

COUNCIL ASSESSMENT REPORT

WESTERN REGIONAL PLANNING PANEL

PANEL REFERENCE	PPSWES-200
DA NUMBER	189/2023
PROPOSED DEVELOPMENT	Electricity Generating Facility sub-5mW AC Solar Farm and four (4) battery energy storage systems
ADDRESS	Lot2, DP881219, 293 Hawkins Road, Yoogali NSW 2680
APPLICANT	ACEnergy Pty Ltd
OWNER	Barbara and Brian Savage
DA LODGEMENT DATE	22 September 2023
APPLICATION TYPE	Development Application
REGIONALLY SIGNIFICANT CRITERIA	Section 2.19(1) and Schedule 6 of <i>State Environmental Planning Policy (Planning Systems) 2021</i> : CIV > \$5m – Private infrastructure and community facilities
CIV	\$6,040,041 (excluding GST)
CLAUSE 4.6 REQUESTS	Not applicable
KEY SEPP/LEP	<ul style="list-style-type: none"> • <i>State Environmental Planning Policy (Planning Systems) 2021</i> • <i>State Environmental Planning Policy (Primary Production) 2021</i> • <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i> • <i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i> • <i>Griffith Local Environmental Plan 2014</i> • <i>Griffith Development Control Plan No 1 – Non-Urban Development</i>
TOTAL AND UNIQUE SUBMISSIONS AND KEY ISSUES RAISED	Nil submissions
DOCUMENTS SUBMITTED FOR CONSIDERATION	<ul style="list-style-type: none"> • Statement of Environmental Effects • Site and Elevation Plans • Acoustic and Vibration Assessment • Agricultural Assessment Report • AHIMS Web Services search result • Biodiversity Assessment Report

	<ul style="list-style-type: none"> • Bushfire Management and Emergency Response Plan • Flood Risk Report • Glint and Glare Assessment Report • Traffic Impact Assessment Report • Preliminary Investigation • Letter (RFI response) from Premise Australia dated 23 February 2024
SPECIAL INFRASTRUCTURE CONTRIBUTIONS (s7.24)	Not applicable
RECOMMENDATION	Approval
DRAFT CONDITIONS TO APPLICANT	Yes
SCHEDULED MEETING DATE	9 April 2024
REPORT PREPARED BY	Lillian Charlesworth, Manager RSD Assessment Department of Planning, Housing and Infrastructure (on behalf of Griffith City Council)
DATE OF REPORT	15 March 2024

EXECUTIVE SUMMARY

The development application (DA 189/2023) seeks consent for electricity generating works (i.e., a solar farm) and battery energy storage system (BESS) with a capacity below 5 megawatts (MW).

The subject site known as 293 Hawkins Road, Yoogali has three (3) unsealed road frontages including Hawkins Road to the south, Centofanti Road to the north and Mirrool Branch Canal Road to the east. The site comprises 21ha (Lot 2 DP881219) of a 41.8ha property (that also includes Lot 1 DP881219).

Existing development on the site consists of a detached dwelling and several ancillary agricultural structures off Hawkins Road. The property is currently used for sheep grazing. There is a dam located centrally within Lot 2 that will be filled as part of the development.

The site is located south-east of Griffith, approximately 11.8km by road from the city centre. The locality comprises rural properties used for agricultural and horticultural purposes with scattered residential dwellings.

The site is located in the RU1 Primary Production Zone pursuant to clause 2.3 of Griffith Local Environmental Plan 2014 (LEP 2014). While electricity generating works are not permissible in the RU1 zone, the use is permissible with consent on any land in a prescribed non-residential zone under clause 2.36(1)(b) of State Environmental Planning Policy (Transport and Infrastructure) 2021 (the SEPP). As the RU1 Primary Production zone is a prescribed non-residential zone under the SEPP, the proposed development is permissible with consent.

The principal planning controls relevant to the proposal include *State Environmental Planning Policy (Transport and Infrastructure) 2021*, *State Environmental Planning Policy (Planning*

Systems), *State Environmental Planning Policy (Primary Production) 2021*, *State Environmental Planning Policy (Resilience and Hazards) 2021*, *Griffith Local Environmental Plan 2014* and *Griffith Development Control Plan No.1 – Non-Urban Development*. The proposal is consistent with the relevant provisions of the above planning controls.

There were no concurrence requirements from agencies for the proposal and the application is not integrated development pursuant to section 4.46 of the *Environmental Planning and Assessment Act 1979* ('EP&A Act'). A referral was sent to Essential Energy who raised no concerns.

The application was placed on public exhibition from 13 October 2023 to 27 November 2023, with no submissions being received.

The application is referred to the Western Regional Planning Panel (the Panel) as the development is '*regionally significant development*', pursuant to section 2.19(1) and clause (5)(a) of Schedule 6 of *State Environmental Planning Policy (Planning Systems) 2021* as the proposal is development for *private infrastructure* with a CIV over \$5 million. A briefing on this application was held with the Western Regional Planning Panel on 12 March 2024.

Assessment of the application under section 4.15(1) of the *Environmental Planning and Assessment Act 1979* ('EP&A Act') considered that there are unlikely to be any significant adverse impacts of the development on the natural and built environments, subject to the recommended conditions.

