

1. Executive Summary

1.1 Reason for consideration by Regional Planning Panel

The Development Application has been referred to the Northern Regional Planning Panel (NRPP) for determination pursuant to Clause 5(a) of Schedule 7 of the State Environmental Planning Policy (State and Regional Development) 2011, as the development is private infrastructure works with Capital Investment Value (CIV) of more than \$5 million.

1.2 Description of Proposed Development

The development is seeking consent for the construction and operation of Electricity Generating Works (Solar Farm) with a generation capacity of 5MW and construction of boundary fence and landscaping.



Figure 1. Site Plan

1.5 Recommendation

It is recommended that the Development Application No. 2021/035 be approved, subject to the conditions of consent contained in Annexure A.

1.6 *Annexures*

Annexure A	Draft Conditions of Consent
Annexure B	Submissions

2. Evaluation of Development Application

2.1 *Proposed Development*

The development application is seeking consent for the construction and operation of an Electricity Generating Works (Solar Farm) with a generation capacity of 5MW. The Solar Farm comprises:

- 12,000 solar modules;
- Two 3.4MW inverter stations;
- Security fence; and
- Perimeter landscaping on exterior of security fence.

2.2 *Site Description*

The proposed development is located within the boundaries of Lot 48 DP 755474, being 781 Wandobah Road, Gunnedah. The development site contains an existing dwelling house. The development will occupy part of the site. The occupied area of the site is located to the north of the dwelling and comprises approximately 12.3 hectares (ha) of the 49.57ha site area. The lot has direct frontage to Wandobah Road to the West of the site.

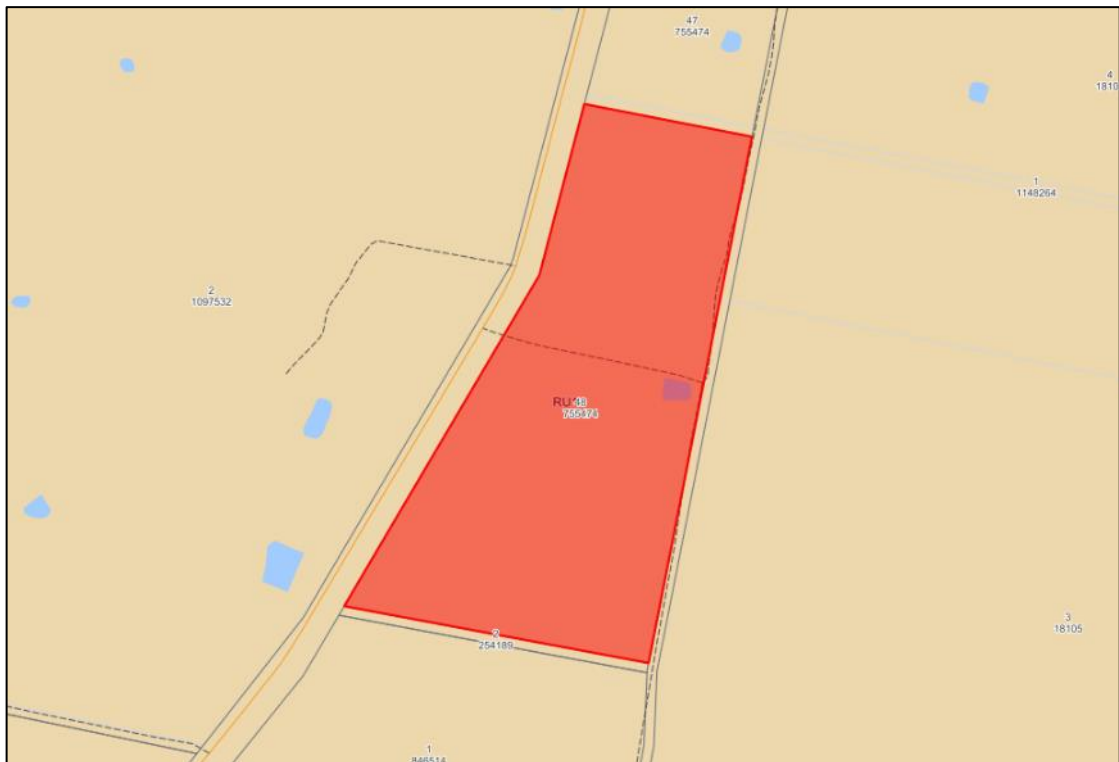


Figure 3. Development Site (Sourced: Gunnedah Mapping System)

2.3 *Background*

The development site is currently used for agricultural grazing including residential activity. The property was granted a Complying Development Certificate (No. 356/2013) by Private Certifier, for the erection of a Dwelling House in July 2013. A Development Consent was issued in February 2017 for additions to the dwelling house.

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

Evaluation of the development application has been undertaken in compliance with Section 4.15 of the EPA Act 1979.

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

➤ *State Environmental Planning Policy (Infrastructure) 2007*

The development proposes the development of a 5MW solar farm, which is regarded as being electricity generating works, as per definition within the standard instrument. The development site is zoned RU1 which is a prescribed rural zone within Division 4 of this SEPP. Hence, the development site is permitted with consent, subject to Clause 34(b).

The development site adjoins a public road reserve which does not contain a constructed public road. This road reserve retains an electrical transmission line. There is no easement within the road reserve for the purposes of electrical transmission. The development does not occur within 5 metres of the overhead electricity power line and there are no underground electricity power lines within the immediate area around the site. Hence, there was no obligation for Council to refer the development to the local service provider (Essential Energy) prior to determination of the development.

➤ *State Environmental Planning Policy (Koala Habitat Protection) 2020*

The development is required to be considered in accordance with the provisions of *State Environmental Planning Policy (Koala Habitat Protection) 2000* as the Gunnedah Shire is listed within Schedule 1 of *State Environmental Planning Policy (Koala Habitat Protection) 2021* and the site is zoned RU1 Primary Production. The development site has a total area of 50.147 ha. Hence, any development would be subject to assessment under this SEPP.

The Biodiversity assessment report contained within the Statement of Environmental Effects (SoEE) identified that the development site contains two Eucalyptus Coolabah (*Eucalyptus microtheca*). Eucalyptus Coolabah are not listed as being a Feed Tree under Schedule 2 with this SEPP. As illustrated in Figure 4, there is more vegetation within the development site than the two Eucalyptus Coolabah trees indicated within the applicants report. This does not enable the assessment of the development to conclude what other vegetation species are present within the site and in turn, the assessment cannot conclude if the development site meets the

definition of ***potential koala habitat**. As it cannot be concluded that the site does not contain less than 15% of the total trees onsite as Koala Feed Trees, in accordance with the definition, this assessment then makes the assumption that the site is potential Koala Habitat. In accordance with Section 8(3)(b) of the SEPP, this assessment must conclude if the site is 'Core Koala Habitat'.

***potential koala habitat** means areas of native vegetation where trees of the types listed in Schedule 2 constitute at least 15% of the total number of trees in the upper or lower strata of the tree component.



Figure 4 – Aerial Image of Site

The development site has no record of any historical Koala Sighting and the site inspection did not indicate any presence of breeding females or history of a historical koala population onsite. Hence, the development site is not regarded as being core Koala Habitat. Hence, no further assessment is required and no further action is required.

➤ *State Environmental Planning Policy No. 55 – Remediation of Land (SEPP No. 55)*

The development site is not located in an investigation area and there is no record within Council's record system which lists any record of identified site contamination. The development site has historically been used for agricultural purpose. The development site is not known to historically contain any cattle or sheep dips within the site area. The site is historically known to be used for animal grazing. The development site is not known to have been used for any other previous activity which may have resulted in contamination of the site. The proposed land use does not propose an activity for residential, education or child care purposes. Hence, Council's assessment has considered that the site is not known to contain any areas of contamination and that the site is suitable for the proposed development use.

➤ *State Environmental Planning Policy No. 64 – Advertising Signage (SEPP No. 64)*

The development does not propose any signage or advertising structures that require specific consideration under SEPP No. 64.

➤ *State Environmental Planning Policy (State and Regional Development) 2011*

The CIV of the development does not exceed \$30M and is not located within an environmentally sensitive area of State significance. Hence, the development is not listed as being a development of state significance within Schedule 1 of this SEPP.

The development is regarded as being Regionally Significant Development as the development is private infrastructure with a CIV over \$5M. As the development is regional development, the Northern Regional Planning Panel (NRPP) is the determining body for this application.

➤ *Regional Environmental Plans (REP)*

There are no Regional Environmental Plans (REP) which apply to the development site.

➤ *Gunnedah Local Environmental Plan 2012 (GLEP 2012)*

1.3 – Land to which Plan applies

The development site is located within the Gunnedah Local Government Area. The development is subject to the provision of the Gunnedah Local Environmental Plan 2012.

2.3 – Zone objectives and Land Use Table

The development site is zoned RU1 Primary Production. The land use Electricity Generating Works is not listed as being either permitted without consent or prohibited. Hence, as per the Land Use Table, the development is permitted with consent. The development is also permitted in accordance with Clause 34 of the *State Environmental Planning Policy (Infrastructure) 2007*, regardless of the permissibility of the GLEP 2012.

