits to a new mitigation measure (SW7):

- All works within waterfront land being carried out in accordance with the '*Guidelines for Controlled Activities on Waterfront Land (NRAR 2018)*'

#### **3.2 Substation area and revised subdivision**

Changes are proposed to the area for the substation and subsequently a revision to the proposed subdivision as presented in the EIS.

MSF propose to change the size of the area the new substation would occupy from approximately 60m x 80m (0.48 ha) as outlined in section 3.3.1 of the EIS, to an area of 90 m x 115m (1.04ha). The area of the substation includes the 20m Asset Protection Zone (APZ). The increased area of the substation will not result in an increase in the development footprint of the Proposal. The location of the substation has not changed as shown in Figure 1-1.

The increased size of the substation will result in a negligible change to the visual impact from the previously proposed substation area. Vegetation screening is proposed along the eastern boundary of the substation to minimise the visual impact to the surrounding sensitive receivers.



The substation requires a subdivision to provide a separate lot to be owned by TransGrid. The subdivision for the substation will have a small overlap with transmission line easement to provide a connection to the 132kV power line. The substation will also have a dedicated access easement into the substation from Seatonville Road.

A map showing the proposed subdivision lots is shown in Figure 3-1. Due to the change to the subdivision area for the substation, a revised subdivision outline is shown in Table 3-1 with the updated areas of proposed lots 1 and 2.

**Table 3-1 Proposed subdivision lots for the Site**

Proposed Lot	Lot/DP	Approximate area (Ha)
Lot 1	<ul style="list-style-type: none"> <li>Part Lot 2 DP 573426</li> <li>Part Lot 1 DP1031281</li> <li>Part Lot 130 DP754318</li> <li>Lot 122 DP754318</li> <li>Part Lot 182 DP754318</li> <li>Lot 1 DP252522</li> <li>Part Lot 2 DP252522</li> <li>Lot 1 DP1006557</li> <li>Part Lot 1 DP1095725</li> <li>Part Lot 2 DP1095725</li> <li>The existing Bakers Lane (currently in the process of being closed by Dubbo Regional Council)</li> </ul>	374
Lot 2 (for the substation)	<ul style="list-style-type: none"> <li>Part Lot 2 DP 573426</li> </ul>	1.04
Lot 3	<ul style="list-style-type: none"> <li>Part Lot 2 DP1095725</li> </ul>	58
Lot 4	<ul style="list-style-type: none"> <li>Part Lot 182 DP754318</li> </ul>	84
Lot 5	<ul style="list-style-type: none"> <li>Part Lot 2 DP 573426</li> <li>Part Lot 1 DP1031281</li> <li>Part Lot 130 DP754318</li> </ul>	85

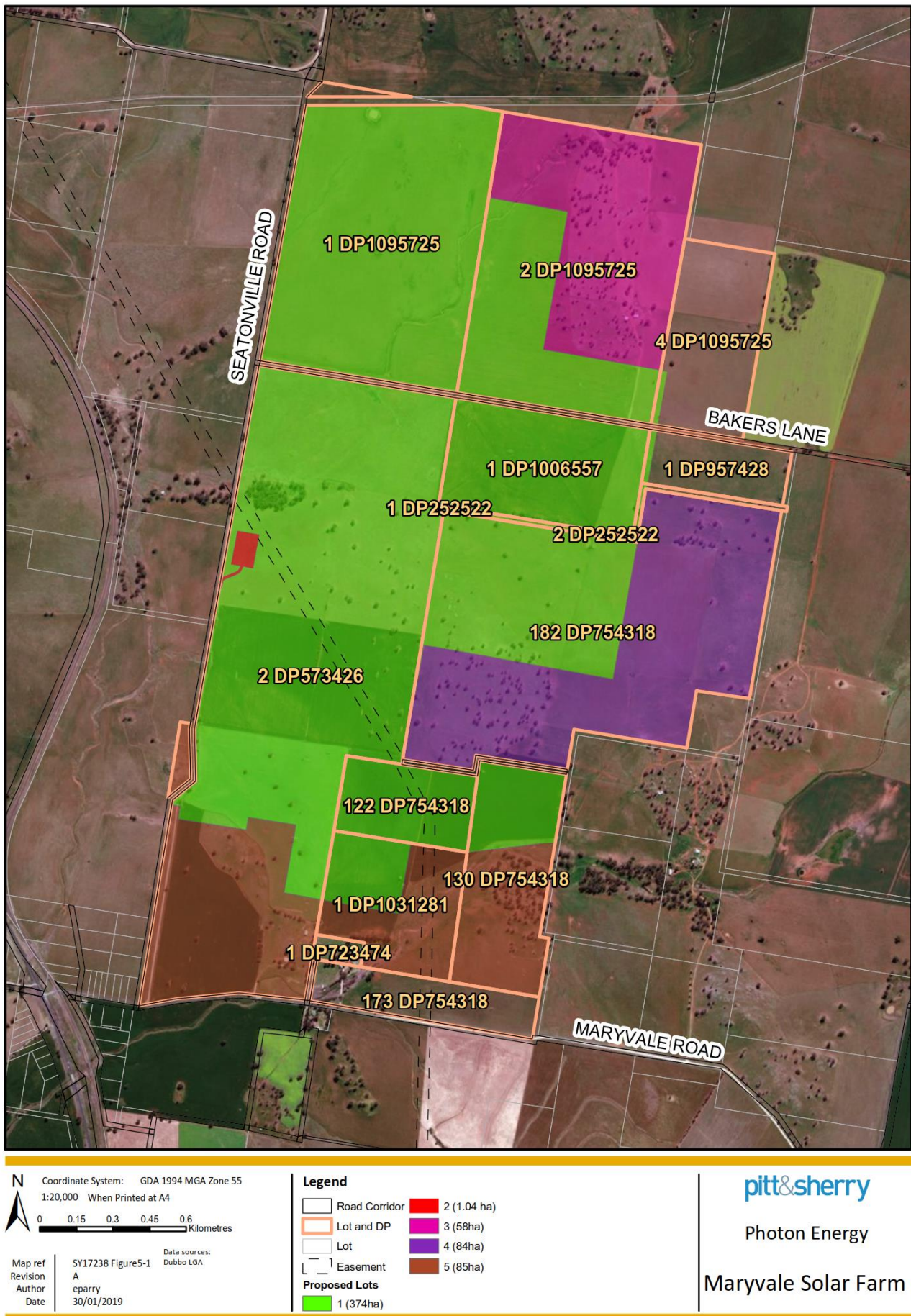


Figure 3-1 Land subject to development shown in green and the revised subdivision of the Site

## 4. Submissions Received and Responses

A total of 12 submissions were received from government stakeholders, organisations and the community, as described in Table 4-1.

Eight submissions were received from government stakeholders in the form of comments and have been addressed in Section 4.1. Four submissions were received from members of the community in the form of objections and have been addressed in Section 4.2.

Table 4-1 Submission received on the Maryvale Solar Farm proposal

Stakeholder	Number of responses received
Government: <ul style="list-style-type: none"> <li>• Department of Industry: Land and Water</li> <li>• Department of Planning &amp; Environment: Resources &amp; Geoscience</li> <li>• Environment Protection Authority</li> <li>• Office of Environment &amp; Heritage</li> <li>• NSW Roads and Maritime Services</li> <li>• Fire and Rescue NSW</li> <li>• Dubbo Regional Council</li> <li>• NSW Rural Fire Service</li> </ul>	8
Community	4
<b>Total submissions received</b>	<b>12</b>

pitt&sherry have reviewed each submission to understand the key aspects and concerns.

## 4.1 Response to Government agency comments

Specific responses to government agency submissions is provided in **Error! Not a valid bookmark self-reference.**

Table 4-2 Summary of Responses to Government Agency Submissions

Aspect	Detail of submission	MSF Response
Department of Industry - Crown Lands and Water Division		
Water Supply and Use	Prior to Project Determination, the proponent should seek confirmation that water can be sourced from an appropriately authorised and reliable supply. Where additional extraction points are required, or the authorised use is proposed to change, an impact assessment will be required and mitigating measures developed where necessary.	<p>Agricultural activities undertaken on the Site are currently supported by dam water supply. This water use will continue for the remaining areas of the Site outside of the development footprint.</p> <p>A search of the NSW Water Register did not identify a water licence issued under the <i>Water Act 1912</i> or an approval issued under the <i>Water Management Act 2000</i> to the parcels included in the Site.</p> <p>Construction of the proposal will require limited potable water for staff amenities. Potable water would be trucked to the Site on an as needs basis and stored within temporary water tanks at the staff amenities area.</p> <p>During operation, water would be required for stock watering and vegetation management. Water for these purposes is proposed to be supplied from the existing dam. Water may also be required for panel cleaning on an ad hoc basis. The water demands of the solar farm operation are small and likely to be less than the current demands from agriculture on the Site. It is estimated that annual operational water usage would be approximately 1.5 ML/ per annum.</p> <p>Should water requirements exceed those available from the existing dam, MSF will source external water supply to be transported to Site under appropriate agreements and approvals.</p> <p><i>No further mitigation measures are proposed.</i></p>

Aspect	Detail of submission	MSF Response
Soil and Water Management plan	The proponent should prepare a Soil and Water Management Plan and Erosion and Sediment Control Plan in consultation with Lands and Water.	<p>As per mitigation measure G1and SW1, a Soil and Water Management Plan (SWMP) will be prepared and implemented by the Contractor as part of the Construction Environmental Management Plan (CEMP).</p> <p>MSF commits to a revised mitigation measures (G1 and SW1):</p> <ul style="list-style-type: none"> <li>• A project specific Construction Environmental Management Plan (CEMP) and all relevant sub-plans will be prepared by the Contractor prior to commencing Stage 1 construction. The sub-plans will include: <ul style="list-style-type: none"> <li>○ Land Management Plan (LMP) including a weed management plan</li> <li>○ Soil and Water Management Plan (SWMP) including erosion and sediment (ERSED) control <b>to be prepared in consultation with Department of Industry – Lands and Water</b></li> <li>○ Unexpected Finds protocol</li> <li>○ Waste Management Plan (WMP)</li> <li>○ Traffic Management Plan (TMP)</li> <li>○ Emergency Contingency Plan</li> </ul> </li> <li>• A Soil and Water Management Plan (SWMP) will be prepared <b>in consultation with Department of Industry – Lands and Water</b> and implemented by the Contractor as part of the CEMP, this will include use of onsite water for dust mitigation measures.</li> </ul> <p><i>A revised mitigation measure has been proposed.</i></p>
Watercourses	The redesign of 1st and 2nd order watercourses needs to be in accordance with the Guidelines for Controlled Activities on Waterfront Land (NRAR 2018).	<p>Surface water and hydrology are addressed in section 6.6 of the EIS. Figure 6-22 in the EIS shows all four waterways identified on the site.</p> <p>The western most unnamed 2nd order waterway in the north of the Site (Waterway 1) is a small but incised drainage line, approximately 1.5m wide channel and half metre deep. As the size of this waterway is relatively small, and the associated catchment size is approximately 80ha, it is proposed that</p>



Aspect	Detail of submission	MSF Response
		<p>this waterway would be suitably graded into a shallow and broad swale and revegetated, then developed with PV units.</p> <p>The 2nd order waterway south of Waterway 1 (Waterway 2) is well-defined and a significant watercourse, approximately 20m wide and 2-3m deep with a catchment area of approximately 500ha. This waterway would be left as a primary flow channel, stabilised with vegetation where necessary and maintained with a 40m buffer from the solar farm development. However as outlined in Section 3.1 of this report, further consideration has identified that up to five trenches across Waterway 2 may be required to install cabling between the solar panels. The depth of the trenches would be selected based on the depth of the waterway in that location. The waterway would be returned to its previous condition after trenching works are completed.</p> <p>The waterway located in the south-east of the site (Waterway 3) and the unnamed tributary of Bodangora Creek located in the east of the site (Waterway 4), are small ephemeral first order streams which are located within small areas of the Proposal footprint. It is proposed that both would be suitably graded into shallow swales and revegetated, then developed with PV units.</p> <p>MSF commits to a new mitigation measure (SW7):</p> <ul style="list-style-type: none"> <li>• All works within waterfront land being carried out in accordance with the 'Guidelines for Controlled Activities on Waterfront Land (NRAR 2018)'</li> </ul> <p><i>A new mitigation measure has been proposed.</i></p>
	Construct any internal access tracks with crossings over 1st and 2nd order streams in accordance with the Guidelines for Watercourse Crossings in Waterfront Land (NRAR 2018).	<p>The waterway crossing to the east of the intersection of Maryvale Road and Seatonville Road will be upgraded to allow for truck movements and will be widened to allow for two-way truck movements.</p> <p>No internal waterway crossings for roads are anticipated to be required. The area of land north west of Waterway 2 will be accessed via existing roads</p>

