

COUNCIL ASSESSMENT REPORT

HUNTER AND CENTRAL COAST REGIONAL PLANNING PANEL

PANEL REFERENCE & DA NUMBER	PPSHC46 – DA 2020-49
PROPOSAL	Electricity Generating Works (Solar Farm)
ADDRESS	Lot 400 DP 791860 Denman Road Muswellbrook
APPLICANT	Denman Road Solar Park PTY Ltd
OWNER	Pukara Estate Pty Ltd
DA LODGEMENT DATE	21/05/2020
APPLICATION TYPE	The proposed development is integrated development under the provision
REGIONALLY SIGNIFICANT CRITERIA	Clause 5(a), Schedule 7 of the SRD SEPP: Development that has a capital investment value of more than \$5 million for the purpose of private electricity generating works.
CIV	\$26,313,000
CLAUSE 4.6 REQUESTS	Not applicable
KEY SEPP/LEP	• State Environmental Planning Policy (Infrastructure) 2007 • State Environmental Planning Policy No 33 – Hazardous and Offensive Development • State Environmental Planning Policy No 55 – Remediation of Land • State Environmental Planning Policy (State and Regional Development) 2011 • State Environmental Planning Policy (Primary Production and Rural Development) 2009 • State Environmental Planning Policy (Koala Habitat Protection) 2019 • Muswellbrook Local Environmental Plan 2009
TOTAL & UNIQUE SUBMISSIONS ISSUES SUBMISSIONS	Six (6) Unique Submission Key issues: • Noise impacts; • Visual impacts; • Notification process; • Conflict with existing land uses (dust and agricultural management)

DOCUMENTS SUBMITTED FOR CONSIDERATION	• Concept Plans • Traffic Impact Assessment • Preliminary Flora and Fauna Assessment • Flood Study and Stormwater Management Plan • Aboriginal Heritage Diligence Assessment • Construction and Operation Noise Assessment • Decommissioning Plan • Landscaping Plan and Plan of Management • Submissions • Applicants response to Submissions
SPECIAL INFRASTRUCTURE CONTRIBUTIONS (S7.24)	Not Applicable
RECOMMENDATION	Approval – Subject to Conditions
DRAFT CONDITIONS TO APPLICANT	No
SCHEDULED MEETING DATE	18 August 2021
PLAN VERSION	9 August 2021
PREPARED BY	Alisa Evans, Project Planner
DATE OF REPORT	9 August 2021

EXECUTIVE SUMMARY

The following is a summary of key points regarding the assessment of the development application:

- The proposed development involves the establishment of an electricity generating works (solar farm) at Lot 400 DP 791860, Denman Road Muswellbrook. The proposed solar farm will have an electricity generating capacity of 22 Megawatts.
- The estimated capital investment value (CIV) for the proposed development is \$26,000,000. The State Environmental Planning Policy (State and Regional Development) 2011 identifies development for the purposes of electricity generating works with a CIV between \$5 million and \$30 million as regionally significant development. The Hunter Central Coast Regional Planning Panel is the consent authority for regionally significant development in the Muswellbrook Local Government Area (LGA).
- The proposed development is not 'designated development' but is 'integrated development' under the National Parks and Wildlife Act 1974 (s90). Heritage NSW have issue GTAs for the proposal.
- The proposed development was publicly notified and advertised between the 15 June 2020 and 7 July 2020. The local business association, the Sandy Hollow Progress Association was also directly notified of the proposed development. Five (5) unique submissions were received in relation to the proposed development.
- The proposal was notified to the following government agencies and Council Officers, and their comments taken into consideration:
 - Ausgrid (legislated referral)
 - Traffic for NSW (legislated referral)

- NSW Rural Fire Service
 - Council's Community Infrastructure Department
 - Council's Ecologist and Sustainability Team Leader
 - Council's Senior Environmental Health Officer
- Key findings of the Section 4.15 Assessment which inform this recommendation include:
- The proposed development is not permissible under the provisions of the Muswellbrook LEP 2009. The proposal is permissible with consent under the provisions of the ISEPP as the development is for the purpose of energy generating works. The provisions of the ISEPP related to the permissibility of the development prevail over the provisions contained in the Muswellbrook LEP 2009.
 - The proposed development is in accordance with all other relevant provisions of the Muswellbrook LEP 2009.
 - The proposed development is compatible with the requirements of the relevant SEPP's.
 - The proposed development is compatible with the relevant requirements of the Muswellbrook DCP 2009 and conditions of consent have been recommended to ensure the development is carried out in accordance with certain DCP provisions.
 - Council Officers are satisfied that the proposed development is unlikely to have a significant adverse environmental impact.
- The proposed development would have positive social and economic impacts for the Muswellbrook LGA.

Following a detailed assessment of the proposal, pursuant to Section 4.16(1)(b) of the *EP&A Act*, DA 21020-49 (PPHCC-46) is recommended for approval subject to the conditions of consent at **Attachment A** of this report.

1. THE SITE AND LOCALITY

1.1 The Site

The proposed development relates to Lot 400 DP 791860, Denman Road Muswellbrook. Lot 400 DP 791860 has a total area of 40ha and is located approximately 12.5km from Muswellbrook and 9.6km from Denman. The land fronts Denman Road (a classified State Road).

The site contains a stock dam, 66kv powerline (Ausgrid infrastructure) and approximately 9 trees (scattered). There are no structures on site and the site is predominately cleared for grazing. The overhead transmission lines are within an easement 20.115m wide and there is a 3m wide water supply easement on the southern boundary.

The subject site is zoned RU1 Primary Production under the Muswellbrook Local Environmental Plan (LEP) 2009 and adjoins similarly zoned land. The land is identified as bushfire prone by Council's bushfire information mapping but is not identified as flood liable by Council's flood information mapping.

The image below identifies the subject site in context with the surrounding locality.



1.2 The Locality

The subject land is located with an area with several land uses. These include mining (open cut coal operations), horticulture (olive grove), broadacre cropping and extensive grazing (small and large stock). The Hunter River and flood plain are located to the north of the site.

THE PROPOSAL AND BACKGROUND

1.3 The Proposal

The proposed development seeks to establish an electricity generating works on the land by developing a solar farm and associated infrastructure across the 40ha site.

The extract below has been taken from Section 5 Components of the Solar Generation Facility (Source: SoEE page 20) of the statement of environmental effects (SoEE) and provides a summary of the key components of the proposed development.

5. Components of the Solar Generation Facility

The Denman Road Solar Park involves the installation of a Solar Generation Facility on the one site. The Solar Generation Facility will have a final generation capacity that will not exceed a capacity of 22MWAC at the 66kv Network Connection Point (NCP).

The Solar Generation Facility includes the following elements:

- PV modules located within the Array Area mounted on a single axis tracking system with a maximum height of 4m above natural ground at maximum tilt
- Underground cabling connecting the PV modules to and between inverters
- A Property Boundary Fence 1.2m high
- A perimeter Security Fence up to 2.5m high
- Operations compound adjacent to the substation including buildings with a maximum height of 5m and car parking for an estimated capacity of up to eight (8) vehicles
- A 10m unvegetated defensible firebreak area around the perimeter of the Array Area Envelope (2m outside and 8m inside the Perimeter Security Fence)
- A 10m separation area between the perimeter security fence and the site boundary to accommodate vegetated landscape screening, maintained to be at least 4m high
- Internal access tracks within the site Perimeter Security Fencing (4m wide)
- A dedicated water tank for firefighting at the highest point of the site
- Emergency access points
- Site access from Denman Road
- Approximately five (5) inverters (up to 3m high) located within the Array Area
- Substation: Connects the Solar Generation Facility to the Ausgrid 66kv powerlines (national electricity grid) (area 32m x 32m - 1,024m²)
- A perimeter security fence up to 2.5m high enclosing the Substation
- A 10m defensible firebreak area around the perimeter of the Substation Transformer

Image.2 (Development Site Works Plan, source: applicant's submitted plan-set) provides a general overview of the solar panel arrangement and layout of the development.

2. STATUTORY CONSIDERATIONS

Section 4.15(1) of the *Environmental Planning and Assessment Act 1979* ('EP&A Act') outlines the matters which the consent authority must take into consideration when determining a development application. These matters are of relevance to the development application include the following:

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

These matters are further considered below.

- The proposal is Integrated Development (s4.46) (which are considered further in this report).

2.1 Section 4.15(1)(a)(i) - Provisions of Environmental Planning Instruments

The following Environmental Planning Instruments are relevant to this application:

- *State Environmental Planning Policy (Infrastructure) 2007*
- *State Environmental Planning Policy No 33 – Hazardous and Offensive Development*
- *State Environmental Planning Policy No 55 – Remediation of Land*
- *State Environmental Planning Policy (State and Regional Development) 2011*
- *State Environmental Planning Policy (Primary Production and Rural Development) 2009;*
- *State Environmental Planning Policy (Koala Habitat Protection) 2019*
- *Muswellbrook Local Environmental Plan 2009.*

A summary of the key matters for consideration arising from these State Environmental Planning Policies are outlined in **Table 2** and considered in more detail below.

Table 2: Summary of Applicable State Environmental Planning Policies
(Preconditions in **bold**)

EPI	Matters for Consideration	Comply (Y/N)
SRD SEPP	• Clause 20(1) declares the proposal as regionally significant development pursuant to Clause 5(a) of Schedule 7.	Y
SEPP 33	• A preliminary risk screening should be prepared in accordance with <i>the SEPP</i>	Y

SEPP 55	• Clause 7 - Contamination and remediation has been considered in the SoEE. There are no records of Contamination under s58 of the Contaminated Land Management Act 1997 and no site history indicating contamination or risk of contamination to the proposal.	Y
Infrastructure SEPP	• Clause 45 (Determination of development applications—other development) – Electricity Transmission - the proposal is satisfactory subject to conditions. • Clause 101 Development with frontage to classified road • Clause 102(2) Impact of road noise or vibration on non-road development • Clause 104(3) - Traffic-generating development	Y

State Environmental Planning Policy (State and Regional Development) 2011

State Environmental Planning Policy (State and Regional Development) 2011 ('SRD SEPP') applies to the proposal as it identifies that the development is regionally significant development. Pursuant to Clause 20(1) of SRD SEPP, the proposal is a regionally significant development as it satisfies the criteria in Clause 5(a) of Schedule 7 of the SRD SEPP as the proposal is development for *electricity generating works (solar farm)* with a CIV over \$5 million. Accordingly, the Hunter and Central Coast Planning Panel is the consent authority for the application.

The proposal is consistent with this Policy.

State Environmental Planning Policy No 33 Hazardous and Offensive Development:

A preliminary risk screening was prepared in accordance with *the SEPP*. The preliminary risk screening indicates the development is not "potentially hazardous". Council Officers are satisfied that the proposal does not involve a potentially hazardous or potentially offensive development and thereby further assessment of this development against the SEPP provisions is not required.