The development is considered to be in line with the land use objectives of the RU1 land zone. The development proposes the development of a solar farm within the rural locality, which is a sustainable rural land use and considered to be appropriate on the site due to its compatibility with ongoing agricultural land uses. The development site is over 1 kilometre from the nearest residential land, which retains separation between the land use activity and those that would not be compatible with the development.

In addition the development site is identified within the *Draft Gunnedah Shire Local Housing Strategy, Figure A: Summary of precincts and opportunities in residential development in Gunnedah*, as being a Transition area for future housing release area. In line with this Draft strategic document the development site is not marked for future residential development, but within an area that would be subject to investigation once all other identified areas within this strategy, had been developed. Hence, it is not expected that based on the limited life of the development, that the development would prevent residential development in areas identified within the Draft Gunnedah Shire Local Housing Strategy 2021. However, this would be compromised if the limitation on operational life was to be extended any further than the indicated intended operational life.

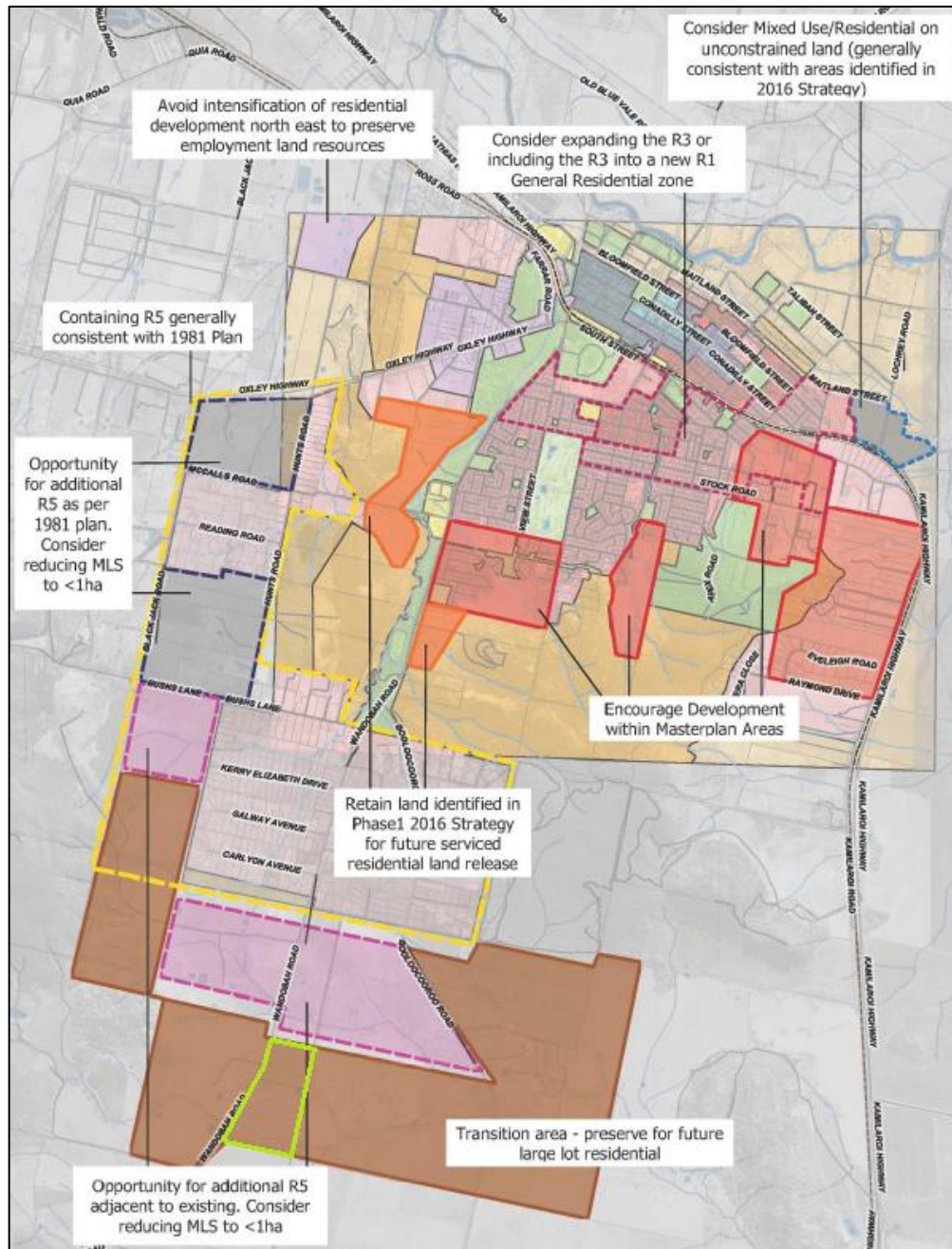


Figure 4. precincts and opportunities in residential development, development site marked in Green (Sourced: Draft Gunnedah Shire Local Housing Strategy)

4.4 – Floor Space Ratio

The development site is not subject to Floor Space Ratio.

6.5 – Essential Services

The development site is not serviced by Council's reticulated water supply. The existing dwelling has provision of onsite water storage for domestic usage. The development will not create a water supply demand. Hence, there is no need to

extend Council's water supply to service the site or to provide additional onsite water storage for water supply.

The development site is serviced by overhead electrical transmission lines. These service lines will be connected to the development to allow for the discharge of the generated electricity to the electrical service network.

The development site is not serviced by Council's gravity sewer service mains. The existing dwelling has provision of an onsite sewerage management system for the management of sewerage generation. The development is not expected to generate any effluent ongoing. Hence, there is no need to extend Council's sewer mains to service the site or to provide additional or upgraded onsite sewer management systems.

There is no Council's stormwater network adjoining the site or within the surrounding vicinity of the site which may be extended to the site if required. The development may result in additional stormwater runoff due to the installation of the solar arrays. There may be additional runoff due to the concentration of water runoff from the panels into a concise location. In the event that the development is recommended for approval it is suggested that a Stormwater Management Plan (SMP) be provided prior to the issue of a Construction Certificate. The SMP is to ensure that the stormwater leaving the site is less than the predevelopment flows.

The development site has directed frontage to Wandobah Road, which is a public road. The development proposes a separate vehicle access to the development which enables suitable road access to the development.

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 proposed development or the development site.

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

➤ Gunnedah Development Control Plan 2012

6. General Development Specifications

- 6.2 – Parking Requirements

Appendix 1 the Gunnedah Development Control Plan does not contain the proposed land use activity, to assign a specific number of onsite parking spaces required for the development. The submitted Traffic Impact Assessment

identified a need for a minimum of 40 parking spaces onsite during construction to accommodate construction staff and traffic. It is indicated that this will be a temporary parking area to the North of the solar arrays.

The development does not propose any permanent staff to be located onsite. However, there would be a need for staff to attend the site on occasion as required. It is suggested that one (1) permanent parking space be provided onsite for the occasions when staff attend the site. The temporary parking area should be treated with dust suppressant material to ensure that the traffic movements do not give rise to dust generation from the site.

- **6.3 – Landscaping**

The development proposes landscaping on the exterior of the development security fence. This landscaping barrier will form the only means of reducing the visual impact of the development. The detailed landscaping plan proposes vegetation planting along the North, West and South boundaries of the site. The developer does not propose any landscaping along the East boundary of the site.

Council's assessment of visual impacts has concluded that there is a necessity to require that landscaping occur along each boundary, including the East elevation of the lot. Hence, Council has recommended that an amended detailed landscaping plan be prepared and submitted to Council for consideration, including vegetation along the East boundary. All vegetation to be used within the landscaping plan is to consist of low maintenance, drought and frost tolerant species. Considerations of visual impact are addressed further through this report.

As the development does not require more than 10 permanent parking spaces onsite there is no need for landscaping to be provided within the parking area to provide shading over parking spaces. Hence, there is no landscaping or shade structure required within the development site to provide shading to parking areas.

- **6.4 – Outdoor Lighting**

The development is not indicated to propose any security lighting as part of the development.

- **6.5 – Outdoor Advertising/Signage**

The development does not propose any business identification signs or advertising structures as part of the development consent sort.

- **6.6.1 – Environmental Effects**

Traffic

Traffic generated by the development will predominately occur during the 3 month construction phase of the development, with limited infrequent attendance to the site expected upon completion of the development works. The submitted Traffic Impact Assessment has determined that the development will generate 45 B-Double vehicle movements to the site during the construction of the solar farm. In addition to the delivery of materials, an additional 40 light vehicle movements is expected each day for the transport of the construction of their workforce. There is expected to be a single light vehicle movement to and from the site on a quarterly basis for maintenance throughout the life of the development. It is expected by Council that additional movements would occur in the event of more significant repair or maintenance works and similar vehicle movements would be expected during the decommission phase of the development post closure of the solar farm.

All traffic will be to and from the site via Wandobah Road. Wandobah Road will allow for vehicle movements attending the site either from the North (Gunnedah) or the South (Curlewis or Kamilaroi Highway). Due to the high intensity of the works over a short time and the infrequent ongoing access to the site upon completion of construction there is not expected to be any prolonged impact to the local road network. Hence, there is no obligation for any upgrades to Wandobah Road as a result of the development.

Flood Liability

The development site is not mapped within the Gunnedah Local Environmental Plan 2012 as being subject to flooding during a 1 in 100 year flood event. The development will not impact on any land which is subject to flooding in such a way that it may redirect flood waters to change flood flow paths or intensify flood impacts in an area.

