

### COUNCIL ASSESSMENT REPORT

<b>Panel Reference</b>	PPSNTH-51
<b>DA Number</b>	DA2020/035
<b>LGA</b>	Gunnedah Shire Council
<b>Proposed Development</b>	Construction and use of a 5MW Solar Farm and associated infrastructure
<b>Street Address</b>	262 Hunts Road, GUNNEDAH Lot: 2 DP: 814689
<b>Applicant/Owner</b>	NSW Community Renewables (Gunnedah) Pty Ltd C/- KDC Pty Ltd Valerie Dewsbury (Owner)
<b>Date of DA lodgement</b>	3 June 2020
<b>Total number of Submissions Number of Unique Objections</b>	Thirteen (13) unique public submissions (Objections)
<b>Recommendation</b>	Refusal
<b>Regional Development Criteria (Schedule 7 of the SEPP (State and Regional Development) 2011)</b>	Private infrastructure for the purpose of electricity generation works with a capital investment value of more than \$5 million.
<b>List of all relevant s4.15(1)(a) matters</b>	<ul style="list-style-type: none"> <li>• Environmental Planning and Assessment Regulation 2000</li> <li>• Gunnedah Local Environmental Plan 2012</li> <li>• Gunnedah Development Control Plan 2012</li> <li>• State Environmental Planning Policy (State and Regional Development) 2011</li> <li>• State Environmental Planning Policy No.55 – Remediation of Land</li> <li>• State Environmental Planning Policy (Koala Habitat Protection) 2019</li> <li>• State Environmental Planning Policy (Infrastructure) 2007</li> </ul>
<b>List all documents submitted with this report for the Panel's consideration</b>	<ul style="list-style-type: none"> <li>• Statement of Environmental Effects and Development Plans</li> <li>• Additional Information provided by Applicant – submitted 8 September 2020, 14 February 2021, 19 March 2021 and 23 April 2021</li> <li>• Noise Assessment – 2 February 2021</li> <li>• Flora and Fauna Assessment – 8 September 2020</li> <li>• Essential Energy Response – 19 March 2021</li> <li>• Engineering Services Response – 8 July 2020</li> <li>• Waste Management Services Response – 30 June 2020</li> <li>• Building Response – 9 February 2021</li> </ul>
<b>Clause 4.6 requests</b>	Not applicable
<b>Summary of key submissions</b>	<ul style="list-style-type: none"> <li>• Impact of the development on house and land prices</li> <li>• Noise Impacts on nearby receivers</li> <li>• Reflection glare impacts</li> <li>• Visual impacts</li> <li>• The impacts of the development on the character of area, being inconsistent with the zone objectives</li> <li>• The proximity of the development to residential areas</li> <li>• Lack of formal consultation</li> <li>• SoEE is deficient and contains inconsistencies</li> <li>• Decommission and disposal post development lifespan not addressed</li> <li>• Stormwater drainage modelling and stream order is inaccurate</li> </ul>

	<ul style="list-style-type: none"> <li>• Impacts on local road network not appropriately addressed</li> <li>• Conflict between construction and operational vehicles, pedestrians and cyclists</li> <li>• Possible health implication to long term exposure to high voltage electrical transmission</li> <li>• The development is inconsistent with Council's Urban Land use Strategy</li> <li>• The dust impacts from unsealed vehicle movements</li> <li>• Management of vegetation regrowth and weeds has not been adequately addressed</li> <li>• Increased Bushfire risk on surrounding areas</li> <li>• Impacts on local flora from changes to microclimate</li> <li>• Vegetation clearing potentially exceeds BOS thresholds of 0.5ha as per Clause 7.2 of Biodiversity Conservation Regulation 2017.</li> </ul>
<b>Report prepared by</b>	Ashleigh Stewart, Senior Development Officer – Gunnedah Shire Council
<b>Report date</b>	9 June 2021

**Summary of s4.15 matters**

Have all recommendations in relation to relevant s4.15 matters been summarised in the Executive Summary of the assessment report?

**Yes****Legislative clauses requiring consent authority satisfaction**

Have relevant clauses in all applicable environmental planning instruments where the consent authority must be satisfied about a particular matter been listed, and relevant recommendations summarized, in the Executive Summary of the assessment report?

**Yes**

*e.g. Clause 7 of SEPP 55 - Remediation of Land, Clause 4.6(4) of the relevant LEP*

**Clause 4.6 Exceptions to development standards**

If a written request for a contravention to a development standard (clause 4.6 of the LEP) has been received, has it been attached to the assessment report?

**Not applicable****Special Infrastructure Contributions**

Does the DA require Special Infrastructure Contributions conditions (S7.24)?

*Note: Certain DAs in the Western Sydney Growth Areas Special Contributions Area may require specific Special Infrastructure Contributions (SIC) conditions*

**No****Conditions**

Have draft conditions been provided to the applicant for comment?

*Note: in order to reduce delays in determinations, the Panel prefer that draft conditions, notwithstanding Council's recommendation, be provided to the applicant to enable any comments to be considered as part of the assessment report*

**No**



### 1.3 Compliance with Planning Controls

The development is not regarded as being State Significant Development (SSD) as per *Schedule 1, Clause 20 of the State Environmental Planning Policy (State and Regional Development) 2011*, with the application not having a capital investment value of more than \$30 million.

The development will have a capacity of 5 megawatt (MW). The development is not regarded as being Designated Development specified within *Schedule 3 of the Environmental Planning and Assessment Regulation 2000*. The development application has been lodged as a local development.

### 1.4 Consultation

The development application was exhibited and notified in accordance with the *Section 2.2 and Schedule 1 of the Environmental Planning and Assessment Act 1979*. The Gunnedah Community Participation Plan required that the application be notified to adjoining and surrounding neighbours and advertised in the local paper. The development application was exhibited and notified from Monday, 15 June 2020 to Tuesday, 14 July 2020. Council received thirteen (13) unique submissions during the exhibition period.

### 1.5 Recommendation

It is recommended that Development Application DA2020/035 for electricity generating work and associated infrastructure proposed at 262 Hunts Road, Gunnedah be refused based on the reasons for refusal, provided within this report.

### 1.6 Annexures

Annexure A Reasons for Refusal  
Annexure B Submissions

## 2. Evaluation of Development Application

### 2.1 *Proposed Development*

- Construction of a 5 MW *Solar Energy Generation Works\** (Solar Farm) consisting of an estimated 14,196 solar PV panels and 196 ground mounted single axis trackers;
- Associated infrastructure including, transformers, inverters, switchgear, perimeter fencing and internal access roads.
- new 4m wide access road at the south eastern corner of the site;
- Removal of nine (9) trees (White Box, *Eucalyptus albens*) and regrowth vegetation in the north east corner of the site;
- Security fencing 2.2m high;
- Earthworks for onsite stormwater detention/diversion; and
- Establishment of landscaping barrier.

### 2.2 *Site Description*

The development is to be located on a portion of the development allotment, Lot 2 DP 814689, 262 Hunts Road, Gunnedah. The lot has a total area of 24.2 hectares, with the development being constructed on a footprint of approximately 16 hectares. The development site has frontage to Black Jack Road and Bushs Lane.

### 2.3 *Strategic Context*

#### New England North-West Regional Plan 2036

The New England North West Regional Plan 2036 (the Plan) outlines a 20-year vision to build sustainable communities through complementary development and natural resource protections.

The Plan anticipates that 13,800 additional people are expected to populate the region by 2036, with an additional 9,700 dwellings required. Tamworth Regional, **Gunnedah**, Narrabri, Glen Innes and Moree Plains will host the most population in 2036 as centres of regional strategic importance.

Two of the Key Priorities for Gunnedah identified in the Plan are set out below:

- Deliver a variety of housing options in Gunnedah and promote development that contributes to the unique character of Curlewis, Mullaley, Tambar Springs, Carroll, Breeza, Kelvin and Emerald Hill; and
- Identify and promote wind, solar and other renewable energy production opportunities.

Council has and continues to support renewable energy production opportunities in suitable locations in the Gunnedah Shire. This is evident as there have been four (4) recent solar farms approved and one (1) currently under construction. However, as identified in the key priorities it is also essential with the anticipated population growth for Gunnedah over the next 15 years there is a need to deliver a variety of housing options to meet this demand.

The proposed electricity generating works will be located in an area that is identified in the Gunnedah Urban Landuse Strategy as a residential release area, due to its close proximity to the adjoining R5 Large Lot Residential zone and several residential receivers. It is therefore



considered that the site should be preserved to deliver a variety of housing to meet the population growth for Gunnedah as anticipated in the Plan.

#### Gunnedah Local Strategic Planning Statement

The Gunnedah Local Strategic Planning Statement (LSPS) sets out the 20-year vision for land use in the local area, the special character and values that are to be preserved and how change will be managed into the future.

The key points in the LSPS relevant to the assessment of this development application are found in the following key points and priorities (summarised):

- **Local Planning Priority 7: Housing types for lifestyle diversity**  
**Action 24** sets out the requirements for developing a local housing strategy that identifies and prioritises areas for growth, having regard to housing demand, growth trends, affordability and existing and likely future housing needs, ensuring the strategy avoids important agricultural land.
- **Local Planning Priority 11: Preserving biodiversity and preparing for climate change**  
**Action 45** encourages the use of renewable energy and green industries to reduce carbon emissions and manage energy, water and waste.

As previously stated, Council has and continues to support renewable energy production opportunities in suitable locations in the Gunnedah Shire. This is evident as there have been four (4) recent solar farms approved and one (1) currently under construction. However, as identified in the key priorities it is also essential with the anticipated population growth for Gunnedah to deliver a variety of housing options to meet this demand.

Council is currently developing a local housing strategy which is currently in a draft form. The Draft Local Housing Strategy relies on the information provided in the Gunnedah Urban Landuse Strategy and supports the identified residential release phasing areas in the 2016 strategy. As previously discussed, the location of the solar farm is identified in one of the residential release areas in the Gunnedah Urban Landuse Strategy. It is therefore considered that the solar farm is not suitably located and will prevent the future residential release of the site for over 25 years with no committed decommission date.

#### Gunnedah Urban Landuse Strategy (2016)

The 2016 Gunnedah Urban Landuse Strategy identifies land availability and makes recommendations for additional land supply. It provides a comprehensive overview of residential land availability in Gunnedah.

Preliminary estimates conclude that with the projected population growth figures issued by Department of Planning and Environment (2013) there is a total forecasted increase of 900 persons up to the year 2031, or 429 new households.

As part of the research associated with developing this strategy, the DPIE population projections were revised. This revision was based on dwelling approvals over the 5 – 10 years prior to its development and is presented for comparative analysis purposes outlining an alternative projected demand of housing over the next 17 years up to 2031. This indicates the existing supply of residential lots could be exhausted by 2031 and additional R5 zoned residential lands will be required for future residential growth.

Therefore, there is merit in considering the release of additional land for residential purposes, primarily to retain housing location options in the market and retain property prices at affordable levels.

The location of the solar farm is identified in one of the residential release areas in the Gunnedah Urban Landuse Strategy as illustrated below in Figure 2. Council has also identified in the draft Gunnedah Water Supply Strategy the requirement to have the water supply system upgraded to the land in 2029 to meet the demand for additional residential growth (Figure 3).

As projected in this strategy, residential lots could be exhausted by 2031. Therefore, as the solar farm will prevent the future residential release of the site for over 25 years with no committed decommission date, the application should not be supported as the demand to provide residential land to meet the projected growth is critical to ensure there is enough residential land supply in Gunnedah.