Aspect	Detail of submission	MSF Response
		<p>(Seatonville Road and Bakers Lane) which includes existing waterway crossings as shown in Figure 1 1 above. Should crossings of internal waterways be required would be addressed in the Soil and Water Management Plan as part of the CEMP as outlined in Section 6.6 of the Maryvale Solar Farm EIS.</p> <p>Additionally, MSF commits to a new mitigation measure (SW8):</p> <ul style="list-style-type: none"> <li>Any waterway crossings for roads will be completed in accordance with the <i>Guidelines for Watercourse Crossings in Waterfront Land (NRAR 2018)</i>.</li> </ul> <p><i>A new mitigation measure has been proposed.</i></p>
Agriculture	<p>The current agricultural productivity of the site should be assessed/obtained.</p> <p>Crop yields and stocking rates over a minimum of the last 3 years should be used as a baseline data set to assist in providing agricultural indicators to guide the return of land back to agricultural production for decommissioning purposes. This should form part of the criteria for land rehabilitation outcomes to be achieved especially for agricultural purposes. Other criteria to be considered includes physical aspects (depth of topsoil, drainage/soil permeability), as well as chemical aspects (pH, cation exchange capacity, other fertility aspects) that would be part of the decommissioning and rehabilitation plan. This is verified biophysical strategic agricultural land, so to achieve the existing (pre-construction) land and soil capability adequate consideration of pre-existing parameters will be required. It is not “highly reversible” without clear and detailed baseline assessment that can inform monitoring and final decommissioning processes being undertaken. The site is of high quality agricultural land that is suitable for cropping.</p>	<p>Further information has been obtained on the agricultural productivity of the site over the last three years. Note the last two years have been drought years with low productivity. The three-year average crop yields are as follows:</p> <ul style="list-style-type: none"> <li>Canola – 0.8-1.0 tonne/hectare</li> <li>Barley – 2-2.2 tonne/hectare</li> <li>Wheat – 1.7-1.9 tonne/hectare</li> <li>Oats – 2 tonne/hectare</li> </ul> <p>The Dry Sheep Equivalent (DSE) of the properties is based on one 50kg wether (maintaining weight) and will vary across the site as there is a mixture of native pasture and improved pastures. The three-year DSE has been 3-5 DSE/hectare.</p> <p>Section 6.7 of the EIS describes the physical and chemical properties assessed. Soils, Geology and Contamination Assessment was prepared to determine the significance of soils of the Site and the report is provided in Appendix G of the EIS. The findings of the soil survey and analysis are outlined in section 6.7 and Appendix G of the EIS. The soil Log Sheets and Laboratory results are provided in the EIS Appendix I.</p> <p>The agricultural productivity of the site and soil properties will be input into the Final Decommissioning and Rehabilitation Plan. Prior to decommissioning</p>

Aspect	Detail of submission	MSF Response
		<p>of the Solar Farm, the Draft Decommissioning and Rehabilitation Plan will be finalised and implemented to ensure the land is returned to pre-development conditions to enable continuation of agricultural use.</p> <p>Furthermore, MSF commits to the new mitigation measure (L7):</p> <ul style="list-style-type: none"> <li>A decommissioning and rehabilitation plan will be prepared and implemented prior to decommissioning, which identifies the agricultural productivity of the site prior to construction of the solar farm.</li> </ul> <p><i>A new mitigation measure has been proposed.</i></p>
	The value of the agricultural land should be recognised through developing protocols and outcomes associated with the draft decommissioning and rehabilitation management plan that includes agriculture as a final land use.	<p>As above, MSF is committed to preparing a Decommissioning and Rehabilitation plan, which identifies the agricultural productivity of the site prior to construction of the solar farm and aims to return the Site to pre-development conditions.</p> <p>MSF is also committed to the existing mitigation measure (S12) to implement a Land Management Plan (LMP) that addresses the ongoing land management activities including the measures required to maintain healthy soil and plant systems and maintain the agricultural capability of the land.</p> <p><i>No further mitigation measures have been proposed.</i></p>
Office of Environment and Heritage		
Biodiversity	OEH notes that the project has generated an offset requirement for the loss of 0.8 ha of derived native grassland (15 ecosystem credits), 0.4 ha of non-endemic eucalypt plantings (6 credits) and the removal of 109 paddock trees (103.25 credits). This will be acquitted by making a payment of equivalent value to the Biodiversity Conservation Fund.	<p>Noted.</p> <p><i>No further mitigation measures have been proposed.</i></p>
Aboriginal Heritage	OEH believes that adequate consultation with the local Aboriginal community has not occurred. OEH has a list of over 18 Registered Aboriginal Parties (RAP's) that represents individuals and Aboriginal organisations that may hold Cultural Knowledge	In accordance with the SEARs, an assessment of the likely Aboriginal heritage impacts of the development, including adequate consultation with the local Aboriginal community has been undertaken (see Appendix F of the EIS).

Aspect	Detail of submission	MSF Response
	<p>relevant to this development. The proponent has only consulted with one of these RAP's, the Local Aboriginal Land Council (LALC). Within this particular Aboriginal community not all knowledge is held by the LALC members and not all knowledge holders are associated with the LALC.</p> <p>OEH recommends that the proponent consult more extensively with the Aboriginal community to ensure adequate consultation has occurred and not just rely of the LALC as the only source of information. The proponent should adhere to the "Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW, 2010).</p>	<p>As outlined in Section 6.3 of the EIS, the Site was assessed as having low archaeological potential and no previously recorded sites were situated within or adjacent to the study area. An archaeological field survey was conducted by Kelleher Nightingale Consulting and the Wellington Local Aboriginal Land Council (WLALC) and identified seven heritage sites within the study area. The sites are all outside the Proposal footprint and will not be impacted by the proposal. WLALC have stated their concurrence with the Proposal as long as the identified sites are protected, and appropriate mitigation measures were outlined in Section 6.3.4 of the EIS.</p> <p>Further consultation was undertaken with OEH on 11 January 2019 and as a result MSF commits to a new mitigation measure (H4):</p> <ul style="list-style-type: none"> <li>• Prior to commencing construction, local aboriginal stakeholders (as identified by OEH) will be invited to participate in a site visit with the heritage consultant.</li> </ul> <p><i>A new mitigation measure has been proposed.</i></p>
NSW Roads and Maritime Services		
Road Safety	<p>Roads and Maritime Services is supportive of the proponent's commitment for all solar farm related traffic to access the site via Cobbora, Maryvale and Seatonville Roads, with no vehicle movements through the intersection of the Mitchell Highway (HW7) and Maryvale Road.</p>	<p>Noted.</p> <p><i>No further mitigation measures have been proposed.</i></p>
	<p>Roads and Maritime is also supportive of the proposed upgrade to the Cobbora Road intersection with Maryvale Road, however, Roads and Maritime does not support the proposal to reduce the speed zone through this intersection to compensate for lack of sight distance. Roads and Maritime requests the proponent investigates the level of works required to achieve, in accordance with Austroads Guide to Road Design, adequate sight distance at the Cobbora/Maryvale Road intersection.</p>	<p>Traffic, transport and road safety are addressed in section 6.2 of the EIS. A Traffic Impact Assessment (TIA) was prepared by Seca Solutions to investigate the potential traffic impacts of the Proposal (Appendix E of the EIS).</p> <p>The existing intersection sight distances measured on site at the T intersection of Cobbora Rd and Maryvale Road were 185 m on the left and 200 m on the right. In accordance with Austroads Guidelines, drivers turning right onto a road with a 100km/hr speed limit require visibility to the left and right of 248 m. As such this existing intersection, does not meet Austroads Guidelines.</p>

Aspect	Detail of submission	MSF Response
		<p>Traffic associated with the development are anticipated to use the intersection for left turn movements from Cobbora Road into Maryvale Road. As such, use of the intersection by the development will not include right hand turns which are the key traffic movement that influences the need for suitable sight distances in this location.</p> <p>It has been identified that the sight lines available for a driver turning right from Maryvale Road onto Cobbora Road are satisfactory for an 80km/hr speed limit. Thus, a temporary speed limit is considered appropriate to achieve sight distances in accordance Austroads Guidelines for construction traffic.</p> <p>Additional measures which could also improve sight distances include a stopping sight distance with the use of Trucks turning ahead signs and maintenance of the grass / verge area throughout construction.</p> <p>To minimise any impacts associated with an increase in traffic during construction, MSF commits to an additional mitigation measure (T13):</p> <ul style="list-style-type: none"> <li>• Further investigation will be undertaken on measures to improve safety at the Cobbora Road/Maryvale Road intersection to meet the relevant guidelines in consultation with the relevant road authorities.</li> </ul> <p><i>A new mitigation measure has been proposed.</i></p>
Dubbo Regional Council		
Property description	<p>The property description includes Lot 2 DP 573426, Lots 1 &amp; 2 DP 1095725, Lot 1 DP 1006557, Lots 122 &amp; 182 DP 754318</p> <p>However, the proposal also includes the part use of Lot 1 DP 1031281, Lot 130 DP 754318 &amp; Lot 2 DP 252522 and the part closure of Bakers Lane.</p>	<p>MSF acknowledge the property description did not include all the relevant Lots and DP.</p> <p>Figure 3-1 above shows the property subject to the development footprint in green. All land parcels subject to the Proposal include:</p> <ul style="list-style-type: none"> <li>• Part Lot 2 DP 573426</li> <li>• Part Lot 1 DP1031281</li> </ul>



Aspect	Detail of submission	MSF Response
		<ul style="list-style-type: none"> <li>• Part Lot 130 DP754318</li> <li>• Lot 122 DP754318</li> <li>• Part Lot 182 DP754318</li> <li>• Lot 1 DP252522</li> <li>• Part Lot 2 DP252522</li> <li>• Lot 1 DP1006557</li> <li>• Lot 1 DP1095725</li> <li>• Part Lot 2 DP1095725</li> <li>• The existing Bakers Lane (currently in the process of being closed by Dubbo Regional Council)</li> </ul> <p><i>No further mitigation measures are proposed.</i></p>
	There is a Road Closure application and subsequent land disposal of Bakers Lane currently under consideration by Council. The resolution of this matter may take some time and as such, it may restrict what can be approved in the short term.	<p>MSF have been in contact with Dubbo Regional Council regarding the Road Closure application for Bakers Lane which is currently in progress. Council has provided alternative approval pathways for work within Bakers Lane should the Road Closure not be completed prior to commencement of construction.</p> <p><i>No further mitigation measures are proposed.</i></p>
Infrastructure and operations	<p>Council's Infrastructure and Operations Officers have raised no general objections to the proposal. However, the following is provided as the likely works required:</p> <ul style="list-style-type: none"> <li>• Upgrade of the intersection at Cobbora Road and Maryvale Road;</li> <li>• Upgrade of gravel intersection at Maryvale and Seatonville Road to a sealed intersection;</li> <li>• Widening and strengthening of Seatonville Road to cater for semi-trailers;</li> </ul>	<p>The proposed road upgrades are outlined in section 6.2 of the EIS. The following upgrades are proposed:</p> <ul style="list-style-type: none"> <li>• Intersection treatment at Cobbora Road/Maryvale Road - Left turn deceleration lane on Cobbora Road (AUL (S) type upgrade)</li> <li>• Widening of Maryvale Road at three locations</li> <li>• Strengthening of one waterway structure (approximately 450m east of Seatonville Road) on Maryvale Road</li> <li>• Widening of Seatonville Road to allow two-way movements of heavy vehicles</li> </ul>

Aspect	Detail of submission	MSF Response
	<ul style="list-style-type: none"> <li>• Widening and strengthening of Maryvale Road to cater for semi-trailers;</li> <li>• Upgrade of Maryvale Road to a fully bitumen sealed road;</li> <li>• Rural culverted accesses with appropriate gate setbacks to the property;</li> <li>• Traffic Management Report prior to construction;</li> <li>• Dilapidation Report prior to construction; and</li> <li>• Maintenance Schedule prior to construction.</li> </ul>	<ul style="list-style-type: none"> <li>• Sealing of Seatonville Road for 30m at the approach to Maryvale Road.</li> </ul> <p>A concept design for the upgrade works is provided in Appendix E of the EIS.</p> <p>MSF do not consider that an upgrade to Maryvale Road to be fully bitumen sealed is warranted as a result of the temporary construction traffic associated with the Proposal.</p> <p>MSF commits to a new mitigation measure (T14):</p> <ul style="list-style-type: none"> <li>• Rural culverted accesses will be maintained or constructed with appropriate gate setbacks to the relevant property.</li> </ul> <p>MSF has committed to the following existing mitigation measures which will assist in managing any potential environmental and safety impacts associated with the temporary use of the unsealed Maryvale Road:</p> <ul style="list-style-type: none"> <li>• A Traffic Management Plan (TMP) for construction shall be developed in accordance with Roads and Maritime Guidelines and the Australian Standard AS1742.3.</li> <li>• A dilapidation survey will be completed along Maryvale Road prior to upgrades on this road and after the works are complete. A dilapidation survey protocol is provided in Appendix H.</li> <li>• Establish a maintenance schedule with Dubbo Regional Council for Coborra Road, Maryvale Road and Seatonville Road for the duration of construction.</li> <li>• Undertake consultation with the relevant Road Authority for the proposed road improvements, as stated in 6.2.4, and any ancillary road works and obtain a Section 138 approval prior to the construction of the proposal.</li> </ul> <p><i>A new mitigation measure has been proposed.</i></p>
Developer Contributions	With regard to Wellington Council's Section 94A Developer Contribution Plan 2012, it is noted that it applies to the entire former Wellington Local Government Area and levies are payable	MSF will provide significant investment into the Wellington community and wider region. This will be in the form of employment / contracting

Aspect	Detail of submission	MSF Response
	<p>at the rate of 1% of the proposed development cost. Given the proposal is valued at \$188,000,000 the applicable levy would be \$1,880,000.</p> <p>From the EIS, Section 4 Stakeholder Consultation and subsection 4.4 Dubbo Regional Council, provides a synopsis of the consultation undertaken thus far. <i>“Table 4-3: Moderate concerns raised by Dubbo Regional Council through consultation.</i></p> <p><i>Concern: S94 of the EP&amp;A Act enabling Council’s to levy for public amenities and services as a consequence of development.</i></p> <p><i>Outcome: Dubbo Regional Council appreciates that the MSF won’t trigger S94 Contribution requirements and suggested developing a community benefit fund in lieu of a S94 Contribution.”</i> (EIS p.51).</p> <p>Council’s statement as per correspondence dated 11 October 2017, is that the Section 94A is applicable and has made no suggestions regarding a community benefit fund as the singular form of developer contributions.</p> <p>Council’s S94A Development Contributions Plan 2012, includes section 1.9 <i>Are there any exemptions to the levy?</i> If the S94A levy is not to be levied, then the applicant needs to address the variation sought, providing reasons for the variation, for the consideration of the consent authority. It should also be noted that Council is happy to further discuss the capabilities and opportunities for a Planning Agreement.</p>	<p>opportunities during construction and operations, waste management, accommodation, transport and general living expenses.</p> <p>MSF will also undertake road upgrades including improvements to Cobbora Road, Maryvale Road and Seatonville Road to facilitate the Proposal. These will have long term benefits to the community.</p> <p>MSF will not be using Council services, e.g. water and waste, during the operational phase. As such the development, will not result in net increase to the requirements on council services and infrastructure but rather provide localised improvements and broader economic benefits.</p> <p>Given this, MSF is requesting that there are no contributions in the determination.</p> <p><i>No further mitigation measures are proposed.</i></p>