Slope

The development site has a slight slope falling from the West to the East. The elevation change is minimal and viewed as being flat. The development does not require any earthworks to enable for the construction works to occur.

Construction impacts

The development will generate an increase in traffic during the construction works. The noise impacts of the development are to be confined to the construction period of the development. Construction traffic and noise has been addressed elsewhere throughout this report.

The construction works is expected to generate a significant amount of waste from packaging and transport provisions (eg, timber pallets and polystyrene). A Site Waste Minimisation Management Plan is required to be submitted and approved by Council prior to the issue of a Construction Certificate to ensure that

any waste that can avoid disposal to the Gunnedah Waste Management Facility occurs. Any excessive volumes of waste transported to the Gunnedah Waste Management Facility may impact on forecasted cell volume capacities and life of the facility.

Solid and Liquid Waste

The development is not expected to generate any ongoing solid or liquid waste. There are no amenities proposed for the ongoing operation of the site. Hence, there was no requirement for the installation of an Onsite Sewerage Management Facility. It is expected that temporary amenities will be provided for construction personnel.

Construction waste is to be stored onsite in an appropriate manor to ensure that there is no windborne litter. As indicated previously A Site Waste Minimisation Management Plan is required to be submitted and approved by Council prior to the issue of a Construction Certificate for the management and disposal of construction waste. Similarly a Final Decommission and Rehabilitation Report is required prior to decommission of the facility to address how decommissioned materials will be addressed. The submitted Decommission Assessment indicated that 'At the end of their life, the PV modules will be removed from site and transported on semi-trailers to a dedicated solar panel recycling facility'. Council wishes to ensure that waste is recycled where appropriate to ensure that solar arrays and infrastructure is not sent to landfill.

Air Quality (odour and pollution)

The development is not expected to generate any odour or air pollution during the ongoing operation of the solar farm. As there will be no consistent traffic movements to or from the site and none of the ongoing operation will generate any odour or pollutants the development is not expected to have a detrimental impact to air quality. Increase in use of renewable power sources may result in reducing global CO² emissions.

Noise emissions

The development construction will involve the driving of steel posts approximately 1.5-3.5 metres into the ground using a pile driver. It is expected that this is the most intense noise generation of the development. There will be some earthwork with earthmoving equipment involved for the trenching and preparation of the site.

The Noise assessment considered what the likely noise impacts where from Trenching and Earthworks, Piling, Assembly and Transport (onsite). It was concluded that the greatest noise level would be from piling rigs with a total sound power level of 113dBA.

The noise modelling determined that all receivers, except receiver R1 (Dwelling on development site) met the Noise Management Levels. Hence, it is concluded that for these other receivers, which are not associated with the development, that there is either natural topography or sufficient distance between the development site and these receivers to minimise noise generation to a suitable level that it would not generate any intrusive noise at these receivers.

The only receiver which experienced an exceedance of the Noise Management Level was Receiver R1, which is located to the south of the development area. Noise levels at this receiver are expected to range from 31-54dBA, which is above the assessment Noise Management Level of 45dBA. The noise is expected to be exceeded when earth works and other construction activities are located at their closest point to the dwelling. Receiver R1, is associated within the development site, being located within the boundaries of the development allotment.



Figure 5 – Residential Receivers considered in noise assessment (Figure 1, Noise Assessment, prepared by Muller Acoustic Consulting)



Figure 6— Construction Noise assessment, 45dBA contour (Figure 2, Noise Assessment, prepared by Muller Acoustic Consulting)

The submitted noise assessment determined that the noise generation from systems utilised within the tracking arrays of the solar modules would be insignificant compared to ambient background noise levels at any of the assessed receivers. Operating motors would operate for a 1 minute over a 15 minute period to move tracking systems. The operational noise levels were expected to be less than 30dBA at all receivers.



Figure 7– Operational Noise assessment, 35dBA contour (Figure 3, Noise Assessment, prepared by Muller Acoustic Consulting)

Operational traffic is expected to be restricted to one vehicle quarterly. The vehicle is expected to be a light vehicle only and will be for the purposes of maintenance or inspection of the site and will not generate any significant noise levels due to the infrequent and low movements. Based on these conclusions Council has determined that it believes that there would be no noise impacts to nearby receivers from ongoing operation of the facility, regardless of period of day within which the noise was generated. Any ongoing maintenance would occur during normal business hours. Hence, there would be no necessary ongoing mitigation measures, with the exception of ensuring that equipment onsite is maintained in a good working order.

Water quality

The development is not expected to influence water quality downstream. The development proposed use is not expected to potential create any soil contamination which could be migrated off site and potentially pollute areas downstream of the site. The development will not have excessive volumes of organic matter which could encourage water pollutants such as blue-green algae to occur within standing water downstream of the site. The development

is not expected to have any significant excavated portions of the site which may result in ongoing soil erosion and soil degradation. Hence, it is concluded that the development will not affect water quality.

Sustainability

The development of a solar farm is considered to be a sustainable activity, reducing the NSW reliance on coal fired power generation. The development has committed to the removal and recycling of solar panels and all other materials upon decommission of the site.

- 6.6.2 – Erosion and Sediment Control

Erosion and Sediment are to be established in accordance with the Managing Urban Stormwater: Soils and Construction Vol 1 (Blue Book) (DECC, 2008). Erosion and Sediment must be established prior to works commencing and for the life of the development.

- 6.6.3 – Conflicting Land Uses

There is suitable distance between the development site and those of the residential zoned land nearby which could experience a negative visual and social impact from the construction of the development. Adjoining areas are rural and not expected to be utilised for residential purposes until close to the end of the life period of the development (35 years). These considerations have been made previously through this report. The development is not expected to prevent agricultural use of the site or any of the allotments directly adjoining the site. Hence, there is considered to currently be enough buffer distance between the development site and any competing land uses.

- 6.6.4 – Waste Management

The Decommission Assessment submitted with the development application indicates that at the end of their life, the solar modules will be recycled and that all underground cables and earthwork networks will be excavated and recycled.

There is not expected to be any waste generated during operation of the site.

- 6.6.5 – Noise

Council's standard construction operating period is to be imposed as a condition of consent to ensure that the construction hours are limited to those appropriate to protect the amenity of the immediate locality. Noise Impacts have previous been considered through this report.

- 6.6.6 - Geology

The development will not remove any vegetation from the site and the establishment of landscaping barrier around the perimeter of the development

area will help to prevent any erosion around the site security fence. The development activity is not expected to attribute to additional salinity potential.

The water runoff from solar panels may result in localised soil erosion and scarring. It is expected that encouraging the retention of grasses below the panels will assist with reducing such erosion occurring and prevent increase in water runoff from the site.

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

The development site is not subject to a planning agreement or draft planning agreement and the development does not include a proposal, between the development applicant, relevant body or Council, to enter into a planning agreement.

S4.15(1)(a)(iv) the regulations

Joint Regional Planning Panels Order 2009

Gunnedah Shire Council is identified as being located within the Northern Regional Planning Panel.

Environmental Planning and Assessment Regulation 2000

The development is not considered to be Designated Development under the provisions of Schedule 3 of the *Environmental Planning and Assessment Regulation 2000*. Refer to Part 1.3 previously through 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

See comments in relation to the following relevant matters indicated below:-

Context & Setting

The development site located within a rural locality with the immediate area being used for agricultural purposes. The site is part of the surrounding plain and is not located in an elevated position, resulting in the development being a prominent feature in the locality.

The site is located to the South of the Gunnedah Township and the North West of the Village of Curlewis. The closest residential zone is the R5 Large Lot Residential area of Gunnedah located over 1 kilometre to the North of the development site. The adjoining rural lots contain sporadic dwelling houses.

The development proposes the construction of a Solar Farm and associated structure. The solar farm will consist of the installation of 12,000 solar modules in 140 rows (103.5 metres in length) on tracked system, installation of two 3.4MW AC inverter stations and

transformers, connected by underground cables to overhead power lines adjoining the site, construction of perimeter security fence and establishment of landscaping around the exterior of the security fence. In the context of the locality the development will be a significantly higher density to the adjoining rural land with the massing of the solar arrays into approximately 12.3ha of the site. The resulting coverage is approximately 25% of the entire allotment (49.57ha). The security fence is also a different visual appearance to the typical rural fencing seen in rural landscapes, with the fence proposed as a 1.8 high security fence.

To reduce the visual impact of the development on the locality the developer has proposed the landscaping barrier on the North, West and South boundaries of the site, to reduce the visibility of the development. The development fronts Thompson Road to the East. Even though Thompson Road is unconstructed, this is still a public road reserve and it is possible that this will be constructed during the requested 35 year life span of the development and thus will see traffic passing along this side of the site. In addition there are at least 5 dwellings to the East of the site which are identified as being elevated over the site. It is the conclusion of Council's assessment that landscaping is required along this elevation of the site to reduce the visual impact of the development fence as well as any screening that this landscaping would provide to the solar arrays.