State Environmental Planning Policy No. 55 – Remediation of Land

Under Clause 7 of this SEPP a consent authority must not consent to the carrying out of any development on land unless:

- (a) *It has considered whether the land is contaminated, and*
- (b) *If the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and*
- (c) *If the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.*

The subject land has historically been utilised for agricultural activities, with a focus on the grazing of livestock and less frequent small-scale cropping activities. Certain agricultural

pursuits including intensive livestock keeping or horticultural activities have the potential to result in site contamination. However, based on the information submitted with this development application, Council records in relation to the land, and the inspection of the site, Council Officers considered there to be a low risk of contamination. No visual evidence of contamination has been observed by Council Officers inspecting the site.

Accordingly, Council Officers are satisfied that the land is unlikely to be subject to contamination which would require remediation under the SEPP for the proposed development to proceed.

State Environmental Planning Policy (Infrastructure) 2007

Part 3 of this SEPP includes provisions which are specifically related to development for the purpose of electricity generating works and thereby relevant to the assessment of this development application.

Clause 34(1)(b) contained in Part 3 of the SEPP establishes development for the purpose of electricity generating works to be a type of development permissible with consent in any prescribed rural zone which is identified to include the RU1 Primary Production zone (the land use zoning for the proposed development).

In addition to the permissibility provisions of the SEPP:

- Clause 45 includes provisions that require Council to notify the relevant electricity supply authority of the proposed development and take into consideration any comments received from that authority in its determination of the development. This notification has been completed and its outcomes are included under the referral heading of this report.
- Clause 101 of the SEPP restricts a consent authority from granting development consent to the development of land with frontage to a state classified road unless it has considered matters prescribed by that clause that relate to the safety of vehicular access to that road and protection of the road's ongoing operation. The Golden Highway is a classified state road and the proposed development has been referred to TfNSW and Council's Community Infrastructure Department to review access provisions and the impact of the development on the road network. Comments have been received from TfNSW and Council Community Infrastructure Department that indicate the proposed development can be supported from a traffic impact and management perspective. The outcomes of these referrals are discussed in greater detail under the referral section of this report.

Council Officers are satisfied that the provisions of the ISEPP establish the proposal to be a type of development permissible with consent and that the proposed development may be supported under the provisions of Clause 45 and Clause 101, subject to the imposition of conditions of consent that have been recommended by the referral agencies.

State Environmental Planning Policy (Koala Habitat Protection) 2019

It was determined in the flora and fauna Assessment undertaken by Eco Logical Australia Pty Ltd that the site was of low habitat value with no feeding trees identified within the site.

Council Officers are satisfied that the provisions of the SEPP have been considered and that the proposal will not impact Koala habitat.

Muswellbrook Local Environmental Plan 2009

The relevant local environmental plan applying to the site is the Muswellbrook Local Environmental Plan 2009 ('the LEP'). The aims of the LEP include:

- protect and conserve soil stability by controlling development in accordance with land capability.

The proposal is consistent with these aims as the proposal is being carried out on land with a suitable land capability.

Zoning and Permissibility (Part 2)

The site is located within the RU1 Primary Production Zone pursuant to Clause 2.2 of the LEP.

RU1 Primary Production and the proposed developments relationship with the RU1 Primary Production has been considered below.

Zone RU1 Primary Production

1 Objectives of zone

- *To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.*
- *To encourage diversity in primary industry enterprises and systems appropriate for the area.*
- *To minimise the fragmentation and alienation of resource lands.*
- *To minimise conflict between land uses within this zone and land uses within adjoining zones.*
- *To protect the agricultural potential of rural land not identified for alternative land use, and to minimise the cost to the community of providing, extending and maintaining public amenities and services.*
- *To maintain the rural landscape character of the land in the long term.*
- *To ensure that development for the purpose of extractive industries, underground mines (other than surface works associated with underground mines) or open cut mines (other than open cut mines from the surface of the flood plain), will not—*
 - a) *destroy or impair the agricultural production potential of the land or, in the case of underground mining, unreasonably restrict or otherwise affect any other development on the surface, or*
 - b) *detrimentally affect in any way the quantity, flow and quality of water in either subterranean or surface water systems, or*
 - c) *visually intrude into its surroundings, except by way of suitable screening.*
- *To protect or conserve (or both)—*
 - a) *soil stability by controlling development in accordance with land capability, and*
 - b) *trees and other vegetation, and*
 - c) *water resources, water quality and wetland areas, and their catchments and buffer areas, and*
 - d) *valuable deposits of minerals and extractive materials by restricting development that would compromise the efficient extraction of those deposits.*

2 Permitted without consent

Extensive agriculture; Home occupations; Intensive plant agriculture

3 Permitted with consent

Air transport facilities; Airstrips; Animal boarding or training establishments; Aquaculture; Camping grounds; Caravan parks; Cellar door premises; Cemeteries; Community facilities; Crematoria; Depots; Dwelling houses; Eco-tourist facilities; Educational establishments; Environmental facilities;

Environmental protection works; Extractive industries; Farm buildings; Flood mitigation works; Forestry; Function centres; Group homes; Hazardous industries; Health consulting rooms; Heavy industrial storage establishments; Helipads; Highway service centres; Home-based child care; Home businesses; Home industries; Industrial retail outlets; Information and education facilities; Intensive livestock agriculture; Kiosks; Landscaping material supplies; Open cut mining; Places of public worship; Plant nurseries; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Research stations; Restaurants or cafes; Roads; Roadside stalls; Rural industries; Rural supplies; Rural worker's dwellings; Secondary dwellings; Service stations; Sewerage systems; Signage; Storage premises; Take away food and drink premises; Tourist and visitor accommodation; Transport depots; Truck depots; Turf farming; Veterinary hospitals; Waste disposal facilities; Water supply systems

4 Prohibited

Any development not specified in item 2 or 3

The proposed development best meets the land use classification of an electricity generating works. The definition of this land use has been included below:

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

Electricity generating works are innominate and as a result are a type of development prohibited under the land use table.

Clause 8 of the ISEPP identifies that where there is an inconsistency with that plan and any other environmental planning instrument the provisions of the ISEPP prevail. Part 3 Division 4 of the ISEPP identifies the RU1 Primary Production zone as a prescribed zone within which electricity generating works may be carried out with development consent despite any provisions to the contrary in another environmental planning instrument.

As a result of the provisions of the ISEPP the proposed development is viewed as a type of development permissible with consent despite the provisions of the Muswellbrook LEP 2009 land use table.

General Muswellbrook LEP 2009

The following table assesses the proposed development against the relevant provisions:

Table 3 – Muswellbrook LEP 2009 provisions

<u>MUSWELLBROOK LEP 2009 CLAUSE PROVISIONS</u>	<u>PLANNING CONSIDERATION</u>	<u>COMPATIBLE WITH</u>
Part 2 Permitted or Prohibited Development		
2.3 Zone Objectives	Council Officers are satisfied the proposed development complies with the zone objectives. In forming this view Council Officers have observed that: At the conclusion of the project's lifespan the site will be returned to an agricultural/grazing use consistent with its current land use. A decommissioning plan has been submitted by the applicant outlining the general means of the decommission of the site and its rehabilitation to revert its use back to primary production land (grazing)	Yes

	- The proposed solar farm does not fragment or alienate resource lands. - The proposed development is not anticipated to give rise to land use conflict with nearby established agricultural land uses.	
Part 4 Principle Development Standards Additional local provisions		
4.3 Height of Buildings	The maximum building height for the land is 12m. The height of the proposed solar panels and associated structures would not exceed this maximum building height limitation.	Yes
4.4 Floor Space Ratio	No FSR is applicable to the subject site.	NA
Part 7 Additional Local Provisions		
7.1 Terrestrial Biodiversity	The land subject to this development application is not identified as terrestrial biodiversity.	NA
7.6 Earthworks	Clause 7.6(3) provides several matters which the consent authority is required to consider prior to granting development consent to development involving earthworks. Each of the relevant matters have been listed and commented on below. <i>(3) Before granting development consent for earthworks (or for development involving ancillary earthworks), the consent authority must consider the following matters:</i> <i>(a) the likely disruption of, or any detrimental effect on, drainage patterns and soil stability in the locality of the development,</i> <u>Planning comment:</u> A detailed Flood Study and Stormwater Management plan has been received and reviewed by Council staff and is deemed satisfactory. A condition of consent is included. <i>(b) the effect of the development on the likely future use or redevelopment of the land,</i> <u>Planning comment:</u> it is unlikely that the proposed development and earthworks would adversely impact the capacity of the site to be redeveloped in the future. Significant earthworks are not required to facilitate the proposed use. The filling of the existing dam and the construction of drainage swales to direct stormwater within the site will be minor.	Yes

	<i>(c) the quality of the fill or the soil to be excavated, or both,</i> <u>Planning comment:</u> soil used to fill the existing dams would primarily be sourced on-site from the construction of swale drains. Minimal off-site fill will be required. Off-site material will be obtained from a reputable source. <i>(d) the effect of the development on the existing and likely amenity of adjoining properties,</i> <u>Planning comment:</u> Earthworks associated with the proposed development will have limited impact on the amenity of adjoining properties. The development is located on a rural lot and the separation distance between the proposed development and nearby residential buildings would negate any impacts to the amenity of neighbouring residents that can be attributed to earthworks carried out on the site. <i>(e) the source of any fill material and the destination of any excavated material,</i> <u>Planning comment:</u> To ensure that fill brought to the site is obtained from an appropriate facility and suitable for use a condition of consent has been included in the recommended notice of determination regarding the quality of fill. <i>(f) the likelihood of disturbing relics,</i> <u>Planning comment:</u> An aboriginal due diligence assessment has been carried out in relation to the proposed development. The report suggests that the development site has the potential to contain aboriginal relics. Any work will require a s90 approval under the National Parks and Wildlife Act 1974 as outlined within the GTAs from the Heritage NSW referral. <i>(g) the proximity to, and potential for adverse impacts on, any waterway, drinking water catchment or environmentally sensitive area,</i> <u>Planning comment:</u> Council Officers are satisfied that the proposed development is unlikely to have any significant adverse impacts in this area.	
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The proposal is generally consistent with the LEP.

2.2 Section 4.15 (1)(a)(ii) - Provisions of any Proposed Instruments

There are no proposed instruments which have been the subject of public consultation under the EP&A Act, and which may be relevant to the proposal. including the following:

2.3 Section 4.15(1)(a)(iii) - Provisions of any Development Control Plan

The following Development Control Plan is relevant to this application:

- *Muswellbrook Development Control Plan 2009 (MDCP 2009)*

Sections of the DCP which do not relate to the proposed development have not been referenced in the comments below. Council's DCP can be viewed in full at Council's website.

Section 3 – Site Analysis

The documentation accompanying this development application indicates that the proponent has considered the constraints and development opportunities for the subject site in the preparation of this development application in accordance with the requirements of this Section of the DCP.

Section 8 – Rural and Environmental Zone development

The table below measures the proposed development against the DCP controls specified by this Section of the DCP.