Aspect	Detail of submission	MSF Response
Riparian Corridor	<p>The EIS Section 6 Environmental Impact Assessment, subsection 6.6.2 Existing Environment – Surface Water Drainage, states that <i>“The main channels of Maryvale and Bodangora Creeks are mapped in the LEP as riparian lands, however, neither of these sections of watercourses flows through the Proposal Site except a small section of Bodangora Creek in the south-east corner of the Site that would not be subject to development or disturbance.”</i></p> <p>The question is the distance between any proposed works / structures and the Creek / bank. Guidelines from the NSW Office of Water indicate a distance of 40 metres is required, but the EIS does not provide such detail.</p> <p>As stated in Council’s correspondence dated 11 October 2017, the proposal may be designated as per Section 4.46 Integrated Development, of the Act. The NSW Office of Water should be contacted to provide advice accordingly.</p>	<p>MSF commits a new mitigation measure (SW9):</p> <ul style="list-style-type: none"> <li>• A 40m buffer will be maintained between infrastructure and Bodangora Creek near the south-east boundary of the site</li> </ul> <p>As the Proposal is an SSD it is not an integrated development under the EP&amp;A Act. Section 4.41 of the EP&amp;A Act identifies authorisations that are not required for approved SSD including:</p> <ul style="list-style-type: none"> <li>• 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 <i>Water Management Act 2000</i>.</li> </ul> <p><i>A new mitigation measure has been proposed.</i></p>
On-site infrastructure	<p>The EIS Section 3 Description of the Proposal, subsection 3.3.1 Key Infrastructure Components, refers to 2 x 40’ shipping containers for storage and maintenance equipment will be permanently situated within the Site on the compound areas used during construction. No details have been provided regarding location, screening, footings, as previous requested in Council’s correspondence dated 11 October 2017.</p>	<p>The two 40 ft shipping containers to be used for storage will be situated within the Site on the compound areas used during construction. Figure 1-1 shows the location of the construction parking and temporary facilities where the shipping containers would be located.</p> <p>No screening is currently proposed for the location of the shipping containers. However, MSF commits to paint or colour-treat facility components to better match the surroundings and decrease their visibility and contrast.</p> <p>Details associated with the construction and operation of this area including footings would be prepared during detailed design and prior to construction of the Proposal.</p> <p><i>No further mitigation measures are proposed.</i></p>
	<p>The ‘construction parking and temporary facilities’ are shown in Figure 3-3, but it appears that the area (black shading) is located generally beneath the transmission line. The area is in excess of 1</p>	<p>The construction parking and temporary facilities are located next to the construction laydown facilities in the south west corner of the site and</p>

Aspect	Detail of submission	MSF Response
	kilometre long and will provide parking for up to 70 vehicles. Again, specific details are required regarding this facet of the development.	occupies an area of approximately 6,600 m <sup>2</sup> . The location is shown in Figure 1-1.  <i>No further mitigation measures are proposed.</i>
Development Closure	The EIS Section 3 Description of the Proposal, subsection 3.4.3 Decommissioning, doesn't address the issue of how this can be achieved and enforced. Council could be unaware that a site is closing down, and the site could be left in a condition not suitable for agricultural pursuits in accordance with the zoning of the land.	As outlined in mitigation measure G1, a LMP would form part of the CEMP. The LMP would address ongoing agronomic management of land during operation.  As outlined throughout the EIS and within Appendix M of the EIS, a decommissioning and rehabilitation plan will be prepared and implemented prior to decommissioning.  All the infrastructure will be removed upon decommissioning with the possible exception of the substation, transmission lines to the substation and access road to the substation.  Additionally, MSF commits to a new mitigation measure (L8): <ul style="list-style-type: none"> <li>Dubbo Regional Council will be notified prior to decommissioning of the project.</li> </ul> <i>A new mitigation measure has been proposed.</i>
Development Alternatives	The EIS Section 2 Need and Justification for the Proposal, subsection 2.4.1 Alternative site locations, makes mention of nine (9) alternative locations however no details have been provided.	The alternatives for the Proposal are addressed in section 2.4 of the EIS. A desktop environmental site analysis was undertaken by pitt&sherry in May 2017 for nine proposed locations across NSW including regions such as the North West, Central West, South and South East and Tablelands.  <i>No further mitigation measures are proposed.</i>
Substation	The development proposes to construct amongst other things, substation switchyard which includes a transformer, 33kV switchgear building and auxiliary services building. No details of the proposed site switchgear building, and auxiliary services building have been provided, including its size, construction materials or floor plan.	The key infrastructure components are addressed in Section 3.3.1 of the EIS.  The size of the area the substation is proposed to occupy has been increased by 0.55 ha as outlined in section 3 of this report. The new substation would occupy an area approximately 90 m x 115 m and the switchgear building, and auxiliary services building would be contained within that area. Further details



Aspect	Detail of submission	MSF Response
		<p>regarding the construction materials and floor plan of the substation will be prepared during detailed design.</p> <p><i>No further mitigation measures are proposed.</i></p>
Sewer	<p>There is no gravity sewer available to which the proposed development can drain. The submitted Environmental Impact Statement (EIS) indicates that temporary portable toilets will be provided during construction of the development. There appears to be no indication in the EIS that such facilities will remain for maintenance staff after the development has been constructed. Under the BCA, the proposed buildings may require toilet facilities to be provided.</p>	<p>Temporary ancillary facilities associated with the compound site would be installed during the construction which would include staff amenities such as portable toilets.</p> <p>The Proposal does not include the construction of permanent staff amenities such as toilets on site. MSF will not be using Council services, e.g. water and waste, once the solar farm is operational.</p> <p><i>No further mitigation measures are proposed</i></p>
Agriculture	<p>The site is currently used for agriculture, including grazing of sheep and the cultivation of cereal crops such as wheat, and fodder crops such as lucerne. The impact of the proposed development upon the Rural Planning Principles as stated in State Environmental Planning Policy (SEPP) (Rural Lands) 2008, requires careful consideration.</p> <p>The EIS states: “... <i>this development will provide socioeconomic benefits during the duration of the Proposal, as well as agricultural land use opportunities (grazing) occurring throughout the Proposal life cycle, and subsequent to decommissioning.</i>”</p> <p>The EIS does not however address Part 3 Rural subdivision and dwellings, and specifically clause 9 Rural subdivision for agricultural purposes, subclause (1) to (5). Clause 9 is similarly repeated in Wellington Local Environmental Plan 2012, clause 4.2 Rural subdivision.</p>	<p>Part 3 clause 9 of the State Environmental Planning Policy (SEPP) (Rural Lands) 2008 states:</p> <ol style="list-style-type: none"> <li>1. The objective of this clause is to provide flexibility in the application of standards for subdivision in rural zones to allow land owners a greater chance to achieve the objectives for development in the relevant zone.</li> <li>2. Land in a rural zone may, with consent, be subdivided for the purpose of primary production to create a lot of a size that is less than the minimum size otherwise permitted for that land.</li> <li>3. However, such a lot cannot be created if an existing dwelling would, as the result of the subdivision, be situated on the lot.</li> <li>4. A dwelling cannot be erected on such a lot.</li> </ol> <p>The subdivision of this Site is not for the purposes of primary production. MSF has a lease agreement with the landholders for the Site. As per Section 7A of the <i>Conveyancing Act 1919</i>, the project is expected to require reconfiguration of the lots, since the proposed lease with the landholder will exceed 5 years. The subdivision will not result in dwellings being erected on the lots.</p> <p>The Wellington LEP designates the Site as ‘AF’ on the Lot Size Map Sheet LSZ_004, where the minimum lot size is 400 ha. Section 2.6 of the Wellington</p>

Aspect	Detail of submission	MSF Response
		<p>LEP states that the size of any lot resulting from subdivision of land to which this clause applies is not to be less than that shown on the Lot Size Map. All five of the new lots will be below the minimum lot size and therefore will not be compliant with Section 2.6 of the Wellington LEP and clause 9 of the Rural Lands SEPP.</p> <p>However, Section 4.38 of the EP&amp;A Act allows the consent authority to grant development consent to a State Significant Development which may be partly prohibited by an environmental planning instrument. Accordingly, development consent may be granted, inclusive of this subdivision.</p> <p><i>No further mitigation measures are proposed.</i></p>
	<p>The EIS section 5.6.1 Wellington Local Environmental Plan (2012) discusses the proposed subdivision of the site, which will involve 'lease lots' as per Figure 5-1 (see above). The description of the proposed new lots does not match Figure 5-1, containing the following errors:</p> <ul style="list-style-type: none"> <li>Proposed Lot 1 includes Pt Lot 1 DP 1095725 &amp; Pt Lot 2 DP 1095725; and</li> <li>Proposed Lot 4 is stated as being 64 ha, when Figure 5-1 states 84 ha.</li> </ul>	<p>MSF acknowledge the subdivision plan did not include all the relevant Lots and DP.</p> <p>Figure 1-1 has been amended to rectify this error.</p> <p>The proposed Lot 4 would be 84 ha.</p> <p>The proposed Lot 1 includes the following properties:</p> <ul style="list-style-type: none"> <li>Part Lot 2 DP 573426</li> <li>Part Lot 1 DP1031281</li> <li>Part Lot 130 DP754318</li> <li>Lot 122 DP754318</li> <li>Part Lot 182 DP754318</li> <li>Lot 1 DP252522</li> <li>Part Lot 2 DP252522</li> <li>Lot 1 DP1006557</li> <li>Part Lot 1 DP1095725</li> </ul>

Aspect	Detail of submission	MSF Response
		<ul style="list-style-type: none"> <li>• Part Lot 2 DP1095725</li> <li>• The existing Bakers Lane (currently in the process of being closed by Dubbo Regional Council)</li> </ul> <p><i>No further mitigation measures are proposed.</i></p>
Wellington Local Environmental Plan 2012	<p>Wellington Local Environmental Plan (LEP) 2012, clause 4.1 Minimum subdivision lot size, subclause (3) states: <i>“The size of any lot resulting from a subdivision of land to which this clause applies is not be less than the minimum size shown on the Lot Size Map in relation to that land.”</i> The Lot Size Map indicates that the minimum subdivision lot size is 400 ha, of which none of the proposed lots complies.</p> <p>Wellington Local Environmental Plan (LEP) 2012, clause 4.2 Rural subdivision, states in subclauses (3) and (4):</p> <p><i>(3) Land in a zone to which this clause applies may, with development consent, be subdivided for the purpose of primary production to create a lot of a size that is less than the minimum size shown on the Lot Size Map in relation to that land.</i></p> <p>The issue with the proposed ‘lease lots’ is that they can only be created below the stated minimum lot size, when that purpose is for ‘primary production’. The proposed lots are being created for a solar farm (Lot 1), with the others simply being the remainder of the lots surplus to the solar farms area requirements. As such, the lots are not being created for ‘primary production’ and as such would be contrary to subclause (3) as stated above.</p>	<p>As noted above, all five of the new lots will be below the minimum lot size specified by the Lot Size Map and therefore the subdivisions will not be compliant with Section 4.1 and 4.2 of the Wellington LEP.</p> <p>Section 4.38 of the EP&amp;A Act allows the consent authority to grant development consent to a State Significant Development which may be partly prohibited by an environmental planning instrument. Accordingly, development consent may be granted, inclusive of this subdivision.</p> <p><i>No further mitigation measures are proposed.</i></p>
Biodiversity	The EIS, section 6.1 Biodiversity (flora and fauna) refers to native trees along fence lines (0.4 ha). The trees have been planted, but	The native trees identified along the fence line were planted by the current landowner, not under a Landcare program or with public funds. These

Aspect	Detail of submission	MSF Response
	the question is by who and under what circumstances. While the landholder may have planted the trees, the more probable is that the trees were planted using public funds for a specific Landcare related purpose.	<p>plantings cover a small area totalling 0.4ha and are unlikely to support any population of threatened species.</p> <p>The vegetation screening works for the proposal (see the tree boundary in Figure 1-2 above) will provide an opportunity to replace the plantings to be cleared. The screening areas would be approximately 3-5m wide (on ground) and consist of a range of local native trees and tall shrubs.</p> <p><i>No further mitigation measures are proposed.</i></p>
NSW Rural Fire Service (RFS)		
Bushfire	NSW RFS reviewed the information provided and advises that it raises no objection to the proposed development subject to the adherence of the mitigation strategies given within Section 3.8 of the report prepared by Eco Logical Australia dated 9 November 2018.	<p>The Bushfire Risk Assessment prepared by Eco Logical (Appendix J of the EIS) recommended bushfire mitigation strategies in Section 6.8 of the report. The recommended mitigation strategies were incorporated into the mitigation measures in the Maryvale Solar Farm EIS. Mitigation measures BF4, BF6, BF8, BF10, BF12, BF17, BF18 and BF20 commit to the mitigation strategies recommended.</p> <p>MSF commits to a revised mitigation measure (BF6):</p> <p>Develop an Emergency Response Plan (ERP) in consultation with the NSW RFS District Fire Control Centre prior to construction. The ERP should include:</p> <ul style="list-style-type: none"> <li>• Foreseeable on-site and off-site fire events</li> <li>• Clearly states work health safety risks and procedures to be followed by fire-fighters, including <ul style="list-style-type: none"> <li>– Personal protective clothing</li> <li>– Minimum level of respiratory protection</li> <li>– Minimum evacuation zone distances</li> <li>– A safe method of shutting down and isolating the PV system</li> <li>– <b>Avoid fire-fighting within footprint of solar farm</b></li> <li>– <b>Avoid operating downwind of smoke from burning solar farm components</b></li> <li>– Any other risk control measures required to be followed by fire fighters</li> </ul> </li> </ul>