Figure 8 – Residential Receivers (Figure 3 of Visual Impact Assessment)

To ensure that landscaping is suitably established on this elevation as well as the proposed elevations of the development site, Council has recommended that a detailed landscaping plan be provided to Council for approval prior to the issue of a Construction Certificate. This will ensure that appropriate vegetation is selected for the development and also that species

will establish a suitable visual screen to reduce the visual impact of the development. The landscaping plan is to include a maintenance schedule and replacement program for unsuccessful planting, to ensure that all vegetation established in the landscaping barrier reaches a suitable maturity and that maturity is reached within a suitable timeframe. Any unsuccessful planting would need to be replaced or the landscaping barrier will not be successful in its intended outcome of completing suitable visual barrier to adjoining residential receivers and from public reserves.

The development proposes to establish landscaping around the perimeter of the fence as part of the development work. However, the visual impact assessment does not demonstrate clear visual screen until the vegetation reaches maturity. Council suggests that some form of temporary screening should be established until all vegetation reaches maturity and suitable cohesion to reduce visibility of the site. As the maturity of vegetation cannot be achieved quickly Council suggests that landscaping should be established prior to the issue of a Construction Certificate. Landscaping does not require any construction works so it would be acceptable and lawful for this to occur at a stage prior to a Construction Certificate. The landscaping barrier is the only visual preventative mitigation measure proposed for the development and the successful mitigation of the visual impact relies upon the successful establishment and speedy growth of the vegetation. Alternatively it could be the position of the panel to require the landscaping to be conducted as a deferred commencement condition, requiring that vegetation reach a certain height of density prior to the deferred commencement condition being satisfied, enabling the works for the fence and the solar farm to occur.

Solar panels are designed to absorb light to maximise its efficiency. To limit the reflection from the frame of the panels dark, light absorbing materials are used and glass is treated with anti-reflective coating. As part of the Statement of Environmental Effects a Glint and Glare Assessment was included to consider the likely impact on residential receivers. The GlareGauge analysis concluded that there was no glare potential at any of the receivers within 2 kilometers of the development site. The tracking of the solar panels is a slow rotation. Hence, the development is unlikely to cause glint occupancies at nearby receivers. Hence, no preventative measures, except those undertaken in the design and construction of the solar panels and arrays, were considered to be necessary.

Access, Transport and Traffic

The development site has frontage to Wandobah Road and Thompson Road. Thompson Road is unconstructed and does not enable access to the site. There is no obligation for the development to construct any portion of Thompson Road as the development will be provided with access from Wandobah Road for both construction and operational traffic.

The development expects a 3 month construction period which will involve construction traffic consisting of a total 45 B-Double trucks, plus light vehicles transporting workers required for construction. Operational traffic will be restricted to 1 light vehicle on a quarterly basis, for maintenance of the facility.

All operational and construction traffic will access the site via Wandobah Road. No access is proposed by the development to access from Thompson Road. Wandobah Road is bitumen constructed, unimproved by kerb and gutter. The proposed entry to the site is located at the northern position of the site fronting to Wandobah Road. This position provides good sighting lines in either direction, with visibility in excess of 250m in either direction. It is suggested that a condition be imposed to require hazard signs be placed, during the construction period, along Wandobah Road to identifying the turning of trucks on the approach to the entry to the site.

The development site is located within a rural locality and there are no public transport routes which pass the development site. It is considered to be unreasonable to require the diversion or additional of a public transport route for access to the site, due to the minimal operational staff access requirements, as per above. Due to the rural nature of the site and the distance of the development site from any other pedestrian pathways or cycleway it is also considered unfeasible to require the extension of any pedestrian pathways to the site.

Public Domain

The development does not propose to dedicate any public reserves as part of the development proposal. There is limited need or demand for this to occur due to the location of the development, the nature of surrounding areas and the distance of the development site from key active public spaces within the Gunnedah Township. The development does not require any pedestrian linkages between the development and public spaces based on the rural nature of the development.

The visual impact of the development from public spaces has been considered previously throughout this report. The development will be visible from public road reserves. However, the visual impacts are not expected to be distracting to motorists traveling past the site, especially upon establishment of mitigating measures.

Utilities

The development site does not have provision of Council's utility services. There is a Council water main located at the intersection of Wandobah Road and Blackjack Forest Road, approximately 1km to the north of the site. The development does not create any water demand and Council has no current desire for this service to be extended to service the site. There are no sewer services in the immediate area around the site that could be extended to service the development site. The Gunnedah LGA does not have any gas service lines that could service the development.

Heritage

The development site does not contain any identified items of environmental heritage, nor are there any located within the vicinity of the development, that will be impact by the development. Any items of potential Aboriginal or European heritage that are uncovered during construction works or land clearing undertaken as part of the development will

require the immediate cessation of operations and contact be made with the appropriate department within the Department of Planning and Environment.

Other Land Resources

The development will utilise current agricultural land. At the time of this assessment the development site appeared not to be used for agricultural purposes with no livestock onsite and the land devoid of any crops or fodder. The proposed activity would not prevent the site from being used for grazing purposes. Although the development does not include details of its proposal, solar developments have enabled the continued agricultural activity with the enablement of livestock grazing of grasses beneath the solar arrays. This would allow for co-use of the site. In addition the land use is only seeking consent for the operation of the facility for an infinite period of time. Once the solar farm is decommissioned the site can be returned to agricultural activities as solar farms are not anticipated to introduce any possible contamination issued to the site. Hence, the development is not anticipated to alienate agricultural productivity of the development site.

Water

The development site does not have provision of Council's water services and they are not available in an area that could be extended to the site. The development does not have a water demand. The development is not expected to impact or penetrate the ground water table.

The development is required to provide a stormwater management plan prior to the issue of a Construction Certificate to ensure that any stormwater generated by the development does not impact downstream. The development is outside of the area identified within the Gunnedah Development Services Plan for Stormwater. Hence, the development is not subject to development headwork charges for stormwater.

Soils

There is no previous history of usage on the site that could potential lead to a risk in site contamination. The development site does not have a high degree of slope across the site that could lead to potential for land slip and appropriate sediment and erosion controls are to be put in place during any construction works to ensure that no soil erosion or degradation occurs during the development works. It is considered that the sites soils are adequate for the development.

Air and microclimate

The proposed development is considered to have minimal impact on the existing microclimate in the area. The development is not expected to produce any odour or emissions from the site, with the development a sustainable land use activity. The construction of the development may result in the reduction of unsustainable electrical generation within the remainder of the region and state. The development is not expected

to generate any dust from traffic due to minimal traffic movements during the operation of the development. Due to the rural locality of the development there is not anticipated need for sealed internal driveways.

Flora and fauna

The development will not result in the removal of any trees from the site. The Biodiversity Inspection Report for the site determined that the development will require the removal of less than 1ha of native grasses from the site. The development site largely contains introduced species and pasture grasses. It is considered that the development is highly unlikely to impact on threatened species and ecological communities.

The development does not appear on the Biodiversity Values Map as being a site of Biodiversity value.

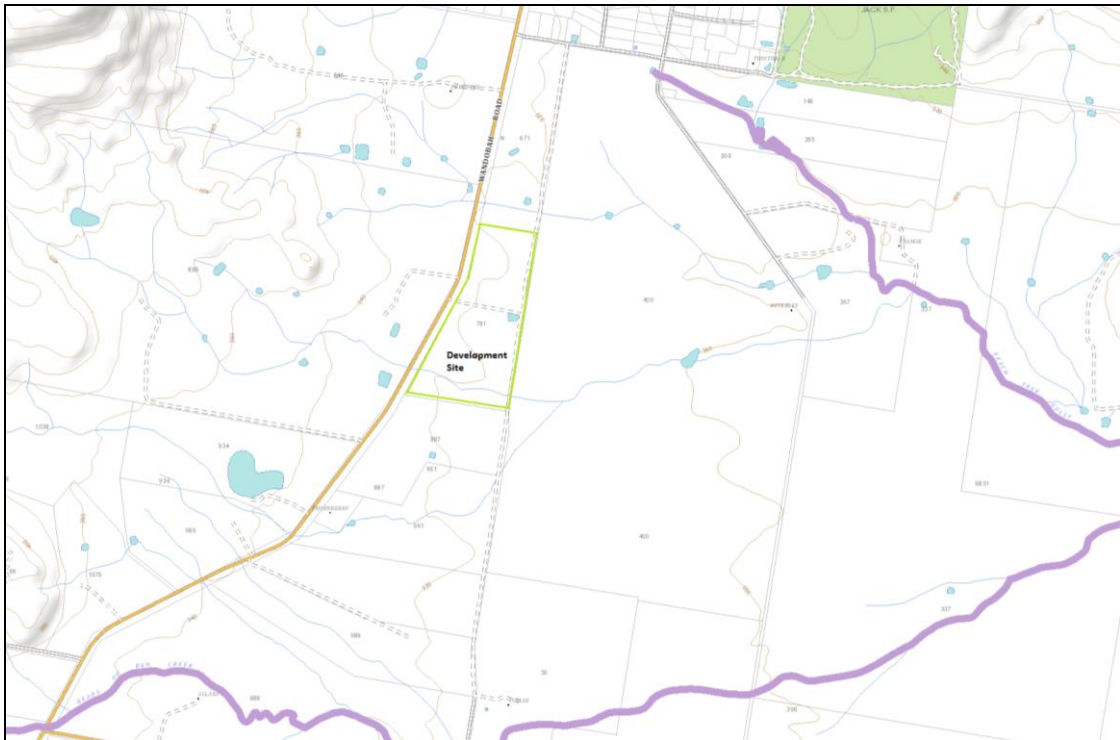


Figure 9 – Biodiversity Values Map.