A number of key issues were identified in this assessment which included:

- Loss of agricultural land – the land is not identified as State significant agricultural land. The site is located within the Murrumbidgee Irrigation Area, although the soil is predominantly class 4 (moderate to severe limitations) under the Soil Capability Mapping for NSW. Also, as grazing is expected to continue on the site during the operational phase and the development will eventually be decommissioned and returned to agricultural use, the loss of agricultural land is not considered significant.
- Traffic, access and parking - the matters considered include the advice from Council's Development Engineer, existing and proposed conditions along the heavy vehicle route and key intersections, traffic generation, the Traffic Impact Assessment, site access (including the need for a bushfire emergency access point) and car parking provision. The proposal is satisfactory subject to conditions.
- Noise - there will be exceedances of the adopted standards, largely for construction noise which are short-term, however impacts will be minimised by the recommended conditions of consent.
- Bushfire management - the land is bushfire prone with a minor risk of fatality, injury or environmental damage and a moderate risk of loss of assets and economic loss, mainly to solar farm infrastructure. The bushfire prone designation is in recognition that cereal crops have the potential to cure and sustain a fire, although the site is predominantly cleared except for exotic grass, which will be managed by sheep grazing during the operation phase. A Bushfire Management Plan has been submitted and includes adequate mitigation measures, including a 10m wide Asset Protection Zone (APZ), that forms part of the draft conditions.

- Native vegetation - 90% of the site is covered by exotic grasses and no tree removal is proposed, though Weeping Myall trees (listed as an endangered ecological community under the NSW Biodiversity Conservation Act 2016 and the Commonwealth Environment Planning and Biodiversity Conservation Act 1999) are located on Hawkins Road reserve adjoining the proposed new site access point. Conditions of consent will ensure adequate measures are taken to protect these trees during the construction phase.
- Earthworks – sedimentation within adjoining irrigation channels could lead to raising the bed of the channel, thereby reducing capacity. Erosion and sediment controls are included in the recommended conditions.
- Decommissioning – the site will be decommissioned in 31 years at the end of its useful life. It is important to ensure that all above and below ground solar farm infrastructure is removed and either recycled, reused or appropriately disposed of in order to return the site to its current agricultural potential and prevent site contamination (particularly from the BESS). This provision is included in the conditions of consent.

The suitability of the site for the development is seen as satisfactory and the development is considered to be in the public interest in terms of providing renewable energy and reducing reliance on fossil fuels.

It is recommended that DA 189/2023 for an electricity generating works (solar farm) and battery energy storage system at 293 Hawkins Road, Yoogali be APPROVED pursuant to Section 4.16(1)(a) of the *Environmental Planning and Assessment Act 1979* subject to the conditions of consent attached to this report at Attachment A.

1. THE SITE AND LOCALITY

1.1 The Site

The site is described as Lot 1 and Lot 2 DP881219, 293 Hawkins Road, Yoogali. The proposed development will be located wholly within Lot 2. The area of the property is approximately 41.8ha, whilst the development site within the property is 21ha (**Figure 1**).

Lot 2 has a primary frontage of 399m along Hawkins Road to the south and also fronts Mirrool Branch Canal Road to the east and Centofanti Road to the north. These are all unformed rural roads. The site has been used for grazing purposes by the current owner since 1977 and includes a single dwelling, sheds, silos and similar structures within the western part of the site. There are two existing vehicular access points along Hawkins Road, one to the farm and one to the dwelling. There are irrigation channels along the northern and southern boundaries and a dam located centrally within the site.

The site has been essentially cleared and laser levelled in the past to facilitate agricultural use of the land, with existing gradients of approximately 0.1%, sloping from north to south (**Figure 2**). Vegetation within the development site consists of over 90% exotic grasslands with limited native grass species and sparse native shrubs, mainly along the fence lines. Part of the Centofanti Road reserve and the entire section of Mirrool Branch Canal Road reserve adjoining the site are identified on the terrestrial biodiversity map. These road reserves include Weeping Myall, which is listed as an endangered ecological community under the NSW Biodiversity

Conservation Act 2016 and the Commonwealth Environment Planning and Biodiversity Conservation Act 1999.

The site has not been mapped as Biophysical Strategic Agricultural Land, nor is it identified as significant agricultural land. The land/soil capability of the site has been identified as Class 3. The property is not mapped as flood prone land under Council's mapping. The site is bushfire prone land, being part vegetation category 3 and part vegetation buffer (surrounding the area of the dwelling).



Figure 1 – Property (green), development site (red) and surrounding road network (source: Traffic Impact Assessment)



Figure 2 – The site from Mirrool Branch Canal Road (source: Agricultural Assessment Report)

1.2 The Locality

The site is within a rural area characterised by predominantly agricultural and horticultural uses, located approximately 11.8km SE of Griffith (**Figure 3**). A 33 kv overhead transmission line is located on the eastern side of Mirrool Branch Canal Road, Mirrool Creek lies approximately 500m to the SE and a railway line is approximately 1.25km to the north of the site. To the west is Kidman Way that links Griffith with towns to the south and to the north is Burley Griffin Way that links Griffith with towns to the east.