Aspect	Detail of submission	MSF Response
		<ul style="list-style-type: none"> <li>Any other risk control measures required to be followed by fire-fighters</li> <li>Evacuation triggers and protocols</li> <li>Suppression response strategies and tactics, including aerial suppression options/management</li> </ul> <p><i>Revised mitigation measure has been proposed.</i></p>
Fire & Rescue NSW		
Emergency Response Plan	A comprehensive Emergency Response Plan (ERP) is developed for the site.	<p>As per existing mitigation measure BF6 shown above, an Emergency Response Plan (ERP) will be developed in consultation with the NSW RFS District Fire Control Centre prior to construction.</p> <p><i>No further mitigation measures are proposed.</i></p>
	The ERP specifically addresses foreseeable on-site and off-site fire events and other emergency incidents (e.g. fires involving solar panel arrays, bushfires in the immediate vicinity) or potential hazmat incidents	<p>MSF commits to the existing mitigation measure BF6 (shown above) which states the ERP to be developed should include:</p> <ul style="list-style-type: none"> <li>Foreseeable on-site and off-site fire events</li> <li>Clearly states work health safety risks and procedures to be followed by fire-fighters</li> <li>A safe method of shutting down and isolating the PV system</li> <li>Training for fighting fires within solar farms</li> <li>Any other risk control measures required to be followed by fire-fighters</li> <li>Evacuation triggers and protocols</li> <li>Suppression response strategies and tactics, including aerial suppression options/management.</li> </ul> <p><i>No further mitigation measures are proposed.</i></p>
	ERP details the appropriate risk control measures to safely mitigate potential risks to the health and safety of firefighters. Including level of personal protective clothing, minimum level of	MSF is committed to the requirements of mitigation measure BF6 of the Maryvale Solar Farm EIS (see above).



Aspect	Detail of submission	MSF Response
	<p>respiratory protection, decontamination procedures, minimum evacuation zone distances and a safe method of shutting down and isolating the photovoltaic system.</p> <p>Other risk control measures that may need to be implemented in a fire emergency due to any unique hazards specific to the site should also be included in the ERP.</p>	<p>The potential hazards to fire fighters were also addressed in Section 6.8.2 of the Maryvale Solar Farm EIS. The risks to fire-fighter safety associated with a fire burning the solar panels and associated equipment include:</p> <ul style="list-style-type: none"> <li>• Electrocution – solar panels would be energised under any natural or artificial light conditions</li> <li>• Conduction of electrical current through water is also a risk when operational personnel spray the high-powered engine hose at the inverter or the components of the solar PV system</li> <li>• Inhalation of potentially toxic fumes and smoke from any plastic components such as cables or other decomposed products of the panels, although the majority of the site, would be largely constructed of glass, silicon, steel and aluminium.</li> </ul> <p>Each inverter station will be fitted with an isolation switch allowing for the isolation of individual inverter stations. The turning off of sections or all of the solar farm can be done on site at the control room or remotely from MSF's control centre. When the inverter station is turned off then the solar panels will be isolated and disconnected from the grid. This will mitigate risks to fire fighters by reducing their risk of electrocution</p> <p><i>No further mitigation measures are proposed.</i></p>
	<p>Two copies of the ERP be stored in a prominent 'Emergency Information Cabinet' located in a position directly adjacent to the sites main entry points.</p>	<p>MSF is committed to the existing mitigation measure (BF7):</p> <ul style="list-style-type: none"> <li>• Two copies of the ERP should be permanently stored in a prominent 'Emergency Information Cabinet' to be located at the main entrance point to the solar farm, external to any security fence or locked gate, and a copy provided to local emergency responders.'</li> </ul> <p><i>No further mitigation measure proposed.</i></p>
Local emergency management	<p>Once constructed and prior to operation, the operator of the facility contacts the relevant local emergency management</p>	<p>MSF is committed to the existing mitigation measure (BF14):</p> <ul style="list-style-type: none"> <li>• At the end of construction and prior to operation contact the Local Emergency Management Committee to establish emergency management</li> </ul>

Aspect	Detail of submission	MSF Response
committee	committee (LEMC). LEMC is a committee established by Section 28 of the State Emergency and Rescue Management Act 1989.	procedures with relevant authorities for the safety hazards presented by the site.  <i>No further mitigation measures are proposed.</i>
Environment Protection Authority		
Environment Protection Licence	The EPA notes that the project is not deemed a Scheduled Activity in accordance with Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> and therefore the proponent will not be required to apply for an Environment Protection Licence for the project.	Noted.  <i>No further mitigation measures have been proposed.</i>
Water Management	The EPA notes the EIS addresses surface water issues and includes a commitment to prepare a soil and water management plan for the construction phase of the project. The EPA also notes the proposed erosion and sediment mitigation measure of maintaining at least 80% groundcover during operational phase of the project. The EPA considers it appropriate to require a soil and water management plan for the operational phase of the project.	MSF has committed to preparing a Land Management Plan during the operational phase (existing mitigation measure SW6) to ensure at least 80% groundcover is restored and maintained.  MSF commits to a revised mitigation measure (S12):  Implement a Land Management Plan that addresses the ongoing land management and maintenance activities (Refer Appendix L). This would address: <ul style="list-style-type: none"> <li>• Ongoing agronomic management of the land including stock, water, vegetation and soils management</li> <li>• Measures required to maintain healthy soil and plant systems and maintain the agricultural capability of the land</li> <li>• Stock management programs and infrastructure (e.g. fencing, watering points)</li> <li>• <b>Soil and Water management including erosion and sediment control and on-site water use</b></li> <li>• Soil amelioration, pasture management and weed control, and</li> <li>• Monitoring programs for soil fertility and groundcover</li> </ul> <i>Revised mitigation measure has been proposed.</i>
Waste management	The EIS refers to a Waste Management Plan that is to be developed. The EPA supports the development of	Noted.

Aspect	Detail of submission	MSF Response
	a Waste Management Plan prior to the commencement of construction given issues that other similar developments in the region have experienced in managing the large volume of waste that is generated during construction phase.	<i>No further mitigation measures have been proposed.</i>
Department of Planning & Environment: Resources & Geoscience		
Stakeholder consultation	Acknowledges the EIS has addressed all GSNSW requirements regarding the assessment of land use compatibility with operating mines, extractive industries (quarries), mineral, coal or petroleum resources and exploration activities. Mineral titles over the site have been identified and considered and consultation with the affected titleholder has been adequately undertaken and recorded in the EIS.	Noted.  <i>No further mitigation measures are proposed.</i>

## 4.2 Responses to community submissions

Four objections were received from the community during the public exhibition period. A response to comments from this submission are provided in Table 4-3.

Table 4-3 Summary of responses to community submissions

Aspect	Detail of Issue	MSF Response
Land use compatibility (4 submissions)	<p>Loss of Biophysical Strategic Agricultural Land/high quality agricultural land:</p> <ul style="list-style-type: none"> <li>Land suited for mixed farming and agriculture</li> <li>The project will contribute to the loss of over 5,000 ha of BSAL/productive agricultural land</li> <li>There are other sites in the Wellington area under transmission lines with land less valuable to the economy and more suited to solar panels.</li> <li>Selection of land marked as BSAL is not in line with the Solar Farm guideline which list BSAL as a constraint</li> <li>There is no guarantee the subject land will not be impacted or sterilised over the 25-year lease.</li> <li>Cropping with lucerne is an important part of maintaining the fertility of the soil</li> <li>Grass nutritional quality is reduced when it is shaded by solar panels</li> </ul>	<p>Land use impacts were assessed in Section 6.4 of the EIS.</p> <p>The land for the Proposal has been mapped as Biophysical Strategic Agricultural Land (BSAL) by the <i>State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007</i> (Strategic Agricultural Land Map – Sheet STA_022). BSAL is classified as naturally fertile and highly productive and can be used for intensive agriculture such as cultivation.</p> <p>The solar farm is located on land mapped in capability Class 2 under the Land and Soil Capability (LSC) Mapping for NSW (OEHL, 2017). Class 2 land is ‘arable land suitable for regular cultivation for crops, but not suited to continuous cultivation.’ (NSW Agriculture, 2002).</p> <p>BSAL and soil capability class 2 are identified in the Large-Scale Solar Energy Guideline (DP&amp;E, 2018) as a site constraint, which should be considered during site selection. However, the guidelines state this constraint does not preclude large-scale energy development.</p> <p>The MSF Site was considered a preferred location due to:</p> <ul style="list-style-type: none"> <li>The suitability of commercial scale solar electricity generation on the land, in terms of solar yield</li> <li>Availability of suitably sized lots</li> <li>Aspect of the land (north facing)</li> <li>Ease of access to major transport networks such as the Mitchell Highway</li> <li>Suitable landscape requiring minimal earthworks and limited vegetation removal</li> </ul>

Aspect	Detail of Issue	MSF Response
		<ul style="list-style-type: none"> <li>• Locality population density</li> <li>• Location relevant to natural waterways, and</li> <li>• Proximity to and capacity of connection infrastructure (132kV transmission line and Wellington substation)</li> </ul> <p>The Proposal will cover approximately 66% of the Subject Land (375 Ha) with the remaining area to continue to be used for agriculture as per existing use. The land used for the Proposal will continue to be used for agricultural use with limited sheep grazing to continue on the land used for solar panels.</p> <p>The Site is privately owned and currently used for agricultural purposes including cropping (wheat and lucerne) and grazing. The Proposal will result in a change from cropping agriculture to electricity generation accompanied by grazing agriculture. Except for limited and short-term earthworks associated with construction and the operational use of internal tracks the majority of the soil surfaces would not be impacted by the development in the long term; no large areas of reshaping or excavation are proposed.</p> <p>The Proposal has a reversible nature as it can be decommissioned and rehabilitated returning the land to its former agricultural use at the end of the operational period. The proponent has demonstrated their intentions to ensure the rehabilitation of the site through the development of a draft Land Management Plan in Appendix L and a draft Rehabilitation and Decommissioning Plan in Appendix M of the EIS.</p> <p>It is anticipated that the solar panels will provide shelter and a microclimate' for the ground cover beneath allowing some protection from extreme temperatures, which may improve ground cover health and longevity. The ground cover within the Site would be affected by shading to varying degrees depending on the time of year and time of day but is not expected to inhibit the maintenance of an effective groundcover.</p>

Aspect	Detail of Issue	MSF Response
		<p>It is recognised that agricultural use of the land will be reduced during the solar farm lifetime. An improvement in accumulated organic matter can be anticipated under a permanent pasture scenario and this will assist in maintaining fertility as well as soil structure.</p> <p>Due to the reversible nature of this infrastructure, and commitment to rehabilitation it is anticipated that this property could be used for cropping agriculture following the decommissioning of the Proposal. The layout and design of the project has been designed to ensure that ongoing farm operations will not be adversely affected.</p> <p><i>No further mitigation measures have been proposed.</i></p>
	Request the company undertake soil tests every 12 months, which are to be reported back to the State Government and available for public perusal, to ensure that the soil quality of the land is not being compromised.	<p>As per existing mitigation measure (S12), during operation of the solar farm a LMP will be implemented which addresses the ongoing the land management and maintenance activities. The plan will include monitoring programs for soil fertility and groundcover.</p> <p><i>No further mitigation measures have been proposed.</i></p>
Fire Risk (1 submission)	Increased risks of fire due to the proposed solar farm.	<p>Bushfire risks and the associated mitigation measures risks are addressed in section 6.8 of the EIS</p> <p>A Bushfire Risk Assessment was completed (Appendix J of the EIS) and included best practice industry mitigation measures adopted across large scale solar farms throughout Australia including a 15m APZ and additional set back between the boundary and the first solar panels.</p> <p><i>No further mitigation measures are proposed.</i></p>
	<p>The firefighters likely to respond to a bushfire in this area would be volunteers and/or individual property owners. The risks to fire-fighter safety associated with the solar farm:</p> <ul style="list-style-type: none"> <li>• Electrocution – solar panels would be energised under any natural or artificial light conditions</li> </ul>	<p>Firefighting risks are addressed in section 6.8 of the EIS.</p> <p>Each inverter station will be fitted with an isolation switch allowing for the isolation of individual inverter stations. The turning off of sections or all of the solar farm can be done on site at the control room or remotely from</p>



Aspect	Detail of Issue	MSF Response
	<ul style="list-style-type: none"> <li>Conduction of electrical current through water is also a risk when operational personnel spray the high-powered engine hose at the inverter or the components of the solar PV system</li> <li>Inhalation of potentially toxic fumes and smoke from any plastic components such as cables or other decomposed products of the panels, although the majority of the site, would be largely constructed of glass, silicon, steel and aluminium.</li> </ul>	<p>MSF's control centre. When the inverter station is turned off the solar panels will be isolated and disconnected from the grid. This will mitigate risks to fire fighters by reducing their risk of electrocution.</p> <p>An Emergency Response Plan (ERP) will be developed in consultation with the NSW RFS District Fire Control Centre prior to construction which will clearly state work health safety risks and procedures to be followed by fire-fighters.</p> <p>MSF has also committed to the following mitigation measures:</p> <ul style="list-style-type: none"> <li>At the end of construction and prior to operation contact the Local Emergency Management Committee to establish emergency management procedures with relevant authorities for the safety hazards presented by the site.</li> <li>At the end of construction and prior to operation brief the local volunteer fire brigades and neighbouring farmers.</li> <li>Brief the local volunteer fire brigades and neighbouring farmers at regular intervals e.g. annual pre-season fire meetings.</li> </ul> <p><i>No further mitigation measures are proposed.</i></p>
	One tank outside the APZ with a capacity of 20,000L located near the substation is not enough water to put out fire before major damage is caused.	<p>Bush fire risks and associated mitigation measures are addressed in Section 6.8 of the EIS. A Bushfire Risk assessment of the Proposal was undertaken (Appendix J of the EIS) which recommended installation of a water supply tank with a capacity of 20,000L, which is in accordance with RFS guidelines.</p> <p><i>No further mitigation measures are proposed.</i></p>
Water (1 submission)	Operational water use is estimated to be approximately 1.5ML/per annum and will be trucked to Site. Where is this water coming from and who pays for it?	MSF plan to truck all construction and operational phase water requirements into the site from external provider/s. Water for use during the operation of the solar farm Site would be sourced through a local contractor and delivered to Site by water truck. MSF would pay for all the water sourced for the construction and operation of the solar farm.