Landscaping use around the site is to be low maintenance, drought and frost tolerant species which are suitable for the climatic conditions of the Gunnedah region. Landscaping will be maintained even after the development is decommissioned. Hence, appropriate selection of vegetation will ensure that landscaping could increase the landscape and the value of the habitat potential onsite.

Waste

The development site is not serviced by Council's sewer mains. There are no Council's services within the vicinity of the site and there are no obligation for the development to

extend any services to the site. The development is not expected to generate any effluent which would require disposal to Council's sewer or be managed onsite.

Waste generated during the construction works, during the operation of the site and during the decommission of the site, have been addressed previously through this report. The development site is not serviced by Council's kerb side collection. Waste is to be maintained onsite and disposed to a licensed waste management facility or recycling centre.

Energy

The development does not create any energy demand with the development activity creating electrical energy to feed back into the electrical grid. The development is a renewable energy source with the generation of electrical energy from solar. The development will create electricity to service the grid and does not include any energy storage capacity, such as batteries.

Noise & vibration

The development noise impacts have been addressed previously through the report.

Natural hazards

The site is not identified as being bushfire prone land or mapped within the Gunnedah Local Environmental Plan 2012 as being subject to a 1% ARI flood event. The site is not known to be subject to saline soils or land slip.

Technological hazards

The development is not expected to generate any technological risks. As previously addressed the development site is not bushfire prone land and Council's assessment under SEPP No. 55 did not identify any historical land use that could potentially have led to contamination of the site's soils.

Safety, security & crime prevention

The development facility will be unmanned, with only sporadic attendance by operating staff. The development does not identify the installation of any security surveillance equipment. The development will include the construction of a 1.8 metre high security fence to prevent unauthorised entry to the site. Due to the need for reduction in visual impacts the development will include landscaping around the perimeter of the site. This will prevent visibility into the site and natural surveillance by adjoining land holders or motorists passing the site. The distance of the site from residential areas and the absence of any pedestrian paths or linkages passing the site will reduce the likelihood of unsocial behaviours being attracted to the site. The development does not have a permanent workforce and as such there is no possibility of employees of the site attributing to unsocial behaviours within the community.

Social & Economic impact in the locality

The development will have little social impact on the Gunnedah or Curlewis communities, weather positive or negative. The development does not impact on public safety or social cohesion of the community. The development will provide a solar farm which may result in a small increase in renewable energy electrical generation.

Site design and internal design

The development site does not have a floor space ratio which would limit the development on the site. The development does not include any buildings, only the structure of the solar arrays and the two inverter stations. The solar farm will be located within a secure area of the site by the construction of a perimeter security fence. The development proposes landscaping on the exterior of the fence to reduce the visual impact of the fence on the locality.

There will be no buildings which can be occupied which need to be considered for health and safety.

Construction

Landscaping works are to occur prior to construction to ensure that the vegetation has sufficient time to establish and lessen the period of time that it takes for the landscaping to reach maturity and reduce the visibility of the construction. It is unlikely that the landscaping will reach maturity until well into the life of the development. Hence, it is recommended that other temporary mitigation measures be established and implemented prior to construction occurring to ensure that the construction works also does not create any visual impact.

Any construction works must be compliant with the Building Code of Australia.

Cumulative impacts

The proposed development is considered to have minimal cumulative impacts on the surrounding area with no emissions. There are no activities within the surrounding area that would in combination within the development have a negative impact on the environment, surrounding infrastructure or the environment.

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

The development is not restricted by any development occurring on any of the adjacent development. The development site is not mapped as being bushfire prone land or flood prone land. The development does not create any excessive transport demand with minimal ongoing traffic volumes. The development has been determined not to create any noise or glint and glare issues to the adjoining locality.

The development site has adequate setback from lot boundaries and the site has the necessary utilities for the proposed development. vehicle access is provided by the construction of a new access point to Wandobah Road. Electrical connections will be made to the transmission lines located within Thompson Road to the East of the site.

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

Gunnedah Community Participation Plan 2020 – Consultation

The development application for the construction of a solar farm is required by the *Gunnedah Community Participation Plan 2020* to be notified to adjoining land holders and exhibited for a period of 21 days. Council received two (2) submissions during the exhibition period. Each of the submissions were considered to be unique. A copy of submissions have been attached to this development assessment report, as Annexure C.

The matters raised within these submissions are addressed as follows:

- ***The development is location in same area of future urban housing development***
The development site is not currently zoned for residential activities. The site is not mapped as being future residential land within the Gunnedah Urban Land Use Strategy. The site is identified within the *Draft Gunnedah Shire Local Housing Strategy, Figure A: Summary of precincts and opportunities in residential development in Gunnedah*, as being a Transition area for future housing release area. This is not expected to be until the end of 2041 at a minimum. The development will not prevent residential development growth to the south of the current area due to the separation between the site and the expected next residential release areas within each of the Gunnedah Shires two strategic documents.
- ***Significant time for consideration of planning proposal for adjoining property***
The length of assessment of strategic planning assessments is not a consideration for this development assessment.

The assessment officer has investigated the indicated lodged application. There was no formal application for the planning proposal made to Council. hence, Council never proceeded the planning proposal, which explains why there was never any outcome for this planning proposal.

- ***The development site is more appropriate for agricultural uses***
Electrical Generation Works is a permitted land use by SEPP (Infrastructure) 2007. Council has assessed the development site against the impacts on productive agricultural land. The development does not prevent the site or the adjoining allotments from being used for agricultural activity. There is the ability to continue to graze underneath the solar arrays.
- ***Smaller scale to existing solar farms in LGA and unnecessary***
There is no limitation on how many solar developments that can be approved within an LGA. The necessity of the development is to be determined by the market values and is to be determined by the developer. The only limitation would be based on the space within the electrical transmission network. This is to be determined in consultation with the local service provider.
- ***In adequate capacity for additional vehicle within the road network and additional accesses from road reserve***
Council has assessed the development and determined that the construction traffic was not significant enough that the road formation of Wandobah Road is inadequate and requires upgrade. The operational traffic is less than the construction traffic. The development does not require upgrade of the road network.
- ***Vehicle access should be provided by Thompson Road***
Thompson Road is not constructed and cannot be utilised for vehicle access to the site without first being constructed. The development does not propose the construction of Thompson Road and it would be onerous for Council to require this as part of the development. Vehicle access would not lessen the impact of vehicles on Wandobah Road as vehicles would need to travel along Wandobah Road to get to Thompson Road. So there is no benefit to requiring access from Thompson Road road reserve opposed to Wandobah Road.
- ***Rotation of panels (East-West) will affect the ability for future houses to West of the site***
The rotation of solar panels will not prevent the ability for dwellings to be constructed on any of the adjoining land. Noise and visual impacts for the operational life of the development determined that these would not impact on any of the adjoining allotments.

- ***The development would result in a reduction to surrounding land values***
Land value is not a consideration for planning matters, in addition there is no evidence that the approval of the solar farm would reduce the land value of any of the properties within the surrounding area.
- ***The development would result in increased heat generation by solar panels***
The development is not expected to direct heat around the development area.
- ***Glare would affect residences to East and West from Panels***
The development included an assessment against glare. The glint and glare assessment has determined that none of the residence within 2 kilometre of the site would experience any glare or glint from the development.
- ***The proposed 3m wide landscaping barrier is inadequate***
Council has suggested that an amended landscaping plan be provided prior to the issue of a Construction Certificate to ensure that landscaping occurs along all boundaries of the development area. when this landscaping plan is supplied it will be considered by Council for its suitability to achieve an appropriate visual barrier that is consistent with the surrounding locality and has vegetation suitable within the region.
- ***The development may introduction of noxious weeds***
Council has recommended that a condition be imposed which requires a Construction Management Plan be submitted and be approved by Gunnedah Shire Council prior to a Construction Certificate being issued. This condition includes the need to address the management of reducing introduction of noxious weeds to the site.
- ***There is a lack of landscaping/visual screen on the Western side of the development***
The development landscaping plan proposes landscaping to be conducted along the North, South and West boundaries of the development area. it is expected that the reference within the submission to the western side of the development is an error and rather should refer to the Eastern side of the site, which is the only elevation without proposed landscaping.

Council has recommended that a condition be imposed which requires an amended landscaping plan be provided prior to the issue of a Construction Certificate. The amended landscaping plan is to include the addition of landscaping along the entire western elevation of the site. This is expected to reduce any visual impacts on residences located to the West of the site which may be detrimentally impacted by the development. Landscaping will be established within the property boundary and will provide visual protection from the public road reserve of Thompson Road, in the event that it is constructed.

