STATEMENT OF ENVIRONMENTAL EFFECTS

Amaroo Solar Farm
Lot 392 DP751780, Amaroo Drive
Moree NSW 2400

Prepared for:

Providence Asset Group
704/99 Bathurst Street
SYDNEY NSW 2000

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BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Providence Asset Group (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
631.30013.00000-R01 – v0.5	26 May 2021	Rachel Pettitt	Clare Brennock	
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631.30013.00000-R011 For client review	25 May 2021	Rachel Pettitt	Clare Brennock	

CONTENTS

DOCUMENT REFERENCES

FIGURES

TABLES

APPENDICES

1 Introduction

This Statement of Environmental Effects (SEE) is submitted to Moree Plains Shire Council (Council) in support of a Development Application (DA) for a solar photovoltaic (PV) power generation plant at Amaroo Drive, Moree NSW 2400 (the site).

Specifically, the proposed development includes:

- Establishment of a grid-connected solar photovoltaic (PV) plant including associated electrical generation, supplying no greater than 5 megawatts (MW);
- Construction of unsealed access road from existing gravel access off Amaroo Drive to the development area;
- Earthworks for construction lay-down area, hardstand areas and internal roads;
- High chain link security fencing 2.3m high; and
- Other associated site improvements as shown on the Plans at **Appendix A**.

This SEE has been prepared by SLR Consulting (SLR) on behalf of Providence Asset Group (PAG). It describes the site, its environs, the proposed development and provides an assessment of the proposal in terms of the matters for consideration under Section 4.15 (1) of the Environmental Planning and Assessment Act 1979 (EP&A Act 1979). It should be read in conjunction with the supporting information and Plans prepared by Build Power and Energy Pty Ltd appended to this report **(Appendix A)**.

1.1 Providence Asset Group

Providence Asset Group (PAG) is an Australian innovation led investment and asset management firm focusing on ethical investment within an environmental, social and corporate governance framework. Through collaborative partnerships, PAG supports and invests in projects aligned to new forms of renewable and clean energy.

PAG have now secured over 30 solar farm sites in regional NSW and Victoria, including a partnership with Manilla Community Renewable Energy Inc. to develop Australia's first community owned solar farm. Once constructed, the 5MW Manilla project will be able to power the community of Manilla during daylight hours. The project is also a recipient of a NSW Government grant to develop PAG's a world first energy storage technology which will enable the Manilla project, and subsequently PAG's solar projects, to provide stable energy well into the early morning and evening peak electricity consumption periods.

1.2 Consultation with Council

A formal pre-development application meeting request was sent to Moree Plains Shire Council, however it was deemed a formal meeting was not required for this application. Pre-development application advice was provided by Moree Plains Shire Council via email from Shaun Yong on 10 March, 2021. Overall, the feedback was positive. The necessary items to take into consideration for the proposed development were outlined in the email. These items are summarised in Table 1 below.

Table 1 Consultation with Moree Plains Shire Council

Matters Raised	Comments
Land Use Permissibility	Land use permissibility is discussed in Section **4.10**.
Land Use Compatibility	This Statement of Environmental Effects considers all land affected by the proposed development and the impact the development may have on all affected land. It is considered the existing land use and surroundings are compatible with the proposed use of the land.
Amenity	Temporary construction staff amenities will be provided on site. No permanent staff amenities are proposed given the autonomous nature of the ongoing operation.
Aboriginal Heritage (E.g. sacred trees)	A Due Diligence Aboriginal Archaeological Assessment has been prepared for this proposal by Virtus Heritage and is located at **Appendix F.**
Flooding	The sites is listed as flood free under 0.5% AEP conditions within the *'Review of Moree and Environs Flood Study/ Floodplain risk Management Study and Plan – Volume 1 – Flood Study Report'.* Therefore, a flood assessment was deemed not required. This is discussed further in Section **4.10** of this report.
Bushfire Management	The site has been mapped within a Category 3 zone under the Moree LGA bushfire prone land map. Fire risk management procedures have been outlined in Section **5.6** of this report.
Biodiversity	An Ecological Assessment has been prepared for this proposal and included at **Appendix H.**
Site drainage	A Stormwater Management Report has been prepared for the proposal and included at **Appendix B.**
ARTC	Not applicable. The proposed site is not adjacent to or within close proximity to an existing railway line.
Noise	An Acoustic Assessment has been prepared for the proposal and is located at **Appendix G**.
Dust	The proposed solar farm, once operational, is expected to re-establish grasslands on site whilst managing dust generation.
Reflectivity	A Reflectivity Glare Assessment has been conducted for the application and is located at **Appendix I**.

2 The Site and Surrounds

2.1 Site Description

The land is legally known as part Lot 392 DP751780 and is generally referred to as Amaroo Drive, Moree NSW 2400 (refer to **Figure 1** and **Figure 2**). The land is currently vacant rural pasture and is used for agricultural purposes. In terms of topography, the site is relatively flat and is heavily cropped, with a lack of trees or vegetation in the area.

The proposed lot in which the development site is situated has a total area of approximately 67.52 hectares. The proposed development site is a 4-sided polygon shape which is generally flat and comprises approximately 15 hectares. The development site is located in the north-western section of Lot 392 DP751780. Proposed access to the site will be via the existing shared gravel road Amaroo Drive, approximately 1km west of Narrabri Road (Newell Highway).

Figure 1 Locality Plan (Source: Six Maps)

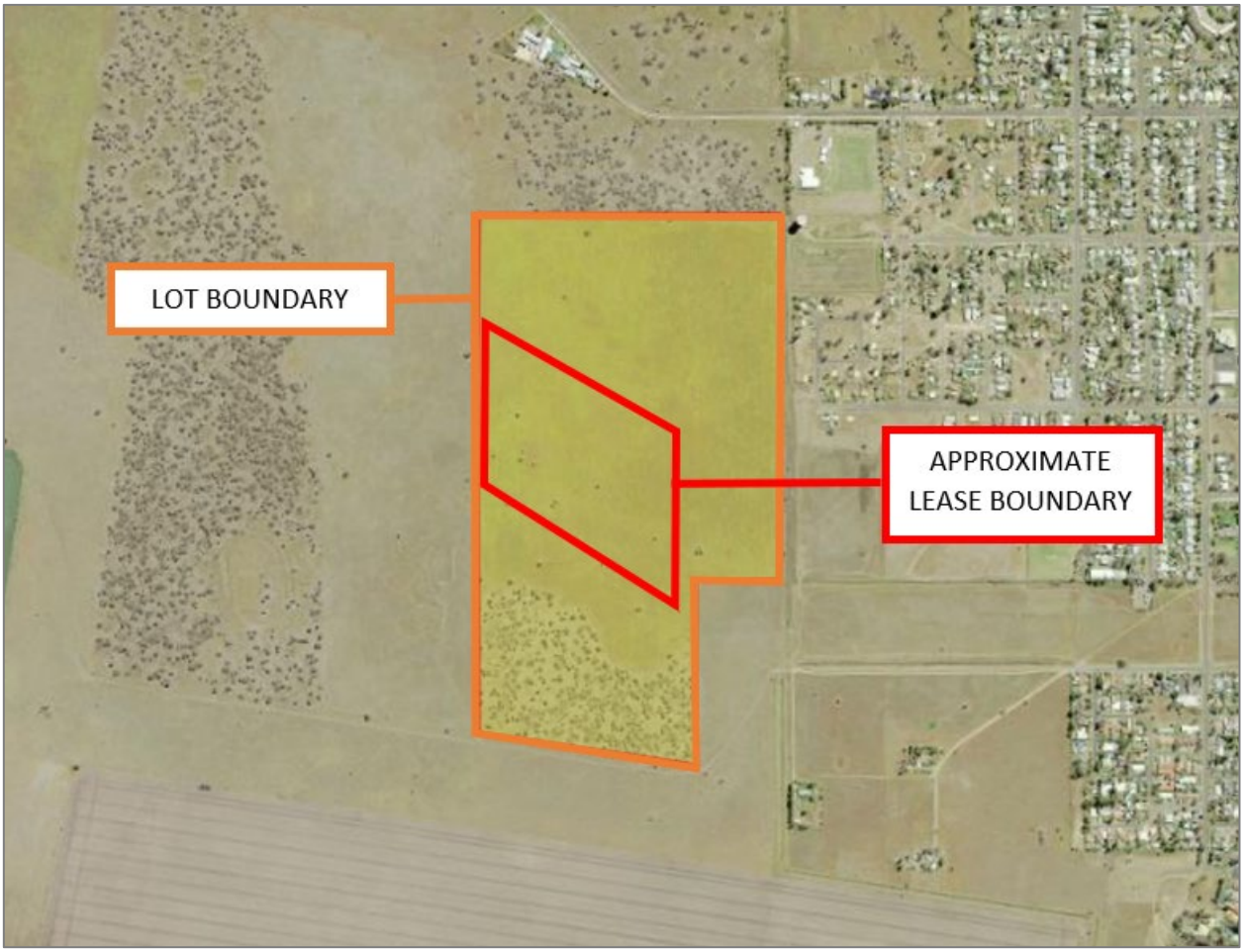
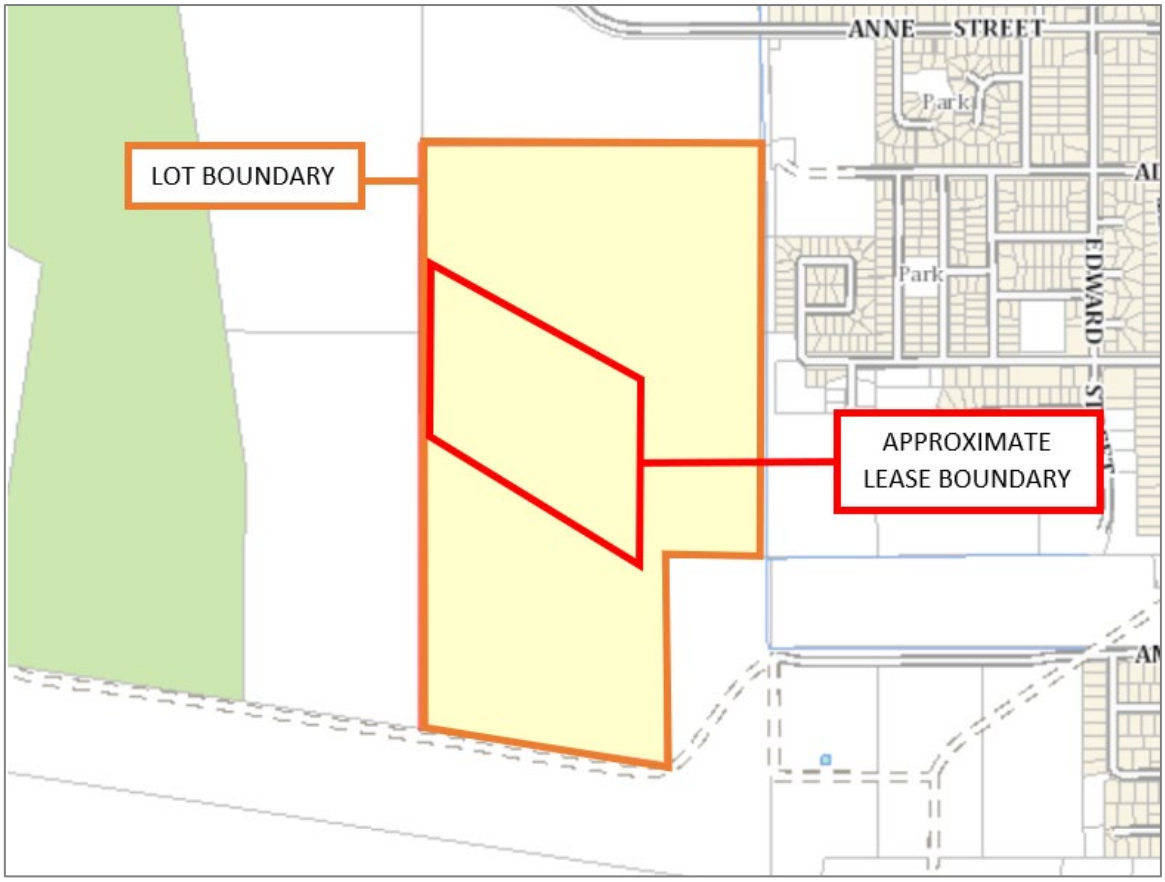