Table 4 – DCP Section 8 Rural and Environment Zone Development

<u>MUSWELLBROOK SHIRE COUNCIL DCP SECTION 8 Rural and Environmental Zone Development</u>		
<u>DCP REQUIREMENTS</u>	<u>COMPLIES</u>	<u>PLANNING COMMENT</u>
8.1 Introduction		
8.1.1 Dwelling houses on existing parcels of land	NA	The development application does not involve the erection of a new dwelling.
8.2 Built Form		
8.2.1 Scenic Protection and Building Location	Yes	This section of the DCP includes provisions that relate to managing the visual impact of developments, maintaining the privacy of neighbouring properties by the siting of new dwellings, discouraging the construction of structures that protrude above natural ridgelines and landscape elements and

		encouraging the co-location/cluster construction of buildings. A visual impact assessment is included in the SoEE as well as a landscaping plan. Amelioration measures have been incorporated into the landscaping plan and management plan. The ongoing maintenance of the landscaping (buffer) is a recommended condition of consent.
8.2.2 Setbacks	No	This section of the DCP prescribes setbacks of 50m from a public road, and 10m from an adjoining property boundary. The proposed development would achieve the minimum setback requirements established by this clause for the side boundaries. The setback of 50m from a road frontage isn't complied with. The solar panel arrays will be setback approximately 25 from Denman Road. The setback contains a 10m wide landscaping buffer and 10m wide access road that will be established along the entire boundary of the subject land. The nature of the use and the landscaping means the setback is considered acceptable.
8.2.3 Colours and materials	Yes	This section of the DCP encourages the use of natural colours, muted and earthy tones and the avoidance of highly reflective building materials. A Visual Impact assessment included in the SoEE raises no concern regarding the potential for significant visual impacts. This report includes recommendations including landscaping and colour schemes to mitigate potential visual impacts of the development. Council Officers are satisfied that the proposed development would be compatible with the requirements of this clause where carried out in accordance with the recommendations of the SoEE and the landscaping plan.
8.2.4 Car parking and access	Yes	This section of the DCP establishes provisions for rural property accesses and requires consideration of car parking requirements against the provisions of Section 16 of the DCP.

		The site has direct frontage to the Denman Road. Council Officers are satisfied that vehicular access could be constructed in accordance with Council's standard requirements. Conditions of consent have been recommended to ensure this is achieved. Commentary in relation to the development's compliance with the off-street car parking is provided in relation to Section 16 of the DCP. Council officers are satisfied that the proposed car parking arrangement would satisfy the DCP requirements.
8.2.5 Temporary Dwellings	NA	The proposed development does not involve the construction of any dwellings.
8.3 Environmental Matters		
8.3.1 topography	Yes	This clause seeks to ensure development does not significantly alter the natural topography of a site and that the visual amenity of an area is protected. The proposed development does not involve significant earthworks or the large-scale reshaping of natural contours and gradients.
8.3.2 Vegetation	Yes	Council Officers are satisfied that the proposed development would not have an adverse impact on ecological communities including native vegetation and can be supported under the provisions of this DCP Section.
8.3.3 Riparian Buffers	Yes	This development application would not involve the carrying out of work in a riparian buffer area.
8.3.4 Management of Rivers, Creek, Streams and Drainage	Yes	This clause requires consideration of the impact of developments on natural drainage channels and the management of stormwater from new developments. A Flood Study and Stormwater Management Plan has been provided and outlines strategies for the management of stormwater from the development.

		Council Officers are satisfied that the impact of the proposed development on existing drainage channels, and the consideration given to stormwater drainage, meets the DCP requirements established by this Section.
8.3.5 Services	Yes	The applicant has proposed a potable water supply of 20,000L be provided to the development and indicated that on-site amenities will be provided during construction and operation of the facility. Council officers have no objection to these arrangements and have recommended conditions of consent to ensure minimum standards are met.
8.3.6 Buffers	NA	The proposed development is not located within an identified buffer area and thereby the provisions of this section do not require further consideration.
8.4 Frost Control Fans	NA	The proposed development does not involve the construction of any frost fan.

Section 16 – Car Parking and Access

Vehicular access to the site has been reviewed by the Transport for NSW and Council's Community Infrastructure Department. Council Officers are satisfied that the site attributes and parameters are sufficient to support vehicle access during both construction and operation. The plans include preliminary designs for the construction of internal access roads and proposed upgrades to the Denman Road access. No issue is raised with the relationship between these provided they are carried out in accordance with the recommendations of Council's Community Infrastructure Department and the TfNSW.

The DCP does not prescribe a rate for off-street car parking for a solar farm or electricity generating works. The applicant has suggested that there would not be a requirement for permanent formalised on-site parking to be required due to the limited operating requirements of the premises. This has been reviewed by Council Officers in assessing the likely environmental impacts associated with the proposed development and no objection has been raised to proposed car parking arrangements.

Section 20 – Erosion and Sediment Control

A sediment and erosion control plan will be part of the final design of the solar farm. The SoEE notes that a Construction Environmental Management Plan (CEMP) and Operational Environmental Plan (OEMP) will need to be prepared.

It is considered that the proposed development would comply with the requirements of this section of the DCP.

Section 22 – Land Use Buffers

The proposed development is not located within any established land use buffer areas and thereby presents no issue for the provisions of this Clause.

Section 23 – On-site Sewage Management Systems

To ensure the safe operation of the site staff amenities will need to be provided both during the construction and operational phases of the development. Liquid wastewater will need to be managed in accordance with the requirements of this Section of the DCP and any Section 68 approval.

Council Officers have put forward recommended conditions to ensure that any on-site sewage management is in accordance with Council requirements and the requirements of this Section of the DCP.

Section 24 – Waste Management

The documentation accompanying the proposed development has provided a broad overview of the expected waste streams from the operation of the premises and the manner of disposal. Council Officers are satisfied that this approach could be implemented as a condition of consent.

Section 25 – Stormwater Management

The stormwater design information submitted with the proposed development has been reviewed by Council's Roads and Drainage team who have raised no concern with the proposed design. Council Officers are satisfied that stormwater management has been appropriately considered through the design of the development and that any stormwater discharges from the site are highly unlikely to have an adverse impact on neighbouring properties and thereby conflict with the key related requirements of this section of the DCP.

Development Contributions

The following contributions plans are relevant pursuant to Section 7.18 of the EP&A Act and have been considered in the recommended conditions (notwithstanding Contributions plans are not DCPs they are required to be considered):

- *Development Contributions Plan 2010*

Council's *Development Contributions Plan 2010* requires the payment of a development contribution at a rate of 1% of the total estimated value of a development for development applications with a value exceeding \$100,000.

The Capital Value Estimation submitted with this development application has the value of the proposed development at \$26,131.00 (excluding GST). Accordingly, a Contribution would be payable under the provisions of this plan at a rate of 1% of \$28,744,100. The total contribution payable equates to \$287,441.00.

This Contributions Plan has been considered and included the recommended draft consent.

2.4 Section 4.15(1)(a) (iia) – Planning agreements under Section 7.4 of the EP&A Act

There have been no planning agreements entered into and there are no draft planning agreements being proposed for the site.

2.5 Section 4.15(1)(a)(iv) - Provisions of Regulations

Clause 92(1) of the Regulation contains matters that must be taken into consideration by a consent authority in determining a development application. These sections have been reviewed in relation to the proposed development and Council Officers are satisfied that there are no additional matters prescribed by Division 8 that have implications for the assessment and determination of this development application. While the recommended conditions of consent have been drafted to include the prescribed conditions of consent referenced by Division 8A relevant to the proposed development.

2.6 Section 4.15(1)(b) - Likely Impacts of Development

The consideration of impacts on the natural and built environments includes the following:

- Context and setting – The site is located within a rural setting with the area comprising of horticulture, grazing, seasonal cropping and open cut mining operations. The proposed solar farm and ancillary infrastructure will be the first within the rural setting and will alter the existing setting in the locality.

The visual assessment within the SoEE has considered several residences within the 1.5km radius of the subject land. While those at similar elevation will have the development softened by a landscaping buffer those on the elevated ridgelines will still have a partially filtered outlook over the subject land.

- Access and traffic – access to the subject site will be via the Denman Road. The proposed development has been reviewed by TfNSW and Council's Community Infrastructure Department. All recommendations made regarding vehicle access and road construction are reflected in the recommended conditions of consent.
- Public Domain – there is no public domain that is impacted by the proposed development.
- Utilities – The proposed development has been referred to Ausgrid as the energy provider for the locality - they specified conditions of consent relating to the connection of the development with its energy network. A supply of potable water is to be made available as part of the development, while the management of wastewater from the site's operation has been considered by Council's Environmental Health Officer and is to be controlled in accordance with recommended conditions. Council Officers are satisfied that due consideration has been given to the operational requirements of the development in terms of available utilities.
- Heritage – The proposed development is not located in a heritage conservation area or situated in the vicinity of any State or Locally listed items of environmental heritage.

An aboriginal archaeological due diligence assessment has been completed in relation to the proposal and development site. This investigation did identify potential for culturally significant sites. The proposal was referred to Heritage NSW as Integrated development under s90 of the National Parks and Wildlife Act 1974. General Terms

of Approval were issued on the 29 June 2021 and are included in the draft conditions of consent.

- Other land resources – The site is not within a drinking water catchment. The proposal will not have a negative impact on access to resources or future agricultural activity.
- Water/air/soils impacts – Minimal impact.
- Flora and fauna impacts – a preliminary Flora and Fauna Assessment determined that the land was unlikely to support any threatened species populations due to its cleared state and disconnection from surrounding native vegetation. It was determined that the proposed use will not have significant impacts on flora and fauna of the locality.
- Natural environment – There are no significant changes to the natural contours of the site. Minor earthworks will be undertaken to infill a dam, construct stormwater management and internal access roads. The site grade is a moderate slope of 2.8% and will not require altering to facilitate the installation of the solar panel armaments.
- Noise and vibration – construction noise will be will exceed the recommended industrial guidelines as detailed within “Construction and Operational Noise Assessment” prepared by TTM reference 21GCA0031 _ R01_0. While, the noise generated from the operation of the solar farm and its invertors of is not predicted to have adverse noise impacts on the surrounding amenity. There is a slight increase in noise in a worst-case scenario for washing of the panels and vegetation management predicted from plant movement. However, this is minimal, and due to the times of day this activity would be occurring is unlikely to impact the amenity.
- Natural hazards –site is bushfire prone under Councils bushfire mapping. A Bushfire Assessment Report was prepared and submitted with this development application to consider the site’s bushfire risk in relation to the proposed development. This Report and its recommendations have been reviewed by the NSW RFS who have put forward recommended conditions of consent to manage bushfire threat in relation to the proposed development. These recommendations have informed the recommended conditions of consent
- Social and Economic impact – The proposed development is anticipated to have moderate social and economic benefits for the locality and wider region. The proposed development would generate a supply of electricity capable of powering approximately 10,000 homes and save around 35,000 tonnes of carbon dioxide production per annum.

The construction phase of the development would support 35 jobs with 2-4 full time equivalent position attributed to the regular operation of the facility.

Accordingly, it is considered that the proposal will result in any significant adverse impacts in the locality as outlined above.

2.7 Section 4.15(1)(c) - Suitability of the site

The subject site is suitable to the proposed development. Council Officers are satisfied that where the proposed development is carried out in accordance with the recommended conditions of consent it would be compatible with the site attributes and would be unlikely to have any significant impact on the locality.