- ***There are inconsistencies with construction hours within the application documents***
Council has included a recommended condition which limits development construction hours to those typically imposed by Gunnedah Shire Council on development within the Gunnedah LGA. The construction would be limited to:
Monday to Friday - 7.00am to 5.00pm;
Saturday - 8.00am to 1.00pm if audible on other residential premises, otherwise 7.00am to 5.00pm;
No work to be carried out on Sunday or Public Holidays.
- ***Requested relocation of parking and setdown area to south of the development area***
The relocation of the onsite parking and setdown area to the southern side of the development area was not considered to be warranted as the development did not have significant noise or air quality impacts on the adjoining residence to the North. The relocation of this area would require the alteration to the entry position of the development which would result in reduction of visibility of motorist to vehicles entering and exit the site.
- ***Requested relocation of the solar farm to southern end of the development site***
Similar to the relocation suggestion for the parking and setdown area, there is no reason that the development would need to be relocated to the southern side of the site. There is no exceedance of noise impacts and the relocation would not resolve all visual impacts.
- ***Need for repair of existing boundary fence***
The boundary fence of the development is not part of the development. There is no obligation for the developer to complete any works or upgrade to the property boundary fence. There are no controls within the Gunnedah LEP 2012 or DCP and there is no State Environmental Planning Policy which require a minimum standard of boundary fence be constructed. Hence, it would be onerous for Council to suggest a condition that this access be upgraded.
- ***Suggestion that existing boundary fence is not in the correct location***
Council has recommended that a condition be imposed that prior to works commencing a survey report be provided to confirm that the development will occur entirely within the property boundaries.

S4.15(1)(e) the public interest

The development application is not regarded as being designated or integrated development and hence, did not require concurrence from any public authorities. Council is not aware of any relevant federal or state planning studies, strategies or management plans that are applicable to the proposed development.

The development site is located outside of the area designated within the Gunnedah Urban Land Use Strategy (2016), as being future residential growth area. The development will not impact on the housing availability identified by this plan.

The Draft Gunnedah Shire Local Housing Strategy, which at the time of the writing of this report had not been adopted by Council, identifies the development site as being a transitional area to be preserved for future large lot residential development, refer to Figure 4. This strategy is expected to identify the housing needs of the Gunnedah Community up until the year 2041. The development proposal is a temporary activity for up to a maximum of 35 years. As this area is only identified as a transitional area within this plan, it is not expected that within the time period of the development that this area will be developed for residential purposes. The solar activity, being a temporary activity, including rehabilitation of the site upon decommission, will not prevent the future land use into the long term future expected by this strategy. The proposed activity is not expected to create possible land contamination that could alienate this land from being fit for future residential use.

The development application was placed on public exhibition for a period of 21 days. Council received two submissions during this exhibition period. Matters raised within the submissions have been addressed previously through this report.

3. Conclusion

The development application is seeking approval for the construction and operation of a 5MW electricity Generating Works (Solar Farm), comprising 12,000 solar modules, two 3.4MW inverter stations, security fence and landscaping.

The application has been assessed pursuant to the requirements of the *Environmental Planning and Assessment Act 1979*, *Environmental Planning and Assessment Regulation 2000* and any other applicable act or Environmental Planning Instrument. The evaluation of the application has demonstrated that the proposed development satisfies the necessary assessment in terms of the matters of consideration as identified by the legislation.

It is recommended that, in relation to Development Application No. 2021/035 at Lot 48 DP 755474, 781 Wandobah Road, Gunnedah, be approved subject to the listed conditions of consent identified within Annexure A.

ANNEXURE A – DRAFT CONDITIONS OF CONSENT

DEVELOPMENT APPLICATION NO. 2021/035

A. THAT DEVELOPMENT CONSENT BE GRANTED SUBJECT TO THE FOLLOWING CONDITIONS:

A1. The proposed development shall be carried out generally in accordance with the details set out in the following:

- Development Application form lodged, 05/05/2021;
- Statement of Environmental Effects, prepared by Zenith Town Planning Pty Ltd, dated 8 April 2021, Project Number 1920;
- Addendum to Statement of Environmental Effects – Gunnedah 2A Solar Farm (Development Application No. 2021/035), prepared by Zenith Town Planning Pty Ltd, dated 17 June 2021;
- Addendum No 2 to Statement of Environmental Effects – Gunnedah 2A Solar Farm (Development Application No. 2021/035), prepared by Zenith Town Planning Pty Ltd, dated 23 September 2021;
- Letter, prepared by Zenith Town Planning Pty Ltd, dated 20 October 2021;
- Submitted plans:
 - Prepared by ITP Renewables, dated 02/03/2021, Drawing No. A5000 GND2A-G-0400 (Location Plan), Drawing No. A5000 GND2A-G-2100, Rev 2 (General Arrangement Plan), Drawing No. A5000 GND2A-G-2200 (Site Elevations), Drawing No. A5000 GND2A-C-4300 (Inverter Footing Details), Drawing No. A5000 GND2A-C-5300 (Fencing Details), Drawing No. A5000 GND2A-C-5301 (Gate Details), Drawing No. A5000 GND2A-C-6300 (Access Path Details), Drawing No. A5000 GND2A-E-3400 (Nextracker Array Details), Drawing No. A5000 GND2A-E-4300 (Inverter Station Detail), Drawing No. A5000 GND2A-C-7300 (Landscape Details);
 - Prepared by Space Landscape Designs, dated 17/06/2021, Drawing No. L-01, Rev B (Landscape Plan), Drawing No. L-02, Rev B (Elevation 7 Detail Plan), Drawing No. L-03, Rev B (Specification and Details);
- Supporting Documentation:
 - Potential Bushfire Impact Associated with two Inverter Stations, dated 30 September 2021;
 - Waste Assessment, prepared by ITP Renewables, dated 04/06/2021;
 - Noise Assessment, prepared by Muller Acoustic Consulting, dated June 2021, ref: MAC180781-12RP1V2;
 - Decommissioning Assessment, prepared by ITP Renewables, dated 04/06/2021;

except as otherwise provided by the conditions of consent.

Reason: To ensure compliance with application and plans.

A2. To confirm and clarify the terms of this approval, development consent is given for the undertaking of the following works:

- Construction of a 12,000 solar modules, installed in 140 rows mounted on single axis tracking systems, by the completion of the following works:
 - Construction of a 5 MW solar energy generation facility;
 - Installation of two (2) 3.4MW inverter Stations, mounted on 12.2 metre long skids;
 - Establishment of temporary car parking and material laydown area;

- Construction of permanent onsite parking space;
- Construction of 2.3m high security fence;
- Establishment of landscaping barrier; &
- Construction of new vehicle access at North West corner of the site;
- Generation of a no more than 5 megawatt (MW) per annum.

Reason: To ensure compliance with application and plans.

- A3.** Development consent is granted for the operation of the proposed Electrical Generation Works (Solar Farm) for a period not greater than 35 years from the commencement of electrical generating operations.

Note: The developer is required to advise Council of the commencement date of operation of the electrical generation works approved under this consent. Council will then provide written confirmation of the lapsing date for electrical generation works under this development consent.

Reason: To ensure compliance with lease agreement and to allow Council to plan for the future use of the site.

- A4. Decommissioning**

At the completion of the 35 years lifespan of the development, decommissioning of the site is to occur within 6 months of completion and the site is to be returned to a standard that would support the primary production (Agricultural) use of the site in accordance with the Final Decommissioning and Rehabilitation Report required by this condition.

A Final Decommissioning and Rehabilitation Report is to be provided to Council a minimum of 6 months prior to the cessation of the 35 year approval period specified within condition A3. The decommissioning report, which is to include, but not to be limited to, the location for which all decommissioned materials and infrastructure will be disposed to and a maximum timeframe for which decommissioning works will occur, is to be to the satisfaction of Gunnedah Shire Council's General Manager or Delegate.

Documentary evidence is to be provided to Council from a suitably qualified person to confirm that the development has been successfully decommissioned.

Reason: To ensure required decommissioning and rehabilitation works are completed.

B. PRESCRIBED CONDITIONS

Note: The following conditions are prescribed conditions and may or may not relate directly to this development.

- B1. Compliance with Building Code of Australia and insurance requirements under the [Home Building Act 1989](#)**

(cf clauses 78 and 78A of EP&A Regulation 1994)

- (1) For the purposes of section 4.17(11) of the Act, the following conditions are prescribed in relation to a development consent for development that involves any building work—

- (a) that the work must be carried out in accordance with the requirements of the *Building Code of Australia*,
 - (b) in the case of residential building work for which the *Home Building Act 1989* requires there to be a contract of insurance in force in accordance with Part 6 of that Act, that such a contract of insurance is in force before any building work authorised to be carried out by the consent commences.
- (1A) For the purposes of section 4.17(11) of the Act, it is prescribed as a condition of a development consent for a temporary structure that is used as an entertainment venue, that the temporary structure must comply with Part B1 and NSW Part H102 of Volume One of the *Building Code of Australia*.
- (2) This clause does not apply—
 - (a) to the extent to which an exemption is in force under clause 164B, 187 or 188, subject to the terms of any condition or requirement referred to in clause 164B(4), 187(6) or 188(4), or
 - (b) to the erection of a temporary building, other than a temporary structure to which subclause (1A) applies.
- (3) In this clause, a reference to the *Building Code of Australia* is a reference to that Code as in force on the date the application is made for the relevant—
 - (a) development consent, in the case of a temporary structure that is an entertainment venue, or
 - (b) construction certificate, in every other case.

Note: There are no relevant provisions in the *Building Code of Australia* in respect of temporary structures that are not entertainment venues.

Reason: To ensure compliance with the statutory requirements.