Figure 2 Cadastral Plan (Source Six Maps)



2.2 Site Location and Context

The site is located approximately 2km south-west of Moree town centre within the Moree Plains Local Government Area (LGA). Amaroo Drive is a dual lane, unsealed road, which connects to Narrabri Road to the east and has no kerb or guttering on the northern side of the road. Amaroo Drive extends to a dirt road on the western end of the road.

The site is located approximately 2.6km north-west of Moree Airport. Aviation has been considered as part of the reflectivity report completed for the project (refer to **Appendix I**).

Surrounding lands to the north, south and west are similar to the investigation area consisting of agricultural land with rural dwellings, sheds, dams, and scattered remnant vegetation. Mehi River is located approximately 800m north of the site. The closest residential dwellings to the proposed development site are immediately east of the site, with the closest being Lot 32 DP261302 approximately 395m northeast.

3 Project Description

The Moree Solar Farm project is one of PAG's solar initiatives to be rolled out across regional Australia, with multiple benefits for rural and regional communities.

The proposal includes a no larger than 5MW grid-connected solar PV installation. The solar farm will be connected to the existing Moree 66/22kV Zone Substation at 75 Tycannah Street, Moree which is approximately 2.53km east of the proposed development site.

The proposed development aims to erect an estimated 13,524 solar PV panels with a nameplate rating of 540W. Other electrical generation infrastructure is proposed on the site including a Power Conversion Station (PCS) consisting of inverters, transformer switchgear and auxiliary plant. Due to the capacity of the inverter system, the proposed development will produce less than 5MW. Most of the infrastructure would be prefabricated off-site, delivered and assembled on-site.

The PV arrangement will consist of 161 ground mounted single axis trackers, refer to Figure 3. The solar PV panels measuring approximately 2.3m by 1.1m with 600mm clearance above the existing ground surface. The panels will be positioned on single axis-trackers oriented north-south with a spacing of 6.4m. The PV mounting structure will comprise steel posts driven to approximately 1.5m below ground using a small pile driver. Additional support structures will be attached to the piles, which would then support the PV panels.

The proposed development will not require the entire removal of vegetation within the development area, it is noted that the site has had extensive land clearing for agricultural purposes (cropping) and remnant native ground cover on the site is negligible. The proposal will not involve clearing of native vegetation that exceeds the Biodiversity Offset Scheme (BOS) threshold for the site. The proposed solar farm, once operational, is expected to re-establish grasslands on site whilst managing dust generation and encouraging continued agricultural activities through livestock grazing. Weed management and control will be included as part of the standard operation procedures of the facility.

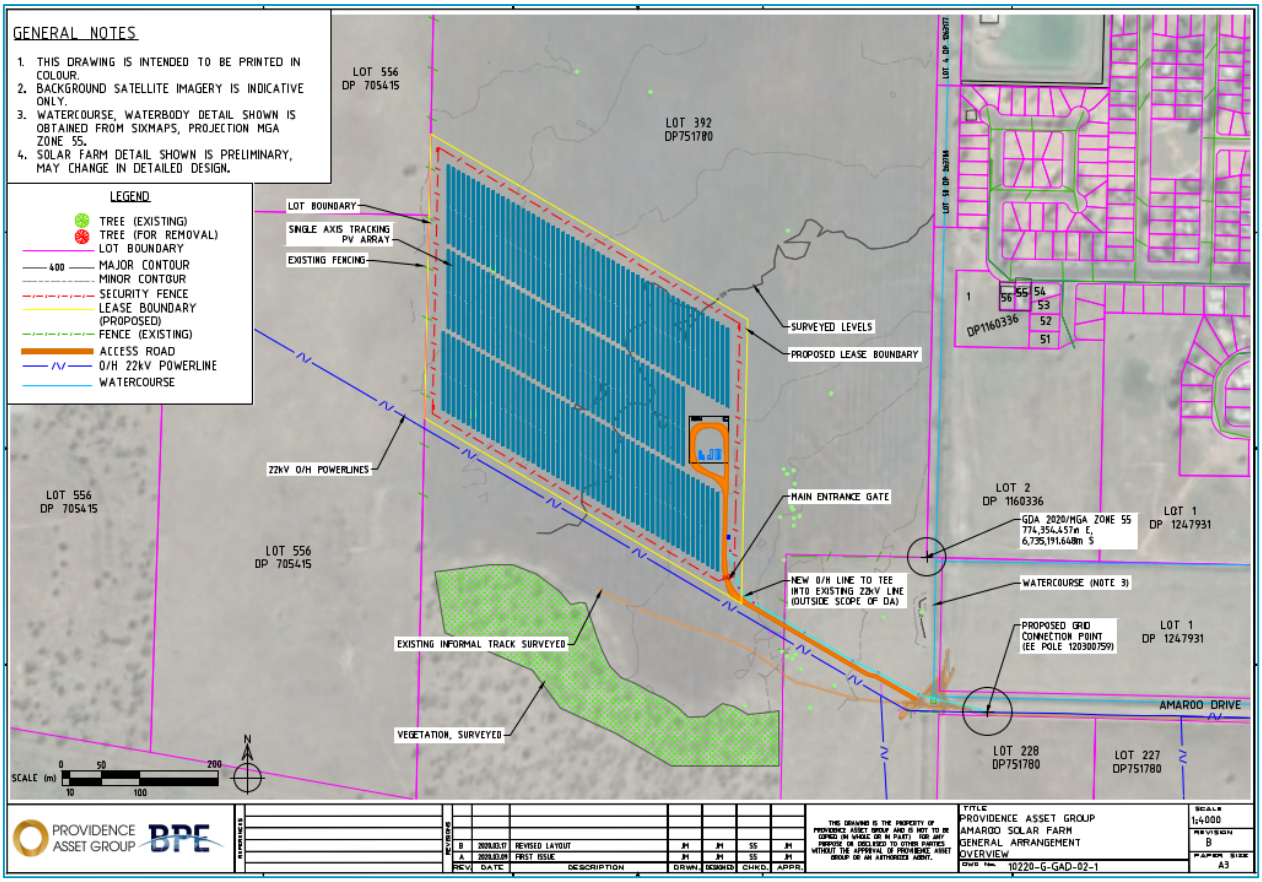
Vehicular access to the site will be via a new access road off the end of Amaroo Drive, the existing shared access dirt/ gravel road located approximately 1.4km west of Narrabri Road (Newell Highway). The main entrance to the development will be in the south-east corner of the site and emergency access points will be located in the remaining corners of the site. The solar farm will be fully fenced with a 2.3m security fencing including barbed wire at the top. A temporary construction office area is indicatively shown on the General Arrangement Plan on the eastern boundary of the site, with expectations that temporary car parking and off load areas are located within the hardstand area, also identified within the general arrangement plan (refer to **Figure 3**). Motion activated security lighting will be installed at the site.

A stormwater management system is proposed including an onsite detention basin holding a total volume of 179m^3 supported with a low flow outlet. Refer to the Stormwater Management Plans at **Appendix B**. Earthworks for the project are generally limited to the establishment of the access road, drainage swales and batters, laydown area, and detention basin.

The solar PV farm would operate 24 hours a day, 7 days a week, with no permanent staff on site. Maintenance inspections will be undertaken on an as needs basis.

During the construction period there is estimated to be up to 30 personnel on site for up to 6 months.

Figure 3 Proposed Development Layout



4 Relevant Legislation and Planning Controls

The following Environmental Planning Instruments (EPIs) and Development Control Plans (DCPs) are relevant to the proposed development as explored within this Section of the report:

- *Environment Protection and Biodiversity Conservation Act 1999;*
- *Environmental Planning and Assessment Act 1979;*
- *National Parks and Wildlife Act 1974;*
- *Biodiversity Conservation Act 2016;*
- *Local Land Services Act 2013.*
- *State Environmental Planning Policy (State and Regional Development) 2011;*
- *State Environmental Planning Policy (Infrastructure) 2007;*
- *State Environmental Planning Policy 55 – Remediation of Land;*
- *State Environmental Planning Policy (Koala Habitat Protection) 2019;*
- *Moree Plains Local Environmental Plan 2011;*
- *Moree Plains Development Control Plan 2013;*

- *Moree Plains Shire Growth Management Strategy;*
- *New England North West Regional Plan 2036; and*
- *New England North West Strategic Land Use Plan 2012.*

4.1 Environmental Protection and Biodiversity Conservation Act 1999

Consideration of the EPBC Act 1999 revealed that impacts on Matters of National Environmental Significance (MNES) are unlikely to occur. One EPBC listed ecological community was identified within the Development Site, *Natural Grasslands on basalt and fine-textured alluvial plains of northern NSW and southern Queensland Threatened Ecological Community*. However, this vegetation is in a degraded state due to long-term agricultural management practices and is not considered important to the long-term survival of the community in the locality. Therefore, an EPBC referral to the Commonwealth Minister for the Environment is not recommended.