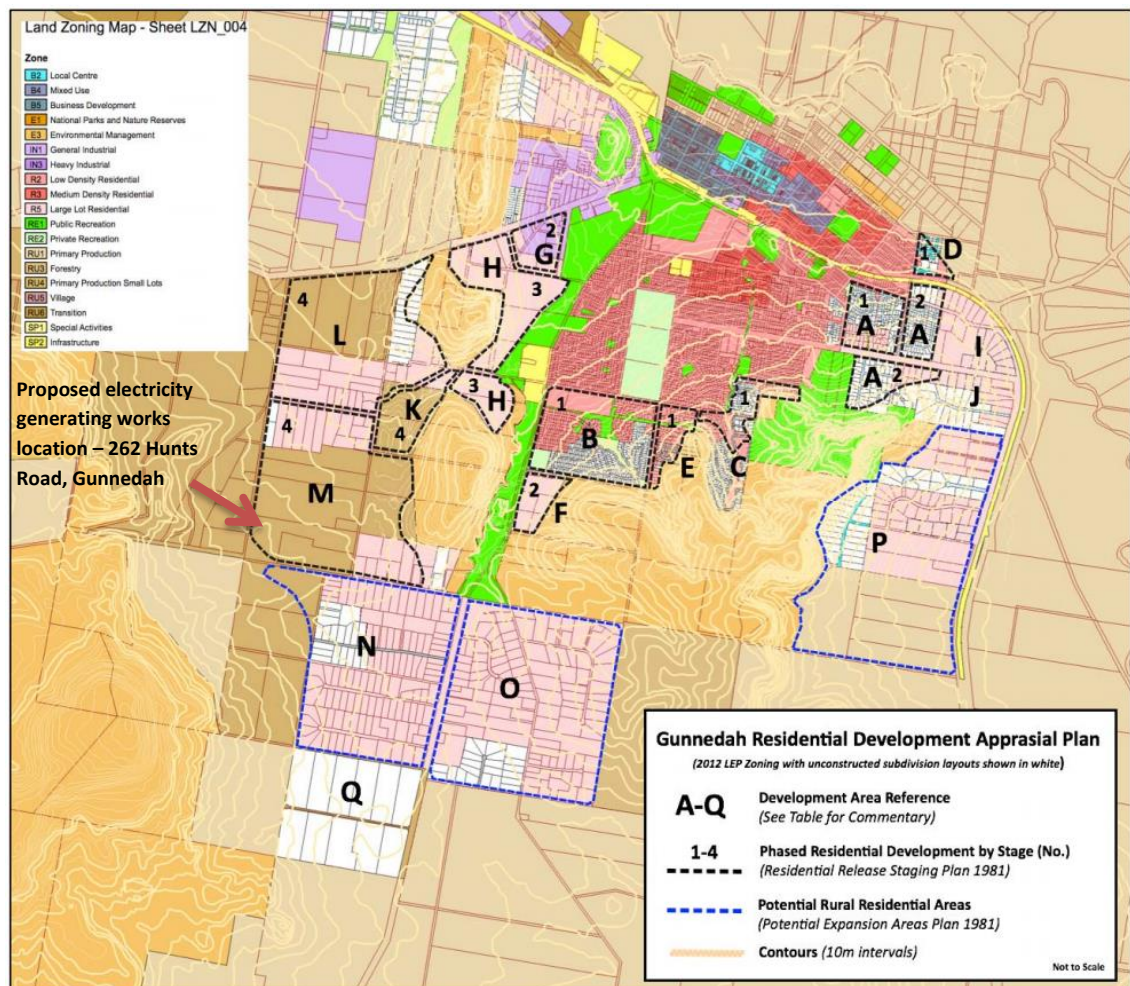


Figure 2 – Overall Residential Zoning Appraisals and Phasing Plan (Gunnedah Urban Landuse Strategy)

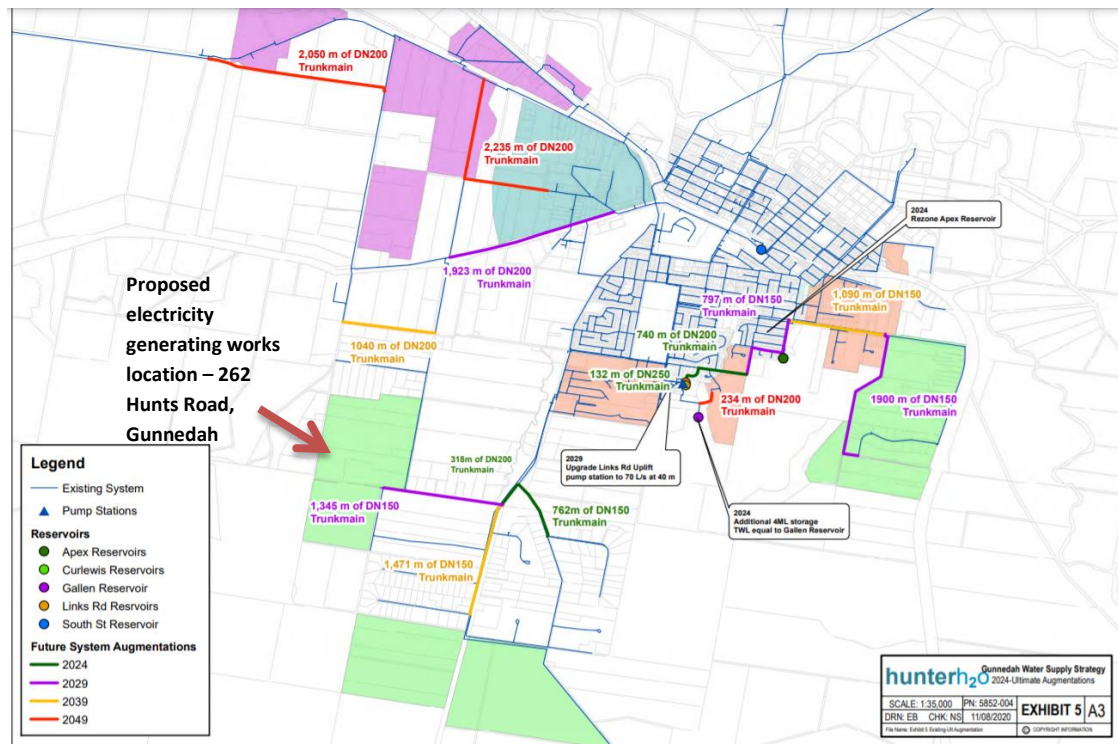


Figure 3 – Gunnedah Water Supply Strategy

## 2.4 Environmental Planning and Assessment Act 1979 (EPA Act 1979)

### Section 1.3 Objects of Act

The objects of this Act are as follows—

- (a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,
- (b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,
- (c) to promote the orderly and economic use and development of land,
- (d) to promote the delivery and maintenance of affordable housing,
- (e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,
- (f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),
- (g) to promote good design and amenity of the built environment,
- (h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,
- (i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,
- (j) to provide increased opportunity for community participation in environmental planning and assessment.

**Comment:** The proposal is not considered to promote the orderly and economic use and development of the land. The development is to be located on a visually prominent site on the immediate fringe of the Gunnedah Township and will occupy a significantly large proportion of the site, which will cause a significant impact on the surrounding residential area and land identified within Council's strategies as future residential land.



Council does support renewable energy developments, which is evident as there are other approved electricity generation works in the Shire. However, in this circumstance it is considered that the proposed site is unsuitable for the development and does not promote good design or amenity of the built environment in this circumstance.

In addition, during the public exhibition period Council received a large number of unique objections and no letters of support. The matters raised in the submissions were not adequately addressed by the applicant or able to be addressed with the level of information provided.

It is therefore considered that the proposed electricity generating works, the development is not consistent with the objects of the Environmental Planning and Assessment Act.

***Section 1.7 Application of Part 7 of Biodiversity Conservation Act 2016 and Part 7A of Fisheries Management Act 1994***

The application of Part 7 of *Biodiversity Conservation Act 2016* is considered for this development. The minimum lot size for the development site is 10 hectares; therefore, Clause 7.2 of the *Biodiversity Conservation Regulation 2017* is triggered. The allowable clearing threshold for a lot less than 40 hectares but more than 1ha is 0.5 hectare. The development proposes to remove nine (9) trees (White Box, *Eucalyptus albens*) and regrowth vegetation in the north east corner of the site. The removal of the identified vegetation has not triggered the biodiversity values map nor does it exceed the clearing threshold under the *Biodiversity Conservation Act 2016*.

Part 7A of the *Fisheries Management Act 1994* has effect in connection with aquatic movements. The site is not affected by any waterways, with one dam located outside the development area.

***Section 4.46 – Integrated Development***

The development proposal has not been nominated or identified as Integrated Development pursuant to section 4.46 of the *Environmental Planning and Assessment Act 1979*.

***Section 4.15 – Evaluation***

Evaluation of the development application was undertaken in compliance with Section 4.15 of the *Environmental Planning and Assessment Act 1979*, as amended. In determining a development application, a consent authority is to take into consideration the following matters as are of relevance to the development application.

***S4.15(1)(a)(i) any environmental planning instrument (EPI)***

**State Environmental Planning Policies (SEPPs):**

The following SEPPs have been considered in connection with this development:

➤ State Environmental Planning Policy (Infrastructure) 2007

The development is not considered to be a traffic generating development in accordance with Schedule 3 of this SEPP. Therefore, Council is the roads authority for this development.

The development site is zoned RU4, which is a *prescribed rural, industrial or special use zone*, under the provision of this SEPP and is permitted with consent despite any provision of the GLEP. Refer to Clause 2.3 of the GLEP assessment for permissibility.

The development is located within 10 metres of an overhead power distribution line. Therefore, the development application was referred to Essential Energy for comment. Essential Energy have advised the following:

*'Strictly based on the documents submitted, Essential Energy has no comments to make as to potential safety risks arising from the proposed development.'*

*Essential Energy makes the following general comments:*

- 1. If the proposed development changes, there may be potential safety risks and it is recommended that Essential Energy is consulted for further comment.*
- 2. Any existing encumbrances/easements in favour of Essential Energy (or its predecessors) noted on the title of the above property should be complied with.*
- 3. Satisfactory arrangements are to be made with Essential Energy with respect to the proposed electricity generation plant which will form part of the development. It is the Applicant's responsibility to enter into the required Connection Agreement/s and any other requirements with Essential Energy for the development, which may include the payment of fees and contributions. Refer Essential Energy's Network Connections team for requirements via email [networkconnections@essentialenergy.com.au](mailto:networkconnections@essentialenergy.com.au).*
- 4. Minimum safety clearance requirements are to be maintained at all times for the proposed driveway access and/or exit, as such driveway access will pass under Essential Energy's existing overhead powerlines located at the front of the property. Refer Essential Energy's policy CEOM7106.25 Minimum Clearance Requirements for NSW and refer ISSC 20 Guideline for the Management of Activities within Electricity Easements and Close to Infrastructure.*
- 5. Any proposed driveway access and/or exit (concrete crossovers) must remain at least 1.0 metre away from any electricity infrastructure (power pole) at all times, to prevent accidental damage.*
- 6. The Applicant will need to engage the services of an Accredited Service Provider to ensure adequate provision of power is available to the site in accordance with industry standards.*
- 7. In addition, Essential Energy's records indicate there is electricity infrastructure located within close proximity of the property. Any activities within this location must be undertaken in accordance with the latest industry guideline currently known as ISSC 20 Guideline for the Management of Activities within Electricity Easements and Close to Infrastructure. Approval may be required from Essential Energy should activities within the property encroach on the electricity infrastructure.*
- 8. Prior to carrying out any works, a "Dial Before You Dig" enquiry should be undertaken in accordance with the requirements of Part 5E (Protection of Underground Electricity Power Lines) of the Electricity Supply Act 1995 (NSW).*
- 9. Given there is electricity infrastructure in the area, it is the responsibility of the person/s completing any works around powerlines to understand their safety responsibilities. SafeWork NSW (<https://www.safework.nsw.gov.au/>) has publications that provide guidance when working close to electricity infrastructure. These include the Code of Practice – Work near Overhead Power Lines and Code of Practice – Work near Underground Assets.'*

**Comment:** The above general comments provided by Essential Energy may be imposed as conditions should this Development Application be approved by the NRPP.

- State Environmental Planning Policy (Koala Habitat Protection) 2019  
*State Environmental Planning Policy (Koala Habitat Protection) 2019* (Koala SEPP 2019) was the legislative policy in force at the time of the lodgement of the development application. This legislation has since been repealed with the *State Environmental Planning Policy (Koala Habitat Protection) 2020* coming into force on the 30 November 2020 and the *State Environmental Planning Policy (Koala Habitat Protection) 2021* which commenced on 17 March 2021. SEPP (Koala Habitat Protection) 2020 does not apply to the land as the land is zoned RU4 Primary Production Small Lots. Section 18 of Part 4 of the SEPP (Koala Habitat Protection) 2021 states that ‘a development application made in relation to land, but not finally determined before this Policy applied to the land, must be determined as if this Policy had not commenced in its application to the land’. Hence, as the Koala SEPP 2019 was in force at the time of lodgement, the assessment for this development has therefore been conducted under this policy.

The development site does not have a registered Koala Plan of Management (KPoM). However, the site has an area of greater than 1 hectare, requiring assessment under the provision of the SEPP. A Koala Assessment Report was prepared by suitably qualified persons from KLEINFELDER into the availability of habitat and potential impacts on Koala populations. The development was considered to be Tier 2 development due to the potential impacts on Koala populations through vegetation removal.

The development site has predominately been cleared of native vegetation with a small isolated patch of native vegetation located 200m to the north of the subject site and more expansive bushland to the south-west surrounding Black Jack Mountain. Connective koala habitat is located along the southern end of Black Jack Road. Remaining patches of vegetation onsite contains *White Cypress Pine – Buloke – White Box* shrubby open forest on hills in the Liverpool Plains – Dubbo region and Brigalow Belt South Bioregion. The proposed development will require the removal of nine (9) trees (*White Box, Eucalyptus albens*) and regrowth vegetation in the north east corner of the site. This vegetation was not considered as a Koala movement corridor, providing linkage between key Koala Habitat within the surrounding landscape as the vegetation is isolated from the intact areas of high-quality core koala habitat vegetation. Vegetation adjoining the property was considered to be more valuable vegetation suitable for sustaining Koala populations. However, given the extent of *Eucalyptus albens* onsite (constituting ‘Highly Suitable Habitat’) and the existence of koala records less than 18 years old within 5km of the site, the trees meet the definition of ‘Core Koala Habitat’.