2.8 Section 4.15(1)(d) - Public Submissions

These submissions are considered in Section 5 of this report.

2.9 Section 4.15(1)(e) - Public interest

The proposed development is consistent with the public interest. The proposed development would establish a new electricity generating works with the capacity to generate enough energy to power approximately 10,000 homes a year. The facility would support 2 full time equivalent role while its construction would support a workforce of 35 people over 6 months.

3. REFERRALS AND SUBMISSIONS

3.1 Agency Referrals and Concurrence

The development application has been referred to various agencies for comment/concurrence/referral as required by the EP&A Act and outlined below in Table 5.

Table 2: Concurrence and Referrals to agencies

Agency	Concurrence/ referral trigger	Comments (Issue, resolution, conditions)	Resolved
Concurrence Requirements (s4.13 of EP&A Act) - NA			
Referral/Consultation Agencies			
RFS	S4.14 – EP&A Act Development on bushfire prone land	NSW RFS reviewed the application and recommended conditions to be imposed. They include buffers, water tank for fire fitting purposes and access. These are included in the conditions of consent.	Y
Electricity supply authority	CI 45 – Infrastructure SEPP Development near electrical infrastructure	Recommend conditions that assets and easements are maintained and that a connection application is submitted prior to construction.	Y
Transport for NSW	CI 101 Development with frontage to a classified road	The proposed solar farm access from Denman Road. The access will require a S138 and will refer to TfNSW as part of the process. Conditions are included.	Y
Integrated Development (S 4.46 of the EP&A Act)			
Heritage NSW	S90 – <i>National Parks and Wildlife Act 1974</i>	General Terms of Approval were issued on the 29 June 2021. It will require the applicant to obtain a s90 permit and Aboriginal Heritage Impact Permit (AHIP)	Y

3.2 Council Internal Referrals

The development application has been referred to various Council officers for technical review as outlined **Table 6**.

Table 3: Consideration of Council Referrals

Officer	Comments	Resolved
Community and Infrastructure	Council's Engineering Officer reviewed the submitted stormwater concept plan, traffic management plan and MUSIC model and have no objections subject to conditions.	Y
Environmental Health Officer	Council's EHO Officer review the application and the Construction and Operational Noise Assessment and raised no objections. Condition are required are in relation to portable water supply, onsite sewage management system (S68) and noise mitigation.	Y
Biodiversity and Sustainability	Council's Biodiversity officer reviewed the application reviewed the application SoEE and Flora and fauna Assessment and raised no objections to the proposal. No conditions were requested.	Y

3.3 Community Consultation

The proposal was notified from 15 June 2020 until 8 July 2020. The notification included the following:

- Notification letters sent to adjoining and adjacent properties (nineteen letters sent to adjoining properties);
- Notification on the Council's website and Social media account.

The Council received a total of five 5 unique submissions, comprising 5 objections to the proposal. The issues raised in these submissions are considered in **Table 7**

Table 4: Community Submissions

Issue	No of submissions raising the issue	Council Comments
Land capability and contradictory to LEP objectives	1	The land capability classification for the land is a small portion of Class 3 but class 4 generally. The loss of the land to agricultural use is not significant to the overall regional capacity for agriculturally productive land. The proposal is unlikely to cause the fragmentation of Class 1 to 3 land.

Coal Dust would reduce solar efficiency	3	Panel cleaning will be undertaken as part of onsite care and maintenance. Only water is required for clearing of the panels and will be undertaken on a regular basis. Water will be available on an on-site tank for such activity.
Inadequate landscaping screening	2	A detailed landscaping and management plan have been supplied. The landscaping is a mix of native vegetations (shrubs, trees and ground covers) that are low water requirements. While water will be trucked in during the 3-year establishment period, ongoing watering shouldn't be required once the plantings are established. However, during a period of drought additional maintenance would be required. The landscaping buffer will achieve adequate visual buffering to those dwellings at a similar elevation. However, those at the higher elevation (Roxburgh Road) will still overlook the development.
Benefits are overstated	1	The data relating to benefits is consistent with other solar farms being approved with the state. The solar production rate and employment figures are considered reasonable.
Other renewable energy zones should be used	1	The Muswellbrook Local Government Area is identified within the Renewable Energy Zone. There are several localities within the state that are suitable.
No supply guarantee for infrastructure operator	1	Local infrastructure has the capability of receiving the loads proposed based on the preliminary advice and correspondence of the utility provider (Ausgrid). The formal arrangements and agreements for the supplied to be accepted into the grid is an independent process and not subject to consideration under this assessment.
Unclear who is the applicant	2	The applicant is Denman Road Solar Park Pty Ltd. A later submission from the same party questions the developers/owners being internationally own. This is not a matter consideration with the assessment.
Loss of amenity and reduced value of properties • Visual • Noise • glare	3	Visual The landscaping buffer will filter the site from those dwelling located along Denman Road. The site is already filtered by existing vegetation. Properties along Roxburgh Road will view the subject site from their elevated positions on the ridge. They are approximately 2 km from the site. While it will impact

		there view it is not considered detrimental to their outlook. The submissions requested an independent visual impact assessment be undertaken by an external assessor. Council officers did not consider this is required. Noise The solar farms operation is low noise generating once construction is complete. A Noise assessment was undertaken. The substations were related to the southern road boundary away from existing adjoining dwelling house. Noise generated as part of the construction period will at times exceed the industry standard. It is expected that the noise can be mitigated by limiting hours of construction and temporary acoustic barriers for certain construction activity. Glare Glare from the panels is unlikely. The panels will pivot to throughout the day following the direction of the sun. The panels are designed to absorb light and have an anti-reflective coating. The applicant provided further clarification that also demonstrated that glare would unlikely be a concern after 1km from site. Those that are unable to be screen by way of landscaping will be outside of this 1km radius.
No formal notification to properties in Roxburgh Road locality	2	The application was notified to adjoining landowners, an advertisement was place in the local newspaper and was the proposal was displayed on Council's website during the notification period. As submissions were received from people living in this area the notification process has allowed concerns from residents in that area to be raised.
Located within mining buffer not compatible	2	The Mine was notified as part of the application process and contacted by the applicant independently. No object has been received in the process and the use is compatible with the surrounding land uses.

4. KEY ISSUES

The following key issues are relevant to the assessment of this application having considered the relevant planning controls and the proposal in detail:

4.1 Visual Impact

The proposal is to utilise the whole of the site to for a Solar farm. This involves the filling in of the existing farm dam, installation of access roads, landscaping (all boundaries), battery storage, site office and substation.

The landscaping will be used to filter the site from the road network and dwelling houses with the immediate vicinity. Inspections from the near by properties and those of Roxburgh Rd were undertaken While the landscaping buffer proposed should adequately screen the structures on site it cannot screen entirely for elevated properties that overlook the site from Roxburgh Road. However, they are at a distance that the development will not be the dominate feature within the view corridor. It will be a new element with the landscape.

Resolution: The issue has been resolved through recommended conditions of consent as outlined in **Attachment A**.

4.2 Noise and vibration Assessment

The Noise and Vibration Report considered the noise and vibration impacts arising from the proposed construction and operation of the solar farm. The report concluded that construction noise levels at nearby receivers are likely to exceed the noise management levels and, in some instances, could exceed the construction noise level.

The report concluded that the works could proceed if mitigation measures were applied during the construction phase of the proposed development. Council staff have assessed the proposal as satisfactory notwithstanding the likely noise exceedance which could be addressed in recommended conditions of consent, which is supported.

Resolution: The issue has been resolved through recommended conditions of consent as outlined in **Attachment A**.

5. CONCLUSION

This development application has been considered in accordance with the requirements of the EP&A Act and the Regulations. The assessment of relevant planning controls, issues raised in submissions and the key issues identified in this report, has allowed the Assessing Officer to conclude that the application can be supported.

It is considered that the key issues as outlined in Section 6 have been resolved satisfactorily through amendments to the proposal and/or in the recommended draft conditions at **Attachment A**.

6. RECOMMENDATION

That the Development Application DA 2020-49 (PPHCC-46) Electricity Generating Works (Solar Farm) at Lot 400 DP 791860 Denman Road Muswellbrook be APPROVED pursuant to Section 4.16(1)(a) of the *Environmental Planning and Assessment Act 1979* subject to the conditions of consent in Attachment A.

The following attachments are provided:

- Attachment A: Draft Conditions of consent/reasons for refusal
- Applicant's Response to Submissions.

CONSENT CONDITIONS – SOLAR FARMS

HUNTER AND CENTRAL COAST REGIONAL PLANNING PANEL

PANEL REFERENCE & DA NUMBER	PPHCC-46 – DA 2020-49
PROPOSAL	Electricity Generation Works (Solar Farm)
ADDRESS	Lot 400 DP 791860 Denman Road Muswellbrook
APPLICANT	Denman Road Solar Park Pty Ltd
APPLICATION TYPE	Development Application – Integrated

PART A: GENERAL

A1 Approved Plans and Supporting Documentation

The development must be implemented in accordance with the approved plans, specifications and supporting documentation listed below which have been endorsed by Council's approved stamp, except where amended by conditions of this consent:

Plan/Report Title	Reference No	Revision	Prepared by	Date
Concept Development Plans	Denman Solar Park	-	ASLAT Consulting	09/07/2021
Denman Road Solar Park – Statement of Environmental Effects	-	-	ASLAT Consulting	19/05/2020
Landscape Development Application Document (DA)	1954	C	Moir Landscape Architecture	10/05/2021
Denman Road Solar Landscape Maintenance Plan	1954	B	Moir Landscape Architecture	22/04/2021
Construction and Operational Noise Assessment	21GCA0031 R01_0	A	Ttm	10/06/2021
Decommissioning Plan	-	-	Aslat Consulting	23/11/2020
Denman Road Solar Park – Traffic Impact Assessment	P4480	001	BITZIOS Consulting	18/03/2020

Eco Logical Australia 2020 - Denman Road Solar Park Preliminary Flora and Fauna Assessment	19MUD/14425	V3	Eco Logical Australia Pty Ltd	20/11/2020
Denman Road Solar Park Flood Study & Stormwater Management Plan	9-0155/R1155	B	TOPO	06/04/2021

In the event of any inconsistency between conditions of this approval and the drawings/documents referred to above, the conditions prevail. In the event of any inconsistency between the approved plans and the supporting documentation, the approved plans prevail.

Reason: To ensure the development proceeds in the manner assessed by Council and all parties are aware of the approved plans and supporting documentation that applies to the development.

A2 Signage

A separate application shall be submitted to Council prior to the erection of any signage unless the proposed signage is 'exempt development' under *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* or any other applicable environmental planning instrument.

Reason: To ensure any signage is assessed in accordance with the planning controls.

A3 Compliance with the Building Code of Australia

All building work shall be carried out in accordance with the provisions of the Building Code of Australia. 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 construction certificate.

Reason: Prescribed Condition under Clause 98 of the *Environmental Planning and Assessment Regulation 2000*.