Full details are included in the Ecological Assessment Report at **Appendix H** and further discussion in Section **5.4** of this report.

4.2 Environmental Planning and Assessment Act 1979

The proposal, as with all development applications, is subject to the provisions of the Environmental Planning and Assessment Act 1979 (EP&A Act). Section 4.15(1) of the EP&A Act, 1979 provides criteria which a consent authority is to take into consideration, where relevant, when considering a DA. An assessment of the subject DA, in accordance with the relevant matters prescribed under Section 4.15(1), is provided within this SEE.

It is noted, pursuant to Section **4.6** of the EP&A Act 1979, the proposed development does not trigger integrated development provisions.

4.3 National Parks and Wildlife Act 1974

The National Parks and Wildlife Act 1974 includes provisions for the protection and recording of Aboriginal objects in NSW.

A Due Diligence Aboriginal Archaeological Assessment has been undertaken in accordance with the provisions of the National Parks and Wildlife Regulations 2009 and the accompanying Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (OEH 2010). The assessment found no Aboriginal objects or sites in the project area. Due to the high level of disturbance and lack of any undisturbed soils or sensitive landform identified, the project area is deemed to have a low potential for archaeological deposits. See Appendix G for a copy of the assessment for the proposal prepared by Virtus Heritage. See further discussion in Section **5.9.1** of this report.

4.4 Biodiversity Conservation Act

The Biodiversity Conservation Act 2016 (BC Act 2016) aims to maintain a healthy, productive, and resilient environment for the greatest well-being of the community, now and into the future, consistent with the

principles of ecologically sustainable development. To achieve its goals, the BC Act 2016 governs endangered species and communities and provides a framework for a Biodiversity Offset Scheme.

An assessment was undertaken by Kleinfelder in accordance with Section 7.3 of the BC Act 2016 to determine the significance of potential impacts of the proposed development on any threatened species or communities which are listed within the Act.

One listed ecological community was identified within the development site, however due to long-term agricultural management practices on the site, it is not considered to be important to the long-term survival of the community in the locality. No further ecological communities or any listed flora or fauna were identified on site. The proposed development will result in the removal of 0.91 hectares of native vegetation; therefore, the clearing of native vegetation will not exceed the BOS threshold from the site. The proposed development is unlikely to cause any significant impact to any threatened species, populations or communities listed within the BC Act and entry into the NSW BOS is not triggered by the proposed development. Further details are provided in Section **5.4** of this Report and in the Flora and Fauna assessment at **Appendix H.**

4.5 Local Land Services Act 2013

The Local Land Services Act 2013 (LLS Act 2013) aims to establish a statutory corporation (to be known as Local Land Services) with responsibility for management and delivery of local land services in the social, economic and environmental interests of the State in accordance with any State priorities for local land services.

60H Category 1-exempt land mapping

(1) Land is to be designated as category 1-exempt land if the Environment Agency Head reasonably believes that—

(a) the land was cleared of native vegetation as at 1 January 1990, or

(b) the land was lawfully cleared of native vegetation between 1 January 1990 and the commencement of this Part.

(2) Land is to be designated as category 1-exempt land if the Environment Agency Head reasonably believes that—

(a) the land contains low conservation value grasslands, or

(b) the land contains native vegetation that was identified as regrowth in a property vegetation plan referred to in section 9 (2) (b) of the Native Vegetation Act 2003, or

(c) the land is of a kind prescribed by the regulations as category 1-exempt land.

(3) Land is to be designated as category 1-exempt land if the land is biodiversity certified under Part 8 of the Biodiversity Conservation Act 2016 or under any Act repealed by that Act.

(4) However—

(a) land described in subsection (1) or (2) is not to be designated as category 1-exempt land if section 60I (2) requires the land to be designated as category 2-regulated land, and

(b) land described in subsection (1) (a) is not to be designated as category 1-exempt land if the land was unlawfully cleared of native vegetation after 1 January 1990, and

(c) land described in subsection (2) (a) is not to be designated as category 1-exempt land if the land was unlawfully cleared of native vegetation after 1 January 1990.

(5) The regulations may make provision for the purposes of determining whether grasslands are low conservation value grasslands for the purposes of this Division.

The proposed development area in the subject site of Lot 191 of DP757125 has been under regular cropping, grazing and pasture improvement since prior to 1990. Therefore, in accordance with the Local Land Services Act 2013, the full project development area can be considered as category 1-exempt land. See further discussion in Section **5.4.1** of this report.

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

Regional development classification applies to both local and designated development applications exceeding certain criteria defined by Schedule 7 of the SEPP SRD.

5 Private infrastructure and community facilities over $5 million

Development that has a capital investment value of more than $5 million for any of the following purposes:

(a) air transport facilities, electricity generating works, port facilities, rail infrastructure facilities, road infrastructure facilities, sewerage systems, telecommunications facilities, waste or resource management facilities, water supply systems, or wharf or boating facilities,

(b) affordable housing, child care centres, community facilities, correctional centres, educational establishments, group homes, health services facilities or places of public worship.

The proposed electricity generating works is considered to be private infrastructure with a CIV greater than $5 million (refer to **Appendix K**) and as a result the development is deemed to be regionally significant development and the application will be referred to the Regional Planning Panel (RPP) for determination.

4.7 State Environmental Planning Policy (Infrastructure) 2007

Division 4 Electricity generating works or solar energy systems

One of the aims of SEPP (Infrastructure) 2007 is to provide greater flexibility in the location of infrastructure and service facilities. This SEPP identifies certain electricity generating works that are permitted with consent, without consent, as exempt development, as complying development and works that are prohibited.

In this Division—

***electricity generating works** has the same meaning as it has in the Standard Instrument.*

Note—

The term electricity generating works is defined by the Standard Instrument as follows—

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

(a) making or generating electricity, or

(b) electricity storage.

Clause 34 Development permitted with consent

(1) Development for the purpose of electricity generating works may be carried out by any person with consent on the following land—

(a) in the case of electricity generating works comprising a building or place used for the purpose of making or generating electricity using waves, tides or aquatic thermal as the relevant fuel source—on any land,

(b) in any other case—any land in a prescribed rural, industrial or special use zone.

Definition:

prescribed rural, industrial or special use zone means any of the following land use zones or a land use zone that is equivalent to any of those zones—

*(a) **RU1 Primary Production**,*

(b) RU2 Rural Landscape,

(c) RU3 Forestry,

(d) RU4 Primary Production Small Lots,

(e) IN1 General Industrial,

(f) IN2 Light Industrial,

(g) IN3 Heavy Industrial,

(h) IN4 Working Waterfront,

(i) SP1 Special Activities,

(j) SP2 Infrastructure.

The development area is zoned RU1 Primary Production, the proposed solar PV project is therefore permitted with consent under Clause 34 of SEPP (Infrastructure) 2007.

Clause 45 Determination of development applications—other development

The proposed development will require works to connect to the overhead electricity power lines and as a result constitutes works within 5m of powerlines. Due to the location and nature of the proposed development referral to the electricity supply authority will be required during the assessment period.

Clause 104 - Traffic-generating development

The proposed development will not generate greater than 50 vehicle movements per hour and as such does not trigger traffic generating development under the SEPP. Referral under this clause to Transport for NSW is therefore not required.

4.8 State Environmental Planning Policy No 55 - Remediation of Land

This SEPP requires the consent authority to consider the potential contamination status of the land prior to approving a development.

A search of the NSW EPA's 'List of NSW contaminated sites notified to the EPA' and 'POEO Public Register' has been undertaken which revealed no contaminated sites listed on or in the vicinity of the site. A total of 4 licenses have been issued under the Protection of the Environment Operations Act in Moree, however, none are noted within proximity to the site. Environmental protection licenses issued within Moree include:

- Licence 4884 – Australian Oil Seeds Processors Pty Ltd – 50 Burrington Road, Moree NSW 2400 – Operational
- License 12266 – Frome Street Investments No 11 Pty Ltd – Moree Hot Springs Health Resort, Corner of Newell Highway and Jones Avenue, Moree NSW 2400 - Operational
- License 21015 – Frome Street Investments No 11 Pty Ltd – 52 Industrial Drive, Moree NSW 2400 – Operational
- License 21323 - Frome Street Investments No 11 Pty Ltd – Gwydir Carapark, 6 Amaroo Drive, Moree NSW 2400 – Operational
- License 11821 – George Loi Sung Chiu (Dragon and Phoenix Palace) – Dragon and Pheonix Palace, 361 Frome Street, Moree NSW 2400 – Operational
- License 21494 – John Holland Pty Ltd – Trans4m Rail, Balo Street, Moree NSW 2400 – Operational
- License 4015 – Moree Plains Shire Council – Moree Spa Baths, Anne Street, Moree NSW 2400 – Operational
- License 723 – Moree Plains Shire Council – Moree Sewage Treatment Works, Boundary Street, Moree NSW 2400 – Operational

A search of the records of former notices of contaminated land within Moree on the NSW EPA Contaminated Lands Register found no containated land sn close proximity to the proposed site. The search found the following current notices:

- 54 Alice Street Moree – Caltex Service Station – Declaration of Significantly Contaminated Land 20131108 – Issued 13 August 2013
- 54 Alice Street Moree – Caltex Service Station – Approved Voluntary Management Proposal 20151717 – Issued 23 December 2015 (Amended 31 August 2016)
- 1 Dover Street Moree – Former Freedom Service Station Site Moree – Declaration of Significantly Contaminated Land 20131109 – Issued 13 August, 2013
- 1 Dover Street Moree – Former Freedom Service Station Site Moree – Approved Voluntary Management Proposal 20151718 – Issued 23 December 2015 (Amended 31 August 2016)

The proposed development is not considered to be sensitive in nature and as a result is considered to be appropriate for the site in its current state in accordance with SEPP55.