Aspect	Detail of Issue	MSF Response
		<p>Agricultural activities undertaken on the Site are currently supported by dam water supply. This water use will continue for the remaining areas of the Subject Land not subject to the Proposal. Should water requirements exceed those available from the existing dam, MSF will source external water supply to be transported to Site under appropriate agreements and approvals.</p> <p><i>No further mitigation measures are proposed.</i></p>
	<p>A diluted organic polymer agent is proposed to be used to reduce the quantity of water required for dust suppression activities. Is it sprayed or mixed into the water and what are its long term environmental effects?</p>	<p>Organic polymers are used regularly for dust suppression in the construction industry. Organic polymers are generally diluted in water and applied to the site via spraying from a water truck. By using a diluted organic polymer agent less water is required for dust suppression.</p> <p>If organic polymers are used for dust suppression during construction the appropriate product would be selected for the Site and activity. Using polymers in dust suppression is also included in the Managing Urban Stormwater: Soils and Construction (Landcom, 2004), which provides the industry standards on erosion and sediment control.</p> <p>A Soil and Water Management Plan (SWMP) will be prepared and implemented as part of the CEMP, in accordance with Managing Urban Stormwater: Soils and Construction (Landcom, 2004). This will include an erosion and sediment control plan for implementation during construction.</p> <p><i>No further mitigation measures are proposed.</i></p>
Traffic (1 submission)	<p>Issues from construction traffic:</p> <ul style="list-style-type: none"> <li>increase in dust and noise impacts to residences located on Maryvale road including house listed for sale</li> <li>measures to ensure safe driving from staff/contractors is insufficient</li> <li>carpooling will not last throughout construction or be sufficient</li> </ul>	<p>Traffic impacts and mitigation measures are addressed in section 6.2 of the EIS.</p> <p>Dust management measures will be employed on unsealed roads, stockpiles and other areas of loose or disturbed soil prone to dust generation. Controls may include covering of stockpiles, watering roads and organic polymer agents. The access road for the site will be sealed for the first 30 metres to</p>

Aspect	Detail of Issue	MSF Response
	<ul style="list-style-type: none"> <li>• more road upgrades required</li> <li>• further road safety work required</li> </ul>	<p>allow for safe traffic movements and to reduce potential for dust and erosion.</p> <p>Road traffic noise was assessed in section 6.9 of the EIS. The assessment indicates that operational noise predictions from construction traffic for relevant noise criteria would be satisfied at all receivers.</p> <p>A TMP for construction will be developed in accordance with Roads and Maritime Guidelines and the Australian Standard AS1742.3. The plan would include:</p> <ul style="list-style-type: none"> <li>• designated routes of construction traffic to the site</li> <li>• carpooling/shuttle bus arrangements to minimise vehicle numbers during construction</li> <li>• any restrictions on traffic movements (such as residential areas, school pick-up and drop-off times)</li> <li>• a complaint handling procedure / register</li> <li>• the management and coordination of construction and staff vehicle movements to the site and measures to limit disruption to other motorists</li> <li>• measures to be employed to ensure a high level of safety for all road users during the construction and operation phases of the development</li> <li>• specifically, the TMP will detail how the projected maximum of seventy (70) light vehicles accessing the site per day will be achieved and enforced.</li> </ul> <p>MSF undertook consultation with Dubbo Regional Council regarding road upgrades to be included in the Proposal. The following road upgrades are proposed:</p> <ul style="list-style-type: none"> <li>• Intersection treatment at Cobbora Road/Maryvale Road - Left turn deceleration lane on Cobbora Road</li> <li>• Widening of Maryvale Road at three locations</li> </ul>

Aspect	Detail of Issue	MSF Response
		<ul style="list-style-type: none"> <li>• Strengthening of one waterway structure (approximately 450m east of Seatonville Road) on Maryvale Road</li> <li>• Widening of Seatonville Road to allow two-way movements of heavy vehicles</li> <li>• Sealing of Seatonville Road for 30m at the approach to Maryvale Road.</li> <li>• Rural culverted accesses with appropriate gate setbacks to the relevant property</li> </ul> <p>MSF will undertake further consultation with the relevant Road Authority for the proposed road improvements and any ancillary road works and obtain a Section 138 approval prior to the construction of the proposal. MSF will also establish a maintenance schedule with Dubbo Regional Council for Coborra Road, Maryvale Road and Seatonville Road for the duration of construction.</p> <p>A complaint handling procedure and register will be implemented to assist in recording and managing potential conflict with the local community during construction. Each complaint would need to be investigated and appropriate noise amelioration measures put in place to mitigate future occurrences, where the noise in question is in excess of allowable limits</p> <p><i>No further mitigation measures have been proposed.</i></p>
Salinity (1 submission)	Salinity risks: <ul style="list-style-type: none"> <li>• Tree clearing and pasture removal will expose the area to salinity hotspots</li> <li>• Sheep may be able to graze between the rows of panels, but this does little to lessen the risk of salinity hotspots.</li> <li>• The possibility of salinity outbreaks is a foreseeable risk that has not been dealt with in the EIS.</li> </ul>	<p>Salinity is not anticipated to be a high risk given the Site's location in the landscape and the infiltration rates are expected to be the same as present or lower.</p> <p>The Proposal will result in the removal of 109 mature paddock trees from the Site. However, there are no significant vegetation corridors present on site and the values provided by paddock trees can be replicated to some extent by the provision of landscape screening vegetation around the site landscape plantings.</p>

Aspect	Detail of Issue	MSF Response
		<p>The substantial replanting of deep rooted trees and shrubs as part of the landscape plan will also assist with the uptake of soil water on Site, as will the selection of suitable pasture species. MSF are committed to the implementation of the Land Management Plan to ensure at least 80% groundcover is restored and maintained.</p> <p>MSF commits to the revised mitigation measure (S12):</p> <p>Implement a Land Management Plan <b>prepared in consultation with Local Land Services</b> that addresses the ongoing land management and maintenance activities (Refer Appendix L). This would address:</p> <ul style="list-style-type: none"> <li>• Ongoing agronomic management of the land including stock, water, vegetation and soils management</li> <li>• Measures required to maintain healthy soil and plant systems and maintain the agricultural capability of the land</li> <li>• Stock management programs and infrastructure (e.g. fencing, watering points)</li> <li>• Soil and Water management including erosion and sediment control and on-site water use</li> <li>• Soil amelioration, pasture management and weed control, and</li> <li>• Monitoring programs for soil fertility and groundcover</li> </ul> <p><i>A revised mitigation measure has been proposed.</i></p>
Consultation (1 submission)	Concerns regarding transparency of consultation with landholders and the community	<p>A Community and Stakeholder Engagement Plan (CSEP) was prepared in October 2017 in accordance with The Community and Stakeholder Engagement Draft Environmental Assessment Guidance Series June 2017 (Draft Guidelines) prepared by DP&amp;E. Over the course of the consultation period to date, a total of 18 community members were present during open community consultation sessions, 70 residents within the locality of the site were contacted either through letters, emails or phone calls, and 7 neighbouring residents have participated in a group or one on one meeting.</p>

Aspect	Detail of Issue	MSF Response
		<p>Updates provided by the Maryvale Solar website (<a href="http://www.photonenergy.com.au/current-projects/maryvale-solar-farm">www.photonenergy.com.au/current-projects/maryvale-solar-farm</a>), and the option for contact through the website as well as a dedicated hotline (1300 088 565) and email <a href="mailto:maryvalesolarfarm@photonenergy.com">maryvalesolarfarm@photonenergy.com</a>, also allowed for interested community members to voice their queries and/or concerns by a number of methods.</p> <p><i>No further mitigation measures have been proposed.</i></p>
Visual (2 submissions)	There will be 47 people visually impacted by this proposed development.	<p>The visual impact from neighbouring private viewpoints on Maryvale Road were assessed in the Visual Impact Assessment (Appendix H of EIS) and summarised in Section 6.5 of the EIS. The Proposal would be visible to 47 potentially affected private viewpoints as well as five public viewpoints located on the Mitchell Highway, Combo Road, Cobbora Road, Tarwong Lane and Phillipsons/Twiggs Roads.</p> <p>A Detailed Landscape Plan will be developed as part of the CEMP to implement the Concept Landscape Plan in Appendix H, which includes visual screening as shown in Figure 6-11 of the EIS.</p> <p>Following the anticipated growth and screening effects of proposed mitigation planting (approximately 3-5 years), for some private viewpoints the impact rating would reduce so that there would be:</p> <ul style="list-style-type: none"> <li>• One private viewpoint rated as moderate-high</li> <li>• Three private viewpoints rated moderate</li> <li>• 30 private viewpoints rated moderate-low</li> </ul> <p>The sensitive receiver which has the private viewpoint rated as moderate-high participated in a one on one consultation and did not raise any concerns about visual impacts from the Proposal.</p> <p>It has been determined that implementation of mitigation measures outlined in Section 6.5.4 of the EIS, will reduce the majority of sensitive receivers' visual impact levels to moderate or below.</p>



Aspect	Detail of Issue	MSF Response
		<i>No further mitigation measures have been proposed.</i>
Property values (1 submission)	<p>Reduced property value:</p> <ul style="list-style-type: none"> <li>Property value will be significantly reduced due to impacts of solar farm</li> <li>Studies on the wind farm from the United States not comparable</li> <li>Presence of solar farms creates uncertainty around other nearby land being developed for the same purpose</li> <li>Visual impacts will occur with viewpoints from the residence and most areas on our property</li> <li>Any conclusion drawn in relation to wind farms, cannot be reasonably applied to the proposal</li> </ul>	<p>A number of large scale farms have now been operating in Australia for several years and there have been no formal or informal reported impacts on local land values.</p> <p>In the absence of relevant definitive investigations of the impact to property values from large-scale solar farms in Australia reference is made to a study commissioned by the NSW OEH in 2016 into the impact of wind farms on land value (Urbis, 2016). This study concluded that:</p> <ul style="list-style-type: none"> <li>On land used for primary production, where productivity is maintained, there is no loss of value</li> <li>International studies have identified that negative impacts are more likely where there is a greater number of traditional residential and lifestyle properties in proximity to wind farms, and</li> <li>Appropriately located wind farms within rural areas, removed from higher density residential areas, are unlikely to have a measurable negative impact on surrounding land values</li> </ul> <p>The balance of the Site will be used for continued production and in the absence of data concerning solar developments the conclusions drawn in relation to wind farms as a similar development type can be reasonably applied to the Proposal.</p> <p>In the case of the Maryvale solar farm, there is little traditional residential development in the locality with residences being generally associated with surrounding primary production and larger 'lifestyle' lots. The Proposal would not have an adverse impact on use of neighbouring properties for agricultural purposes.</p> <p>MSF commits to the mitigation measure L5, in that all the infrastructure will be removed upon decommissioning with the possible exception of the</p>

Aspect	Detail of Issue	MSF Response
		<p>substation, transmission lines to the substation and access road to the substation.</p> <p><i>No further mitigation measures have been proposed.</i></p>
Health and safety (1 submission)	Exposure to electromagnetic fields (EMFs)	<p>Hazards, including EMFs, and the associated mitigation measures are addressed in section 6.13 of the EIS.</p> <p>EMFs can be hazardous to human health, the World Health Organisation (WHO) has concluded that short-term exposure to very high levels of EMFs can be harmful to health however exposure to low EMFs is inconclusive (WHO, 2018). The strengths of the fields decrease rapidly with increasing distance from operating electrical equipment and can also be reduced by shielding.</p> <p>The layout of the Proposal has been designed to provide a buffer between the facility, sensitive receivers, road users and the general public. Given the levels associated with the infrastructure components and the distance to publicly accessible land and the nearest receiver, EMFs from the proposed development are likely to be indistinguishable from background levels at the boundary fence.</p> <p>The International Commission on Non-Ionizing Radiation Protection (ICNIRP) published Guidelines for limiting exposure to time-varying electric, magnetic and electromagnetic fields (up to 300 GHz) in 1998 and an updated version in 2010.</p> <p>Regarding electromagnetic interference, all electrical equipment would be designed in accordance with relevant codes and industry best practice standards in Australia</p> <p><i>No further mitigation measures have been proposed.</i></p>