A field investigation of the site did not identify the presence of any Koala individuals or any evidence of the presence of Koalas within the site and also included scat searches. However, a search of historical records identified that a koala sightings did occur within 5km of the subject site in the past 18 years. Although the proposed trees to be removed are considered to be ‘Core Koala Habitat’ their removal is unlikely to impose a significant barrier to koala movement or fragmentation of the koala population as the trees are isolated from intact areas of high quality vegetation to the southern end of the site. Due to this, it is considered that the removal of the identified nine (9) *Eucalyptus albens* is unlikely to exacerbate any indirect impacts on the koala population such as vehicle strikes, dog attacks, increased risk of fire or drownings. In addition to this, the development site was chosen by the applicant due to the lack of native vegetation present onsite. The development has also been designed to avoid impact on a number of Koala Feed Trees within the proximity of the subject site.

It is considered that should the development application be approved, a pre-clearance survey would be required to ensure the clearing will not adversely impact individual koalas. If a Koala is discovered during the pre-clearance survey, all removal of vegetation will pause until the animal is relocated safely.

Furthermore, the development proposes a 2.2m security fence around the perimeter of the development area. However, this fencing is not expected to prevent Koala movement throughout the site or fragment Koala Habitat due to the lack of vegetation onsite. It is considered that the low quality of the habitat to be removed and the operational impacts of the development will not result in direct Koala deaths or reduce the ability for Koala breeding. Compensatory measures that may be conditioned as a result of the removal of the identified trees should the development application be approved would need to include the replacement of Koala Feed Tree species at a ratio of 2:1, which are to be planted within or adjacent to the Study Area.

➤ State Environmental Planning Policy No. 55 – Remediation of Land

The subject land has been historically used for extensive agricultural purposes. It is noted in Table 1 of the Planning Guidelines for Managing Land Contamination, that agricultural/horticultural activities are identified as a use that may cause potential contamination.

A search was undertaken on the NSW EPA's 'List of NSW contaminated sites notified to the EPA' and the 'POEO Public Register' which revealed that there were no contaminated sites listed on the subject site and there are no licences provided under the *Protection of the Environment Operations Act 1997*.

A site inspection was undertaken and revealed that the land did not have any evidence of site contamination from previous agricultural activities.

Furthermore, a search of Council records was also undertaken on the subject site and there was no record of past or present contaminating land uses.

Based on the information provided above, Council is satisfied that the land is suitable for the proposed electricity generating works.

➤ State Environmental Planning Policy No. 64 – Advertising and Signage

The development does not propose any signage or advertising structures.

State Environmental Planning Policy (State and Regional Development) 2011

The proposed solar farm is a development for the purpose of electricity generation works and does not have a Capital Investment Value (CIV) in excess of \$30 million with the development identified as having a CIV of \$6,936,302.00. The development site is not located within an environmentally sensitive area of State Significance. Hence, the proposed solar farm is not considered to be State Significant Development (SSD) for the purposes of the EPA Act 1979.

The development is considered to be Regional Development as the development is identified as a private infrastructure facility with a capital investment value of greater than \$5 million. As the development CIV exceeds \$5 million the development represents regionally significant development, resulting in the Northern Regional Planning Panel (NRPP) being the determining body for this development application.



➤ Regional Environmental Plans (REP)

There are no regional environmental plans that apply to the development site.

➤ Gunnedah Local Environmental Plan 2012 (GLEP 2012)

The following clauses of the Gunnedah Local Environmental Plan 2012 have been assessed as being relevant and matters for consideration in assessment of the Development Application.

**1.3 – Aims of Plan**

(1) *This Plan aims to make local environmental planning provisions for land in Gunnedah in accordance with the relevant standard environmental planning instrument under section 3.20 of the Act.*

(2) *The particular aims of this Plan are as follows—*

*(aa) to protect and promote the use and development of land for arts and cultural activity, including music and other performance arts,*

*(a) to conserve and enhance, for current and future generations, the ecological integrity, environmental heritage and environmental significance of Gunnedah,*

*(b) to promote the economic well being of the community in a socially and environmentally responsible way, focusing on new employment growth and a diversified economy,*

*(c) to encourage the proper management of productive agricultural land and prevent the fragmentation of agricultural holdings,*

*(d) to provide opportunities for a range of new housing and housing choice,*

*(e) to facilitate the provision and co-ordination of community services and facilities,*

*(f) to seek the provision of adequate and appropriate infrastructure to meet the needs of future development,*

*(g) to provide direction and guidance in the management of growth and development,*

*(h) to conserve the cultural and environmental heritage of Gunnedah,*

*(i) to allow development in a way that minimises risks due to environmental hazards.*

**Comment:** It is considered that the proposed development conflicts with the aims of the GLEP 2012 which is based on the following:

- The proposed development does not conserve or enhance the ecological integrity of the land. It is proposed to remove nine (9) *Eucalyptus albens*, which are considered to be 'Core Koala Habitat' and regrowth vegetation in the north east corner of the site. Although the vegetation is isolated from the intact areas of high-quality movement corridors, it is considered that the removal of this vegetation demonstrates that the development does not comply with this objective.
- The proposed development does not promote the economic well being of the community in a socially and environmentally responsible way. It is considered that during the construction phase the development may have the potential to increase the opportunity for local employment, however given that there would be no permanent staff during operation, the potential benefit in regards to local employment once the solar farm is operational would be negligible.
- The proposed development will be located in an area identified as a residential release area in the Gunnedah Urban Landuse Strategy. Therefore the development will significantly impact the release of housing in this area for over 25 years with no committed decommission date. Due to this, it is considered that the development does not comply with the aim of the plan to provide opportunities for a range of new housing and housing choice.

#### 1.4 – Definitions

The proposed is defined in accordance with the GLEP 2012 as:

***electricity generating works*** means a building or place used for the purpose of—

- (a) making or generating electricity, or
- (b) electricity storage

#### 2.2 – Zoning of Land to which Plan Applies

The land is zoned RU4 Primary Production Small Lots.

#### 2.3 – Zone Objectives and Land Use Table

The proposed land use is defined as being ‘Electricity Generating Works’. This land use is not listed within items 2 or 4 within the land use table of RU4 Primary Production Small Lots of the GLEP 2012. Hence, the land use is determined to be permissible with consent. The objectives of the RU4 Primary Production Small Lots Zone are provided below with comments. Based on the following comments and considerations, it is determined that the proposed development does not comply with most of the objectives outlined in the RU4 Primary Production Small Lots Land Use Table:

- *To enable sustainable primary industry and other compatible land uses.*

**Comment:** The proposed development does not propose to enable sustainable primary production for the land. It is also considered that energy generation works are not a compatible land use for the area due to its close proximity to a number of residential receivers and residential zones.

- *To encourage and promote diversity and employment opportunities in relation to primary industry enterprises, particularly those that require smaller lots or that are more intensive in nature.*

**Comment:** It is considered that the proposed development does promote diversity to primary industry enterprises, however the proposed energy generation works are considered to cause conflict with the current and future residential land uses in the area as discussed in further detail in the body of this report.

- *To minimise conflict between land uses within this zone and land uses within adjoining zones.*

**Comment:** It is considered that the proposal does not achieve this objective as the proposal will create land use conflicts in the RU4 Primary Production Small Lots and adjoining R5 Large Lot Residential zones and will also encroach upon the developed residential land to the east and south east of the site. The subject land has been identified in Council’s Urban Landuse Strategy as an area for future residential development.

- *To maintain the rural and scenic character of the land.*

**Comment:** The proposal does not provide satisfactory mitigation measures to protect and maintain the rural and scenic character of the land. Council and the Northern Regional Planning Panel requested a detail landscaping plan to be provided by the applicant in order to address the visual implications of the development on the surrounding land. Despite several requests for a detailed landscaping plan the applicant has not provided this

information and therefore Council is unable to be satisfied that the proposed development will not have an impact on the rural and scenic character of the land.

- *To ensure that development does not unreasonably increase the demand for public services or public facilities.*

**Comment:** It is considered that the proposed development will not unreasonably increase the demand for public services or public facilities.

- *To conserve and enhance the quality of valuable environmental assets, including waterways, riparian land, wetlands and other surface and groundwater resources, remnant native vegetation and fauna movement corridors as part of all new development and land use.*

**Comment:** The proposed development does not conserve or enhance the quality of valuable environmental assets. It is proposed to remove nine (9) *Eucalyptus albens*, which are considered to be 'Core Koala Habitat' and regrowth vegetation in the north east corner of the site. Although the vegetation is isolated from the intact areas of high-quality movement corridors, it is considered that the removal of this vegetation demonstrates that the development does not comply with this objective.

- *To provide opportunities for a restricted range of employment-generating development that is compatible with, and adds value to, local agricultural production.*

**Comment:** The proposed development will provide opportunities for employment during construction, however it is only proposed to employ one full time employee for the day to day operation of the solar farm once it is operational. Therefore, the proposed solar farm will not generate significant employment opportunities for Gunnedah once operational.

It is also considered that the proposed development does not add value to local agricultural production as there is no mention of proposed ancillary agricultural land use to be associated with the development. Rather the proposed development will sterilise the land for local agriculture production for over 25 years with no committed decommission date.

- *To minimise conflict between land uses in the zone and with adjoining zones.*

**Comment:** It is considered that the proposal does not achieve this objective as the applicant has not provided sufficient information to address ways to minimise conflict between the identified residential receivers and adjoining R5 Large Lot Residential Zone, such as a detailed landscaping plan, artist impressions from each residential receiver or the reduction of decibels for each proposed construction mitigation measure in order to minimise conflict.

- *To maintain native vegetation and wildlife corridors.*

**Comment:** The proposed development seeks to remove nine (9) *Eucalyptus albens* and regrowth vegetation in the north east corner of the site. It has been determined that the *Eucalyptus albens* are identified as 'Core Koala Habitat', however this vegetation was not considered as a Koala movement corridor, providing linkage between key Koala Habitat within the surrounding landscape as they are isolated from the intact areas of high-quality core koala habitat vegetation.

#### 5.10 - Heritage Conservation

The site is not listed as a heritage item nor is the site listed as being part of a heritage conservation area. There are also no identified heritage items located in the proximity of the site and no heritage sites listed within Schedule 5 of the GLEP2012.

#### 6.1 - Flood Planning

The site is not mapped as floodprone under the GLEP 2012. A flood impact assessment was undertaken on the site and revealed that in this regard the proposed solar farm infrastructure is largely unaffected by flooding. No further consideration is therefore necessary.

#### 6.5 – Essential Services

Reticulated services are not required for the Solar Farm as there will be no permanent offices or amenities onsite. Council's reticulated water services are available to the site from Hunts Road if required.

A Stormwater Management Plan has been provided and has been determined by Council's Chief Engineer to be satisfactory.

The development site has frontage to Black Jack Road and Bushs Lane with the ability to provide access to the site from any of the road frontages. The development proposes vehicle access from Black Jack Road during construction and Bushs Lane once in operation.

***S4.15(1)(a)(ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Planning Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved)***

There are no draft environmental planning instruments applicable to the proposed development.

#### ***S4.15(1)(a)(iii) any development control plan***

##### Gunnedah Development Control Plan 2012

The following outlines the relevant Chapters/provisions of the DCP that have been considered in connection with this assessment:

#### ➤ 4. Industrial

- ***Clause 4.1 – Building Setbacks***

The proposed works are to be located greater than 10m from Black Jack Road. Property boundary setbacks are to be compliant with the Building Code of Australia.

- ***Clause 4.2 – Design***

The proposed solar farm is located in close proximity to residential receivers and R5 Large Lot Residential zones to the east and south east of the site. Due to the close proximity to non-industrial uses council must consider the compatibility of the development on both visual and operational grounds.

In order for council to be satisfied that the proposed development will not have visual implications or impact on the amenity of the area, a detailed landscaping plan and artists impressions for each identified residential receiver was requested as part of



several additional information letters to the applicant. The applicant has responded to the additional information letters requesting that a detailed landscaping plan be provided prior to the issue of any Construction Certificate and an artist impression from each identified residential receiver is unwarranted due to the existing orientation of the dwellings and vegetation surrounding the residential receivers.

A briefing meeting was held with the Northern Regional Planning Panel (NRPP) on Wednesday, 24 March 2021 and the panel also requested that a detailed landscaping plan and artist impressions from each residential receiver is required for the assessment of this development application. This information was requested in order for Council and the NRPP to be satisfied that the proposed solar farm will not have significant visual implications or impact on the visual amenity of the area due to the close proximity to several residential receivers and the R5 Large Lot Residential zone and should not be conditioned.

Council is therefore unable to determine whether the proposed development is compatible on visual grounds.