A4 Lapsing of consent

This consent is limited to a period of 5 years from the date of the Notice of Determination unless the works associated with the development have physically commenced.

Reason: To ensure compliance with Section 4.53 of the *Environmental Planning and Assessment Act 1979*.

A5 Decommission Management Plan

An updated Decommission Management Plan is required to be submitted to Council twelve (12) months prior to decommissioning occurring.

All decommissioning works, including site rehabilitation are to be undertaken in accordance with the approved Decommissioning Plan. Waste from solar panels must be recycled where possible.

Reason: To ensure the decommissioning of the solar farm occurs in an orderly and sustainable manner, that the amenity of the area is maintained while the solar farm is being decommissioned and to ensure the site can be returned to its original condition.

A6 Tree Retention and Removal

Existing trees on the site are to be retained and protected from damage during work, with the exception of the trees outlined the approved Landscape Plan prepared by Moir Landscape Architecture and dated 10 May 2021. Approved tree removal shall be carried out by an appropriately qualified person to avoid any risk to life or damage to property and must have with adequate public liability insurance.

Reason: To protect trees on the site to be retained.

A7 Requirements of Concurrence, Integrated & Other Government Authorities

The following conditions have been imposed by concurrence/integrated authorities:

(a) Ausgrid

1. Heavy vehicle access to all pole locations must be maintained;
2. No structures are to be constructed within Ausgrid's easements;
3. No structures are to be constructed under or near Ausgrid poles and overhead/underground powerlines that are covered under Section 53 of the Electricity Supply Act 1995 No 94 in accordance with the Ausgrid's usual easements widths;
4. Existing ground levels under overhead powerlines are to be maintained; and
5. A Connection Application is to be submitted to Ausgrid for assessment prior to commencement of construction.

(b) NSW Rural Fire Service

General Conditions

1. A Fire Management Plan (FMP) shall be prepared in consultation with NSW RFS Upper Hunter Fire Control Centre. The FMP shall include:

- 24-hour emergency contact details including alternative telephone contact;
- Site infrastructure plan;
- Firefighting water supply plan;
- Site access and internal road plan;
- Construction of Asset Protection Zones (APZ) and their continued maintenance;
- Location of hazards (Physical, Chemical and Electrical) that will impact on firefighting operations and procedures to manage identified

hazards during firefighting operations;

- Such additional matters as required by the NSW RFS District Office (FMP review and updates).

Asset Protection Zones

2. 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 2006' and the NSW Rural Fire Service's document 'Standards for Asset Protection Zones'.

3. To allow for emergency service personnel to undertake property protection activities, a 10-metre defendable space (APZ) that permits unobstructed vehicle access is to be provided around the perimeter of each of the solar array development sites including associate infrastructure.

Water and Utility Services

4. A 20,000 litre water supply (tank) fitted with a 65mm storz fitting shall be located adjoining the internal property access road within the required APZ.

(c) Heritage NSW

APPROVED DEVELOPMENT

1. Development must be in accordance with:

a. Denman Solar Park, Denman Road, Muswellbrook Aboriginal Cultural Heritage Assessment Report by Everick Heritage (May 2021).

b. Denman Solar Park Statement of Environmental Effects by DPI Australia and ASLAT Consulting (May 2020).

Please note that any modification of the above development that will result in impacts to Aboriginal cultural heritage must be referred to Heritage NSW to determine whether changes to these general terms of approval are required.

EXCEPT AS AMENDED by the following general terms of approval:

2. A s.90 Aboriginal Heritage Impact Permit (AHIP) for the proposed works must be sought and granted prior to the commencement of works.

3. The AHIP application must be accompanied by appropriate documentation and mapping as outlined in Applying for an Aboriginal Heritage Impact Permit: Guide for applicants (2011).

4. Consultation with the Aboriginal community undertaken as part of the AHIP application must be in accordance with the Aboriginal cultural heritage consultation requirements for proponents 2010 (2010).

5. The AHIP application must be completed with reference to the requirements of the Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (2011).

6. The AHIP application must include complete records satisfying the requirements of the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (2010).

7. Long term management of Aboriginal objects must be considered as part of the AHIP application.

(d) Transport for NSW

1. As road and drainage works are required on Denman Road (MR209), TfNSW will require the developer to enter into a Works Authorisation Deed (WAD) with TfNSW. TfNSW will exercise its powers and functions of the road authority, to undertake road works in accordance with Sections 64, 71, 72 and 73 of the Roads Act, as applicable, for all works under the WAD (Attachment A).

Note:

Conditions of Consent do not guarantee TfNSW final consent to the specific road work, traffic control facilities and other structures or works, for which it is responsible, on the road network. TfNSW must provide a final consent for each specific change to the classified (State) road network prior to the commencement of any work. The WAD process, including acceptance of design documentation and construction, can take time.

2. All road works under the WAD shall be completed prior to issuing any Occupation Certificate for the development.
3. All works associated with the subject development shall be undertaken at full cost to the developer and at no cost to TfNSW or Council, and to Council's requirements.

Reason: To ensure compliance with Section 4.47(3) of the *Environmental Planning and Assessment Act 1979* and the conditions of concurrence, integrated and other Government Authorities are complied with.

PART B: PRIOR TO THE ISSUE OF ANY CONSTRUCTION CERTIFICATE

B1 Construction Certificate

A Construction Certificate is required for the development in accordance with Section 6.7(1) of the *Environmental Planning and Assessment Act 1979*.

Reason: To ensure compliance with the *Environmental Planning and Assessment Act 1979*.

B2 Payment of Security Deposits, Levies and Contributions

The fees listed in the table below must be paid in accordance with the conditions of this consent and Council's adopted Fees and Charges applicable at the time of

payment. Payments must be made prior to the issue of the Construction Certificate or prior to the commencement of work (if there is no associated Construction Certificate).

- (a) **Public liability insurance** - Prior to the commencement of any works on Council land including a public road, the applicant is to obtain Public Liability Insurance in the minimum amount of \$20 million. This insurance is to note Council's interest and is to remain current for at least the period from the issue of the Construction Certificate until the issue of a Compliance Certificate/Occupation Certificate for the works. Documentary evidence of the Certificate of Currency is to be provided to Council prior to the issuing of any Construction Certificate for access.
- (b) **Payment of development contributions** – The applicant must pay the following development contributions:

Pursuant to section 4.17(1) of the Environmental Planning and Assessment Act 1979, and the Muswellbrook Shire Council Section 94A Development Contributions Plan 2010, a contribution of amount of \$287,441.00 shall be paid to Muswellbrook Shire Council.

The amount to be paid is to be adjusted at the time of the actual payment, in accordance with the provisions of the Muswellbrook Shire Council Section 94A Development Contributions Plan 2010. The contribution is to be paid prior the issue of the Construction Certificate.

Reason: To ensure relevant fees, levies and contributions are paid which address the increased demand for public amenities and services resulting from the approved development.

Reason: To ensure payments are made in accordance with legislative requirements.

B3 Construction Site Management Plan

Prior to the issue of a Construction Certificate, the applicant must prepare the following Construction Site Management Plan (incorporating the Sediment and Erosion Control Plan and Construction Traffic Management Plan).

Reason: To require details of measures that will protect the public and the surrounding environment during site works and construction.

B4 Other Approvals

The following approvals are required where relevant:

- (a) **Roads Act 1993 approval** - The applicant is to submit an application to Council for any work within the road reserve (e.g. vehicular footpath crossings, utilities including stormwater, footpath paving, kerb and gutter etc) for local and regional roads or Transport for NSW for state roads, pursuant to Section 138 of the *Roads Act 1993*. Details must be provided with the Construction Certificate application.
- (b) **Section 68 of the Local Government Act 1993** – Any approvals required under Section 68, Parts A to F, including (but not limited to), any use of public

property for crane operation, waste management or installation of a moveable dwelling. Applications are to be made to Council a minimum of six (6) weeks prior to the proposed activity being undertaken.

Reason: To ensure all work complies with relevant legislation.

B5 Servicing

In relation to services, the following must be undertaken by the applicant where relevant:

- (a) **Letter of consent from electricity authority** - a letter of consent from Ausgrid demonstrating that satisfactory arrangements can be made for the installation and supply of electricity,
- (b) **Adequate services** – the applicant must demonstrate that adequate services for water, electricity and wastewater are available to the site, Prior to occupation.

Note: A private drinking water supply is required for staff. The Public Health Act 2010 and the Public Health Regulation 2012 require drinking water suppliers to have a quality assurance program (QAP) that complies with the Regulation and comply with the approved QAP. You are required to develop and submit a copy of the QAP to NSW Health (Hunter New England Public Health Unit) prior to occupation of the site.

- (c) **Other relevant utilities or services** - that the development as proposed to be carried out is satisfactory to those other service providers, or if it is not, what changes are required to make the development satisfactory to them,
- (d) **Dial before your dig** - the applicant shall contact “Dial Before You Dig on 1100” to obtain a Service Diagram. The sequence number obtained from “Dial Before You Dig” shall be forwarded to the Principal Certifying Authority (PCA) and Council for their records.

Details shall be provided with the Construction Certificate application.

Reason: To ensure work is carried out having regard to existing services and underground infrastructure for safety and efficiency.

B6 On-site Sewage Management

The development will require On-Site Sewage Management System. Such a system requires approval from Council to install, construct or modify under s68 Local Government Act. A current Approval to Operate will also be required before an Occupation Certificate can be provided. Applications to install a system must be accompanied with a Wastewater Management Plan including Site and Soil Assessment by a suitably qualified person.

Reason: To ensure that wastewater is disposed of in an appropriate manner.

B7 Substation to be bundled

The substation shall be provided with appropriate bunding or similar containment systems with a capacity that will exceed the oil storage volume of the transformers and must be demonstrated on the Construction Certificate plans.

Reason: To prevent water or land contamination from potential spills or leaks from the transformers within the substation from polluting the site and surrounding areas.

B8 Stormwater Management

Stormwater management shall be constructed in accordance with the approved stormwater plan prepared by TOPO dated 6 April 2021.

A Section 68 approval under *Local Government Act 1993* will be required to be lodged and approved by Council prior to the issue of a construction certificate.

The development must not result in the diversion of overland surface waters onto adjoining properties and where necessary shall construct appropriate surface drainage systems that connect to Council's stormwater system.

Reason: To ensure stormwater is appropriately managed on the site.

B9 Safety of Aerodromes/Airports

The solar farm must comply with any requirements of the Civil Aviation Safety Authority, particularly in relation to glint and glare and any Obstacle Limitation Surface controls.

Reason: To ensure the development does not have an adverse impact on the nearby aerodrome/airport.

B10 Vehicle Access Requirements

The following vehicle access arrangements must be provided to the site:

- (a) Rural (BAL) turn treatment or as required by Transport for NSW

Entry and exit points are to be clearly signposted and visible from both the street and the site at all times. All required works are to be completed in accordance with Council/Transport for NSW standards prior to the commencement of construction works on the site. Details must be provided on the Construction Certificate plans.

Reason: To ensure safe, practical and legal vehicle access is provided to the site.