Aspect	Detail of Issue	MSF Response
	<p>The 'heat island' effect from solar farms resulting in temperatures around solar farms being regularly 3-4 degrees warmer</p>	<p>A literature review based on peer reviewed published papers regarding 'heat island' effect was undertaken. Research shows there is a minor increase in temperature above large scale photovoltaic solar farms. There are limited studies available on the impacts of large scale photovoltaic solar farms on temperature and climate and of the studies completed none were undertaken in Australia.</p> <p>An analysis undertaken by Fthenakis and Yu (2013) on a large solar farm in North America found that at the centre of the solar farm temperatures above the panels were warmer by an average of 1.9 degrees Celsius in comparison to the surrounding area, however the increased temperature dissipates from 5 to 18 m above the solar farm. The study also found the increased temperature at a horizontal distance from the solar farm dissipates sharply beyond the edge of the solar panels. The solar farm was shown to completely cool overnight.</p> <p>Alternatively, a study by Baron-Gafford et al (2016) found that temperatures over a photovoltaic power plant were regularly 3 to 4 degrees Celsius warmer than the surrounding area at night. A study by Yang et al (2017) also found a minor increase in temperature above the solar panels on large photovoltaic solar farms, however the difference in temperature varied across the seasons with less of a temperature difference occurring during the colder seasons. The study also found the soil temperatures under the solar panels are generally cooler than the surrounding areas without panels.</p> <p>Multiple studies found varying temperature increases above photovoltaic solar panels and were contradictory in respect to overnight temperature differences. The research suggests there is very localised effect on temperatures near the solar panels. A minor increase in temperature close to the solar panels is unlikely to impact the local climate, adjacent properties or nearby receivers. Impacts to agricultural activities and plant growth would be negligible.</p>

Aspect	Detail of Issue	MSF Response
		<i>No further mitigation measures have been proposed.</i>
Community (2 submissions)	<p>Lack of funding contribution to community</p> <ul style="list-style-type: none"> <li>Community benefit fund is insufficient</li> <li>Community expected to pay for road upgrades</li> </ul>	<p>A Maryvale Community Solar Program (or similar) would be established with the intention of helping to build energy security and energy sustainability for organisations at the centre of the community. It is proposed that from the time of the solar farm's operation, MSF would deliver funds into a community enhancement program for community, public and/or not-for-profit organisations within the Dubbo Local Government Area. MSF is currently in consultation with Dubbo Regional Council to establish the community benefit fund.</p> <p>Short term economic benefits of the Proposal (12 months) include the opportunity for up to 150 construction jobs (at peak) as well as indirect supply chain jobs. Regional economic benefits will include:</p> <ul style="list-style-type: none"> <li>Employee expenditure in the Wellington region (fuel supply, vehicle servicing, uniform suppliers, hotels/motels, B&amp;B's, cafés, pubs, catering and cleaning companies)</li> <li>Maximising the use of local contractors and equipment hire</li> <li>Increasing local skills and trades through project experience.</li> </ul> <p>Long term economic benefits of the Proposal include the opportunity of up to 10 operational jobs for the solar farm development. Job opportunities and associated benefits of the continued agricultural use of a proportion of the land will continue throughout the lifetime of the Proposal as well.</p> <p>The road upgrades proposed as part of the development, as outlined in section 6.2 of the EIS, will form part of the development and be paid for by MSF. These upgrades will be a long-term benefit beyond the short-term impacts associated with the construction of the Proposal.</p> <p>Local roads are already subject to heavy vehicle movements from agricultural activities and general haulage, however, should any additional damage occur as a consequence of the proposal this will be rectified. MSF is</p>

Aspect	Detail of Issue	MSF Response
		<p>also committed to completing a dilapidation survey along Maryvale Road prior to upgrades on this road and after the works are complete.</p> <p><i>No further mitigation measures have been proposed.</i></p>
	Impact of developments such as Bodangora Wind Farm causing fracture in the local community not addressed in EIS.	<p>In accordance with the SEARs, an assessment of the likely impacts on the local community has been undertaken as included in section 6.11 of the EIS. Multiple renewable energy projects have been proposed, approved and/or constructed in the region including the Bodangora Wind Farm which was approved in 2013 and has finished construction. The renewable projects in the region and their status is shown in Appendix C of this report.</p> <p>The direct impacts from other developments such as the Bodangora Wind Farm are not within the scope of the proposal and are not addressed in the EIS.</p> <p><i>No further mitigation measures have been proposed.</i></p>
	It can be estimated a 2,000-acre farm will spend \$250,000 per year in town. Local businesses, particularly agricultural businesses, who rely on this income will suffer massive losses from landholders who spend money in these businesses not just for one or two years, but every year. It is not fair to risk businesses in our town, which may also have a damaging impact on the future of Wellington, one of the oldest towns in Australia.	<p>The socioeconomic impacts are outlined in section 6.12 of the EIS.</p> <p>The proposal will create benefits for the region by:</p> <ul style="list-style-type: none"> <li>• Increased employment – there is the potential for local employment to be generated during the construction phase where suitable local contractors and labour hire are available</li> <li>• Stimulation and diversification of the local economy creating greater resilience, and</li> <li>• Developing regional skills in renewable energy technology</li> <li>• Community benefit fund which will deliver funds annually for community, public and/or not-for-profit organisations within the Dubbo Local Government Area</li> </ul> <p>The Proposal will generate 379 gigawatt hours (GWh) of electricity each year. The Proposal represents a total investment of \$188 million and is estimated to provide 150 direct construction jobs at peak period and up to 10 operational jobs. Of these workers, it is expected that the majority will be sourced from the local area using facilities and programs operating in the area including any that Council have in place.</p>

Aspect	Detail of Issue	MSF Response
		<i>No further mitigation measures have been proposed.</i>



## 5. Conclusion

This submissions report has been prepared by pitt&sherry on behalf of MSF (the proponent) to meet the requirements of DP&E and Section 4.39 of the *Environmental Planning and Assessment Act 1979*.

The Maryvale Solar Farm EIS identified that some electrical cabling may be above ground to enable crossing of waterbodies on Site. However further consideration of the design has identified that up to five crossings for cabling may be required across Waterway 2 on the Site. These crossings may be above ground or below ground (requiring trenching) and would avoid Aboriginal archaeological sites and native vegetation to be retained.

Another amendment to the Proposal as presented in the EIS is proposed associated with the substation area and subsequently the subdivision of the land. MSF propose to change the size of the area the substation would occupy from approximately 60m x 80m (0.48 ha) to an area of 90 m x 115m (1.04ha). A revised subdivision plan is presented in Section 3 which identifies the amended areas of the subdivided lots from increasing the area for the substation. The change in substation area would result in a negligible change to the visual impacts of the substation on surrounding receivers.

A total of eight submissions were received from government agency stakeholders and four submissions in the form of objections were received from the community. The Proposal, as presented in the EIS, would provide local, regional and national benefits including:

- Develop the solar power industry and supply chain in Australia
- Develop Australian intellectual property and expertise in solar power
- Assist with Australia's commitments under national and international agreements
- Diversify sources of income for the agricultural sector, allowing financial resilience for farmers
- Provide energy security
- Local and regional economic benefits.

In consideration of the assessment presented in the EIS and this RTS and the revised mitigation measures presented in Appendix A, MSF consider all the issues raised from submissions have been addressed and the project should proceed for approval by the Minister.

## 6. References

Barron-Gafford, G A. Minor, R L. Allen, N A. Cronin, A D. Brooks, A E. Pavao-Zuckerman, M A. 2016, *The Photovoltaic Heat Island Effect: Larger solar power plants increase local temperatures*, Scientific Reports, 6:35070 DOI: 10.1038/srep35070

Department of Planning and Environment (DP&E) 2018, *Large-Scale Solar Energy Guideline*, NSW

Fthenakis V. and Yu Y. 2013, *Analysis of the potential for a heat island effect in large solar farms*, 2013 IEEE 39th Photovoltaic Specialists Conference (PVSC), Tampa, FL

Urbis Pty Ltd (Urbis) 2016, *Review of the Impact of Wind Farms on Property Values*, Report prepared for OEH, NSW

World Health Organisation (WHO), 2018, Electromagnetic Fields (EMF): Summary of Health effects, viewed online 5/03/2018, <[www.who.int/peh-emf/about/WhatIsEMF/en/index1.html](http://www.who.int/peh-emf/about/WhatIsEMF/en/index1.html)>

Yang, L. Gao, X. Lv, F. Hui, X. & Ma, L. & Hou, X. 2017, *Study on the local climatic effects of large photovoltaic solar farms in desert areas*, Solar Energy. 144. 244-253

## Appendix A

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### Revised Mitigation Measures

Table 1 Summary of General Management and Mitigation Measures for Construction and Decommissioning (revisions shown in bold and new mitigation measures shown in yellow boxes)

Mitigation Measure Reference	Description
G1	<p>A project specific Construction Environmental Management Plan (CEMP) and all relevant sub-plans will be prepared by the Contractor prior to commencing Stage 1 construction. The sub-plans will include:</p> <ul style="list-style-type: none"> <li>• Land Management Plan (LMP) including a weed management plan</li> <li>• Soil and Water Management Plan (SWMP) including erosion and sediment (ERSED) control <b>to be prepared in consultation with Department of Industry – Lands and Water</b></li> <li>• Unexpected Finds protocol</li> <li>• Waste Management Plan (WMP)</li> <li>• Traffic Management Plan (TMP)</li> <li>• Emergency Contingency Plan</li> </ul>
G2	<p>All employees, contractors and subcontractors are to receive a project induction. The environmental component may be covered in toolbox talks and should include:</p> <ul style="list-style-type: none"> <li>• Environmental mitigation measures</li> <li>• Vegetation clearing operations and controls to prevent unauthorised clearing</li> <li>• The Unexpected Finds Protocols (historic heritage, Aboriginal heritage and waste)</li> <li>• Aboriginal heritage (Types of aboriginal heritage objects, details of the NMH heritage object, legislative requirements and penalties associated with the harm or desecration of Aboriginal heritage objects)</li> <li>• Waste management strategies and mitigation measures</li> </ul>
G3	Implement community consultation measures to inform the community of construction activity and potential impacts.
G4	A complaint handling procedure and register will be implemented to assist in recording and managing potential conflict with the local community during construction.
G5	<p>Mud and other debris shall be removed from the wheels and bodies of construction vehicles and equipment prior to leaving the project site and before entering the sealed public road network.</p> <p>Soil, earth, mud and other similar materials must be removed from the roadway preferably by dry methods (sweeping, shovelling).</p>
G6	All new buildings and structures will be constructed in accordance with the relevant requirements of the Building Code of Australia.

Table 2 Summary of Management and Mitigation Measures for Construction and Decommissioning

Reference	Mitigation Measure
<b>Biodiversity</b>	

Reference	Mitigation Measure
B1	A 10-m buffer shall be established between the perimeter of the remnant Yellow Box Woodland and the works footprint. No works (e.g. plant, material stockpiling) should encroach this area.
B2	Erect barriers to protect roadside vegetation including old growth eucalypts during road upgrade works.
B3	A clearing protocol will be developed to ensure any potential impacts to native fauna are minimised during vegetation removal. This will include supervised removal of trees with hollows by a trained wildlife carer and tree removal to be undertaken in the non-breeding season.
B4	The Land Management Plan (Appendix L) will be incorporated into an overall construction environmental management plan (CEMP). This will include weed management, animal pest management and monitoring as well as an induction for all employees and contractors detailing the trees that are protected on Site.
B5	Trenches should be backfilled as soon as possible to minimise the chance of fauna becoming trapped. Any trench sections left open for greater than a day would be inspected daily, early in the morning and any trapped fauna removed. The use of ramps or ladders to facilitate trapped fauna escape is recommended.
B6	Speed limits should be set to 20km per hour on internal roads and tracks.
B7	A Vegetation Management Plan will be developed and incorporated into an overall CEMP including protection measures to conserve the remnant Yellow Box Woodland and other significant vegetation.
B8	All staff and contractors will be inducted into the CEMP and informed of the biodiversity management measures and no-go zones.
B9	A rehabilitation plan will be prepared and implemented prior to decommissioning.
<b>Aboriginal Heritage</b>	
AB1	An Unexpected Finds Protocol which addresses unexpected aboriginal heritage finds will be included in the Construction Environmental Management Plan to be completed by the construction contractor.
AB2	The Unexpected Finds Protocol will form part of the site induction and must be viewed by all relevant employees and contractors before working on site.
AB3	Aboriginal archaeological sites Maryvale Road AFT 1, Maryvale Road AFT 2, Maryvale Road IF 1, Maryvale Road TRE 1, Seatonville Road AFT 1, Seatonville Road AFT 2 and Seatonville Road IF 1, and the Culturally significant tree (all outside the footprint), should be addressed in the CEMP to ensure protection.
AB4	If suspected Aboriginal objects, such as stone artefacts are identified during works, works must cease within 10m of the affected area and an archaeologist called in to assess the finds. If the finds are found to be Aboriginal objects, the OEH must be notified under section 89A of the NPW Act. Appropriate management or avoidance should be sought if Aboriginal objects are to be moved or harmed.
AB5	In the extremely unlikely event that human remains are found, works should immediately cease and the NSW Police are to be contacted. If the remains are suspected to be Aboriginal, the OEH may also be contacted at this time to assist in determining appropriate management.
<b>Heritage</b>	

Reference	Mitigation Measure
H1	An Unexpected Finds Protocol which addresses unexpected non-indigenous heritage finds will be included in the Construction Environmental Management Plan to be completed by the construction contractor.
H2	The Unexpected Finds Protocol will form part of the site induction and must be viewed by all relevant employees and contractors before working on site.
H3	If an item (or suspected item) of heritage is discovered during construction, all work in the area of the find will cease immediately and the Unexpected Finds Protocol implemented including notifying an officer from the Heritage branch of OEH immediately (in accordance with section 146 of the <i>Heritage Act 1977</i> ) and seeking advice for management of the object.
H4	Prior to commencing construction, local aboriginal stakeholders (as identified by OEH) will be invited to participate in a site visit with the heritage consultant.
<b>Visual</b>	
V1	Minimise impact through use of siting and design features. Group ancillary facility structures where possible to minimise sprawl. Stabilise new access tracks formed within the Site required for operations, but do not seal with bitumen or other dark coating.
V2	Minimise and repair ground disturbance. Minimise grading across the Site and undertake the minimum levelling necessary to install panel supports. Rehabilitate exposed ground surfaces as soon as possible and implement erosion and sediment controls to avoid issues associated with dust generation and water pollution.
V3	Minimise vegetation removal. Retain existing trees near the substation and along creek line on the western boundary. Maintain a buffer of 40m between infrastructure and waterway 2. Install temporary fencing around vegetation to be retained and demarcate as a no-go zone.
V4	Develop a Detailed Landscape Plan as part of the CEMP to implement the Concept Landscape Plan, which includes visual screening, as indicated in <b>Error! Reference source not found.</b>
V5	Retain as much existing grass cover beneath solar panels as possible.
V6	Progressively stabilise disturbed area with pasture grasses. Develop a remediation plan to include the following actions: <ul style="list-style-type: none"> <li>recontour, cultivate, seed, and stabilise the majority of disturbed surfaces with pasture grass species following the removal of infrastructure, and</li> <li>re-establish any previously removed native vegetation with appropriate, similar species</li> </ul>
V7	Use colour to reduce contrast. Treat the support structures of PV panels and ancillary structures such as inverters, with a non-reflective finish. Paint or colour-treat facility components to better match the surroundings and decrease their visibility and contrast. Choose a colour two to three shades darker than the background colour.
<b>Noise</b>	
N1	Prepare a construction noise management protocol for site to manage noise emissions.