- *Clause 4.3 – Utilities*

The development does not require any connections to water or sewer infrastructure.

The development is not expected to generate any trade waste. Hence, no trade waste application is required for the development.

The development site is not encumbered by any easements within the vicinity of the development which may prohibit the development from occurring in the proposed layout.

A stormwater management plan has been provided to ensure that appropriate stormwater drainage networks are implemented as part of the development and that stormwater discharged from the site is not to exceed pre-development flows. Council's Chief Engineer has advised that the stormwater management system is satisfactory.

- *Clause 4.4 – Traffic and Access*

Vehicle access to the development site is available from Bushs Lane and Black Jack Road. The main access during operation will be from Bushs Lane which is an unsealed road. Access from Black Jack Road will be used during construction due to being bitumen sealed. It is noted that the DCP requires all vehicle accesses to be sealed. The applicant has therefore sought a variation to this requirement.

The applicant has advised the primary transport implication associated with the development is the construction and delivery traffic associated with the construction phase of the solar farm (18 vehicles per hour). It is also indicated that once the solar farm is operational, traffic movements will be limited to a maximum of one vehicle per day (weekdays typically) for maintenance.

Black Jack Road is a local road which is of bitumen formation and satisfies Council's requirements for the proposal. The existing roads are capable of accommodating the traffic generated during and after the construction of the development. Additionally, given the minimal traffic generated by the proposal post construction, it is considered this will not conflict with existing vehicular movement throughout the locality and the

requirement to seal Bushs Lane is unnecessary providing Black Jack Road is proposed to exclusively be used during the construction phase.

In addition to this, all vehicles are able to enter and leave the site in a forward direction and therefore comply with the requirements of the DCP.

- *Clause 4.5 – Parking*

In accordance with Council's local provisions industrial development is required to provide parking on the basis of 1 space per 75 m<sup>2</sup> Gross Floor Area (GFA) or 1 space per 2 employees (whichever is greater). There is no floor area created by the development. The development when operational will generate a demand for 1 employee and therefore one (1) car parking space is required.

Given the demand for parking as a result of the construction phase of the solar farm, a total of ten (10) car parks are proposed for the site. These parking spaces are designed to comply with the requirements of Australian Standard AS2890.1-2004 Parking Facilities – Part 1 Off-street car parking.

Therefore, it is considered that the proposed parking spaces are suitable for the proposed development and complies with the required parking spaces in this clause.

- *Clause 4.6 – Landscaping*

The developer has not provided a detailed landscaping plan for the solar farm. In order for Council to be satisfied that the proposed landscaping will aid in reducing any visual implications of the development and visual amenity of the area, Council and the Northern Regional Planning Panel requested a detailed landscaping plan to be provided. The applicant has requested that a condition of consent be applied to outline the requirement for a detailed landscaping plan to be provided prior to the issue of a Construction Certificate.

Council and the Northern Regional Planning Panel considers that a detailed landscaping plan is required for the assessment of this development application in order to be satisfied that the proposed solar farm will not have significant visual implications or impact on the visual amenity of the areas due to the close proximity to several residential receivers and R5 Large Lot Residential zone and should not be conditioned.

There is no obligation for landscaping around parking areas of the site as the development does not generate parking demand in excess of 10 spaces.

- *Clause 4.7 – Fencing*

The development proposes to construct boundary fences along the exterior boundary of the leased area of the land. The proposed fencing will be covered in mesh with landscaping provided in front of the fence to reduce the visual impact. A condition may be imposed that requires a detailed plan of proposed fencing be provided to Council for approval prior to the issue of a Construction Certificate. This would be required to ensure that the visibility of the fence from the primary road frontages is adequately addressed and the visual appearance of the fence does not detract from the surrounding area.

- *4.8 – Loading/unloading*

Adequate space and facilities are provided for loading/unloading of on-site during construction and operation. Adequate area also exists for vehicle movement to enter

and exit the site in a forward direction. A condition may be imposed requiring loading bay(s) to be line-marked and signposted.

- *Clause 4.9 – Outdoor Lighting*  
A condition may be imposed to ensure that any lighting installed is to be compliant with *AS 4282 Control of Obtrusive Effects of Outdoor Lighting*.
- *Clause 4.10 – Outdoor Signage*  
There is no signage associated with the development proposal.
- *Clause 4.11 – Noise*  
Development is proposed within 400 metres of a residential zone. The noise impacts associated with the development are addressed within this report.

➤ 6. General Development Specifications

- *6.6.1 – Environmental Effects*  
Potential environmental impacts of the development are discussed in detail throughout this report.
- *6.6.2 Erosion and Sediment Control*  
Council's standard condition may be imposed for sediment and erosion control measures to be implemented during construction of the proposed solar farm and associated infrastructure.
- *6.6.3 Conflicting Land uses*  
The subject land is currently vacant but contains an existing dwelling house and outbuildings. The former and current use of the land is for agricultural purposes. The closest residential receptor is approximately 120 metres east of the proposed solar farm.

It is considered that the proposal will create land use conflicts within the RU4 Primary Production Small Lots and adjoining R5 Large Lot Residential zones and will also encroach upon the developed residential land to the east and south east of the site. The subject land has been identified in Council's Urban Landuse Strategy as an area for future residential development.

- *6.6.4 Waste Management*  
A Waste Management Plan has been submitted with the application and addressed in this report.
- *6.6.5 Noise*  
Noise impacts are addressed in further detail under the heading 'Noise and Vibration'.
- *6.6.6 Geology*  
The subject site is relatively flat and stormwater on the site will fall in a North Eastern direction across the development area into a detention basin. The land does not have a significant slope which may inhibit the development. Solar arrays can be appropriately stepped across the site based on natural grade of slope. Earthworks associated with the development are limited to the establishment of the access road, drainage swales and batters, laydown area and detention basin. The solar arrays are single axis  $\pm 60$  degree

horizontal tilt modules mounted on a fixed steel post structure driven approximately 1.5 meters below ground. Hence, the development is not expected to impact on the slope of the site for natural water runoff.

***S4.15(1)(a)(iia) any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4***

There is no planning agreement or draft planning agreement entered into between the development applicant, relevant body or Council, under Section 7.11 of the Act.

***S4.15(1)(a)(iv) the regulations (to the extent that they prescribe matters for the purpose of this paragraph)***

*Environmental Planning & Assessment Regulations 2000*

The development is not identified as Designated Development under the provisions of Schedule 3, See Part 1.3 of this report.

***S4.15(1)(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality***

○ *Context & setting*

The development site is located on a rural property approximately 5km south west of the Gunnedah Township and approximately 2km south of the Oxley Highway. The development lot contains an existing dwelling onsite and is surrounded by large lot residential and rural properties.

To inform the assessment a Visual Impact Assessment (VIA) has been submitted as part of the development application. This VIA concluded that the proposed visual impacts of the development are limited to the adjacent roadways and residences within 500m of the site, which include the R1-R4 residences as illustrated in Figure 4. It is also considered that the proposed development will have a high visual impact on roadways within 70-100m of the site, which is illustrated in Figures 5 and 6. The report outlines that the reasons for the high visual impact in these areas is due to minimal vegetation screening and the width of the development.

In order to be satisfied that the visual impact of the development on the identified nearby residential receivers and surrounding roadways could be significantly reduced, it was requested by Council and the NRPP for the applicant to provide a detailed landscaping plan and artist impressions from each identified residential receiver. The applicant responded to the additional information letter and requested that a detailed landscaping plan be provided prior to the issue of any Construction Certificate and an artist impression from each identified residential receiver is unwarranted due to the existing orientation of the dwellings and vegetation surrounding the residential receivers.

As stated in the VIA the proposed development is likely to have a high visual impact on surrounding residences and roadways due to 'minimal vegetation screening'. Therefore the additional information provided by the applicant advising that an artist impression is unwarranted due to the vegetation surrounding the residential receivers contradicts the information provided in the VIA. It is considered by Council and the NRPP that a detailed landscaping plan and artist impressions from each residential receiver outlined in Figure 5 was critical in the determination of this development application to ensure that the



development is able to achieve an effective visual buffer to significantly reduce the visual impact on the surrounding area.

Furthermore, the NRPP advised in the briefing meeting held on Wednesday, 24 March 2021 that the existing vegetation in the road reserve is not considered to be a suitable visual screen as the vegetation could be removed in the future for road widening and improvements. Therefore, landscaping along Bushs Lane would also be required to ensure that appropriate visual screening is in place and is established should the vegetation in the road corridor be removed in the future.

Based on a full assessment of the proposed development, it is considered that the proposed location and sighting of the energy generating works is inappropriate in the context of the existing residential development surrounding the land and the applicant has not provided a detailed landscaping plan for Council to be satisfied that landscaping would reduce the visual impacts of the development on surrounding land.

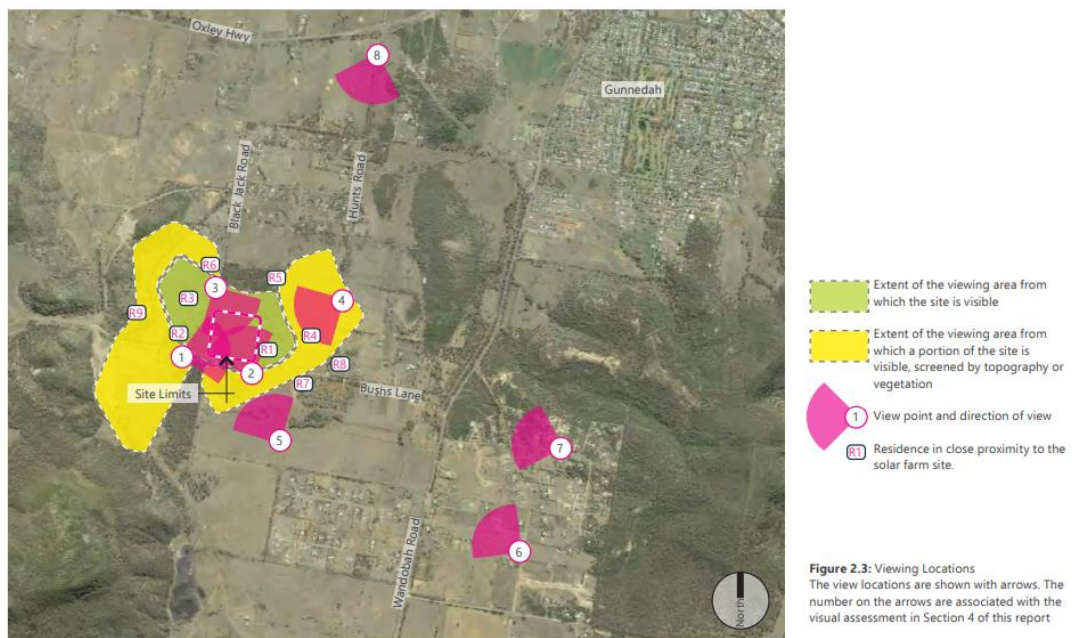


Figure 4 – Viewing Locations from Nearby Residential Receivers



Figure 5 – Viewing from the corner of Bushs Lane and Black Jack Road looking into the site

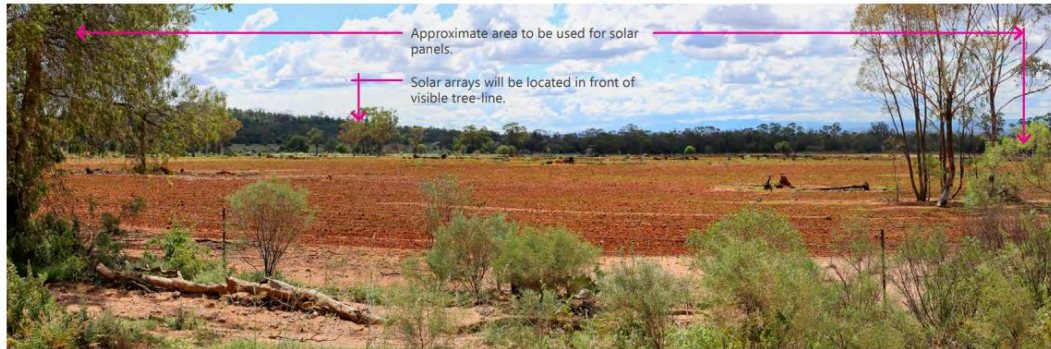


Figure 6 – Viewing from Bushes Lane looking northwest into the site

- *Access, transport and traffic*

Access to the development site is available from Black Jack Road and Bushes Lane. Bushes Lane and Black Jack Road are both classified as local roads. Black Jack Road is bitumen sealed without the improvement of kerb and gutter and Bushes Lane is unsealed along the frontage of the site. The property access is approximately 2.5 kilometres from the intersection of Black Jack Road and the Oxley Highway.

The impact of the development on the surrounding roads is expected to be during the construction phase. The applicant has advised that there will be 18 vehicle movements per hour during the construction phase which consists of 10 light vehicles, 3 road work vehicles and 2 delivery vehicles. Once the solar farm is operational, traffic movements are expected to be limited to a maximum of one vehicle movement associated with maintenance inspections and specific maintenance work which would be short term and infrequent.