B11 Reflection Mitigation Measures

To ensure reflection and glare from the solar panels is minimised, the following shall be implemented:

- (a) Planting and maintenance of a vegetation screen along the all boundary of the site to reduce the impact of the solar panels on the adjoining properties/road;
- (b) Installation of an anti-reflective coating on the solar panels. Evidence shall be provided to the Certifying Authority.

Details are to be shown on the Construction Certificate plans.

Reason: To ensure the solar panels do not cause a nuisance, disturbance or hazard to adjoining properties, nearby aircraft and the public using nearby public roads from glint and glare.

B12 Car Parking

All driveways, access ramps, vehicular crossings and car parking spaces shall be designed and constructed in accordance with the current version of Australian Standards, AS 2890.1-2004: *Parking Facilities – Off-street Car Parking* and AS 2890.2:2018 - *Parking facilities Off-street commercial vehicle facilities*. Details are to be provided with the Construction Certificate application.

Reason: To ensure driveways, access ramps, vehicular crossings and car parking complies with the relevant Australian Standards.

B13 Structural Engineers Certification

Certification from an appropriately qualified and practicing structural engineer is to be provided to the Certifying Authority, certifying the structural adequacy in accordance with the relevant Australian Standards of all reinforced concrete work, structural beams, columns & other structural members including structural drawings. The details are to be submitted to the Principal Certifying Authority for approval prior to construction of the specified works.

Reason: To ensure structural works are safe and built to the relevant specifications.

PART C: PRIOR TO WORKS COMMENCING

C1 Appointment of Principal Certifying Authority

Prior to the commencement of work, the person having the benefit of the development consent and a Construction Certificate shall:

- (a) Appoint a Principal Certifying Authority and notify the Council of the appointment (if Council is not appointed); and
- (b) Notify Council of their intention to commence building work (at least 2 days' notice is required).

Reason: To ensure compliance with the *Environmental Planning and Assessment Act 1979*.

C2 Signs on site

A sign must be erected in a prominent position on any site on which building 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.

Any such sign is to be maintained while the building work or demolition work is being carried out but must be removed when the work has been completed.

Reason: Prescribed Condition under Clause 98A(2) and (3) of the Regulation.

C3 Tree Protection Measures

Before the commencement of any site or building work, the principal certifier must ensure the measures for tree protection detailed in the Construction Site Management Plan are in place.

Reason: To protect trees which are to be retained prior to work commencing on the site.

C5 Toilet facilities

Toilet facilities are to be provided at, or in the vicinity of the site, at the rate of one toilet for every 20 persons or part of 20 persons employed at the site. each toilet provided must be connected to an accredited sewage management facility approved by the Council or some other sewage management facility approved by the Council.

Reason: To provide appropriate on-site amenities during demolition and construction work.

C6 Implementation of the Construction Site Management Plan and Waste Management Plan

The approved Construction Site Management Plan (incorporating the Sediment and Erosion Control Plan and Construction Traffic Management Plan) and the Waste Management Plan must be implemented and maintained prior to, and during, the construction works on the site until works are completed and all exposed surfaces are landscaped/sealed.

Reason: To ensure measures that will protect the public, and the surrounding environment, during site works and construction are implemented prior to works commencing on the site.

PART D: DURING WORKS

D1 Construction Hours

The hours of demolition and/or building work shall be limited to the following hours:

- (a) Monday to Friday: 07:00 am to 05:00 pm;
- (b) Saturday: 08:00 am to 01:00 pm;
- (c) No Construction on Sundays or Public Holidays.

Unless otherwise approved within a construction site management plan, construction vehicles, machinery, goods or materials must not be delivered to the site outside the approved hours of site works. Note: Any variation to the hours of work requires Council's approval.

Reason: To ensure the amenity of the area is maintained during construction.

D2 Compliance with Construction Management Plan

The requirements of the approved Construction Site Management Plan must be complied with and maintained for the duration of the construction works. This includes, but is not limited to, the following:

- All practicable measures shall be undertaken to prevent and minimise harm to the environment and the amenity of the area as a result of the construction and operation of the development, particularly from wind-blown dust, debris, noise and the like.
- All building materials and equipment must be stored wholly within the site unless an approval to store them elsewhere has been granted.
- During construction, care must be taken to protect Council's infrastructure, including street signs, footpath, kerb, gutter and drainage pits etc.
- Protecting measures shall be maintained in a state of good and safe condition throughout the course of demolition.
- The area fronting the site and in the vicinity of the development shall also be made safe for pedestrian and vehicular traffic at all times.

The applicant must ensure a copy of these approved plans is kept on site at all times and made available to Council officers upon request.

Reason: To ensure the required site management measures are implemented during construction.

D3 Waste Management

While building work, demolition or vegetation removal is being carried out, the principal certifier must be satisfied all waste management is undertaken in accordance with the approved waste management plan. Upon disposal of waste, the applicant is to compile and provide records of the disposal to the Principal Certifier, detailing the following:

- (a) The contact details of the person(s) who removed the waste
- (b) The waste carrier vehicle registration
- (c) The date and time of waste collection

- (d) A description of the waste (type of waste and estimated quantity) and whether the waste is expected to be reused, recycled or go to landfill
- (e) The address of the disposal location(s) where the waste was taken
- (f) The corresponding tip docket/receipt from the site(s) to which the waste is transferred, noting date and time of delivery, description (type and quantity) of waste.

Note: If waste has been removed from the site under an EPA Resource Recovery Order or Exemption, the applicant is to maintain all records in relation to that Order or Exemption and provide the records to the principal certifier and Council.

Reason: To require records to be provided, during construction, documenting that waste is appropriately handled.

D5 Responsibility for Changes to Public Infrastructure

While building work is being carried out, the applicant must pay any costs incurred as a result of the approved removal, relocation or reconstruction of infrastructure (including ramps, footpaths, kerb and gutter, light poles, kerb inlet pits, service provider pits, street trees or any other infrastructure in the street footpath area).

Reason: To ensure payment of approved changes to public infrastructure.

D6 Discovery of Aboriginal Objects

While demolition or building work is being carried out, all such works must cease immediately if a relic or Aboriginal object is unexpectedly discovered. The applicant must notify the Heritage NSW in respect of a relic and notify the Secretary of the Department of Planning, Industry and Environment in respect of an Aboriginal object. Building work may recommence at a time confirmed by either the Heritage NSW or the Secretary of the Department of Planning, Industry and Environment.

In this condition:

- “relic” means any deposit, artefact, object or material evidence that:
 - (a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and
 - (b) is of State or local heritage significance; and
- “Aboriginal object” means any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction and includes Aboriginal remains.

Reason: To ensure the protection of objects of potential significance during works.

D7 Discovery of Contamination

Should any contaminated, scheduled, hazardous or asbestos material be discovered before or during construction works, the applicant and contractor shall ensure the

appropriate regulatory authority is notified and that such material is contained, encapsulated, sealed, handled or otherwise disposed of to the requirements of such Authority.

Reason: To ensure contamination discovered during construction is dealt with as quickly as possible and to protect the health of the community and the environment.

D8 Identification Survey

An identification survey prepared by a Registered Surveyor is to be prepared at set out stage of the construction works to ensure that the solar panels and fencing is generally sited in accordance with the approved site plan.

Reason: To ensure buildings are sited and positioned in the approved location.

D9 Construction Noise

While construction work is being carried out, the applicant is to ensure that any noise caused by demolition, vegetation removal or construction does not exceed an LAeq (15 min) of 5dB(A) above background noise, when measured at any lot boundary of the property where the construction is being carried out.

Reason: To protect the amenity of the neighbourhood.

D10 Imported Fill

While construction work is being carried out, the principal certifier must be satisfied all soil removed from or imported to the site is managed in accordance with the following requirements:

- (a) All excavated material removed from the site must be classified in accordance with the EPA's *Waste Classification Guidelines* before it is disposed of at an approved waste management facility and the classification and the volume of material removed must be reported to the principal certifier,
- (b) All fill material imported to the site must be Virgin Excavated Natural Material as defined in Schedule 1 of the *Protection of the Environment Operations Act 1997* or a material identified as being subject to a resource recovery exemption by the NSW EPA.

Reason: To ensure soil removed from the site is appropriately disposed of and soil imported to the site is safe for future occupants.

D11 Critical Stage Inspections

Building work must be inspected on the occasions set out in clause 162A (Critical stage inspections for building work) under the *Environmental Planning and Assessment Regulation 2000*.

Reason: To require approval to proceed with building work following each critical stage inspection and comply with the Regulation.

D12 Tree Protection

While site or building work is being carried out, the applicant must maintain all required tree protection measures in good condition in accordance with the Construction Site Management Plan required under this consent, the relevant requirements of AS 4970-2009 *Protection of Trees on Development Sites* and any Arborist's report approved under this consent. This includes maintaining adequate soil grades and ensuring all machinery, builders refuse, spoil and materials remain outside tree protection zones.

Reason: To protect trees during construction.

D13 Native Vegetation

There must be no removal or disturbance of native vegetation except as authorised by this consent, including canopy trees, understorey and ground cover vegetation without the prior written consent of Council.

Reason: To ensure vegetation is maintained on the site.

D14 Clearing for Asset Protection Zones (APZ)

While building work is being carried out, the applicant must ensure the clearance of vegetation to establish the APZ is confined to within the marked APZ boundary, to the satisfaction of the principal certifier.

Reason: To ensure vegetation clearance during construction is confined within the APZ.

D15 Demolition Work

All demolition work shall be carried out in accordance with *Australian Standards AS 2601-1991 Demolition of Structures*, other relevant Australian Standards and the requirements of SafeWork NSW.

Demolition work must be carried out in accordance with the following:

- (a) The applicant must give relevant notice to all relevant statutory authorities of the demolition.
- (b) All existing utility services to the building to be demolished are to be terminated and sealed off in a manner that ensures there will be no leaks or odours escaping from their respective points of access to or within the building.
- (c) No demolition material shall be burnt on site.
- (d) Dust suppression should be adopted during demolition when required;
- (e) Prior to the commencement of demolition work a licensed demolisher who is registered with SafeWork NSW must prepare a Safe Work Method Statement ('SWMS') to the satisfaction of Council.
- (f) Any material containing asbestos or other hazardous building materials found on site during the demolition process shall be removed and disposed of in accordance with the requirements of SafeWork NSW, the *Protection of the Environment Operations Act 1997*, the *Protection of the Environment Operations (Waste) Regulation 2014* and the NSW Environment Protection Authority *Waste Classification Guidelines 2014*.
- (g) Identified hazardous building materials within the building to be demolished must be removed in accordance with current legislation and the approved Hazardous

Building Materials Survey prior to the general demolition of the building. This hazardous building material removal must be undertaken by the relevant licensed specialists, as documented in the Hazardous Building Materials Survey.

Reason: To ensure demolition work is carried out in a safe manner.

PART E: PRIOR TO THE ISSUE OF THE OCCUPATION CERTIFICATE

E1 Occupation Certificate

Occupation and operation of the solar farm is not to occur until all work has been completed, all of the conditions of consent have been satisfied and an Occupation Certificate has been issued by the Principal Certifying Authority pursuant to Section 6.10 of the *Environmental Planning and Assessment Act 1979*.