4.9 State Environmental Planning Policy (Koala Habitat Protection) 2020

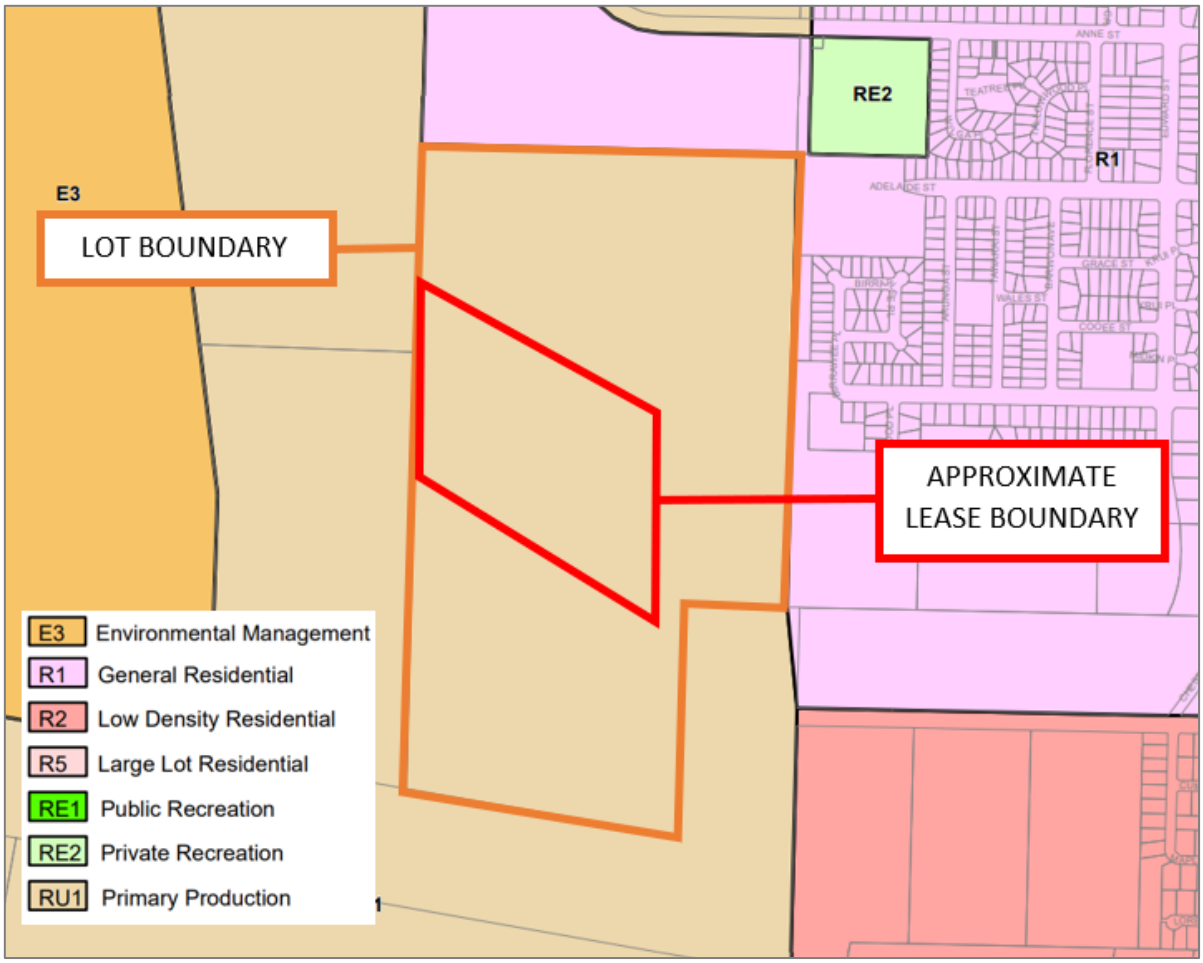
This Policy aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for koalas through the identification of core koala habitat and by requiring the preparation of plans of management before development consent can be granted in relation to areas of core koala habitat. The SEPP is relevant to the proposal noting that Moree Plains is a listed LGA in Schedule 1 and the proposal involves an area more than 1 hectare in size.

Noting that the site is devoid of trees and woody vegetation, it is considered unlikely that the site contains potential koala habitat or core koala habitat. This is discussed further at Section **5.4** within this report.

4.10 Moree Plains Local Environmental Plan 2011

The development area is zoned RU1 Primary Production under the Moree Plains Local Environmental Plan 2011 (LEP 2011), see **Figure 4**.

Figure 4 Land Zone Extract Moree LEP 2011 (LZN_004BA)



The objectives and land use table of the RU1 Primary Production are as follows:

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 permit development for certain purposes if it can be demonstrated that suitable land or premises are not available elsewhere.*
- *To protect significant agricultural resources in recognition of their value to the longer term economic sustainability of Moree Plains.*
- *To maintain the rural character of the land.*

2 Permitted without consent

Building identification signs; Business identification signs; Environmental protection works; Extensive agriculture; Farm buildings; Forestry; Home-based child care; Home businesses; Home industries; Home occupations; Intensive plant agriculture; Roads

3 Permitted with consent

Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Aquaculture; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Car parks; Caravan parks; Cellar door premises; Cemeteries; Charter and tourism boating facilities; Community facilities; Correctional centres; Crematoria; Depots; Dual occupancies; Dwelling houses; Eco-tourist facilities; Educational establishments; Environmental facilities; Extractive industries; Flood mitigation works; Freight transport facilities; Funeral homes; Heavy industrial storage establishments; Heavy industries; Helipads; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Information and education facilities; Intensive livestock agriculture; Jetties; Kiosks; Landscaping material supplies; Marinas; Markets; Mooring pens; Moorings; Mortuaries; Neighbourhood shops; Open cut mining; Passenger transport facilities; Places of public worship; Plant nurseries; Public administration buildings; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Respite day care centres; Restaurants or cafes; Roadside stalls; Rural industries; Rural supplies; Rural workers' dwellings; Secondary dwellings; Service stations; Sewerage systems; Sex services premises; Signage; Tourist and visitor accommodation; Transport depots; Truck depots; Turf farming; Veterinary hospitals; Warehouse or distribution centres; Water recreation structures; Water supply systems; ***Any other development not specified in item 2 or 4***

4 Prohibited

Amusement centres; Centre-based child care facilities; Commercial premises; Entertainment facilities; Exhibition homes; Exhibition villages; Function centres; Health services facilities; Highway service centres; Industries; Registered clubs; Residential accommodation; Restricted premises; Storage premises; Vehicle body repair workshops; Vehicle repair stations; Wholesale supplies

LEP 2012 Definition:

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

(a) making or generating electricity, or

(b) electricity storage.

The proposed land use, defined as *electricity generating works,* is permitted with consent within the RU1 zone as *any other development not specified in item 2 or 3*. As a result, the proposal is a permissible land use for the site under the Moree Plains LEP 2011. It is also noted that the proposal is permissible under Clause 34 of SEPP (Infrastructure) 2007 as discussed in Section 4.6.

Clause 4.1 Minimum Subdivision Lot Size

The minimum lot size for subdivision across the investigation area is 100 hectares. Subdivision does not form part of the scope of works for the solar PV farm.

Clause 4.3 Height of Buildings

This clause has not been adopted under LEP 2011.

Clause 4.4 Floor Space Ratio

This clause has not been adopted under LEP 2011.

Clause 5.10 Heritage Conservation

The investigation area does not contain a listed heritage item nor are any listed heritage items located in proximity to the area. The area is not mapped as a heritage conservation area under the LEP 2011.

Clause 7.1 Earthworks

The objectives of this clause are:

(1) The objective of this clause is to ensure that earthworks for which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land.

The solar panels themselves retain the natural landform and only minor earthworks are required for the underground cabling and supporting infrastructure (access roads, stormwater management etc). The earthworks proposed will have minimal impact on surrounding lands and will be supported with appropriate sediment and erosion controls.

Clause 7.3 Airspace Operation

(1) The objectives of this clause are as follows—

(a) to provide for the effective and ongoing operation of the Moree Airport by ensuring that such operation is not compromised by proposed development that penetrates the Limitation or Operations Surface for that airport,

(b) to protect the community from undue risk from that operation.

The objective of this clause is to provide for the effective and ongoing operation of the Moree Airport and to protect the community for undue risk from that operation. The site has been identified as being within the Moree Airport Obstacle Limitation Surface. Th site is located just under 2.5km from Moree airport, which lies south-east of the site. A Reflective Glare Assessment (RGA) has been undertaken by SLR Consulting and included at **Appendix I**. Aviation has been considered as part of this assessment. Refer to Section **5.8** of this report for further discussion.

Clause 7.6 Flood Planning

(1) The objectives of this clause are as follows—

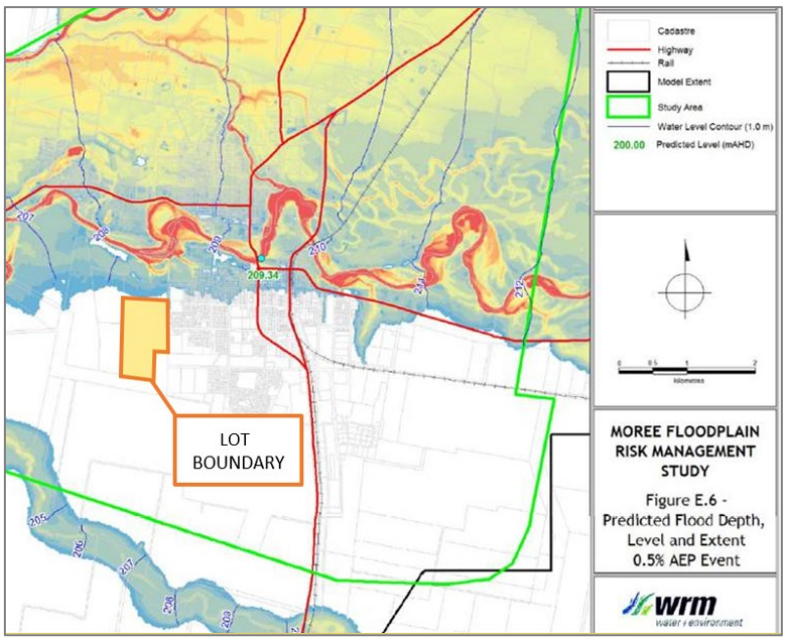
(a) to minimise the flood risk to life and property associated with the use of land,

(b) to allow development on land that is compatible with the land's flood hazard, taking into account projected changes as a result of climate change,

(c) to avoid significant adverse impacts on flood behaviour and the environment

The Planning Certificate states that the site is subject to flood related controls under the Moree LEP 2011 and DCP 2013. However, the *Review of Moree and Environs Flood Study/ Floodplain Risk Managemen Study and Plan: Volume 1 Flood Study Report 2017* indicate the site is flood free under 0.5% AEP conditions (see **Figure 5** below). Therefore, a flood report is not required for this site.

Figure 5 Flood Mapping (Source: Review of Moree and Environs Flood Study/ Floodplains Risk Management Study and Plan – Volume 1 Flood Study Report 2017)



In summary, the solar PV farm project is compliant with the relevant clauses and controls contained within LEP 2011.