All trucks are expected to enter and exit the site via Black Jack Road. The current road network is suitably designed to accommodate the expected vehicle traffic during construction and post completion. Traffic generated is expected to be suitably accommodated within the surrounding road network.

A Construction Traffic Management Plan (CTMP) and Dilapidation Report are proposed by the applicant as part of the development. The CTMP and Dilapidation Report would consider the current road condition, any possible impacts on the road network and mitigate such impacts. A condition may be imposed to ensure that a CTMP and Dilapidation Report are submitted to Council for approval prior to the commencement of construction works.

- *Public domain*

The proposed development will not impact the public domain in terms of recreation opportunities, the amount, location, design, use and management of public spaces, or pedestrian linkages between public spaces.

- *Utilities*

Reticulated services are not required for the Solar Farm as there will be no permanent offices or amenities on site.

- *Heritage*

A Due Diligence Aboriginal Archaeological Assessment was conducted and prepared by a qualified archaeologist and the cultural values of the project site were assessed during a survey by Mr Shoobert from the Red Chief Local Aboriginal Land Council (LALC). Mr

Shoobert did not identify any areas of cultural values within the site and advised that the site did not bore any cultural significance.

The Red Chief LALC board has since advised the applicant after reviewing the due diligence assessment that Mr Shoobert, who was previously organised by the Red Chief LALC to undertake the fieldwork, does not represent the RCHLALC. The applicant has attempted to formally clarify the comments provided by Mr Shoobert; however no formal response has been received. A board member from the Red Chief LALC, Cindy Foley has advised that the project area is within a broader cultural landscape that does have cultural sensitivity to Red Chief LALC due to the proximity of the site being approximately 2 kilometres south of Black Jack Mountain which is an important cultural place.

Furthermore, copies of Aboriginal Heritage Information Management System (AHIMS) searches for each of the development allotments were included in the submitted application. None of the supplied AHIMS searches identified any known items of aboriginal heritage within the boundaries of the proposed project area. However, 2 sites were identified in a 1km buffer of the project area.

Therefore, should the development application be approved by the NRPP, a condition would need to be imposed to ensure that any items of potential Aboriginal or European heritage that are uncovered during construction works or any demolition works undertaken as part of the development will require the cease of operations and Heritage NSW and Red Chief LALC are to be contacted.

- *Other land resources*

The land is predominantly grazing land, with an existing dwelling house and outbuildings onsite. There are no identified mineral and extractive resources on the site or water supply catchments.

In order to support the decommissioning stage, a condition may be imposed requiring a rehabilitation plan for the solar farm to be developed prior to the issue of the Construction Certificate to ensure that the land is suitable for future use.

- *Water*

The Stormwater Management Plan has identified that by discharging the runoff from the proposed Photovoltaic Array's directly to the existing ground surface and maintaining the existing travel paths and natural surface levels the proposed development model will reduce the peak runoff during the 1% AEP.

Construction impacts on groundwater are possible and would likely relate to spills of chemicals or fuels during construction of the solar farm. The clearing of trees can potentially impact groundwater via the rise of saline groundwater through the soil profile. However, the proponent has identified tree clearing would be minimised and therefore it is not considered that this is likely for the subject site.

Furthermore, no water is proposed to be extracted from groundwater sources for construction purposes for any project element. Groundwater is also not expected to be intercepted during construction of the proposed solar farm. Additionally, it is not expected that there will be any water impacts on the adjoining properties during construction and operation of the solar farm.



It is expected that impacts to the local surface and groundwater environments in relation to ongoing operations is considered to be limited given the largely passive nature of the solar farm.

○ *Soils*

The proposed development is not expected to have an adverse impact on soil conservation. Erosions and sediment control measures will be required to be installed prior to works commencing and maintained during construction. In the event the development was to be approved, a condition may be imposed to ensure that these measures are implemented.

○ *Air and microclimate*

The proposed development is considered to have minimal impact on the existing microclimate in the area. The proposed development will generate dust as part of construction activities and therefore dust suppression measures will need to be implemented and managed during construction. Although dust generation is expected it is considered that it will not have a significant impact on the site or surrounding land.

○ *Flora and fauna*

The proposed development requires the removal of vegetation to construct the solar farm. The clearing will involve the removal of nine (9) isolated *Eucalyptus albens* (White Box) trees and a small patch of regrowth vegetation in the north east corner of the site.

It is believed the proposed clearing of vegetation for the development would not have a detrimental impact on the development site or surrounding area. Under Clause 7.2 of the *Biodiversity Conservation Regulation 2017*, area clearing of 0.5 hectare is the maximum allowable clearing threshold for a site less than 40ha but more than 1ha. The development has not triggered the biodiversity values map nor does it exceed the clearing threshold under the *Biodiversity Conservation Act 2016* as identified above.

The development site is not considered to be critical habitat or include significantly endangered ecological species. The development is not expected to create any irreversible ecological impacts.

The protection and care of the koala population and habitat has previously been discussed in this report.

○ *Waste*

There are a number of sources of waste identified for the construction of this development and these include:-

- Packaging materials
- Metal
- Plastic and masonry products
- Excavated material
- Food and General Waste
- Recyclable Waste
- Green Waste

The solar farm would need to manage all types of wastes in accordance with the required guidelines. General waste associated with the proposed development will be stored in a designated area on site. Waste would need to be removed from site to a waste management facility on an as required basis. The proponent has identified that



the Waste Management Plan would be utilised for the development which includes classifying and quantifying waste, and separating waste materials to be recycled or disposed.

The development will generate waste during the construction works. However, there will be significant waste generated during the decommissioning of the site with disposal of solar arrays and associated infrastructure. Should the development be approved, Council would request that a condition be imposed which requires a decommission plan be prepared prior to the issue of a Construction Certificate. The Decommissioning Plan would ensure that any decommission waste that will be disposed of to Council's waste management facility can be accounted for in its long term plans and Environmental Protection License. This is due to the potential large volumes of waste that may be disposed of to the facility which may be above the general expectation of community waste levels.

- *Energy*

The proposed development is expected to have a negligible impact on energy resources. The development has limited ability to improve energy use efficiencies; however, the development would create a renewable energy resource for public access.

- *Noise & vibration*

The proponent engaged an acoustic consultant to prepare a Noise Impact Assessment (NIA) to assess the potential impacts of the construction and operation of the proposed solar farm on nearby sensitive receptors in accordance with the applicable NSW policies and guidelines. It was determined that the most significant construction noise impacts are predicted to be associated with site preparation activities and the installation of support poles (specifically pile driving). Other sources of noise related to the development include construction vibration, road traffic, construction noise and operation noise.

The report identifies 38 potentially sensitive receivers that may be affected by noise from operation or construction activities and traffic related noise.

Construction hours proposed for the development are based on Monday to Friday – 7am to 6pm, Saturdays – 8am to 1pm and no construction work on Sundays or public holidays. It is also advised that there are no out of hours work proposed for this project and therefore sleep disturbance has not been considered in the NIA. The NIA has therefore not taken into consideration the sleep deprivation impact for the large number of night shift workers that work in the large number of coal mines in the Gunnedah Basin and reside in Gunnedah.

Construction noise level results identified noise exceedances for 11 residential receivers. It was advised in the NIA that expected exceedances of the NMLs up to 5dBA at nine of the residential receivers is considered to be negligible, in the context of construction noise, as it will not be a permanent noise source. The construction noise impacts on the two residential receivers located at 170 Bushs Lane and 540 Black Jack Road are expected to exceed the NMLs by up to 15dBA when work is undertaken in their nearest proximity. It is advised in the NIA that exceedances of 10dBA or greater is considered to be significant.

Operational noise level results identify that there will be no noise exceedances of greater than 35dB at any of the identified residential receivers.

The NIA therefore recommends the following noise mitigation measures should be considered during the construction phase of the development:

- *a construction noise management protocol to minimise noise emissions, manage out of hours (minor) works to be inaudible, and to respond to potential concerns from the community;*
- *where possible use localised mobile screens or construction hoarding around piling rig/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 (eg unloading and laydown areas);*
- *minimise noisy plant/machinery (pile driver) working simultaneously with other construction activities where practicable;*
- *operating plant in a conservative manner (no over-revving), shutdown when not in use, and be parked/started at farthest point from relevant assessment locations;*
- *selection of the quietest suitable machinery available for each activity;*
- *minimise impact noise wherever possible;*
- *utilise a broadband reverse alarm in lieu of the traditional high frequency type reverse alarm;*
- *provide toolbox meetings, training and education to drivers and contractors visiting the site during construction so they are aware of the location of noise sensitive receivers and to be cognisant of any noise generating activities;*
- *signage is to be placed at the front entrance advising truck drivers of their requirement to minimise noise both on and off-site; and*
- *utilise project related community consultation forums to notify residences within proximity of the site with project progress, proposed/upcoming potentially noise generating works, its duration and nature and complaint procedure*

As a result of the significant noise exceedance during the construction phase, Council requested additional information to be provided to address how the use of the recommended construction noise mitigation measures will satisfy the NSW Environment Protection Authority (EPA's), Noise Policy for Industry 2017, to reduce emissions to the surrounding community. Including full extent of reduction in decibels (dBA) expected to be achieved by each mitigation measure.

The applicant responded with the following information:

*The Applicant recognises the number of concerns and objections to the project related to potential noise impacts both during construction and operation. While the detailed Noise Assessment report established that operational noise is not expected to exceed the more stringent (lower) requirements of the Intrusiveness Noise Level or the Amenity Noise Level as per the NSW EPA Noise Policy for Industry 2017, the Applicant acknowledges that the certain elements of the required construction activities are expected to exceed the guidelines of the EPA.*

*Due to the nature of certain required construction activities, no viable solution is available to reduce these specific noise impacts below the EPA guidelines. It is noted while the construction of the solar farm is expected to occur over a period of approximately 6 months, piling activities, which represent the largest noise impacts, are expected to be of a significantly shorter duration. To provide greater context to enable Council's assessment of the project, a summary of the construction activities, duration and their expected noise implications is provided in Table 1.*

Construction noise impacts are temporary and will be minimised through management procedures. It is noted the work has the potential to cause disruption to surrounding residential premises during the day therefore the following feasible and reasonable mitigation considerations outlined within the NSW EPA Guidelines will be used to manage these impacts. Mitigation measures like the following are likely to be implemented:

- Using alternative, quieter work methods to reduce the noise at the source;
- Scheduling the noisy work during recommended standard hours;
- Restricting work to defined hours and using respite periods, for example working during defined periods outside business hours and providing respite to residents, subject to negotiation (for example periods of 'quiet' or no work and respite offers, such as movie tickets);
- Temporary relocation of residents to allow a concentrated period of noisy works.

Confirmation of specific measures can be provided prior to the release of a construction certificate.

In addition to the available mitigation strategies outlined in the project specific Noise Assessment report and reiterated in the Statement of Environmental Effects, construction hoarding is proposed to be established between the designated loading/unloading areas and the receivers of greatest impact, given the higher volume of work traffic in this area.

**Table 1 – Indicative breakdown of construction activities and relative noise impact**

Item	Activity	Indicative duration	Noise impact
<b>Site clearing and civil works</b>	Use of mechanical digger to dress any required project layout areas, prepare hardstand areas, foundations and access roads. Minimal site dressing is expected to be required. Pouring of concrete foundations for inverter, transformer and switchgear.	Approximately 10 days.	Low – noise levels will be mainly diesel engine noise from a tracked digger, similar to a tractor working the land.  Installation of access roads may require some rolling, as per normal early stage road construction.
<b>Site deliveries</b>	Deliveries from heavy goods vehicles.	Early construction stages, to be undertaken	Moderate – noise levels will be mainly diesel engine noise from

		in accordance with the approved Traffic Management Plan	trucks, forklifts etc. as well as some mechanical noise from setting down equipment in the site compound.
<b>Piling</b>	Mechanical ramming of steel piles into the ground. Expected to be approximately 2,200 piles overall.	22 days at a very conservative rate of 100 piles/day installed.	High - Piling noise is reasonable significant and on calm days with little to no wind, a repetitive metallic "tinking" noise will be heard outside the boundaries of the site while piling works are ongoing.
<b>Trenching</b>	Mechanical digging of trenches for underground cable runs.	~5 days. Trenching requirements of a 6MW solar farm are insignificant and with pre-planning it is expected that these would undertaken in a short time.	Low – noise levels will be mainly diesel engine noise from a tracked digger, similar to a tractor working the land.
<b>Mechanical installation</b>	Distribution of equipment (trackers, modules, electrical equipment) throughout the site. Manual mechanical installation of equipment.	30 days	Low – mainly vehicle movements around site, as well as construction workers conversing and minor mechanical noise as components are placed / bolted in place.
<b>Electrical installation</b>	Distribution of equipment (switchboards, inverter and transformer station, cabling).	30 days	Negligible – mainly vehicle movements around site, with 1-2 large crane movements to install inverter, transformer and switchgear stations, as well as construction workers conversing.
<b>Commissioning</b>	Electrical testing works. Energising the solar farm.	15 days	Negligible – Commissioning will be undertaken by a small number of highly skilled staff. Some

The construction of the solar farm is expected to occur over a period of approximately six (6) months. During the construction phase piling activities will represent the largest noise impact. The mechanical ramming of the steel piles into the ground is expected to be approximately 2,200 piles overall and the duration is expected to take 22 days at a rate of 100 piles per day. Whilst the table provided does breakdown the inductive duration of each construction activity, there has been no indication on the expect dBA of each construction activity on the surrounding residential receivers.