Reason: To ensure compliance with the *Environmental Planning and Assessment Act 1979*.

E2 Works-as-executed plans and any other documentary evidence

Before the issue of the relevant Occupation Certificate, the applicant must submit, to the satisfaction of the principal certifier, works-as-executed plans, any compliance certificates and any other evidence confirming the following completed works:

- (a) All stormwater drainage systems and storage systems,

The Principal Certifier must provide a copy of the plans to Council with the Occupation Certificate.

Reason: To confirm the location of works once constructed that will become Council assets.

E3 Completion of Public Utility Services

Before the issue of the relevant Occupation Certificate, the principal certifier must ensure any adjustment or augmentation of any public utility services including gas, water, sewer, electricity, street lighting and telecommunications, required as a result of the development, and is completed to the satisfaction of the relevant authority. Before the issue of the Occupation Certificate, the certifier must request written confirmation from the relevant authority that the relevant services have been completed.

Reason: To ensure required changes to public utility services are completed, in accordance with the relevant agency requirements, before occupation.

E5 Repair of Infrastructure

Before the issue of an Occupation Certificate, the applicant must ensure any public infrastructure damaged as a result of the carrying out of building works (including damage caused by, but not limited to, delivery vehicles, waste collection, contractors, sub-contractors, concreting vehicles) is fully repaired to the written satisfaction of Council, and at no cost to Council. Note: If the council is not satisfied, the whole or part of the bond submitted will be used to cover the rectification work.

Reason: To ensure any damage to public infrastructure is rectified.

E6 Removal of Waste upon Completion

Before the issue of an Occupation Certificate, the Principal Certifier must ensure all refuse, spoil and material unsuitable for use on-site is removed from the site and disposed of in accordance with the approved waste management plan. Written evidence of the removal must be supplied to the satisfaction of the Principal Certifier. Before the issue of a partial Occupation Certificate, the applicant must ensure the temporary storage of any waste is carried out in accordance with the approved Waste Management Plan to the Principal Certifier's satisfaction.

Reason: To ensure waste material is appropriately disposed or satisfactorily stored

E7 Completion of Landscaping

Before the issue of an Occupation Certificate, the Principal Certifier must be satisfied that all landscape and tree-works, including pruning in accordance with *AS 4373-2007 Pruning of Amenity Trees* and the removal of all noxious weed species, have been completed in accordance with the approved plans and any relevant conditions of this consent.

Reason: To ensure the approved landscaping works have been completed before occupation, in accordance with the approved landscaping plan(s)

E8 Operations Environment Management Plan

Prior to the issue of an Occupation Certificate, the applicant prepares and submit must Operations Environment Management Plan (OEMP).

Reason: To ensure environmental protection throughout the operation of the development.

E9 Landscaping

All landscaping required by the approved Landscape Plan must be completed prior to the issue of an Occupation Certificate.

Reason: To ensure there is adequate landscaping undertaken on the site and an adequate visual screening buffer has been established on the site.

E11 Drainage works

All drainage works required to be undertaken in accordance with this consent shall be completed prior to the issue of an Occupation Certificate for the development.

Reason: To ensure adequate arrangements have been made for the collection, conveyance, storage and discharge of stormwater on the site.

PART G: OPERATIONAL CONDITIONS

G1 Emergency Management Plan

The approved Emergency Management Plan ('EMP') for the development shall be activated when required throughout the operation of the development and shall be updated if required.

Reason: To ensure the protection of human life, the environment and adjoining property in the event of fire or other emergency generated by the development.

G2 Operations Environmental Management Plan

The approved Operations Environmental Management Plan ('OEMP') for the development shall be complied with throughout the operation of the solar farm.

Reason: To ensure the solar farm is operated in accordance with relevant Australian Standards and best practice.

G3 Vehicle Management

All loading and unloading of vehicles must be undertaken wholly within the site and all vehicles must enter and leave the site a forward direction. Sufficient car parking is to be provided on the site, with no car parking to occur on the public road network in the vicinity of the site. The entry and exit points are to be clearly signposted and visible from both the street and the site at all times.

Reason: To ensure the operation of the solar farm does not adversely affect the surrounding road network.

G4 Landscape Screening

The planting associated with the landscape screen as outlined on the approved Landscape Plan must be maintained while the solar farm is in operation at the site. On-going monitoring of the health and performance of the visual plant screen during the life operation of the solar farm must be undertaken, including replacement of plant stock whenever necessary to ensure the screen continues to act as an effective visual buffer. Following construction, the applicant must restore the ground cover of the site as soon as practicable using suitable species and maintain ground cover.

Reason: To ensure the provision of a landscape screen to reduce the visual impact of the development.

G5 External lighting

Any lighting used on the site in connection with the development is to comply with AS 4282 – *Control of the obtrusive effects of Outdoor lighting*. The applicant must minimise off-site lighting impacts arising from the development and any external lighting is installed as low intensity lighting except where required for safety or emergency purposes.

Reason: To protect the amenity of the surrounding area.

G6 Minimise Harm to the Environment

The applicant must implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment or to the amenity of the area that may result from the construction, operation or decommissioning of the development, including weed control.

Reason: To minimise harm to the environment.

G7 Visual Impacts

The applicant must:

- a) Minimise the off-site visual impacts of the development, including the potential for any glare or reflection from the 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 safety purposes.

Reason: To minimise the visual impact of the development.

G8 Bushfire Protection Measures

During occupation of the development, the applicant must ensure the site is managed, in accordance with *Planning for Bushfire Protection 2019* and the NSW Rural Fire Service's document *Standards for Asset Protection Zones*. Any required bushfire protection measures are to be maintained throughout the operation of the solar farm at the site.

Reason: To reduce the impact of bushfires.

G9 Storage of hazardous materials

The applicant must store and handle all dangerous and hazardous materials on site in accordance with *AS 1940-2004: The storage and handling of flammable and combustible liquids*. The storage of any dangerous and hazardous materials must be provided in a suitably bunded and impervious area and in such a way as to minimise spills of hazardous materials or hydrocarbons. Clean up any spills must occur as soon as possible.

Reason: To minimise harm to the environment.

G10 Maintenance of Wastewater and Stormwater Treatment Device

During occupation and ongoing use of the building, the applicant must ensure all wastewater and stormwater treatment devices (including drainage systems, sumps

and traps, and on-site detention) are regularly maintained, to remain effective and in accordance with any positive covenant (if applicable).

Reason: To protect sewerage and stormwater systems.

G11 Noise Control During Operation

Any noise generated from the operation of the solar farm, including noise from any substation and associated infrastructure, must not be intrusive or constitute offensive noise as defined by the *Protection of the Environment Operations Act 1997* at any private residential receiver. The operation of the solar farm must satisfy the EPA maximum noise criteria pursuant to the EPA's *Noise Policy for Industry (2017)*. If, at any time, these levels are exceeded, operation of the solar farm shall immediately be modified, including suspension of operations if necessary, to ensure compliance.

Reason: To protect the amenity of the area while the solar farm is in operation.

G12 Waste materials

All solid waste from construction and operation of the development shall be assessed, classified and disposed of in accordance with the NSW EPA *Waste Classification Guidelines, Part 1: Classifying Waste*, November 2014. All hazardous building materials must be disposed of in accordance with the relevant statutory requirements.

Reason: To protect the environment.

Submission Responses

Denman Road, Muswellbrook NSW

DA No. 2020/49 – Lot 400 DP 791860

Dated: 12 November 2020

Submission 1

List of Concerns	Response
situated on arable land and dev would contadict the LEP	We refer to 7.4 of the Statement of Environmental Effects <i>Soil and Land Capability</i> <i>Land capability classes aim to classify land according to its inherent ability and protection from erosion and other forms of land degradation. The classification of any land is based on biophysical features which determine the limitations and hazards of that land. The main hazards and limitations include: water erosion, wind erosion, soil structure decline, soil acidification, salinity, waterlogging, shallow soils, rockiness, and mass movement. The eight class system recognises four types of land uses with land capability decreasing from Class 1 to Class 8:</i> <i>Class 1 – 3: land suitable for cultivation</i> <i>Class 4 – 5: land suitable for grazing and restricted cultivation</i> <i>Class 6: land suitable for grazing</i> <i>Class 7 – 8: land not suitable for agricultural production</i> <i>The State Land Capability mapping indicates that the northern portion, approximately 12ha, of the site is classified as Class 3. The remaining area is Class 4. Better soil and cropping land is apparent to the north of Denman Road. The Site is not used for commercial cropping and the small portion of Class 3 land on the Solar Park Site will not affect the regional agricultural land capacity.</i>
in a very high depositional dust area from coal mining which would reduce efficiency outputs of solar panels by 50%	Cleaning of the solar panels for dust is part of the operation and maintenance requirements for the Solar Farm

	The establishment of the landscaped native vegetation screening and buffer zone (10m) around the solar farm will assist in mitigating the dust.
limitations in proposed screening as the site has no water for effective visual buffer if the dam as proposed is filled in.	Native vegetation shall be utilised for the screening and buffer zone that have low water requirements that are appropriate for the area. The native vegetation shall be maintained throughout the life of the project.
the site being agricultural forms part of the mining land buffer zone to limit an already conflicted land use issue in the immediate area.	We refer to 7.2 of the Statement of Environmental Effects <i>Site Constraints</i> <i>Review of the ePlanning Spatial Viewer revealed no Protection mapping affecting the Solar Park Site. Matters reviewed include: Acid Sulphate Soils, Airport Noise, Drinking Water Catchment, Groundwater Vulnerability, Mineral and Resource Land, Obstacle Limitation Surface, Riparian Lands and Watercourses, Salinity, Scenic Protection Land, Terrestrial Biodiversity, Wetlands, Environmentally Sensitive Land.</i> We refer to 3.4 of the Statement of Environmental Effects <i>Business and Industry</i> <i>As the Solar Generation Facility are located in the Buffer Area for the BHP Mt Arthur Coal Mine we have approached BHP to seek pre-lodgement feedback and/or support. To-date BHP has not offered any feedback but has advised that any views will be submitted in response to the public notification of the development application.</i>
benefits in supply seem over stated and on going employment is negligible	The benefits identified in the Executive Summary of Statement of Environmental Effects are the expected effects of the solar farm.
NSW Gov has just announced 3 renewable energy zones to prevent land use conflict in other areas of the state.	We refer to 14 of the Statement of Environmental Effects - Statutory and Planning Framework whereby all the relevant Planning Zone Objectives, Permissibility and all associated Commonwealth and NSW Legislation was reviewed and no conflict was identified with the development of a solar farm. Additionally, the NSW Government has declared the Hunter Valley will be a Renewable Energy Zone.
no supply guarantee to grid has been achieved is concerning as large solar dev. are facing similar hurdles as there is congestion in the market.	We refer to 3.4.1 of the Statement of Environmental Effects

	<i>The Solar Generation Facility will be connected to the Ausgrid Power Distribution Network in the onsite 66kv power easement corridor. The Proponent has had several meetings with Ausgrid to help plan the Solar Park network connection and generation capacity.</i> <i>The planning matters of interest to Ausgrid are:</i> <i>• The 66kv network connection</i> <i>• The physical location of the solar park infrastructure in relation to the existing distribution lines</i> <i>• Lateral crossings of the 66kv easement for access, electrical cabling and services</i> <i>There is a formal process for connection to the Power Network which requires approval by the Network Service Provider (Ausgrid) and the Australian Energy Market Operator (AEMO) in accordance with the National Electricity Rules (NER's). This process independent of, and will run concurrently with the Development Application.</i> Further Ausgrid, the network service provider, has advised there is sufficient capacity and network strength within the Muswellbrook area for the proposed solar farm.
the proponent is the developer ? unclear.	The Proponent is the Developer for the project.
possible negative effects on near residences in loss of further amenity and reduced property value interest...as not many people's first choice to live next door to a solar farm.	The Statement of Environmental Effects and supporting documents details the all the potential impacts and required assessments to ensure that there is minimal or no loss of amenity to residents. The location was determined due to the proximity to the existing coal mines to mitigate any loss of amenity. Observation in recently constructed Solar Farms in Queensland and NSW shows no negative effect on property value.