4.11 Moree Plains Development Control Plan 2013

The Moree Plains Development Control Plan (DCP) 2013 applies to all land within the Moree Local Government Area (LGA), including the subject site. The project has been assessed against the following sections of the DCP:

- *Chapter 2 – Parking*
- *Chapter 8 – Industrial Subdivision and Development*
- *Chapter 9 – Rural Development*

A full assessment against the relevant components of the DCP is included in table format at **Appendix C**.

4.12 New England North West Regional Plan

The New England North West Regional Plan 2036 (the Regional Plan) provides an overall strategic plan to manage development in the New England region.

The Regional Plan distinctly highlights the role of renewable energy in the growth of the New England region with the plan's visions outlining the need for the area to harness the solar and wind potential. Goal 1 – A strong and dynamic regional economy identifies renewable energy as a priority growth sector. Direction 5 of the Plan further calls for the promotion and growth of the renewable energy sector, specifically the solar sector through supporting and facilitating smaller-scale renewable solar projects.

Furthermore, the Plan outlines the future economic narratives and priorities for Moree Plains LGA. The Plan states that a priority for the Moree Plains LGA is '*identify and promote wind, solar and other renewable energy production opportunities'.* Goal 1 of the plan is to create a *'strong and dynamic regional economy'* within the New England region and Direction 5 of this goal is *to 'Grown New England North West as the renewable energy hub of NSW'.*

The proposed development on the subject site will align with the goals of the Regional Plan as it will provide an appropriately sized renewable energy project in a location with ready access to the electrical network which will support the regional development of the Moree Plains LGA and New England Region.

4.13 Moree Plains Shire Growth Management Strategy

The Moree Plains Shire Growth Management Stratgey (GMS) provides an overall future direction for the settlements and land within the Moree Shire.

The GMS is a vital component in the future sustainability of the Shire and provides a clear direction for furture developments in the area. The strategy provides a clear statement for principles and a map that will inform the strategic direction for growth management outcomes for the Shire over the next 20 years.

The strategy recognises that forward planning and funding provisions will need to be provided for regionally significant infrastructure projects if the region is going to successfully and sustainably harness its growth potential.

As the scope of the Amaroo Solar Farm project is to provide solar energy infrastructure, the works proposed are considered to be consistant with this strategy.

4.14 New England North West Strategic Land Use Plan 2012

The New England North West Land Use Strategy aims to guide future development and land use within the New England region for the next 20 years. The preparation of the strategy provides the basis for future planning decisions and provide certainty to the community whilst encouraging favourable development and the protection of the environment.

The New England region has been identified as one of six renewable energy precincts across NSW. Additionally, the Moree LGA has been marked to have excellent conditions for solar power farms and solar power generation.

5 Assessment of Planning Issues

The following is an assessment of the environmental effects of the proposed development as described in the preceding sections of this SEE. The assessment considers only those matters under Section 4.15(1) of the EP&A Act 1979 that are relevant to the proposal.

5.1 Compliance with Planning Instruments and Controls

Unless otherwise stated, the proposed development either complies with or is consistent with all relevant planning instruments and controls set out in Section 4 of this SEE, in that:

- The proposed development is permissible under SEPP Infrastructure in the RU1 Primary Production zone;
- The proposed Solar PV Farm is consistent with the relevant objectives of the RU1 zone, including that it will provide a sustainable rural land use whilst maintaining and enhancing the existing natural resource base;
- The proposed solar farm will have minimal to no impact on flora or fauna under the BC Act 2016;
- The development is classified as Regional Development under SEPP State and Regional Development and will therefore be determined by the RPP;
- The proposal complies with the requirements of SEPP Infrastructure and referral to the road authority will not be required as the proposal is not classified as traffic generating development; and
- The proposal is generally consistent with the objectives and relevant controls within Moree Plains DCP 2013.

A detailed assessment of the proposed development against the relevant provisions of the DCP is provided in the table at **Appendix C**.

5.2 Traffic, Access, and Parking

Traffic

A Traffic Impact Assessment (TIA) has been undertaken by Intersect Traffic and is attached at **Appendix D**. The anticipated rates of traffic likely to be generated from the proposed development (both during construction and once operational) are discussed in the TIA.

The majority of traffic movements associated with the development will occur during the construction of the solar farm (approximate 6-month period) with the delivery of panels and prefabricated structural supports. Deliveries during construction works would be expected to be within rigid and articulated vehicles and the access road has been designed to safely accommodate these vehicles.

Traffic movements generated during operation would include a single light vehicle movement associated with maintenance inspections and specific maintenance work (on an as needs basis) which would be short term and infrequent. Therefore, the on-site car parking is considered suitable for the construction phase of the development ensuring all vehicle movements to and from the site will be undertaken in a forward direction.

Peak hour construction traffic has been calculated with a predicted peak of 18 vehicle trips per hour consisting of 10 light vehicles, 3 roadwork vehicles, and 2 delivery vehicles. Based on the data collected from traffic surveys the surrounding road network has sufficient capacity to cater to the projected construction traffic with capacity to spare for future development in the area. It is noted that construction traffic is temporary in nature and will be managed through a future Construction Management Plan.

The TIA notes the existing condition of the surrounding road network in particular Newell Highway (including Frome Street) and Banksia Way/ Amaroo Drive. At the time of assessment, Newell Highway (including From Street) is considered suitable for use of heavy vehicle traffic and is an approved B-Double route through Moree. Banksia Way and Amaroo Drive are both considered suitable to carry heavy vehicle traffic but are not part of an approved B-Double route. It is considered the local and state road network would be suitable to cater for the expected construction traffic associated with the development.

In summary, the additional traffic anticipated from the proposal has been assigned to the road network where it was found that the surrounding road network (both now and in 10 years) is capable of accommodating the expected additional traffic from the proposal.

Access and Internal Circulation

The proposed vehicular access to the site will be provided via the end of the existing Amaroo Drive, approximately 1.3km west of Narrabri Road (Newell Highway). Deliveries to the site will use the identified delivery road shown on Figure 2 of the TIA. Deliveries from Brisbane will be via Newell Highway, and from Sydney and Newcastle via Newell Highway, New England Highway and Kamilaroi Road, then via Frome Street, Banksia Way and Amaroo Drive.

During the construction phase of the development the proposed site access road has an unsealed pavement width in excess of 11 metres wide which allows two heavy vehicles to pass each other at normal speed. The TIA demonstrates that Banksia Way has a sealed carriageway width of 12metres between upright kerb and gutter, while Amaroo Drive has a sealed carriageway width of 11 metres and therefore complies with Austroads Standards for Rural Roads with more than 500 vtph. This provides a single lane of travel in each direction with parking lanes on both sides of the road.

Overall, it is considered the local and state road network would be suitable to cater for the expected construction traffic associated with the development.

Parking

The Moree Plains DCP 2013 sets out the relevant on-site car parking rates for land uses within the Moree area. No gross floor area is proposed as part of the development.

As no DCP rate is provided specifically for a solar farm, adopting the parking rate for an industrial type use for this project, the relevant on-site car parking provision during operations is 1 space per 2 staff employed, or 1 space per 100 square metres of gross leasable floor area (whichever is greater).

As no buildings are proposed on site on the site and only 1 employee likely to be engaged in the day to day operation of the solar farm, the development is not required to provide any on-site parking space under the DCP calculations. However, with a single maintenance vehicle visiting the site between 1 to 5 times per fortnight, at least one vehicle car park within the development is considered to be satisfactory.

Consideration of construction parking demand has also been considered with potential for up to 30 employees projected. Construction employee car parking will be provided on the hard stand area identified as the construction lay down area. At least 10 car parks are proposed for construction employees, which is the expected traffic generation from employees to the site. car parking area is to comply with the requirements of Australian Standard AS2890.1-2004 Parking Facilities – Part 1 Off-street car parking with parking bay sizes 2.4 m x 5.4 m and aisle widths of 5.8 metres.

5.3 Stormwater, Soil and Erosion Control

The proposed stormwater management system has been designed to reduce post-development flows to align with the pre-development conditions on the site. To achieve this, an above-ground detention basin is proposed at the eastern border of the development area. This basin provides a holding volume of 179m^3 and is supported with a low flow pipe and overflow weir. The stormwater management system proposed has been designed in accordance with best practice as Moree Plains Shire Council's Development Plan does not provide specific guidance on developments of this nature. Therefore, DRB Consulting Engineers proposed to '*Limit the Post-Development flow rates from the proposed development to the Pre-Development flow rates for all storm events up to and including the 1% AEP storm event.'*

The stormwater drainage strategy for the development can be summarised as:

> *(i) All impervious runoff from the proposed Photovoltaic Arrays will discharge to the existing ground surface where the natural flow regime will be maintained.*
>
> *(ii) Runoff from the proposed gravel/hardstand area catchment will be conveyed via sheet flow and the proposed roadside swale to the proposed above ground onsite stormwater detention basin.*
>
> *(iii) Discharge from the proposed above ground onsite stormwater detention basin will be limited to the pre-development flow rates*.

In accordance with the stormwater drainage philosophy proposed for the site, the Amaroo Solar Farm will limit the Post-Development peak flows to Pre-Development flow rates for 20% AEP, 10% AEP and 1% AEP events.

Detailed Stormwater Plans and Report including DRAINS modelling have been prepared DRB Consulting Engineers provided at **Appendix B**.

5.4 Flora and Fauna

Kleinfelder has undertaken a Flora and Fauna Assessment of the proposed development (refer **Appendix H**). This assessment has been undertaken with reference to the EP&A Act 1979 as well as the BC Act 2016 and the EPBC Act 1999.

As noted within the Flora and Fauna Assessment, the site currently contains a mix of remnant native woodland on the southern boundary of the site, and managed native grassland on the entire site area. The proposed development site is located within the cleared section of the lot, within limited trees and shrubs, and the grassland community has been extensively cleared, likely for agricultural purposes, with few canopy trees remaining.

Impacts to native vegetation within the development site will be limited to the removal of three isolated trees and low condition native groundcover. The proposal is unlikely to cause a significant impact to any threatened species, populations or ecological communities listed under the NSW BC Act.

One EPBC listed ecological communities was identified within the Development Site, namely *Natural Grassland on basalt and fine textured alluvial plains of northern NSW and southern Queensland Threatened Ecological Community.* However, due to long term agricultural practices on site, this vegetation is in a degraded state and is not considered to be significant in the long-term survival of the community. The habitats present within the Development site are not considered to be important for any other ecological communities, threatened special or migratory species. An EPBC referral to the Commonwealth Minister for the Environment is not recommended.

Inclusion of the avoidance and mitigation measures made within the Flora and Fauna Assessment in relation to erosion and dust control, chemical spills, tree removal, and management of displaced fauna will be followed to reduce potential impacts to biodiversity values within the subject site and the environment.