Reference	Mitigation Measure
N2	<p>Implement a formal complaint handling procedure to manage any potential concerns from the community. This will include:</p> <ul style="list-style-type: none"> <li>• Details of a readily accessible contact person.</li> <li>• A well-documented process that includes an escalation procedure so that (if required) there is a path to follow should the complainant not be satisfied.</li> <li>• Details regarding setting up a complaint register.</li> </ul> <p>Each complaint would need to be investigated and appropriate noise amelioration measures put in place to mitigate future occurrences, where the noise in question is in excess of allowable limits</p>
N3	<p>Works are to be carried out during standard work hours (i.e., 7am to 6pm Monday to Friday; 8am to 1pm Saturdays).</p> <p>Any construction outside of these normal working hours would only be undertaken in the event of an emergency or with prior approval from relevant authorities. For non-emergency works outside standard hours, residents and other sensitive land use occupants should be informed of the works between 5 and 14 days before commencement.</p>
N4	Toolbox and induction of personnel prior to start of shift to discuss noise control measures that may be implemented to reduce noise emissions to the community, construction hours and nearest sensitive receivers.
N5	All plant should be shut down when not in use. Plant to be parked/started at farthest point from relevant assessment locations
N6	Avoid the operation of noisy equipment near noise sensitive areas and where possible, loading and unloading would be conducted away from sensitive areas.
N7	Noise levels will be considered when procuring equipment.
N8	All plant is to utilise a broadband reverse alarm in lieu of the traditional hi frequency type reverse alarm.
N9	<p>Ongoing community consultation for residences within close proximity of the works. The information would include details of:</p> <ul style="list-style-type: none"> <li>• The proposed works and when these will occur</li> <li>• The duration and nature of the works</li> <li>• Details of what to do should they have a noise complaint</li> <li>• Updates on the progress of works</li> </ul>
N10	Where possible use localised mobile screens or construction hoarding around plant to act as barriers between construction works and receivers, particularly where equipment is near the site boundary and/or a residential receiver including areas in constant or regular use (e.g. unloading and laydown areas)
N11	Signage is to be placed at the front entrance advising truck drivers of their requirement to minimise noise both on and off-site
<b>Traffic, Transport and Road Safety</b>	
T1	Undertake consultation with the relevant Road Authority for the proposed road improvements, as stated in 6.2.4, and any ancillary road works and obtain a Section 138 approval prior to the construction of the proposal.
T2	<p>A Traffic Management Plan (TMP) for construction shall be developed in accordance with Roads and Maritime Guidelines and the Australian Standard AS1742.3. The plan would include:</p> <ul style="list-style-type: none"> <li>• The designated routes of construction traffic to the site</li> <li>• A map of the primary access routes highlighting critical locations</li> </ul>

Reference	Mitigation Measure
	<ul style="list-style-type: none"> <li>• Drivers Code of Conduct</li> <li>• Carpooling/shuttle bus arrangements to minimise vehicle numbers during construction</li> <li>• Scheduling of deliveries</li> <li>• Community consultation requirements</li> <li>• Any restrictions on traffic movements (such as residential areas, school pick-up and drop-off times)</li> <li>• Traffic controls (speed limits, signage, etc.)</li> <li>• A complaint handling procedure / register</li> <li>• An induction process for vehicle operators</li> <li>• The origin, number, size, frequency, including peak and daily traffic volumes and destination of vehicles accessing/exiting the site</li> <li>• Loads, weights and lengths of haulage and construction related vehicles and the number of movements of such vehicles</li> <li>• Existing background traffic, peak hour volumes and types and their interaction with projected development related traffic</li> <li>• Cumulative impacts of existing background traffic and traffic generated by the construction of the solar farm</li> <li>• The management and coordination of construction and staff vehicle movements to the site and measures to limit disruption to other motorists</li> <li>• Specifically, the TMP will detail how the projected maximum of seventy (70) light vehicles accessing the site per day will be achieved and enforced</li> <li>• Shuttle bus collection and drop off locations and details of parking at these locations</li> <li>• Measures to be employed to ensure a high level of safety for all road users during the construction and operation phases of the development</li> <li>• Scheduling of haulage vehicle movements to minimise convoy length or platoons</li> <li>• Details of intersection improvement works in accordance with Austroads Guide to Road Design</li> <li>• Local climate and environment conditions that may affect road safety for vehicles used during construction, operation and decommissioning of the project (e.g. fog, wet weather and wildlife strikes)</li> </ul>
T3	All Proposal personnel will be provided training on the requirements of the TMP through site inductions, toolbox talks or specific training
T4	The heavy vehicle route will be included within the Driver's Code of Conduct and will form part of the project inception meeting for the project for all staff and drivers. This will include informing all drivers of school bus pick up, and drop off times along the route.
T5	Traffic control will be provided in accordance with the approved construction TMP to manage traffic movements (vehicular, cycle and pedestrian) during construction and maintain the flow of traffic within the site and on surrounding public roads
T6	Traffic management controls will be communicated to appropriate stakeholders which will include the local community in the site vicinity via a letter box drop
T7	Directional signage will be installed to direct construction traffic, and warn other motorists of construction traffic. This signage is positioned in accordance with the approved Traffic Control Plans.

Reference	Mitigation Measure
T8	All employees, subcontractors and suppliers will comply with the speed limits within the worksite, which are as follows: <ul style="list-style-type: none"> <li>• 40 km/h on formed roads</li> <li>• 20 km/h during foggy/dusty conditions with headlights on</li> <li>• 10 km/h when passing pedestrians</li> </ul>
T9	A dilapidation survey will be completed along Maryvale Road prior to upgrades on this road and after the works are complete. A dilapidation survey protocol is provided in Appendix H.
T10	Temporary traffic controls will be installed at the intersection of Maryvale Road and Cobbora Road to reduce the posted vehicle speeds to 80km/h and signage to advise drivers of turning trucks.
T11	A Traffic management plan (TMP) for decommissioning will be developed as part of the decommissioning management plan. This will include a decommissioning haulage route. The indicative decommissioning route provided in this EIS will be reviewed prior to the start of decommissioning.
T12	Establish a maintenance schedule with Dubbo Regional Council for Coborra Road, Maryvale Road and Seatonville Road for the duration of construction.
T13	Further investigation will be undertaken on measures to improve safety at the Cobbora Road/Maryvale Road intersection to meet the relevant guidelines in consultation with the relevant road authorities
T14	Rural culverted accesses will be maintained or constructed with appropriate gate setbacks to the relevant property.
<b>Land Use</b>	
L1	Managed grazing will be used to maintain the height of ground cover during operation of the solar farm.
L2	If operations cease and the Site is to be decommissioned, a remediation plan will be compiled and implemented including identification of pasture species in consultation with local agronomic experts.
L3	All the infrastructure will be removed upon decommissioning with the possible exception of the substation, transmission lines to the substation and access road to the substation.
L4	Implement the Detailed Landscape Plan
L5	All pesticides will be used in accordance with the <i>Pesticides Act 1999</i> , such that only registered pesticides are used based on label instructions that are designed to minimise impacts on surrounding land
L7	A decommissioning and rehabilitation plan will be prepared and implemented prior to decommissioning, which identifies the agricultural productivity of the site prior to construction of the solar farm.
L8	Dubbo regional Council will be notified prior to decommissioning of the project.
<b>Surface Water, Hydrology and Groundwater</b>	
SW1	A Soil and Water Management Plan (SWMP) will be prepared <b>in consultation with Department of Industry – Lands and Water</b> and implemented by the Contractor as part of the CEMP, this will include use of onsite water for dust mitigation measures.
SW2	Minimise the footprint of disturbance at any one time by implementing progressive construction and remediation works.

Reference	Mitigation Measure
SW3	Design solar panel arrays to allow sufficient space between panels to establish and maintain ground cover beneath the panels and assist in reducing potential sediment impacts on water quality.
SW4	Ensure all refuelling activities are undertaken in a bunded area at least 40m from any waterways.
SW5	Additional mitigation measures will be considered during detailed design.
SW7	All works within waterfront land being carried out will be in accordance with the <i>'Guidelines for Controlled Activities on Waterfront Land (NRAR 2018).'</i>
SW8	Any waterway crossings for roads will be completed in accordance with the <i>Guidelines for Watercourse Crossings in Waterfront Land (NRAR 2018).</i>
SW9	A 40 m buffer will be maintained between infrastructure and Bodangora Creek near the south-east boundary of the site
<b>Soils, Geology and Contamination</b>	
S1	A Soil and Water Management Plan (SWMP) will be prepared and implemented as part of the CEMP, in accordance with Managing Urban Stormwater: Soils and Construction (Landcom, 2004). This will include an erosion and sediment control plan for the Site and intersection for implementation during construction.
S2	Minimise the footprint of disturbance during construction and employ progressive rehabilitation strategies to reduce the erosion hazard.
S3	During trenching activities and backfilling, as far as practicable separate topsoil and subsoil and when backfilling return the soil layers in their original order where practicable to do so.
S4	Employ dust management measures on unsealed roads, stockpiles and other areas of loose or disturbed soil prone to dust generation. Controls may include covering of stockpiles, watering roads and synthetic soil stabilisers. Dust management techniques shall be outlined in the SWMP.
S5	Maintain erosion and sediment controls until construction works are complete.
S6	Install stabilised site entrances that all construction vehicles will use to access the site. The stabilised entrance and traffic management protocols in the CEMP shall be designed to minimise tracking of sediment onto adjoining roads from departing vehicles.
S7	Undertake site inspections at least weekly and following significant rainfall events to observe the condition and operation of erosion and sediment controls and water management systems, and schedule any required maintenance.
S8	Undertake soil amelioration and vegetation improvement works in line with the requirements of a Land Management Plan. This should include undertaking required land or vegetation improvement works at an appropriate stage during solar farm development. For example, soil amelioration and fertilising might be most practically undertaken prior to solar panel installation. For similar reasons the desired pasture should be sown before solar panel installation.
S9	Design arrays to allow sufficient space between panels for essential maintenance activities and to facilitate maintenance of an effective ground cover beneath the panels to reduce erosion and help suppress weeds.
S10	Develop and implement a protocol for management of an unexpected finds of soil contamination.
S11	Stabilise batters required for ancillary infrastructure.
<b>Bushfire</b>	

Reference	Mitigation Measure
BF1	All electrical components would be designed and managed to minimise potential for ignition
BF2	The design would consider that the permanent access road must be trafficable by Category 1 fire appliances.
BF3	Design should consider shielding of solar farm components including burial of cables underground and shielding of above ground cables and circuitry (e.g. metal conduit)
BF4	Research undertaken into the ignition, flammability and toxicity risks of the solar farm components once the design is finalised.
BF5	Maximise use of construction components using materials such as glass, silicon, steel and aluminium rather than plastic.
BF6	<p>Develop an Emergency Response Plan (ERP) in consultation with the NSW RFS District Fire Control Centre prior to construction. The ERP should include:</p> <ul style="list-style-type: none"> <li>• Foreseeable on-site and off-site fire events</li> <li>• Clearly states work health safety risks and procedures to be followed by fire-fighters, including <ul style="list-style-type: none"> <li>– Personal protective clothing</li> <li>– Minimum level of respiratory protection</li> <li>– Minimum evacuation zone distances</li> <li>– A safe method of shutting down and isolating the PV system</li> <li>– <b>Avoid fire-fighting within footprint of solar farm</b></li> <li>– <b>Avoid operating downwind of smoke from burning solar farm components</b></li> <li>– Any other risk control measures required to be followed by fire fighters</li> </ul> </li> <li>• Any other risk control measures required to be followed by fire-fighters</li> <li>• Evacuation triggers and protocols</li> <li>• Suppression response strategies and tactics, including aerial suppression options/management</li> </ul>
BF7	Two copies of the ERP should be permanently stored in a prominent 'Emergency Information Cabinet' to be located at the main entrance point to the solar farm, external to any security fence or locked gate, and a copy provided to local emergency responders.
BF8	<p>An Asset Protection Zone (APZ) will be constructed around the solar farm with the following requirements:</p> <ul style="list-style-type: none"> <li>• The APZ will be 15 m wide around the entire perimeter of the solar farm footprint, and 20 m wide for areas abutting the remnant vegetation and landscaping areas</li> <li>• The external edge of the APZ setback at least 25 m from the external edge of PV panels or other components</li> <li>• The APZ must be either a mineral earth fire break (i.e. dirt or gravel)</li> <li>• No trees or shrubs to be planted on the internal side of the fire break including that associated with the landscape plan</li> <li>• APZ preferably located external to any security fence</li> <li>• Access track located on the internal edge of the APZ that is trafficable by Category 1 fire appliances</li> <li>• The substation should have a 20m APZ with no internal vegetation (gravel surface)</li> </ul>