B2. Erection of signs

- (1) For the purposes of section 4.17(11) of the Act, the requirements of subclauses (2) and (3) are prescribed as conditions of a development consent for development that involves any building work, subdivision work or demolition work.
- (2) A sign must be erected in a prominent position on any site on which building work, subdivision work or demolition work is being carried out—
 - (a) showing the name, address and telephone number of the principal certifier for the work, and
 - (b) showing the name of the principal contractor (if any) for any building work and a telephone number on which that person may be contacted outside working hours, and
 - (c) stating that unauthorised entry to the work site is prohibited.
- (3) Any such sign is to be maintained while the building work, subdivision work or demolition work is being carried out, but must be removed when the work has been completed.
- (4) This clause does not apply in relation to building work, subdivision work or demolition work that is carried out inside an existing building that does not affect the external walls of the building.

(5) This clause does not apply in relation to Crown building work that is certified, in accordance with section 6.28 of the Act, to comply with the technical provisions of the State's building laws.

(6) This clause applies to a development consent granted before 1 July 2004 only if the building work, subdivision work or demolition work involved had not been commenced by that date.

Note: Principal certifiers and principal contractors must also ensure that signs required by this clause are erected and maintained (see clause 227A which currently imposes a maximum penalty of \$1,100).

Reason: To ensure compliance with the statutory requirements.

C. PRIOR TO COMMENCEMENT OF WORKS

C1. Prior to the commencement of any building works the developer is to apply to an Accredited Private Certifier or Council for a Construction Certificate for the erection of any structures. **NO BUILDING WORKS SHALL COMMENCE WITHOUT FIRST OBTAINING A CONSTRUCTION CERTIFICATE.**

Reason: To meet statutory requirements.

C2. Prior to work commencing appropriate measures are to be implemented in relation to erosion and sediment control. Such measures are to be maintained during the construction of the development.

Reason: To ensure erosion and sediment control on the development site.

C3. Prior to the commencement of building works a "Peg Survey Report" indicating the location of envelope of solar arrays, security fences and landscaping, is to be submitted to Council confirming the positioning of the solar farm relative to the allotments boundaries. The survey is to confirm that the development will occur entirely within the boundaries of Lot 48 DP 755474.

Reason: To ensure compliance.

D. PRIOR TO THE ISSUE OF A CONSTRUCTION CERTIFICATE

D1. Prior to the issuing of a Construction Certificate, the Developer shall pay to Council a levy as applicable at the time of payment, relative to the total project value, in accordance with the Council's Section 94A Contributions Plan 2013 under Section 7.12 of the *Environmental Planning and Assessment Act 1979*. The current levy payable is calculated at 1% of the development cost. The current levy payable is \$66,000, revised construction cost may incur a varied levy fee.

Note: The Gunnedah Shire Council's Section 94A Contributions Plan 2013 can be viewed on Council's web site at: <http://www.gunnedah.nsw.gov.au>

Reason: To make provision for public amenities and services within the community.

- D2.** Prior to the issuing of a Construction Certificate, the Developer shall apply to Council for approval under Section 68 of the Local Government Act, 1993 to:

(a) Carry out stormwater drainage works

Note: All works are to be carried out by an appropriately licensed contractor in accordance with NSW Code of Practice for Plumbing and Drainage-2006.

Reason: To ensure environmental health standards are met.

Stormwater

- D3.** Prior to the issue of a Construction Certificate a Stormwater Management Plan, prepared by a suitably qualified and experienced engineer or registered surveyor, is to be submitted to Council for assessment and approval.

The Stormwater Management Plan is to include detailed calculations and supporting drawings/documentation, which demonstrate that stormwater can be intercepted, drained and lawfully discharged for the purpose of ensuring that post-development flows do not exceed pre-development flows. The design must ensure that the discharge of stormwater from the development site does not create nuisance to any downstream neighbours.

Any proposed works (e.g. diversion banks, drains etc) must be designed in accordance with Australian Rainfall and Runoff to cater for the 1 in 20 year storm.

Reason: To ensure satisfactory drainage whilst ensuring that the surface water is not diverted onto adjoining properties.

- D4.** A Construction Environmental Management Plan (CEMP) is to be prepared and submitted to Council for review and approval, prior to the Issue of a Construction Certificate. This plan shall include but not be limited to:

- Identifying critical life cycle events of target species and detail timing of vegetation clearing to ensure no impacts to these target fauna species occurs.
- measures to avoid noise encroachment on adjacent habitats, such as avoiding night works as much as possible and directing lights away from vegetation.
- Identify Tree Protection Zones (TPZ) around retained trees for management for the duration of construction in accordance within Australian Standard 4970-2009 – Protection of trees on development site.
- sediment and dust control measures to prevent indirect impacts to retained vegetation including an adaptive dust monitoring programs to control air quality, daily monitoring of dust generated by construction activities with all activities relating to the proposal would be undertaken with the objective of preventing visible dust emissions from the development site.
- vehicle hygiene protocols, to ensure that noxious weeds are not introduced into the development site.

Documentary evidence is to be provided to the Certifying Authority demonstrating that this plan has been submitted and approved by the General Manager of the Gunnedah Shire Council or his delegate, in writing prior to the issue of a Construction Certificate. This plan shall be implemented throughout the construction phase of the solar farm.

Reason: To ensure compliance with approved application and plans.

- D5.** An amended Landscaping Plan is to be submitted to and be approved by the General Manager of the Gunnedah Shire Council or his delegate, prior to the issue of a Construction Certificate. The amended Landscaping Plan is to include the planting of a landscaping barrier along the entire Eastern boundary of the development area, external to the security fence, in addition to all landscaping indicated to be required by the development. The landscaping is to be a minimum width of three (3) metres.

The Landscaping Plan is to include a report prepared by a qualified landscape architect which confirms that selected vegetation species, growth rates, densities and canopy areas will create a suitable barrier within a minimum of 3 years, to visually screen the development from adjoining public spaces and private residences.

Landscaping species should incorporate a selection of suitable species which will enable the establishment of a complete visual screen from the ground level to a height of approximately 2.3 metres, being the height of the security fence.

Selected species should be low maintenance, drought and frost tolerant species.

Reason: To ensure that visual screening is established between the development and residential receivers to the East of the site and Thompson Road.

- D6.** All landscaping identified on the approved landscaping plan required by condition D5, shall be planted in full, prior to the issue of an Construction Certificate.

Reason: To ensure that required landscaping has sufficient time to establish to provide a visual screen along boundaries to reduce visual impact.

- D7.** Temporary screening measures are to be provided to Council and approved prior to the issue of a Construction Certificate. The temporary screening is to demonstrate its effectiveness as a temporary measure to reduce the visual impact of the development on the surrounding locality by using material and colours consistent with the surrounding landscape.

Reason: To ensure the effectiveness of temporary screening to reduce the visual impact on the surrounding locality.

- D8. *Site Waste Minimisation Management Plan***

Prior to the issue of a Construction Certificate a Site Waste Minimisation Management Plan is to be prepared, submitted to and approved by Council in relation to the waste generated during the construction of the Electricity Generation Works.

Reason: To ensure waste generated during construction of the development is minimised.

E. GENERAL

- E1.** The proposed boundary security fence as identified on development General Arrangement Plan, prepared by ITP Renewables, dated 02/03/2021, Drawing No. A5000 GND2A-G-2200 and Site Elevations, prepared by ITP Renewables, dated 02/03/2021, Drawing No. A5000 GND2A-G-2200, is not to exceed a height of 2.3 metres, as measured from the natural ground level.

Reason: To ensure compliance with details of development sort within the submitted Statement of Environmental Effects.

- E2.** Despite the submitted landscaping plan, prepared by Space Landscape Designs, dated 17/06/2021, landscaping is to be established around the entire perimeter of the development area. Landscaping is to be located entirely within the boundaries of the development site.

Reason: To ensure that visual screening is established between the development and residential receivers to the East of the site and Thompson Road.

- E3. *Excavations and backfilling***

All excavations and backfilling associated with the erection or demolition of a building or structure must be executed safely and in accordance with appropriate professional standards and must be properly guarded and protected to prevent them from being dangerous to life or property.

Reason: To ensure compliance.

- E4.** Excavated material from the site is not to be placed on or used to alter the level of Council's footpath, with no earth batters are to extend beyond the property boundary line.

Reason: Implementation of Council policy.

- E5. *Protection of public places***

If the work involved in the construction of the electricity generating works:

- (a) is likely to cause pedestrian or vehicular traffic in a public place to be obstructed or rendered inconvenient, or
- (b) building involves the enclosure of a public place, a hoarding or fence must be erected between the work site and the public place. If necessary, an awning is to be erected, sufficient to prevent any substance from, or in connection with, the work falling into the public place. The work site must be kept lit between sunset and sunrise if it is likely to be hazardous to persons in the public place. Any such hoarding, fence or awning is to be removed when the work has been completed.

Reason: To ensure site safety.

- E6.** Onsite car parking accommodation shall be provided for a minimum of one (1) vehicle within the development area, to ensure the provision of adequate on-site parking facilities commensurate with the demand likely to be generated by the proposed development. Such being set out generally in accordance with the details indicated on the submitted plans, except as otherwise provided by the conditions of this consent. All parking spaces are to be marked to ensure compliance with AS 2890 *Off Street Parking* for parking space dimensions.