5.4.1 Local Land Service Act 2013 (LLS Act)

The Study Area exhibits historical and ongoing land use consistent with category 1- exempt land under Section 60H of the Local Land Services Act 2013 (LLS Act), which defines category 1-exempt land, as stated in Section **4.5** above.

As the Native Vegetation Regulatory Map, which is intended to show the extent of areas of classified as category 1-exempt and category 2-regulated, is still under development, transitional arrangements require assessment against multiple data sources and field surveys. Classification of the subject site for the purposes of this development application as category 1-exempt was assessed using the following data sources:

- An ecological field survey (described in this report).
- Historical aerial photography - 1958, 1985, 1991, 1996, 2002, 2011, 2015 and 2018 (Appendix F of the Flora and Fauna Assessment).
- 2011 Woody vegetation extent maps.
- 2017 Land Use Map.
- Native Vegetation Regulatory Map (showing no areas of vulnerable regulated, sensitive regulated or excluded land).

As noted within the Flora and Fauna Assessment in relation to Section 60H of the LLS Act, no aerial imagery was available for 1 January 1990. Consequently, images from 1958, 1985, 1991, 2002, 2011, 2015 and 2018 were assessed, as shown in Appendix F of the Flora and Fauna Assessment report. Aerial imagery from 1958 shows the subject site to be extensively modified and cleared of native vegetation for cropping and/or pastural improvement purposes. A later image taken in 1985 shows regrowth in the southern portion of the subject site however the area designated for the proposed development remains largely clear of native vegetation except for a few scattered trees, demonstrating clear ongoing agricultural practices on the subject site. Post-1990 imagery shows consistent ongoing land use with the same native regrowth visible in the southern portion of the lot only in 1991, while more recent satellite imagery from 2002 to 2018 clearly shows cultivation furrows.

The NSW 2011 Woody Vegetation Extent indicates no woody vegetation is mapped with the development area. The 2017 Land Use Dataset shows the development area proposed in the subject site to be classified as 3.3.0 Cropping, which is consistent with aerial imagery.

Finally, the Native Vegetation Regulatory Map (shown in Appendix F of the Flora and Fauna Assessment) does not identify any sensitive regulated or vulnerable regulated land within the Study Area. Based on the above data sources, the Development Site has been under regular cropping, grazing and pasture improvement since prior to 1990. Therefore, in accordance with the LLS Act, the Development Site would meet the definition of category 1-exempt land.

5.5 Noise

A Noise Assessment (NA) undertaken by Muller Acoustic Consultants Pty Ltd (MAC) measured and modelled the potential noise generation for the operation (both during construction and once operational) including sleep disturbance noise emissions (refer to **Appendix G**). The report concludes that based on the Noise Assessment results, there are no noise related issues which would prevent approval of the proposed project.

Operational Noise

The results of the NA demonstrate that emissions from the project would satisfy the relevant Project Noise Trigger Levels (PNTL) at all assessed receivers for all assessment periods once the noise controls are implemented. Furthermore, sleep disturbance is not anticipated, as emissions from impact noise are predicted to remain below the EPA screening criterion for sleep disturbance and awakenings.

Based on the NA results, there are no noise related issues which would prevent the approval of the project. The results of the assessment shows compliance with the relevant operational and road noise criteria. A one-off noise validation monitoring assessment is recommended to be completed to quantify operation nose emissions and confirm emissions meet relevant criteria. However, the assessment predicted that no additional ameliorative measures will be required.

Construction Noise

Modelled noise emissions from all project construction activities identify that relevant noise management levels may be exceeded at a number of receiver locations adjacent to the site. All exceedances are expected to be temporary in nature and short in duration. Notwithstanding, noise management measures as provided in the enclosed Noise Assessment (refer to **Appendix G**) are to be considered for implementation to reduce potential impacts on surrounding receivers during construction activities. Road noise emissions are predicted to satisfy the relevant Road Noise Policy (RNP) criteria at all receivers along the proposed transportation route. Vibration impacts from the proposed works are considered to be negligible.

Construction noise mitigation measures recommended for consideration include:

- a construction noise management protocol to minimise noise emissions, manage out of hours (minor) works to be inaudible, and to respond to potential concerns from the community;
- where feasible, the use of localised mobile screens or hoarding around plant to act as barriers between construction works and receivers, particularly where equipment is near the site boundary and/or a residential receiver including areas in constant or regular use (eg unloading and laydown areas);
- operating plant in a conservative manner (no over-revving), shutdown when not in use, and be parked/started at farthest point from relevant assessment locations;
- selection of the quietest suitable machinery available for each activity;
- minimise noisy plant/machinery working simultaneously where practicable;

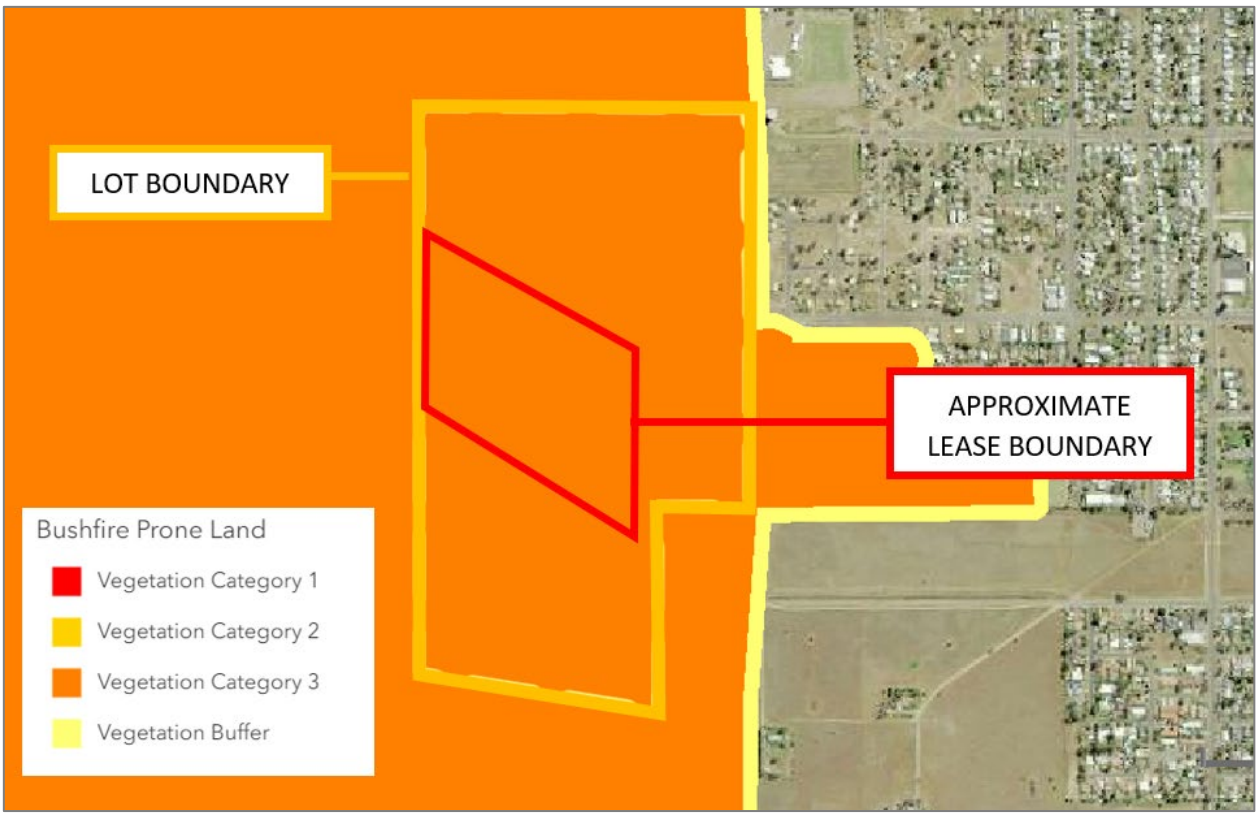
- minimise impact noise wherever possible;
- utilise a broadband reverse alarm in lieu of the traditional high frequency type reverse alarm;
- provide toolbox meetings, training and education to drivers and contractors visiting the site during construction so they are aware of the location of noise sensitive receivers and to be cognisant of any noise generating activities;
- signage is to be placed at the front entrance advising truck drivers of their requirement to minimise noise both on and off-site; and
- utilise project related community consultation forums to notify residences within proximity of the site with project progress, proposed/upcoming potentially noise generating works, its duration and nature and complaint procedure.

5.6 Bushfire

The site has been mapped within a Category 3 zone under the Moree LGA bushfire prone land map, see **Figure 6**.

Approval from the Rural Fire Service (RFS) would not be required under Section 100B of the Rural Fires Act 1997 as the proposed use does not fulfil the definition of a Special Fire Protection Purpose (SFPP). However, regard has been given for Planning for Bushfire Protection 2019, and any building construction standards. It is noted that the proposal includes a 10m buffer zone around to reduce fire risk. The buffer zone between the fence and solar array enables emergency vehicle access and fire risk management.

Figure 6 Bushfire Map (Source: ePlanning Spatial Portal)



5.7 Landscape and Visual Impact

Visual Impact

It is relevant to consider the visual impact of the proposal given the existing rural landscape character of the area and location of a number of neighbouring properties within 1km radius of the site. SLR Consulting has undertaken a Visual Analysis (VA) to assess the potential visual amenity changes which may occur as a result of the proposed development, see **Appendix E**.

Based on the appraisal and findings of the Visual Analysis, it can be considered the proposed solar farm would have a 'minor' visual impact rating on the existing landscape character and values of the site and its local context. The site and adjoining residential areas are sparsely vegetated, however existing vegetation made up of medium to large trees to the north, south and west of the site visually frame the rural property and enclose the local viewshed.

Although the subject site is a relatively close to the urban edge of Moree, views of the existing site from public viewpoints are very limited. Views of the site are typically not visible from major roads and the majority of surrounding urban and rural areas. Views from local road and streets close to the site is generally low to moderate due to the flat nature of the land and surrounding development. However, visibility is higher from limited roads and dwellings adjoining the site.

Given the minor visual change to the rural landscape of the site following the proposed development, select mitigation measures are recommended to further reduce visual impact. Mitigation measures are recommended to further reduce the visual impact of the solar farm, which is inclusive of shrub planting up to 3m in height along the eastern and northern fringes of the solar array. This will assist in screening views from local residential dwellings and roads and integrate the development with surrounding established landscape character. Planting along the northern and western boundaries is not considered necessary due to the limited visibility to these sides and the existing vegetation obscures the majority of views to the site from these aspects.