Reference	Mitigation Measure
BF9	The APZ or a fire break is to be constructed as part of the first stage of the development.
BF10	Construction between 1 December and 31 March would be undertaken in accordance with the following: <ul style="list-style-type: none"> <li>• All plant, vehicles and earth moving machinery will be cleaned of any accumulated flammable material (e.g. soil and vegetation)</li> <li>• A suitable fire appliance (e.g. fire extinguisher) is present on site with at least two personnel trained in bushfire fighting</li> <li>• On days when Very High fire danger or worse is forecast for Wellington, the “fires near me” app is to be checked hourly for the occurrence of any fires likely to threaten the site</li> <li>• All operations involving machinery will cease while the GFDI is or forecast to be 35 or greater</li> </ul>
BF11	Installation of electrical equipment such as, junction boxes, inverters, transformer and electrical cabling, is to be in accordance with AS 3000:2007 Electrical installations and undertaken by qualified professionals.
BF12	Install a water supply tank with a capacity of 20,000L outside the APZ near the substation.
BF13	Ensure any trees or shrubs planted are outside the APZ and meet the following criteria: <ul style="list-style-type: none"> <li>• Use species suitable for the environment that have low fire spotting characteristics (e.g. smooth bark)</li> <li>• Maintain a 20m APZ width adjacent any vegetation</li> </ul>
BF14	At the end of construction and prior to operation contact the Local Emergency Management Committee to establish emergency management procedures with relevant authorities for the safety hazards presented by the site.
BF15	At the end of construction and prior to operation brief the local volunteer fire brigades and neighbouring farmers.
<b>Hazards</b>	
<i>Hazardous Goods</i>	
Haz 1	Dangerous or hazardous materials would be transported, stored and handled in accordance with AS1940-2004: The storage and handling of flammable and combustible liquids and the ADG Code where relevant.
<i>Electromagnetic Interference</i>	
Haz 2	All electrical equipment would be designed in accordance with relevant codes and industry best practice standards in Australia.
Haz 3	The layout of the Proposal has been designed considering buffer distances between the solar farm and sensitive receivers, road users and the general public.
<b>Air Quality</b>	
A1	Activities shall be assessed during adverse weather conditions and modified as required to reduce dust generation (e.g. cease activity where reasonable levels of dust cannot be maintained).
A2	Engines to be switched off when not in use for any prolonged period.
A3	Water suppression of dust on exposed areas, roads and stockpiles when required.
A4	Temporarily excavated soil and other materials that exhibit significant dust lift off would be wet down, stabilised or covered to manage dust.

Reference	Mitigation Measure
A5	Development of a complaint procedure to promptly identify and respond to complaints.
A6	Vehicles and plant would be fitted with suitable pollution reduction devices wherever possible and maintained according to manufacturer's specifications.
<b>Socio-economic</b>	
Socio 1	<p>The Community Stakeholder Engagement Program (CSEP) will continue to be implemented, including:</p> <p>Providing regular updates to the community</p> <p>Inform relevant stakeholders of potential impacts (for example noise impacts)</p> <p>Establishment of a complaints handling procedure and a response protocol</p> <p>Responding to any complaints received.</p>
Socio 2	Liaise with local industry representatives to maximise the use of local contractors, manufacturing facilities and materials. Create a resourcing plan to ensure jobs will be local.
Socio 3	Local accommodation options for staff will be maximised.
Socio 4	Continued engagement with Dubbo Regional Council to discuss community and business concerns.
<b>Waste</b>	
W1	<p>A WMP will be prepared and implemented as part of the CEMP to manage any construction waste. The WMP will include but not be limited to:</p> <ul style="list-style-type: none"> <li>Measures to avoid and minimise waste associated with the Proposal</li> <li>The procedure for assessing, classifying and storing waste in accordance with the EPA's Waste Classification Guidelines (EPA, 2014) and management options</li> <li>Procedures for storage, transport and disposal of waste</li> <li>Procedures for notification to Wellington Waste Management Depot prior to any large disposals</li> <li>Monitoring, record keeping and reporting, e.g. waste tracking data demonstrating the lawful disposal of contaminated products, waste or residues generated at the facility.</li> </ul>
W2	An Unexpected Finds (Waste) Protocol would be established and implemented in case potentially contaminated, hazardous or unsuitable material are encountered during the site works.
W3	Waste management strategies and mitigation measures will be communicated to all employees and contractors during site induction, prior to commencing works at the site.
W4	A schedule will be created with the temporary amenity hire contractor to remove sewage.
W5	The proposed facility will comply with the relevant Protection of Environment Operations Act waste-tracking requirements for any wastes assessed or classified as hazardous waste, industrial waste or 'Group A' waste (such as solvents, paints or oils).
W6	<p>Waste generated from the Proposal will be managed in accordance with the principles of the waste hierarchy.</p> <p>A decommissioning environmental management plan will be prepared for the proposed facility with a Waste Management Plan.</p>



Reference	Mitigation Measure
W7	Wellington Waste Management Depot given appropriate notification before any large quantities of waste are deposited at the Wellington Waste Management Depot. Consultation will be undertaken with Dubbo Regional Council to determine what these notification periods will be and what waste can be taken by the facility.
<b>Cumulative Impacts</b>	
CU1	The CEMP would be updated as required to incorporate potential cumulative impacts from surrounding development activities as they become known. This would include a process to review and update mitigation measures as new work begins or if complaints are received. Key areas within the CEMP include the Waste Management Plan and the Traffic Management Plan.

Table 3 Summary of Management and Mitigation Measures for Operation

Reference	Mitigation Measure
<b>Biodiversity</b>	
B10	Development of an OEMP which will include: <ul style="list-style-type: none"> <li>• The land management plan – which will have a procedure or plan for monitoring vegetation cover and composition and allow for adaptive management</li> <li>• A weed management plan – including monitoring and control</li> <li>• A pest animal management plan – including monitoring and control and site cleanliness</li> <li>• Vehicle speed limits, to reduce risk of collision with fauna, and</li> <li>• Prohibition of domestic pets on site</li> </ul>
<b>Visual</b>	
V8	Minimise impact through use of siting and design features. Signage required at the Site should be of sufficient size to be readable at driver height within short range (0-20m) and contain only information sufficient for basic facility and company identification, for safety, navigation, and delivery purposes. Large scale signage will not be installed.
V9	Avoid Night Sky Impacts. Permanent evening lighting will be limited to compulsory lighting required for the substation. Substation lighting will be turned on if an intrusion is detected or if staff are on site undertaking works outside of daylight hours. Amber colour lights will be used rather than bluish-white lighting.
V10	An OEMP will be prepared for the Proposal and will incorporate a complaints management process.
V11	Monitor performance of screen planting areas six-monthly for first three years then annually. Replant as necessary if plants die, and supplement planting with alternative species if plants are not adapting to the Site.
V12	Keep non-reflective finishes and colour-treated coatings in good repair. Reapply if surface is subject to fading or flaking
<b>Noise</b>	



Reference	Mitigation Measure
N12	Complete a one-off noise validation monitoring assessment to quantify emissions from site and to confirm emissions meet relevant criteria.
N13	Prepare an operational noise protocol that can be implemented to address any community concerns regarding noise emissions for future operations of the Proposal.

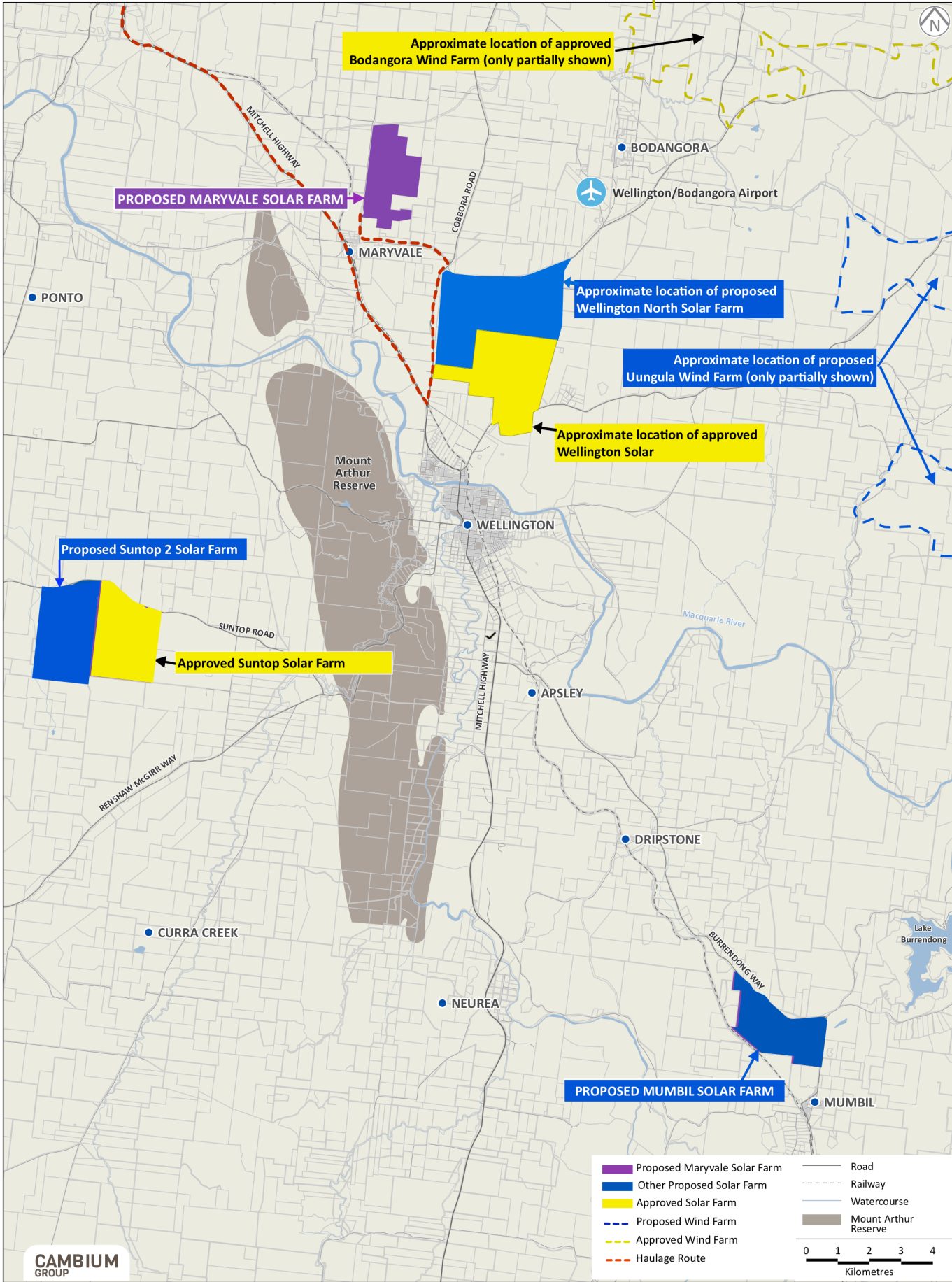
Reference	Mitigation Measure
<b>Land Use</b>	
L6	An OEMP will be prepared for the Proposal and will incorporate: <ul style="list-style-type: none"> <li>• a land management plan including weed management; and</li> <li>• ongoing landscaping commitments.</li> </ul>
<b>Surface water, Hydrology and Groundwater</b>	
SW6	Implement the Land Management Plan to ensure at least 80% groundcover is restored and maintained (Refer Appendix L)
<b>Soils, Geology and Contamination</b>	
S12	Implement a Land Management Plan <b>prepared in consultation with Local Land Services</b> that addresses the ongoing land management and maintenance activities (Refer Appendix L). This would address: <ul style="list-style-type: none"> <li>• Ongoing agronomic management of the land including stock, water, vegetation and soils management</li> <li>• Measures required to maintain healthy soil and plant systems and maintain the agricultural capability of the land</li> <li>• Stock management programs and infrastructure (e.g. fencing, watering points)</li> <li>• <b>Soil and Water management including erosion and sediment control and on-site water use</b></li> <li>• Soil amelioration, pasture management and weed control, and</li> <li>• Monitoring programs for soil fertility and groundcover</li> </ul>
<b>Bushfire</b>	
BF16	Fit PV arrays with an earthing and lightning protection system connected to the main earth link.
BF17	Vegetation fuel levels internal to the APZ and throughout the solar farm will be maintained by grazing, slashing or mowing.
BF18	Remove any vegetation that occurs within the substation compound.
BF19	The solar farm will be monitored via off-site control centres to ensure systems are working correctly, investigate any alarms and monitor panel performance.
BF20	Suspend site maintenance operations when GFDI is or forecast to be 35 or greater.
BF21	Brief the local volunteer fire brigades and neighbouring farmers at regular intervals e.g. annual pre-season fire meetings.
<b>Air Quality</b>	
A7	Establish and maintain ground cover in accordance with the Land Management Plan for the site.
<b>Waste</b>	
W8	A WMP will be prepared and implemented as part of the OEMP to manage any waste operational waste.

## Appendix B

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### Revised map of wind and solar farms in Wellington area

**FIGURE 3-3**  
 Wind and solar farms in the Wellington area  
 MARYVALE SOLAR FARM - VISUAL IMPACT ASSESSMENT



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## Maryvale Solar Farm Submissions Report

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