It is also confirmed by the applicant that there are no viable mitigation measures that could reduce the construction noise impacts below the NSW EPA Guidelines of 45dB. In addition to this, the applicant has not provided information on the full extent of reduction in decibels expected to be achieved by each mitigation measure despite numerous requests by Council and the Northern Regional Planning Panel to provide this information.

On the basis of the information provided above, Council is unable to determine the effectiveness of each mitigation measure that is 'likely' to be implemented or the dBA for each identified construction activity. Therefore, it is considered that the development will cause significant adverse environmental impact on two (2) sensitive residential receivers, as well as noise exceedances at nine (9) of the other nearby receivers for approximately 6 months during the construction phase. Given the prolonged length of time for the construction of the solar farm it is considered that the

noise impacts will cause detrimental effects on the surrounding residential receivers and therefore should not be supported.

- *Natural hazards*

The site is not mapped as bushfire, flood prone, mine subsidence or is subject to landslip. The site is however at risk to potential flooding and bushfire.

In regards to the flooding, the applicant has included a Flood Impact Assessment as part of the SoEE which was undertaken by a Torrent Consulting. The Flood Impact Assessment concluded that:

*'Flood hazard mapping has been produced that shows that the Site is of a low flood risk and is suitable for the proposed solar farm.'*

*The flood modelling results show that at the 1% AEP event (and even the PMF) the proposed solar farm infrastructure is largely unaffected by flooding, being effectively a low flood hazard environment. The flood depths are shallow, and the PV tracker arrays will be elevated well above the flood levels.*

*Ample flood-free refuge is available on-site if people are present during a flood event. Due to the nature of the local topography it is expected that the access to the Site from Gunnedah via Wandobah Road might be flood-affected. However, access via Black Jack Road and the Oxley Highway is likely to provide a greater level of flood immunity.*

*The assessment indicates that the flood impacts of the proposed solar farm development are minor and localised. The most significant consideration appears to be the proposed Site access road crossing of the south-eastern overland flow path. It will be important to ensure adequate cross-drainage through the road is provided at this location to minimise impacts to the road from frequent overtopping.'*

In relation to bushfire, the proposed development is generally located on previously cleared areas of the site with only minimal ground cover. With the installation of solar panels and associated infrastructure on the site there is the potential for an increase in fuel loads from unmanaged grasslands which could lead to grassfires if not effectively managed through mitigation measures.

There is also the potential for fire ignition during the construction phase with the movement of machinery, use of welders and grinders and the like, storage of flammable liquids, electrical faults, lightning strikes and cigarette butts. The flammability of the solar farm is considered to be relatively low as the solar panels are predominantly constructed of glass, silicon, steel and aluminium.

It is therefore recommended that should the development be approved by the NRPP a Fire Management and Emergency Response Plan would need to be prepared for the development. This plan must identify the fire risks and controls of the development, and the procedures that would be implemented if there is a fire on site or in the vicinity of



the site. In addition a condition may also be imposed in order to minimise the fire risk of the development the applicant must:

- (a) minimise the fire risks of the development;
  - (b) ensure that the development:
    - includes at least a 10 metre defensible space around the perimeter of the solar array area that permits unobstructed vehicle access;
    - manages the defensible space and solar array areas as an Asset Protection Zone;
    - complies with the relevant asset protection requirements in the RFS's Planning for Bushfire Protection 2019 (or equivalent) and Standards for Asset Protection Zones;
    - is suitably equipped to respond to any fires on site including provision of a 20,000 litre water supply tank fitted with a 65mm Storz fitting located adjacent to the internal access road;
  - (c) assist the RFS and emergency services as much as practicable if there is a fire in the vicinity of the site; and
  - (d) notify the relevant local emergency management committee following construction of the development, and prior to the commencement of operations.
- *Technological hazards*  
There are no identified technological hazards to people, property or the biophysical environment as a result of the proposed development.
  - *Safety, security & crime prevention*  
The development will not result in any decrease in safety and security in the area. The development will include the installation of security cameras and the entire perimeter of the electricity generating works site will have a security fence installed to reduce safety, security and crime issues.
  - *Social Impact in the locality*  
The social impact in the locality was addressed in the Social Impact Statement provided by the applicant. During construction the proposal would require the short term employment of up to 30 workers. There will be no ongoing long term employment opportunities for local residents once the solar farm is operational.

In the Social Impact Statement it has been advised that there will opportunities for employment during construction in the area of technicians and trade workers, however with the experience of other electricity generating works in the shire, it is considered that local employment opportunities are unlikely. As a result, this would create significant pressure on local hotel and motel accommodation providers and the rental market with trying to accommodate additional drive-in-drive-out workers.

Gunnedah also benefits from a large tourist and mining employment sector to support the township. The existing sectors have already put a significant strain on local accommodation in Gunnedah. Therefore, it is considered that the increase of an additional 30 workers that will need to be accommodated in Gunnedah during the construction phase would place further pressure on accommodation availability in Gunnedah.

- *Economic impact in the locality*

The economic impact in the locality was addressed in the Social Impact Statement provided by the applicant. It is considered that during the construction phase the development may have the potential to increase the opportunity for local employment, however given that there would be no permanent staff during operation, the potential benefit in regards to local employment once the solar farm is operational would be negligible.

- *Site design and internal design*

The subject site is zoned *RU4 Primary Production Small Lots* with a minimum lot size of 10ha. Concern was raised by Council in its initial request for Additional Information, regarding the site design, in particular the location of the power conversion unit, construction laydown area, site entrance, loading and unloading area and carparking proximity to the closest residential receiver being located 120m from the site as illustrated in Figure 7. It is possible that the relocation of these facilities, which have the potential of causing high noise generation through construction and the likely source of operational noise from vehicles or staff attendance, away from this receiver would be more appropriate. The lack of consideration on the significant impact of locating the ancillary infrastructure, carparking, loading and unloading area along the boundary of the closest residential receiver indicates poor site design.

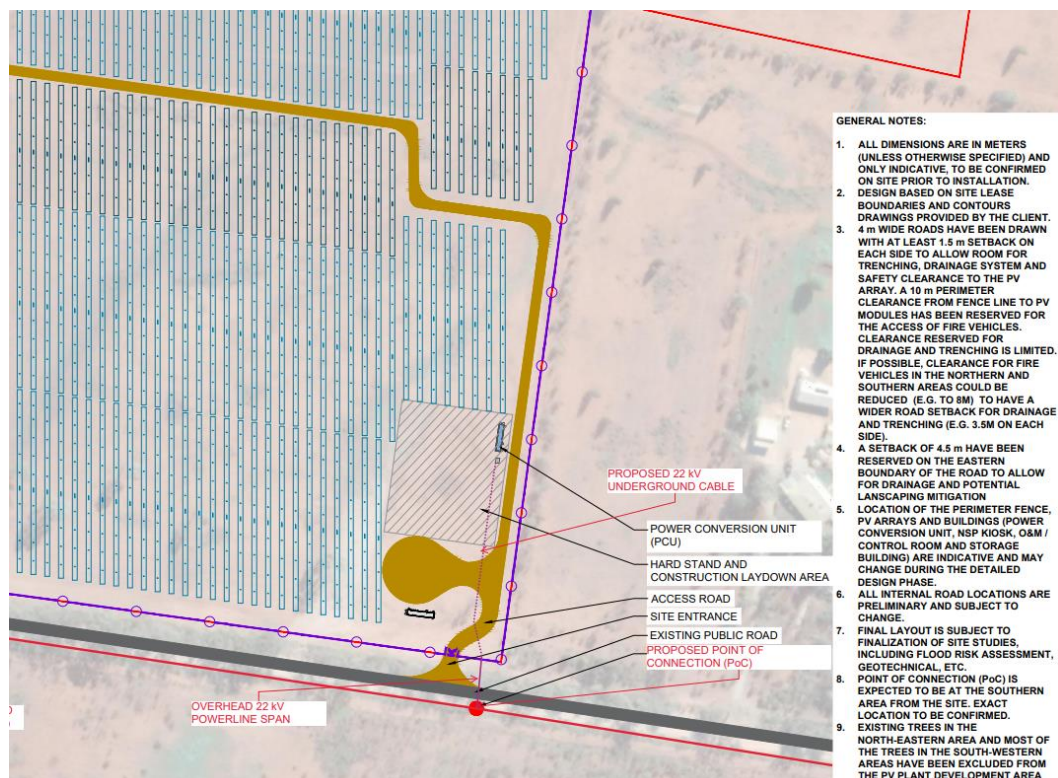


Figure 7 – Solar Farm General Arrangement Plan

- *Construction*

All construction, including roadways must comply with the applicable Australian Standards, Council Policies and the Building Code of Australia where relevant.

- *Cumulative impacts*

The potential cumulative impacts are assessed by other significant construction projects that occur concurrently or other electricity generation works that are proposed

concurrently. The assessment highlighted that there is potential risk of cumulative social, economic, visual, community and environmental impacts.

***S4.15(1)(c) the suitability of the site for the development***

A full assessment of the proposed development has identified a number of significant concerns with the location of the proposed development including the following:

1. The site is located on the immediate residential fringe of the Gunnedah township and is in a visually prominent and open landscape.
2. The site is identified in Council's Urban Land Use Strategy for future residential development growth.
3. The proposal seeks to construct PV panels on 16ha of the 24.2ha agricultural site. The site coverage for the development is greater than 60%.
4. The proposal seeks to provide landscaping along the boundaries of the development site to 'screen' the development, however a detailed landscaping plan has not been provided which provides assurance of a suitable vegetation screen to respect views and vistas of the surrounding locality.
5. The proposal will have construction noise exceedances at 11 nearby sensitive residential receivers, for a prolonged period of time.
6. The proposal has been publicly exhibited and 13 unique objections have been received. Submissions and their content are addressed within the following section of this report.

It is considered throughout the assessment that whilst there are a number of concerns that can be conditioned accordingly, the location of the subject site is not suitable for the proposed development, due to the proximity to a large number of residential receivers, residential zoned land and the future strategic planning for future residential release amid future housing pressures.

***S4.15(1)(d) any submissions made in accordance with this Act or the regulations***

*Community Participation Plan 2020 – Consultation*

The development involves the construction of a solar farm. It is expected that the development will have an impact on adjoining land holders. Hence, under the requirements for the Community Participation Plan 2020 the development application was notified to the adjoining land holders and placed on public exhibition from 15 June 2020 to the 14 July 2020. Council received thirteen (13) submissions during the exhibition period, which were all unique objections. Matters raised within the submissions are addressed as follows:

Issue	Response
Impact of the development on house and land prices	<p><b>Applicant response:</b></p> <p>Visual impacts are the main impact of solar PV farms and as such a Visual Impact Assessment (VIA) has been undertaken provided at Appendix E of the SEE.</p> <p>View point 1 of the VIA assessed the view directly adjoining the site from the corner of Black Jack Road and Bushes Lane provides a worst case view of the site representing view points from the west of the site including the residents along Bushes Lane. As a result of the</p>