5.8 Glare Analysis

SLR Consulting have prepared a Reflective Glare Assessment, refer to **Appendix I** and conclusion of findings below.

Aviation-Related Potential Glare

Quantitative analysis using the FAA-SGHAT software tool has shown that there will be nil glare from the Project at Moree Airport with the solar array in normal tracking mode, i.e., panels tilting ±60°.

There is potential for SGHAT "Green" zone glare on Runways 19 and 23 if panels are left in a horizontal (flat) tilt angle. However, this is an acceptable outcome for aviation related glare.

Motorist, Rail Traffic and Residential Glare

There will be nil glare from the Project in relation to road traffic, rail traffic and surrounding residential receivers under the standard operational tilt of ±60°.

There is potential for reflection visibility to several nearby residential receivers located east of the site if solar panels are left in a fixed tilt horizontal or with a slight eastward tilt (e.g. for maintenance, during construction, back tracking mod etc). However, this did not take into account the benefit of landscaping, trees etc in the vicinity of nearby residences. To eliminate all reflections completely, the solar arrays can be positioned at a fixed westward tilt angle of at least 10 degrees.

Night-Time Illumination Glare

Night-time light is not currently incorporated in the project.

5.9 Heritage

5.9.1 Indigenous Cultural Heritage

Virtus Heritage undertook an Aboriginal Archaeological Due Diligence Assessment (**Appendix F)** for the proposed development area in accordance with the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (2010) and where applicable, the requirements of the Code of Practice for Archaeological Investigation of Aboriginal Objects, NSW (2010).

A site inspection was undertaken on 3 March 2021 within the Moree Local Aboriginal Lands Council (LALC) area. The inspection was carried out over one field day by Senior Archaeologist, Elaine Lin. Moree LALC advised that no site officers were available to accompany the field survey and gave permission for a site inspection to occur without a LALC site officer present.

Due to the impacts of the site's previous agricultural use including vegetation clearing for pasture improvement based on the high level of disturbance observed during the site inspection, the project area has a very low potential for Aboriginal objects or intact cultural deposits to occur.

There are no previously recorded sites within the project area based on heritage searches and background research of previous archaeological investigations to date. No Aboriginal objects or sites were observed in the project area and given the disturbance and lack of any undisturbed soils, the project area is deemed to have a very low potential for archaeological deposits.

The Due Diligence assessment in coordination with consultations made with the Moree LALC made several recommendations to ensure the protection of any found Aboriginal artifact during constriction. All site workers should also be briefed on the possible identification of Aboriginal sites during the construction phase and their responsibilities according to the provisions of the NPW Act 1974 in case any unknown objects or items are uncovered during excavation. Further procedures and protocols are to be established as part of any future Construction Management Plan.

5.9.2 European Heritage

The site does not contain any listed heritage items under Schedule 5 of LEP 2010, nor is it located within a heritage conservation area. No other heritage items are located in proximity to the site.

5.10 Social and Economic Impacts

The proposed establishment of a solar farm on the site is anticipated to have an ongoing positive social and economic impact on the local Moree area and the broader community.

A review of existing renewable projects along with NSW State Government research reveals support for renewable energy projects is generally favourable within the North West Region (including the broader Moree region). This research revealed:

- 94 per cent of respondents supported using renewables to generate electricity in NSW;
- 81 per cent believed NSW should increase the use of renewables over the next five years; and
- 95 per cent supported the use of solar farms in NSW, 92 per cent in their local region, and 84 per cent within 1–2 kilometres of where they lived.

The most common perceived advantages of renewables included environmental benefits and lower cost of electricity. The most common perceived disadvantages included higher cost and concerns about efficiency and reliability. In the North West, 74 per cent were prepared to use renewables 'provided I don't have to pay more for my electricity' and 22 per cent were prepared to pay more to support them.

The proposed solar farm is predicted to improve intergenerational equity through its beneficial contribution to Australia's Climate Change and greenhouse gas minimisation efforts, specifically:

- Directly contribute to helping Australia in meeting the Renewable Energy Target;
- Reduce greenhouse gas emissions required to meet Australia's international climate conditions; and
- Assist in the transition towards cleaner electricity generation.

This is achieved by the potential to annually generate up to 5MW, potentially powering 2,000 homes during daylight hours whilst reducing CO2 emissions by around 200,000 tonnes over the lifespan of the project.

Ongoing communication with the community has been highlighted as an imperative to maximise social benefits of the proposed development. Further recommendations include the following:

- Liaison with local industry representatives to maximise the use of local contractors, manufacturing facilities, materials;
- Establish visual screening early to minimise the visual impact on the solar farm. Visual screening should be done in consultation with closest property holders in accordance with Visual Analysis;
- Establish good relations with people living in the vicinity of the proposal site at the beginning of the proposal and maintain; and
- Implement a community consultation plan to manage impacts to community stakeholders, including but not limited to:
  - mitigation measures to reduce potential construction impacts;
  - protocols to keep the community updated about the progress of the proposal and proposal benefits;
  - protocols to inform relevant stakeholders of potential impacts (haulage, noise, air quality etc.);

- protocols to respond to any complaints received;
- information on how potential customers can access the renewable energy source; and
- a process to monitor the predicted social impacts and amend mitigation and management measures as required.

In summary, the proposed establishment of a Solar PV Farm on the site is anticipated to have an ongoing positive social and economic impact on the local area and the broader Moree community. Overall, it is considered that the development:

- Is consistent with the regulatory and business development framework, including state government legislation and the Moree Plains Shire Council strategic plans;
- Will have positive impacts intergenerational equity, with the provision of cleaner energy in the future;
- Supports Commonwealth and NSW climate change commitments;
- Will generate enough clean, renewable energy for about 2,000 homes;
- Is an appropriate development in relation to the projected changes to population and demographics in the region;
- Is unlikely to have significant negative social impacts to the locality and region; and
- Would be a benefit contributing to the overall community sustainability of the Moree community.

6 Conclusion

The proposed solar PV electrical generation operation located at Amaroo Drive, Moree NSW 2400 will provide electrical power to support the needs of Moree and the surrounding agricultural operations, along with surrounding rural towns and villages. With the growth of the Moree area, the new electrical generator proposed under this DA will greatly assist in meeting the growing electrical demands required to support that growth.

The site has been chosen for its suitability in terms of land use zoning, relatively flat topography, limited trees and vegetation and access to high-capacity electricity lines.

The proposed solar PV electrical generation plant is consistent with the objectives of the RU1 Primary Production zone as it will provide a compatible land use which minimises land use conflict in the area whilst contributing to the land use diversity of the area. The proposal will not increase demand for public services or facilities and will have minimal impact on native vegetation and wildlife corridors or on waterways, wetlands or riparian zones. The development is compliant with the relevant LEP clauses, presenting no variations to any development standard. The proposal is generally compliant with the requirements of Moree Plains DCP 2013.

The design of the development incorporates appropriate stormwater management, respects the natural environment, and minimises potential amenity impacts on neighbouring properties.

Due to the use of high-quality solar tracking systems and site buffer distances to surrounding receivers and transport networks, potential for glare impacts on the surrounding area is considered to be negligible.

This SEE has addressed the potential impacts arising from the proposal on surrounding properties including traffic, access and parking, noise, visual amenity, ecological, and waste and water management. Where necessary, mitigation measures are proposed to minimise these potential impacts and reduce potential risk associated with the development.

Given the merit of the design and the absence of any significant adverse environmental impacts or planning issues, the DA is considered to be in the public's interest and worthy of Council's support.

APPENDIX A

DEVELOPMENT PLANS

Build Power and Energy Pty Ltd

APPENDIX B

STORMWATER MANAGEMENT PLAN

DRB Consulting Engineers Pty Ltd

APPENDIX C

COMPLIANCE TABLE

SLR Consulting Australia Pty Ltd

Table 1 MOREE PLAINS DCP 2013 COMPLIANCE TABLE

CONTROL	REQUIREMENT	COMMENT	COMPLIANCE
2. PARKING			
Provision of Parking Spaces	1. The provision of on-site car parking at the rate set out in Table 2.1 for any particular type or category of development.	In accordance with the parking requirements of Table 2.1, one parking space will be provided for the proposed development. An addition of up to 10 parking spaces will be provided with construction employees during the construction period as required.	Y
	2. Car parking is provided on the site of the development.	Compliant. All provided construction and operation parking will be provided on site.	Y
	3. The layout and dimensions of car parking areas is in accordance with the design standards and principles as set out in Table 2.1 and Figure 2.1.	Noted. Compliant.	Y
	4. All required car parking areas, driveways, turning areas and loading areas are paved in either a bitumen seal coat, asphaltic or bituminous concrete, cement concrete, concrete paving blocks, or brick paving blocks, except on industrial zoned land, where discretion shall be with the Director of Planning and Environment. Note: The standard of paving required will be dependent upon the type of development proposed, with regard to traffic loadings including turning movements of heavy vehicles.	The proposed car parking, driveways and turning areas on site will be a hardstand area with appropriate materials.	Y
	5. In villages and rural areas paving to driveways, turning areas, loading areas and car parking areas are all weather. Note: with surface materials to be at the discretion of the Director of Planning and Development.	Not applicable.	N/A
	6. All parking spaces are suitably marked by lines or spaces indicated by other approved means.	The limited parking spaces provided on site will be clearly marked.	Y
	7. Free and interrupted access to car parking areas is maintained at all times.	Access to parking areas will be maintained at all time.	Y
Car Parking Provisions – Table 2.1	Industries (other than motor vehicle repair workshops) *1 space per 2 staff employed, or* *1 space per 100 square metres of gross leasable floor area (whichever is the greater)*	1 parking space will be provided on site in accordance with the relevant provision. As noted above, up to 10 parking spaces will be provided for	Y