Submission 2

List of Concerns	Response
While I do not object to the solar park I do have concerns the 10 metre green zone would be inadequate near my house, I would like to see at least a 20 metre wide green zone from the Denman road boundary up past the substation yard, there also does not seem to be enough trees in the plan for the solar development judging by the photo supplied of a similar development, one solution would be for the solar development to plant two rows of trees closely spaced for approx. 300 metres on my side of the boundary fence as well, any temporary sheep fencing, establishing and maintenance cost to be borne by the solar farm.	We have undertaken to do detailed Landscape Drawings by Landscape Architects to ensure that the 10m buffer zone is thoroughly designed to ensure adequate visual screening. The detailed Landscape Drawings will be part of the Development Approval submission.
I appreciate the hours of work timeframe supplied when the project is in construction, another must be given for the hours between sunset and sunrise when the project is up and running, would I be correct in thinking there would be zero noise in these hours, this should be a condition set by council as I have a "special needs child" that reacts to certain noise, the ausgrid power line has three power poles on the solar farm block but for some reason the sub-yard has been designed so it is on my boundary (north boundary), it would be reasonable to expect an acoustic sound barrier as a condition perhaps masonry or other selective material as to dampen noise especially on the two sides of the sub-yard facing my house.	We confirm that the Solar Farm will be primarily be operational during day light hours, however, the project may operate at night time from time to time due to the installation and use of Battery Energy Storage System. The Solar Farm is a passive operation and the noise is limited to operation of small electric motors that pivot the solar panels (these will only operate during daylight hours) and small fans within the inverters and batteries (which may operate occasionally at night). There are no noises from the equipment that would be loud or abrupt nature. The 66kV Substation on the Northern Boundary has minimal noise emissions. The electric motors to pivot the solar panels and small fans within the inverters and batteries are located away from the property boundaries. Please refer to the Appendix C Denman Road Concept Plans. Finally, vegetation allowed for as part of the Detailed landscape plan will act as noise suppression.

Another consideration worth mentioning would be to have any acoustic wall, the battery storage containers and any other structure that is noticeable painted a colour to blend into the surrounding landscape.	The battery containers, structures and substation should not be visible after the establishment of the visual screen landscaping. Typically, the electrical plant is coloured in light colours to minimise heat absorption.
While i believe the project has the potential to showcase the best in solar of this scale and for the owners to take pride in their development I do have some doubts on how they will get trees in the green zone up to a point of establishment, after the last few years of below average rainfall, hot dry summers and with the lack of water, maybe a tree count or checkable register would be needed for regular upkeep as to maintain or replace any trees as needed, the success of this project would be largely based on this green zone to soften the impact.	Native vegetation shall be utilised for the screening and buffer zone that have low water requirements that are appropriate for the area. An Operation and Maintenance Contractor will be engaged for the project and the native vegetation screen shall be maintained throughout the life of the project.

Submission 3

List of Concerns	Response
The grounds for my objections are that the property owners in the Roxburgh area have not been made aware of the proposal formally as part of the DA process. The properties to the southern end of Roxburgh Road due to their elevation will have a view of the solar park, and this has not been identified in section 8.3 of the environmental statement.	The Muswellbrook Council undertook a formal notification process pursuant to the Muswellbrook Shire Development Control Plan. We further undertook a consultation process as detailed in 3 Statement of Environmental Effects. Unfortunately, due to COVID restriction we have been unable to attend the area and engage further with the community eg presentations and Q&A. The visual impact assessment for residences was performed for those properties within 1.5km of the Solar Farm (Reference being 8.3 of the Statement of Environmental Effects) as this is considered a reasonable distance for the purposes of an assessment. As to the residence outside of this area we refer to 8.3.1 of the Statement of Environmental Effects.

	<i>The majority of the residential dwellings being partially screened or filtered by either topography, vegetation or both, and where the Solar Generation Facility may be visible, dwellings are at a such a distance that the Solar Generation Facility would not be a dominant feature in views. Over time, the proposed landscape screening will reduce the visibility of the solar array, further reducing the visual impact of the Solar Generation Facility.</i> <i>Views from the surrounding road network will be limited by Landscape Screening. The local area does not hold high visual landscape values, particularly from a tourism perspective, and as such the visual impact to the local road network will be negligible.</i>
Properties in this area are already impacted by being included in either Mangoola or Bengalla's mitigation areas due to noise levels and would now have their properties further downgraded in price value due to having their views impacted by a solar farm on the opposing hill.	We refer to 8.3.1 of the Statement of Environmental Effects <i>The majority of the residential dwellings being partially screened or filtered by either topography, vegetation or both, and where the Solar Generation Facility may be visible, dwellings are at a such a distance that the Solar Generation Facility would not be a dominant feature in views. Over time, the proposed landscape screening will reduce the visibility of the solar array, further reducing the visual impact of the Solar Generation Facility.</i> <i>Views from the surrounding road network will be limited by Landscape Screening. The local area does not hold high visual landscape values, particularly from a tourism perspective, and as such the visual impact to the local road network will be negligible.</i> The Visual Impact would have a negligible effect on the property values within the area. Observation in recently constructed Solar Farms in Queensland and NSW shows no negative effect on property value.
I would like to object on the basis of visual impact. Currently we look straight across the Hunter river to Pukara (directly on the opposite riverbank to our property) to the hills where the solar farm is proposed. It is aesthetically pleasing and happens to be the view from our living room in	See refer to our responses directly above.

which we took advantage of the view by having large windows installed during our renovations. Due to our higher elevation I believe our view will be compromised with a solar farm on the opposing hill.	
It is also an unknown whether the above properties will get the glare/ reflection from these solar panels as they track the sun due to our elevation.	We refer to 8.3.1 of the Statement of Environmental Effects Glare and Light <i>Sometimes communities have concerns that there may be an issue of glint and glare surrounding the reflectivity of the proposed PV solar panels. The Poly-Crystalline Solar Panels proposed for the installation are designed to absorb the sun's energy and directly convert it to electricity. The PV modules being used in the installation for the Denman Solar Park will absorb approximately 82- 90%+ of the light received and have been designed using anti-reflective coatings which significantly reduces the reflectivity. Constructed of dark-coloured materials and covered with anti-reflective coatings, today's typical solar panels may reflect as little as 2 percent of incoming sunlight.</i> <i>Around the world, solar power plants are even located next to airports where glare would be of paramount concern, and evidence thus far suggests that glare has not been a problem for airport personnel.</i> <i>Our investigations have shown that there are no residential properties from which the completed facility will be visible from above. And due to proposed buffer vegetation, the nearest residence is completely screened from the Solar Park site. This will ensure that the visual impact of the completed installation is considered negligible.</i>
As we are already above the height of the olive trees I do not believe any vegetation screening at the site will help our cause.	We refer to our responses above.
I would suggest that the expected output of the solar farm would also not be as efficient as stated due to the amount of dust sediment which would constantly be on the panels due to the airborne dust from the surrounding mines ,in particularly Mount Arthur.	Cleaning of the solar panels for dust is part of the operation and maintenance requirements for the Solar Farm The establishment of the landscaped native vegetation screening and buffer zone (10m) around the solar farm will assist in mitigating the dust.

I would also object that there would appear to be No formal compensation/ consultation process for affected property owners should this project be approved in its current state and it does impact their properties and lifestyles and property values. I would suggest that in line with mining project approvals if a property is impacted due to a visual impact/ operational impacts/ property depreciation that the company needs to liaison with the affected property owner to an agreed outcome. Some conditions should be applied in this respect.	The Muswellbrook Council undertook a formal notification process pursuant to the Muswellbrook Shire Development Control Plan. We further undertook a consultation process as detailed in 3 of the Statement of Environmental Effects. Unfortunately, due to COVID restriction we have been unable to attend the area and engage further with the community eg presentations and Q&A. We cannot make a comment about mining project approvals and compensation of residents affects as we are not a mining company.
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Submission 4

List of Concerns	Response
Same as Submission 1	See above

Submission 5

List of Concerns	Response
The grounds of my objection are in regard to 8.3 of the Statement of Environmental Effects. At point 8.3.2. it states, "Mitigation measures Following installation and full maturity of the Landscape Screening, the Solar Generation Facility will not be visible from the local road network, or residential dwellings in the farming areas surrounding the Site. The visual impact to residential dwellings has been assessed as negligible to low." You have stated that the visual impact to residential dwellings has been assessed as negligible to low, yet our three dwellings across the Hunter River on Roxburgh Road are at such an elevated height we are able to view the area of the proposed Solar Park. We fear that this will make it aesthetically unpleasant to look at and may impact the value of our property.	We refer to 8.3.1 of the Statement of Environmental Effects <i>The majority of the residential dwellings being partially screened or filtered by either topography, vegetation or both, and where the Solar Generation Facility may be visible, dwellings are at a such a distance that the Solar Generation Facility would not be a dominant feature in views. Over time, the proposed landscape screening will reduce the visibility of the solar array, further reducing the visual impact of the Solar Generation Facility.</i> <i>Views from the surrounding road network will be limited by Landscape Screening. The local area does not hold high visual landscape values, particularly from a tourism perspective, and as such the visual impact to the local road network will be negligible.</i>

	The Visual Impact would have a negligible effect on the property values within the area. Observation in recently constructed Solar Farms in Queensland and NSW shows no negative effect on property value.
Due to not being within the 1.5km radius of the site we have had no correspondence regarding the Solar Park. We feel that even though we are not within the radius we will be impacted and therefore should have received correspondence regarding this Project. We are not opposed to Solar Power and would appreciate some consultation to further our understanding.	The Muswellbrook Council undertook a formal notification process pursuant to the Muswellbrook Shire Development Control Plan. We further undertook a consultation process as detailed in 3 of the Statement of Environmental Effects. Unfortunately, due to COVID restriction we have been unable to attend the area and engage further with the community eg presentations and Q&A. Once the COVID restrictions between QLD and NSW are lifted we will continue with our community consultation process.