	<p>view point proximity to the site along with existing vegetation, topography change, and 19310.6_RFI_Gunnedah_September2020 10 setback distances the visual impact was noted as being moderate. The nearest resident to the west is located approximately 190m west of the site boundary. This neighbouring site contains a large number of trees which obscure view to the subject site and would provide effective visual buffering by itself. Further, the topography of the site slopes gently downward toward the north east. The sloping ensures that the visual impact of the solar panels is minimised with the first row obscuring subsequent panels from the south and west.</p> <p>View point 2 is located in the public domain in front of the site on Bushes Lane to provide a worst case view point from an eastern and southern view point noting the nearest resident located approximately 110m from the development area boundary and is considered to be most likely to be impacted noting a high visual impact rating. As a result of the high rating from the residence and the visual impacts from the viewpoint, landscaping is proposed along the eastern boundary of the development area to obscure views into the site.</p> <p>Viewpoint 3 represents the residents from the north west of the site which, while located substantial distance from the site, have up hill and generally unobscured views to the site. The provided photomontage provides a representative view of the site with the solar PV farm rendered into the proposed location. As shown, despite the uphill view and generally unobscured line of sight, the distance buffering absorbs the solar arrays into the landscape resulting in an assessed visual impact of low.</p> <p>The establishment of the recommended trees and large shrubs provide a range of vertical canopy cover to provide visual screening to the surrounding area. Further mitigation measures include the use of anti-reflective coated solar panels and muted colours on supporting structures to blend into the surrounding environment. As such, the proposed development is considered to have minimal visual impact on surrounding residents with</p>
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	<p>impact on property values expected to be low as a result.</p> <p><b>Assessing Officer Comment:</b> There is no direct evidence that solar farms impact on house and land prices. House and land values are not a consideration under the <i>Environmental Planning &amp; Assessment Act 1979</i>.</p>
Noise impacts on nearby receivers	<p><b>Applicant response:</b> The provided noise impact assessment at Appendix H predicted noise impacts generated by the proposed operation of the solar PV farm at nearby receivers including the nearest receiver located approximately 110m east of the development area. Based on the model, there are no noise related issues which would prevent the approval of the project with noise experienced noted as less than 30db meeting compliance with the strictest noise criteria level of 35db.</p> <p>Modelled noise emissions from project construction activities identify that relevant noise management levels may be exceeded at the surrounding receivers. These impacts are noted as temporary and would generally occur with most types of construction occurring at the site due to the low criteria levels for the rural area.</p> <p>As a result, noise impacts on nearby receivers are expected to be low from the ongoing operation of the facility.</p> <p><b>Assessing Officer Comment:</b> Noise impacts have been addressed within the assessment report and forms the basis of a number of the reasons for refusal.</p>
Reflection glare impacts	<p><b>Applicant response:</b> Reflectivity and glare impacts have been discussed within the provided Reflective Glare Assessment provided at Appendix K.</p> <p>Glare impacts on the surrounding receivers are expected to be negligible due to the design and nature of solar PV farms.</p> <p>The solar arrays utilise a solar tracking system which respond to the location of the sun which not only maximises the amount of electricity generated but also ensures that the outgoing light is appropriately managed and hold a tilt</p>



	<p>angle which reflects any resulting light upward towards the sky.</p> <p>Further to this, all panels to be used are to be treated with an anti-reflective coating reducing the amount of light reflected.</p> <p>As a result, glare impacts on the adjoining properties are expected to be negligible with the reflected light reduced and directed upward away from the receivers.</p> <p><b>Assessing Officer Comment:</b> The applicant has provided within the Statement of Environmental Effects a 'Reflective Glare Assessment' that was prepared by SLR Consultants. The Reflective Glare Assessment concluded that the potential for adverse glare from the proposed facility will be negligible in all cases which relate to aviation, motorists, rail traffic and nearby residential receivers.</p> <p>The reason for this conclusion was due to the solar panel design with the use of single axis trackers which keep the panels perpendicular to the sun. Therefore, the reflection from the sun will be perpendicular to cell and direct back towards the sun. It has also been advised that when the tracking system has reached the limit of its tracking range, the angle of incidence moves from perpendicular and will reflect up and away from the ground. In addition to this, the tracking stops when the panel is 60 degrees from horizontal and the reflection will be 30 degrees above the horizon.</p> <p>Furthermore, the applicant has advised that the panels will be coated in an anti-reflective treatment.</p> <p>It is considered that whilst the panels will be coated in an anti-reflective treatment, the extensive steel utilised for the development may present a glare to the nearby residential receivers and surrounding roads. Due to the potential glare impacts, Council requested a detail landscaping plan to be provided in order to address the visual implications of the development on the surrounding land. Despite several requests for a detailed landscaping plan the applicant has not provided this information and therefore Council is unable to be satisfied</p>
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	that the proposed development will not have negligible glare impacts on nearby residential receivers and surrounding roads.
Visual Impacts	<p><b>Applicant response:</b></p> <p>Visual impacts are the main impact of solar PV farms and as such a Visual Impact Assessment (VIA) has been undertaken provided at Appendix E of the SEE.</p> <p>Viewpoint 1 of the VIA assessed the view directly adjoining the site from the corner of Black Jack Road and Bushes Lane provides a worst case view of the site representing view points from the west of the site including the residents along Bushes Lane. As a result of the viewpoints proximity to the site along with existing vegetation, topography change, and setback distances the visual impact was noted as being moderate. The nearest resident to the west is located approximately 190m west of the site boundary. This neighbouring site contains a large number of trees which obscure view to the subject site and would provide effective visual buffering by itself. Further, the topography of the site slopes gently downward toward the north east. The sloping ensures that the visual impact of the solar panels is minimised with the first row obscuring subsequent panels from the south and west.</p> <p>Viewpoint 2 is located in the public domain in front of the site on Bushes Lane to provide a worst case view point from an eastern and southern view point noting the nearest resident located approximately 110m from the development area boundary and is considered to be most likely to be impacted noting a high visual impact rating. As a result of the high rating from the residence and the visual impacts from the viewpoint, landscaping is proposed along the eastern boundary of the development area to obscure views into the site.</p> <p>Viewpoint 3 represents the residents from the north west of the site which, while located substantial distance from the site, have uphill and generally unobscured views to the site. The provided photomontage provides a representative view of the site with the solar PV farm rendered into the proposed location. As shown, despite the uphill view and generally</p>

	<p>unobscured line of sight, the distance buffering absorbs the solar arrays into the landscape resulting in an assessed visual impact of low.</p> <p>The establishment of the recommended trees and large shrubs provide a range of vertical canopy cover to provide visual screening to the surrounding area. Further mitigation measures include the use of anti-reflective coated solar panels and muted colours on supporting structures to blend into the surrounding environment. As such, the proposed development is considered to have minimal visual impact on surrounding residents with the landscaping established.</p> <p><b>Assessing Officer Comment:</b> Visual impacts have been addressed within the assessment report and form the basis of a number of the reasons for refusal.</p>
The impacts of the development on the character of the area, being consistent with the zone objectives	<p><b>Applicant response:</b></p> <p>Solar PV farms are considered to be compatible with primary production zones throughout the state with many projects established in rural areas. This is thanks to the low impacts generated by solar farms in terms of noise, dust/air quality, and water.</p> <p>A full assessment against the objectives of the RU4 zone has been provided at Table 1 of this response.</p> <p><b>Assessing Officer Comment:</b> A full assessment of the development against the RU4 zone objectives is addressed above.</p>
The proximity of the development to residential areas	<p><b>Applicant response:</b></p> <p>The site holds a buffer distance of approximately 465m to the nearby R5 Large Lot Residential zone located to the east of the development area. When combined with the proposed landscaping along the eastern boundary and the existing road reserve trees the visual impact on the nearby residential area is considered to be minimal with the proposed structures effectively obscured from view.</p> <p><b>Assessing Officer Comment:</b> The proximity of the development to residential areas has been addressed within the assessment report and forms the basis of a number of the reasons for refusal.</p>
Lack of formal consultation	<p><b>Applicant response:</b></p>

	<p>The solar farm proponent consulted with or attempted to consult with nearby residents along Black Jack Road and Bushs Lane. A total of six letters were issued to direct / closest neighbouring properties at least four weeks prior to the submission of the Development Application (DA) notifying residents of the proposed development, with contact details provided for those seeking further phone and face-to-face discussions.</p> <p>A total of four neighbouring residents reached out for additional discussions. Due to ongoing travel restrictions associated with COVID-19, opportunities to meet face-to-face were limited. Consequently, additional discussions were held via phone conversations and email only. Preliminary site plans of the development were provided for discussion where requested.</p> <p>The residents' concerns generally related to land devaluation and land suitability for a development of this kind. Two of the respondents were also concerned that this would reduce their ability to later subdivide and whether their blocks would then sell. An adjacent neighbour raised concerns of water flow but were happy with the response provided in relation to the proposed stormwater management plan.</p> <p>A summary of the neighbour consultation process and method is provided below:  + Letters (mailed) – 6 (Early April March 2020)  + Phone Discussions held / Reply correspondence – 5 (17 April 2020 – 20 April 2020)</p> <p>The Council notification period represents an excellent opportunity for members of the community to provide input on new development. Being undertaken by Council ensures the process is objective void of any conflicts of interest when compared to the consultation undertaken by or on behalf of the proponent.</p> <p>As a result, the undertaken consultation is considered appropriate for the scale of development proposed.</p> <p><b>Assessing Officer Comment:</b> Gunnedah Shire</p>
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	<p>Council publicly exhibited the Development Application from Monday, 15 June 2020 until Tuesday, 14 July 2020 and advertised the exhibition in the Gunnedah Times, Council's website, as well as notified the adjoining landowners of the exhibition.</p> <p>The applicant has also advised that letters were sent to neighbours early April-March 2020 and phone discussions were held from 17 April 2020 – 20 April 2020.</p>
SoEE is deficient and contains inconsistencies	<p><b>Applicant response:</b> The provided SoEE is appropriate for the type and scale of development proposed. Additional detail has been requested by Council which has been provided within this report. The amount of detail is considered appropriate for a determination to be made by the RPP.</p> <p><b>Assessing Officer Comment:</b> Council requested additional information from the applicant to rectify the inconsistencies and to obtain additional information to assist with the assessment of this development application.</p>
Decommission and disposal post development lifespan not addressed	<p><b>Applicant response:</b> Decommissioning and disposal arrangements have been discussed within this RFI response. The development has no limiting lifespan.</p> <p>The design of the development ensures that decommissioning of the site will result in very little impacts with the existing landform largely left untouched. All proposed site infrastructure such as the solar panels and arrays are to be directed to appropriately licenced recycling facilities and if any element is required to be landfilled the operator is to direct that waste to out of area landfills with sufficient capacity and appropriately licences to handle the waste.</p> <p><b>Assessing Officer Comment:</b> The decommissioning of solar farm developments involves the removal of the panels and associated infrastructure from the site.</p> <p>A condition may be imposed requiring the applicant to develop a Rehabilitation and Decommissioning Plan should consent be granted. The Plan would ne required to include rehabilitation objectives and strategies and would require the removal and disposal of all solar infrastructure.</p>



<p>Stormwater drainage modelling and stream order is inaccurate</p>	<p><b>Applicant response:</b></p> <p>As the design of the solar PV farm largely retains the natural landform ensuring that stormwater will continue flowing to the north east as per existing conditions. This has resulted in the proposed detention basin located in this north eastern corner of the development area to manage these flows from the described catchment areas.</p> <p>All modelling has been undertaken in accordance with all applicable guidelines using ARR 2019 Initial loss - Continuing loss (IL-CL) hydrological model and 2016 IFD data. The design of the detention basin has ensures post-development flow rates from the basin will be limited to the pre-development flow rate.</p> <p>The stormwater management plan is considered to be appropriate for the proposed development and will achieve the stormwater outcomes desired by Council.</p> <p><b>Assessing Officer Comment:</b> Council requested additional information to be provided regarding the stormwater drainage modelling. The additional information was provided by the applicant on 8 September 2020.</p> <p>Council's Chief Engineer has advised that the information provided is sufficient for Council to be satisfied that the stormwater management system has been designed to maintain natural stormwater flows.</p>
<p>Impacts on local road network not appropriately addressed</p>	<p><b>Applicant response:</b></p> <p>The construction traffic impacts have been assessed as part of the provided Traffic Impact Assessment (TIA) at Appendix D of the SEE. The TIA projected an average of 10 light vehicles per day of which will arrive between 6am and 7pm then departing the site between 5pm and 6pm. Heavy vehicles are projected to be 5 per day spread out between 10 am and 4pm.</p> <p>Protection of Bushs Lane is able to be conditioned as part of a future determination for the development. Conditions can be made requiring a dilapidation report on Bushs Lane to establish its pre-works state along with a condition requiring a bond be paid to Council for any potential damage to the roadway.</p>

	<p>With such conditions in place the roadway will be maintained and repaired to its pre-development state.</p> <p><b>Assessing Officer Comment:</b> There will be minimal traffic to and from the site during operation of the development with only 1 vehicle per day. Consequently, the only material traffic impact would occur during construction, maintenance upgrades and decommissioning of the development.</p> <p>The applicant has advised that there will be 18 vehicle movements per hour during the construction phase which consists of 10 light vehicles, 3 road work vehicles and 2 delivery vehicles. These vehicle movements would be required to occur along Black Jack Road from the intersection of the Oxley Highway as Bushs Lane would not be suitably constructed to accept this traffic. It is considered by Councils Chief Engineer that the existing road network can safely accommodate these vehicles.</p> <p>In order to ensure that the development does not have an impact on the local road network a condition may be imposed to provide a dilapidation report for Black Jack Road and Bushs Lane, which is to include satisfactory repair of the local road network during and post construction.</p>
Conflict between construction and operational vehicles, pedestrians and cyclists	<p><b>Applicant response:</b> All employees and contractors associated with the construction phase to abide by the road rules and will be notified of the road conditions to which they will interact with.</p> <p><b>Assessing Officer Comment:</b> In order to ensure that the development does not cause conflict between construction and operational vehicles, pedestrians and cyclists, a condition may be imposed to prepare a Construction Management Plan.</p>
Possible health implication to long term exposure to high voltage electrical transmission	<p><b>Applicant response:</b> Health impacts from electrical generation and transmission generally pertain to those who utilise pacemaker systems to regulate heart function. This occurs when the electrical fields interfere with the electrical function of the pacemaker. Many studies have investigated the risk associated with this interaction however the studies found that the person may</p>