		construction employees during the construction period.	
General Provisions for Car Parking	1. Parking operations are logical and the circulation pattern is clearly defined through the use of appropriate traffic management measures.	Compliant. Parking on site is logical and vehicle circulation on site is clearly defined.	Y
	2. The number of conflict points between vehicles, and between pedestrians and vehicles, is minimised.	Compliant. No conflict is expected between the limited vehicles and pedestrians on site.	Y
	3. For one-way traffic, circulation is in the clockwise direction.	Compliant, the provided turnaround area on site will be in a clockwise direction.	Y
	4. Solid walls or other obstructions to visibility are avoided on the inside of tight turns.	Compliant, no solid walls or obstructions proposed within the vehicle turnaround circle area.	Y
	5. Blind aisles longer than 15 metres are avoided.	N/A. No blind aisles proposed.	Y
	6. Entry/exit points are clearly marked so as to avoid any confusion. Within the car park, signs are provided where necessary so that drivers wishing to leave the car park may do so by the most efficient route. Signposting is easily seen and understood.	Entry and exit points will be clearly marked on site, particularly during the construction phase of the development. It is noted that during operation of the solar farm only one vehicle is expected to enter and exit the farm on a fortnightly basis.	Y
	7. One-way markings are clearly set out on the pavement in such a manner as to be easily readable and understandable to the users of the car park.	Vehicle movements on site will be made clear. Entry and exit to the site will be one way, in a forward direction.	Y
	8. All parking bay delineations, arrows and other information for drivers painted on the pavement are marked using white (or high-contrast) paint or approved markers. Delineations are not less than 75mm or greater than 100mm wide.	All parking areas and directional traffic markings will be in place using white paint and within the required dimensions.	Y
	9. Note: In certain situations, the installation of signs to Council's satisfaction may be required over and above the normal requirements. Signposting and line-marking will assist to prevent the choking of the aisles and contribute to the general ease of use of the facility. Details of all proposed signposting and marking for parking areas are to be submitted with the development application for Council's consideration.	Noted. Due to the limited vehicle movement on the propose development, particularly during operation, it is not considered additional signage will be required.	Y
	10. Where the development generates a reasonable volume of traffic, separate entry	The proposal will generate limited traffic. The proposed entry and	Y

	and exit locations are provided with suitable separation between the access points.	exit points on site are considered suitable.	
	11. Good visibility is provided at these locations and longitudinal grades provide for a holding area within the property.	N/A	N/A
	12. Good sight distance is provided onto footpath areas from vehicles leaving car parking areas.	N/A	N/A
	13. Garages in residential development are capable of easy entry and exit.	N/A. Not residential development.	N/A
	14. Grades of parking areas are minimised, consistent with achieving adequate drainage.	N/A	N/A
	15. Headroom for undercroft (or underground) parking is sufficient to cater for the vehicles anticipated to use the development.	N/A, no undercroft or underground parking proposed.	N/A
	16. Turning circles cater for the range of vehicle sizes anticipated to utilise the site.	The proposed turning circle on site will be suitable for the heavy vehicles entering the site during construction.	Y
	17. Loading docks provide easy and convenient access for the service vehicles likely to utilise the site.	N/A. No loading dock required on site.	N/A
	18. Provisions are made in the design of loading docks so that delivery vehicles do not conflict with customer traffic.	N/A. No loading dock required on site.	N/A
	19. Parcel pickups are located so as to provide convenient access, including safe pedestrian access to vehicles and to avoid conflict with other vehicle movements.	N/A. No parcel pickups. N/A. No parcel pickup proposed.	N/A
	20. Note: In examining any proposal for a parcel pick-up, the following points will be considered:		N/A
	21. Storage of vehicles approaching the parcel pick-up.	N/A.	N/A
	22. A minimisation of the effect of these stored vehicles on the general flow within the car park.	N/A	N/A
	23. Location of parcel pick-up within the car park	N/A N/A	N/A
	24. Physical separation of through traffic lanes not concerned with the parcel pick-up		N/A

	from parcel pick-up lanes. The purpose of this requirement is to prevent vehicles stopping in the exit aisle and causing further congestion.	N/A	
	25. The provision made for the removing of exhaust fumes from idling cars in covered areas.		N/A
	26. Shade is provided to improve customer comfort in all customer parking areas.	N/A, no customers on site.	N/A
	27. Pedestrians are separated from vehicular traffic as much as physically possible.	Pedestrian and vehicular traffic will be separated as much as possible during construction of the development. Limited pedestrian activity expected on site during operation of the solar farm.	Y
	28. Ramps are designed to as to avoid damage to vehicles and to provide adequate visibility.	No ramps proposed on site.	N/A
8. INDUSTRIAL SUBDIVISION AND DEVELOPMENT			
Industrial Developments:	a) Provide on-site vehicle circulation and manoeuvring in accordance with AS 2890 Part 2.	A vehicle turnaround area will be provided on site, suitable for heavy vehicle and B-double access in accordance with AS 2890 Part 2. Vehicles will be able to enter and exit the site in a forward direction.	Y
	b) Provide parking in accordance with the parking chapter of this DCP.	As detailed above, 1 on-site parking space is required on site in accordance with the required parking rates for the proposed development. However, an addition of up to 10 parking spaces with be provided in the proposed hardstand area for construction employees during construction.	Y
	c) Provide a setback from the primary street frontage of at least 6m to any building element not exceeding 4m in height; and a setback from the primary street frontage of at least 9m to any building element exceeding 4m in height.	No building element exceeding 4m in height is proposed. The proposal will provide a greater than 6m front setback to the primary street frontage.	Y
	d) Provide a building setback from any secondary street frontage of at least 3m.	N/A. No secondary street frontage.	N/A
	e) Locate offices and/or customer areas and/or staff facilities addressing the primary road frontage of the development. These are	No permanent office, customer area or staff facilities are proposed on site. Temporary	Y

	located in a part of the building that does not exceed one story in height, and use materials and/or colours which are differentiated from the main parts of the building.	construction staff facilities will be provided on the eastern boundary of the site with direct access from the primary road.	
	f) Locate customer and visitor parking at the front of the development, towards the primary street frontage. Note: Customer and visitor parking may occur within the building setback area	N/A. No customer or visitor parking proposed.	N/A
	g) Sign customer and visitor parking appropriately.	N/A. No customer or visitor parking proposed.	N/A
	h) Provide a clearly identified point of customer/visitor entry and appropriate separation of customers and visitors from operational areas of the site.	N/A. No customer or visitor entry point required on site.	N/A
	i) Utilise pre-painted sheeting (e.g. Colorbond or similar) for walls of the main part of the building which directly faces a public place (e.g. road, open space area or railway).	N/A. No building proposed.	N/A
	j) Achieve the necessary fire ratings under the Building Code of Australia when parts of the building are constructed to a boundary.	N/A. No building to be constructed on site.	N/A
	k) Avoid narrow and/or unfrequented areas which would be difficult to maintain.	Noted, compliant.	Y Y
	l) Construct access aisles and manoeuvring areas in durable materials suitable for the proposed industrial use.	The proposed access round and turnaround area will be constructed of durable materials suitable for heavy vehicle access and manoeuvring during the construction phase of the development.	Y
	m) Construct car parking areas with a durable sub grade and an all-weather surface. Note: Sealed carparks are preferred for customer and visitor areas.	Noted. Only one parking space will be required on site during the operation. The proposed construction employee car parking will be provided in the hardstand area on site. No visitor or customer parking proposed on site.	N/A
	n) Provide landscaping to the primary street frontage with such landscaping being low maintenance and occupying not less than 20% of the area between the industrial building setback line and the street.	No landscaping is proposed. Existing landscaping on site will remain	

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9. Rural Development			
Biodiversity	1. Proposals falling within areas mapped as Koala Habitat (Map 9.1) undertake a review of the potential impacts on Koala Habitat as required by SEPP 44. (Note: if there is uncertainty as to whether a property or proposal is affected, contact Council's Planning and Development Department for further advice). 2. Proposals are reviewed against the provisions of the NSW Threatened Conservation Act and the NSW Planning Guideline, Commonwealth Environmental Protection and Biodiversity Conservation Act 1999 Guide to implementation in NSW May 2007, by an appropriately qualified and experienced ecologist or environmental scientist, and, if necessary, appropriate additional environmental investigations are conducted. 3. Where proposals would significantly affect areas of native vegetation, a review by an appropriately qualified and experienced ecologist or environmental scientist is undertaken as to the potential impact on wildlife habitat corridors.	A Flora and Fauna Assessment has been completed by Kleinfelder for the proposed site, refer to **Appendix H**. The site does not represent Potential or Core koala habitat and is unlikely to represent habitat for this species. This proposal has been reviewed against the NSW Threatened Conservation Act and the NSW Biodiversity Conservation Act. Refer to **Section 4** of this report and **Appendix H** for the Flora and Fauna Assessment. As above, refer to **Appendix H** for a Flora and Fauna Assessment for the proposed development. This report concludes that it is unlikely this proposal will cause significant impact to any threatened species, populations or ecological communities.	Y Y Y
Bushfire Management	1. Proposals falling within a bushfire hazard area as identified by the Rural Fire Service (refer to Maps 9.2 and 9.3) undertake a review in accordance with the provisions of Planning for Bushfire Protection (2006) and provide the appropriate protection to comply with that document. (Note: if there is uncertainty as to whether a property or proposal is affected, contact Council's Planning and Development Department for further advice). 2. Proposals involving a habitable building and falling outside a mapped bushfire hazard area implement the following provisions: To ensure protection against bushfire and grass fire, an asset protection zone is to be provided to the proposed dwelling/building. This asset protection zone is to be fully contained within the subject land and shall consist of one or more of the following: a) A loop road or access way around the building, minimum 3m in width; or	The proposed site is located within a bushfire hazard zone. Regard has been given to Planning for Bushfire Protection 2019. The 10m buffer zone included between the fence and solar array enables emergency vehicle access and fire risk management.	Y

	b) Managed grassland (i.e. grassland mowed or slashed or otherwise treated to maintain a maximum height of 10cm) of a minimum width of 20m around the proposed building; or c) Cultivated domestic gardens of a minimum width of 20m around the proposed building utilising species of low flammability to Council's satisfaction.		
Access to Rural Properties	1. Access to rural properties is from a public or Crown road. 2. An access point is constructed at the time of creation of an allotment with such access consisting of a gate recessed 20m from the property boundary, together with a table drain crossing in accordance with Council's engineering standards.	Access to the proposed site will be via Amaroo Drive, which is a public road. Access to the site will be located on the south-eastern corner of the site. It is considered the access gate is located at an appropriate distance from lot boundaries and nearby developments.	

APPENDIX D

TRAFFIC IMPACT ASSESSMENT

Intersect Traffic Pty Ltd

APPENDIX E

VISUAL IMPACT ASSESSMENT

SLR Consulting Australia Pty Ltd

APPENDIX F

DUE DILIGENCE ABORIGINAL ARCHAELOGICAL ASSESSMENT

Virtus Heritage

APPENDIX G

NOISE ASSESSMENT

Muller Acoustic Consulting Pty Ltd

APPENDIX H

FLORA AND FAUNA ASSESSMENT

Kleinfelder

APPENDIX I

REFLECTVITY REPORT

SLR Consulting Australia Pty Ltd

APPENDIX J

WASTE MANAGEMENT PLAN

SLR Consulting Australia Pty Ltd

APPENDIX K

QUANTITY SURVEYOR REPORT

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