Reason: To ensure adequate provision of onsite parking facilities.

- E7. *Traffic and Parking***

All internal driveways, parking areas, loading bays and vehicular turning areas are to be constructed with a base course of adequate depth to suit design traffic. Parking areas must comply with AS 2890 – *Parking Facilities*.

Reason: To ensure compliance with relevant Australian Standards and to facilitate the use of vehicular access and parking facilities.

E8. Noise

The Applicant must:

- (a) minimise the noise generated by any construction, upgrading or decommissioning activities on site in accordance with the best practice requirements outlined in the Interim Construction Noise Guideline (DECC, 2009), or its latest version;
- (b) implement all recommended noise mitigation measures outlined in the Noise Assessment, prepared by Muller Acoustic Consulting, dated 2 February 2021; and
- (c) ensure that the duration of mechanical ramming of steel piles into the ground is limited to no more than 22 consecutive days and no more than a total of 30 days.

Reason: To ensure compliance with the NSW EPA's Interim Construction Noise Guideline and Noise Assessment.

E9. Lighting

The applicant must:

- (a) minimise the off-site lighting impacts of the development;
- (b) ensure that all external lighting associated with the development;
 - is installed as low intensity lighting (except where required for safety or emergency purposes);
 - does not shine above the horizontal;
 - complies with AS/NZS 11583.1 Pedestrian Area (Category P) Lighting and AS4282 Control of Obtrusive Effects of Outdoor Light.

Reason: To ensure compliance and reduces the effects of lighting.

E10. Following any construction or upgrading on the site, the Applicant must:

- (a) Restore the ground cover of the site as soon as practicable, but within 12 months of completing any construction or upgrading, using suitable species;
- (b) Maintain the ground cover with appropriate perennial species; and
- (c) Manage weeds within this ground cover.

Reason: To ensure that ground cover is restored and weeds are managed.

E11. The Applicant must:

- (a) minimise the off-site visual impacts of the development, including the potential for any glare or reflection from solar panels;
- (b) ensure the visual appearance of all ancillary infrastructure (including paint colours) blends in as far as possible with the surrounding landscape; and
- (c) not mount any advertising signs or logos on site, except where this is required for identification or safety purposes.

Reason: To ensure visual impacts resulting from the development are reduced.

E12. The Applicant must:

- (a) minimise the fire risks of the development;
- (b) ensure that the development:
 - includes at least a 10 metre defendable space around the perimeter of the solar array area that permits unobstructed vehicle access;
 - manages the defendable 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.

Reason: To ensure compliance with the RFS Planning for Bushfire Protection Guidelines and to minimise the fire risks of the development.

- E13.** Prior to the commencement of operations, the Applicant must prepare a Fire Management and Emergency Response Plan for the development in consultation with the RFS and Fire & Rescue NSW. 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. Two copies of the plan must be kept on site in a prominent position adjacent to the site entry point at all times.

Reason: To minimise the fire risks of the development.

F. DURING CONSTRUCTION WORKS

- F1.** A stamped copy of the development consent, the approved plans and specifications are to be kept at the construction site at all times during the construction period.

Reason: To ensure compliance with approved application and plans.

- F2.** The storage of all building materials shall be confined within the boundaries of the allotment.

Reason: To ensure site safety.

- F3.** Removal of any known or suspected contaminated waste or soil is to be tested and disposed of to a suitably licensed facility.

Reason: To ensure suitable disposal of contaminated waste.

- F4.** Temporary parking areas are to be provided within the development site during extent of construction works. The temporary parking area is to provide a minimum of forty (40) vehicles. Such being set out generally in accordance with the details indicated on the submitted plans, except as otherwise provided by the conditions of this consent.

All parking spaces are to be marked to ensure compliance with *AS 2890 Off Street Parking* for parking space dimensions. Such being set out generally in accordance with the details indicated on the submitted plans, except as otherwise provided by the conditions of this consent. All parking spaces are to be marked to ensure compliance with *AS 2890 Off Street Parking* for parking space dimensions.

Reason: To ensure compliance with Council's requirements.

- F5.** Construction Traffic is to be limited to a maximum of:

- 4 heavy truck movements (B-Double Trucks);
- 40 light vehicles per day, for the transport of construction workers per day.

Reason: To ensure construction traffic does not exceed the capacity of the local road network.

- F6.** Heavy construction traffic is to be limited to delivery hours of 10:00am until 2:00pm.

Reason: To ensure heavy traffic is limited to appropriate times to limit impact on likely peak periods of existing traffic within the road network.

- F7.** Temporary screening measures, as identified by condition D7, are to be established during construction works and are to be retained for the period until which time landscaping achieves a suitable visual screen as to prevent visibility of the external security fence.

Reason: To ensure compliance with Council's requirements.

- F8.** All excavation and operation works shall cease on site should the identification of an item of potential aboriginal or European heritage significance be discovered during excavation and operation works. The Office of Environment and Heritage shall be contacted and any required approvals are to be obtained before the re-commencement of excavation and operation works.

Reason: To ensure that any item of heritage significance uncovered is suitably managed.

- F9. *Toilet facilities***

Toilet facilities are to be provided, at or in the vicinity of the work site on which work involved in the erection or demolition of a building is being carried out, at the rate of one toilet for every 20 persons or part of 20 persons employed at the site.

Each toilet provided:

- (a) must be a standard flushing toilet, and
- (b) must be connected:
 - (i) to a public sewer, or
 - (ii) if connection to a public sewer is not practicable, to an accredited sewage management facility approved by the Council, or
 - (iii) if connection to a public sewer or an accredited sewage management facility is not practicable, to some other sewage management facility approved by the Council.

The provision of toilet facilities in accordance with this clause must be completed before any other work is commenced. In this clause:

accredited sewage management facility means a sewage management facility to which Division 4A of Part 3 of the *Local Government (Approvals) Regulation 1993* applies, being a sewage management facility that is installed or constructed to a design or plan the subject of a certificate of accreditation referred to in clause 95B of the Regulation.

approved by the Council means the subject of an approval in force under Division 1 of Par 3 of the *Local Government (Approvals) Regulation 1993*.

public sewer has the same meaning as it has in the *Local Government (Approvals) Regulation 1993*.

sewage management facility has the same meaning as it has in the *Local Government (Approvals) Regulation 1993*.

Reason: To ensure environmental health standards are met.

- F10.** Work on the development shall be limited to the following hours to prevent unreasonable disturbance to the amenity of the area:-

Monday to Friday	- 7.00am to 5.00pm;
Saturday	- 8.00am to 1.00pm if audible on other residential premises, otherwise 7.00am to 5.00pm;

No work to be carried out on Sunday or Public Holidays.

Note: The builder shall be responsible to instruct and control sub-contractors regarding the hours of work.

Council will exercise its powers under the Protection of the Environment Operations Act, 1997, in the event that the building operations cause noise to emanate from the property on Sundays or Public Holidays or otherwise than between the hours detailed above.

Reason: To ensure amenity of the neighbourhood is maintained.

- F11. *Operation of Plant and Equipment***

The applicant must ensure that all plant and equipment used on site, or in connection with the development, is:

- (a) Maintained in a proper and efficient condition; and
- (b) Operated in a proper and efficient manner.

Reason: To ensure the safe operation of plant and equipment.

G. PRIOR TO THE ISSUE OF AN OCCUPATION CERTIFICATE

- G1.** Occupation of the building and operation of the solar energy generation facility is not to occur until all work has been completed the conditions of consent satisfied and an Occupation Certificate issued by the Principal Certifying Authority.

Reason: To meet statutory requirements.

H. CONTINUED OPERATIONS

- H1.** The Applicant must establish and maintain a mature vegetation buffer (landscape screening) at the location outlined in the approved Landscaping Plan, to the satisfaction of Gunnedah Shire Council's General Manager. This vegetation buffer must:

- (a) Consist of a variety of species that are endemic to the area;
- (b) Within 3 years of the commencement of construction, be effective at screening views from the solar panels and ancillary infrastructure (excluding the overhead power lines) on site from surrounding residences; and
- (c) Be properly maintained with appropriate weed management.

Reason: To ensure maintenance of landscaping.

- H2.** The surface of all internal driveways, vehicular parking, manoeuvring and loading areas is to be maintained at all times.

Reason: To ensure maintenance of car parking areas.

- H3.** All vehicular movement to and from the site shall be in a forward direction to ensure that the proposed development does not give rise to vehicle reversing movements on or off the Public Road with consequent traffic accident potential and reduction in road efficiency.

Reason: To ensure compliance with Council's requirements.

- H4.** All general waste is to be disposed of to a suitably licensed waste management facility.

Reason: To ensure waste is disposed of off-site in an appropriate manner.

- H5. *Asset Protection Zone Development Area***

At all times the entire solar array development footprint is to be managed as an Asset Protection Zone as outlined within section 4.1.3 and Appendix 5 of 'Planning for Bush Fire Protection 2019' and the NSW Rural Fire Service's document 'Standards for Asset Protection Zones'.

Reason: To ensure compliance and fire safety of Building.

- H6.** All landscaping shall be maintained at all times in accordance with the approved landscape plan.

Reason: To ensure maintenance of landscaping.