	<p>experience discomfort when in close proximity to the source of the electrical/magnetic field and is generally short term in nature.</p> <p>Issues arising between the use of electrical fields and pacemakers generally require close proximity to high energy electrical plant or equipment which includes many household appliances, high energy tools, any faulty electrical appliance, and electrical generation and transmission.</p> <p>The proposed solar PV farm does not use a traditional generator system with the electrical fields generated by each individual solar PV panel generally low and inline with lower energy appliances common within one's home. The greatest source of electromagnetic fields will be the inverter and transformers unit. These units are for all practical purposes largely similar to the padmounted substations used for general electricity distribution in urban and semi-urban streets and frequently located adjacent to residential properties.</p> <p>The electrical power station unit and inverter unit are associated with the transmission of electricity from solar panels to the transmission grid and may hold a risk to those with pacemakers. These units are proposed to be located wholly within the site and hold substantial buffer distances to nearby residents. It is also noted that additional medium voltage infrastructure intended to be constructed for the purposes of the solar PV farm will be located further away from residents than the existing Essential Energy 22 kV (medium voltage) network currently installed along Bushs Lane. Further, security fencing is employed around the site to prevent unauthorised entry into the site blocking events where an unauthorised person with a pacemaker comes into proximity with the units.</p> <p>With the buffer distances involved and the provision of security fencing the potential for a medical event tied to the generated electrical fields is considered to be negligible.</p> <p><b>Assessing Officer Comment:</b> According to the Australian Radiation Protection and Nuclear Safety Agency (ARPNSA), which maintains</p>
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	<p>continual oversight of emerging research into the potential health effects of the exposure to electromagnetic fields (EMF), have found that the generation, distribution and use of electricity can produce extremely low frequency (ELF) EMF from electrically charged particles. Humans are exposed to ELF EMF everyday in their homes, workplaces and the environment due to the widespread use of electricity.</p> <p>The ARPNSA research has found that there is no established evidence of health effects resulting from the exposure to electric and magnetic fields from powerlines, substations, transformers or other electrical sources, regardless of proximity. It is therefore considered that the exposure to the proposed generated electrical field will have not greater health implications than the daily exposure to other ELF EMF in the homes, workplaces and the environment.</p>
<p>The development is inconsistent with Council's Urban Land Use Strategy</p>	<p><b>Applicant response:</b></p> <p>It is acknowledged that part of the development area is located within a Residential Phasing area noted within the Gunnedah Urban Landuse Strategy. The site is located within Area M and is noted to retain the existing RU4 with R5 with a re-evaluation once Areas# D, F and H are exhausted.</p> <p>The development area is located on the very south western corner of Area M with a large portion of the development area located outside of Area M, see Figure 1.</p> <p>Figure 1 – Residential Phasing Plan Extract – Area M</p>  <p>The location of the development area at the boundary of the area allows for sufficient area</p>

	<p>for any future residential expansion if deemed to be required by Council once the existing housing stock has been exhausted. The proposed landscaping, while designed for existing proximate residential properties will continue to provide effective visual buffering to any future residences in the area.</p> <p><b>Assessing Officer Comment:</b> The inconsistency with Council's Urban Land Use Strategy has been addressed within the assessment report and forms the basis of a number of the reasons for refusal.</p>
The dust impacts from unsealed vehicles movements	<p><b>Applicant response:</b></p> <p>The proposed vehicle route travels via Blackjack Road turning onto Bushs Lane and travelling approximately 300m on unsealed road to the proposed entry point. All heavy vehicles travelling along this portion of road along with internal roadways are to limit speeds which will significantly reduce dust impacts on the surrounding area.</p> <p>Construction works are limited in duration and with the limited time spent on the unsealed road and the speed restrictions to be applied to heavy vehicles the dust levels generated are expected to be low.</p> <p><b>Assessing Officer Comment:</b></p> <p>The SEE and supporting technical studies identify a range of recommended dust mitigation measures which include the following:</p> <ul style="list-style-type: none"> <li>• Setting maximum speed limits for all traffic within the subject site to limit dust generation.</li> <li>• Use of a water tanker or similar to spray unpaved access tracks during the construction phase where required.</li> <li>• Application of dust suppressants or covers on soil stockpiles where required.</li> </ul> <p>An additional measure may be conditioned to ensure that during construction all vehicles are to use Black Jack Road to access the site as this local road network is bitumen sealed.</p> <p>The above recommended conditions may be incorporated to ensure that dust impacts are significantly reduced and to ensure compliance in this regard.</p>
Management of vegetation regrowth and	<b>Applicant response:</b>



weeds has not been adequately addressed	<p>Weeds on site will be appropriately managed. Details regarding proposed Weed Management procedures can be provided to Council as a condition of consent.</p> <p><b>Assessing Officer Comment:</b> The applicant has submitted a Flora and Fauna Assessment which addresses weed management. The following weed hygiene procedure measured were recommended:</p> <ul style="list-style-type: none"> <li>• All vehicles, equipment, footwear and clothing should be clean and free of weed propagules prior to entering the subject site.</li> <li>• Any weeds that are removed during the proposed works should be disposed of appropriately.</li> </ul> <p>Should the development application be approved by the NRPP, a condition may be applied to ensure appropriate weed management occurs.</p>
Increased Bushfire risk on surrounding areas	<p><b>Applicant response:</b></p> <p>The proposed solar PV farm has been designed with consideration of the Planning for Bushfire Protection 2019 published by the Rural Fire Service. This includes appropriate buffer distances between infrastructure and combustible materials reducing risk of bushfire and ensuring the electrical supply is maintained during emergencies to assist facilitate firefighting efforts.</p> <p><b>Assessing Officer Comment:</b> The subject site is not identified on Council's current Bushfire Prone Land Map as being potentially bushfire prone.</p> <p>The proposed development is defined under the Gunnedah LEP as 'electricity generating works' which it is not considered to be development for a Special Fire Protection purpose and as such it does not require a Bush Fire Safety Authority from the Commissioner of the NSW Rural Fire Service (NSW RFS) under section 100B of the <i>Rural Fires Act 1997</i>.</p> <p>The site for the proposed development is generally located on previously cleared areas of the site with only minimal ground cover. With the installation of solar panels and associated infrastructure on the site there is the potential</p>

	<p>for an increase in fuel loads from unmanaged grasslands which could lead to grassfires if not effectively managed through mitigation measures.</p> <p>There is also the potential for fire ignition during the construction phase with the movement of machinery, use of welders and grinders and the like, storage of flammable liquids, electrical faults, lightning strikes and cigarette butts. The flammability of the solar farm is considered to be relatively low as the solar panels are predominantly constructed of glass, silicon, steel and aluminium.</p> <p>It is therefore recommended that a Fire Management and Emergency Response Plan be prepared for the development if the development was to be supported. This plan would need to identify the fire risks and controls of the development, and the procedures that would be implemented if there is a fire on site or in the vicinity of the site.</p>
Impacts on local flora from changes to microclimate	<p><b>Applicant response:</b></p> <p>Solar PV farms have been found to increase air temperatures above the solar panels. As distance from solar panels increases the air temperature returns back to ambient temperatures which minimises impacts outside of the solar PV farm site. Air temperatures below solar panels are noted as being lower due to the reduced exposure to light.</p> <p>Landscaping utilising canopy trees as proposed have been found to be effective at reducing temperatures. The proposed landscaping will effectively manage any microclimate changes resulting from the solar PV farm.</p> <p><b>Assessing Officer Comment:</b> Impacts on local flora from changes to microclimate have been addressed above within the assessment report.</p>
Vegetation clearing potentially exceeds BOS thresholds of 0.5ha as per Clause 7.2 of <i>Biodiversity Conservation Regulation 2017</i>	<p><b>Applicant response:</b></p> <p>The development area is largely cleared of vegetation with the remaining trees located in pockets at site boundaries barring a total of 9 trees located within the solar PV farm footprint. A small portion of immature shrubs located within the north eastern portion of the site will also be removed to facilitate the proposed development.</p>

	<p>Combined with groundcover species present on the site the overall vegetation clearing is below 0.5ha and does not exceed the BOS threshold.</p> <p><b>Assessing Officer Comment:</b> The proposed land clearing does not exceed the BOS threshold. No further consideration is required.</p>
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#### ***S4.15(1)(e) the public interest***

The development is not integrated or designated development. During the advertising and neighbour notification period Council received thirteen (13) unique objections. As a result of the objections that raise a number of key concerns, which is supported in the assessment report, it is considered that the development is not within the public interest.

### **3. Conclusion**

The application is referred to the Northern Regional Planning Panel for determination in accordance with Clause 20 and Schedule 7 (5)(a) of the State Environmental Planning Policy (state and Regional Development) 2011, as the application is defined as 'private infrastructure' with a CIV exceeding \$5 million.

Development Application (DA2020/035) for the construction and operation of electricity generating works at 262 Hunts Road, Gunnedah has been assessed against the requirements of Section 4.15(1) of the Environmental Planning and Assessment Act 1979, the *Environmental Planning and Assessment Regulation 2000*, the relevant State Environmental Planning Policies, the New England North West Regional Plan, Gunnedah Urban Landuse Strategy, Gunnedah Shire Local Strategic Planning Statement, Gunnedah Local Environmental Plan 2012 and Gunnedah Shire Development Control Plan 2012 and is recommended for refusal based on the following:

1. Pursuant to the provisions of Section 4.15 (1)(a)(i) of the Environmental Planning and Assessment Act 1979, the development is considered to be inconsistent with the aims of the Gunnedah Local Environmental Plan 2012 and objectives of the RU4 Primary Production Small Lots zone;
2. Pursuant to the provisions of Section 4.15 (1)(a)(iii) of the Environmental Planning and Assessment Act 1979, it is considered the proposal fails to demonstrate consistency with the provisions of the Gunnedah Development Control Plan 2012: - Chapter 4 Design, Traffic and Access, Landscaping, Noise and Chapter 6 Conflicting Land Uses;
3. Pursuant to the provisions of Section 4.15 (1)(b) of the Environmental Planning and Assessment Act 1979, it is considered the proposal fails to demonstrate that the likely impacts of the development relating to noise, visual, social and economic impacts will not be adverse;
4. Pursuant to the provisions of Section 4.15 (1)(c) of the Environmental Planning and Assessment Act 1979, it is considered the proposal fails to demonstrate that the site is suitable for the development;
5. Pursuant to the provisions of Section 4.15 (1)(d) & (e) of the Environmental Planning and Assessment Act 1979, it is considered that with the submissions received and the circumstances of the case, the application fails to demonstrate that proposal is in the public interest;

6. The development is not supported by the Gunnedah Urban Landuse Strategy. The development would prevent the land from being developed into residential lots for the future growth of Gunnedah for over 25 years; and
7. The development failed to address the listed items within the request for information issued by Gunnedah Shire Council dated 8 April 2021 under Section 54 of the Environmental Planning and Assessment Regulation 2000.

## Annexure A Reasons for Refusal

1. Pursuant to the provisions of Section 4.15 (1)(a)(i) of the *Environmental Planning and Assessment Act 1979*, the development is considered to be inconsistent with the aims of the *Gunnedah Local Environmental Plan 2012* and objectives of the RU4 Primary Production Small Lots zone;
2. Pursuant to the provisions of Section 4.15 (1)(a)(iii) of the *Environmental Planning and Assessment Act 1979*, it is considered the proposal fails to demonstrate consistency with the provisions of the *Gunnedah Development Control Plan 2012*: - Chapter 4 Design, Traffic and Access, Landscaping, Noise and Chapter 6 Conflicting Land Uses;
3. Pursuant to the provisions of Section 4.15 (1)(b) of the *Environmental Planning and Assessment Act 1979*, it is considered the proposal fails to demonstrate that the likely impacts of the development relating to noise, visual, social and economic impacts will not be adverse.
4. Pursuant to the provisions of Section 4.15 (1)(c) of the *Environmental Planning and Assessment Act 1979*, it is considered the proposal fails to demonstrate that the site is suitable for the development.
5. Pursuant to the provisions of Section 4.15 (1)(d) & (e) of the *Environmental Planning and Assessment Act 1979*, it is considered that with the submissions received and the circumstances of the case, the application fails to demonstrate that proposal is in the public interest.
6. The development is not supported by the Gunnedah Urban Landuse Strategy. The development would prevent the land from being developed into residential lots for the future growth of Gunnedah for over 25 years.
7. The development failed to address the listed items within the request for information issued by Gunnedah Shire Council dated 8 April 2021 under Section 54 of the *Environmental Planning and Assessment Regulation 2000*.



## Annexure B Submissions