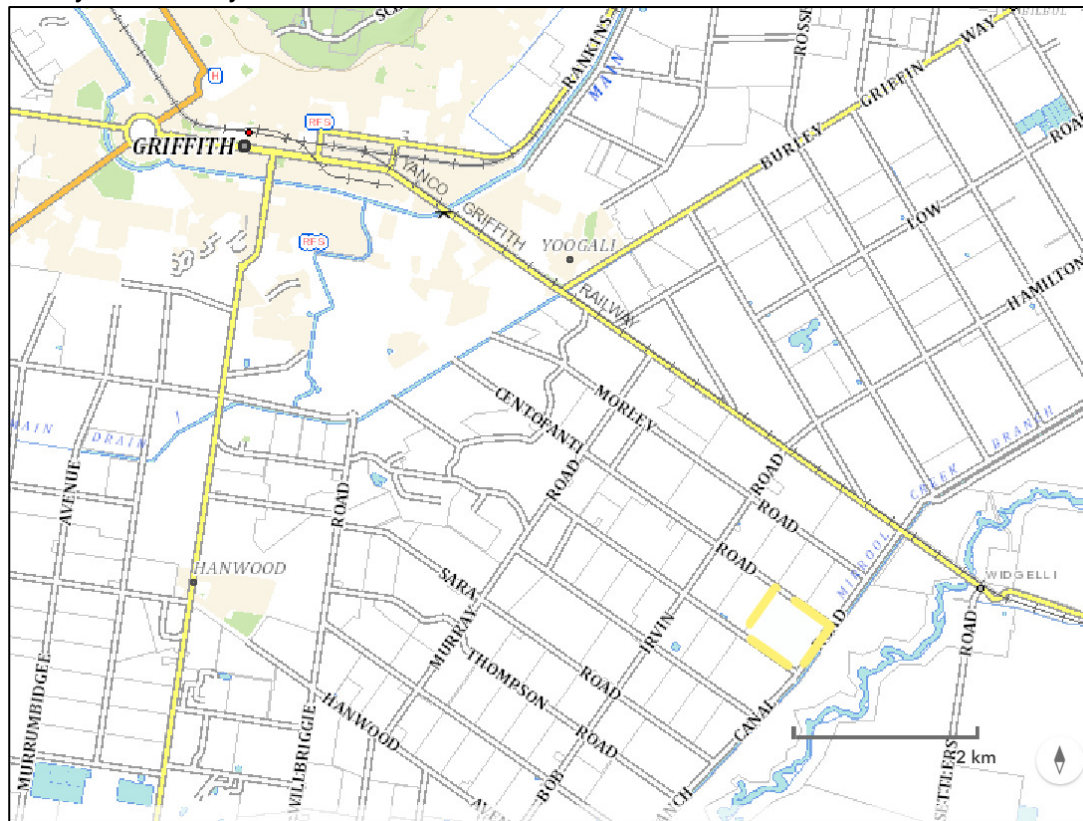


Figure 3 - Locality Map (source: Planning Portal Spatial Viewer)

Horticulture (grapes, oranges, prunes and hydroponic vegetables) and broad acre cropping (rice and cereals) are the predominant land uses in the surrounding area. Rural dwellings are scattered throughout the area with two dwellings on Hawkins Road (one is located within the development site) located within 1km of the site (**Figure 4**).



Figure 4 – Nearby dwellings (source: Glint & Glare Assessment Report)

2. THE PROPOSAL AND BACKGROUND

2.1 The Proposal

The proposal seeks consent for a solar farm and battery energy storage system (BESS) with a capacity below 5 megawatts (MW) on land at 293 Hawkins Road, Yoogali. Overhead wires will connect the facility to a nearby Essential Energy substation.

In summary the proposed development (**Figure 5**) includes:

- 11,000 solar panels (2400mm H x 1300mm W x 40mm D) mounted to array tracking systems with electric motors to tilt the arrays and ensure maximum solar access at all times of the day. The mounted panels will have a maximum height of 2.8m depending on the angle of panel tilt.
- a central inverter (12m L x 3m W x 3m H) (**Figure 6**)
- one high voltage (HV) kiosk (5m L x 5m W x 3m H) (**Figure 7**)
- 4 DC-coupled Battery Energy Storage Systems (BESS) to enable energy storage for times of high demand (each 10m L x 2m W x 3m H) (**Figure 8**)
- a 1.8m high chain mesh security fence around the perimeter of the facility
- a 5m wide landscaped vegetation buffer on the exterior of the fencing consisting of 2 rows of plantings at approximately 2.5m from the security fence, including trees reaching up to 3m in height at maturity and understorey plantings of up to 1.5m.
- 1m high post and wire farm fence around the outside of the landscape buffer.
- a high voltage pole south-east of the kiosk within the site and two new 12m overhead power poles outside the site to connect to the existing overhead 33 kV power line on the eastern side of Mirrool Branch Canal Road. An easement would be created over the electrical line infrastructure.
- a material laydown area adjoining the Hawkins Road boundary (during the construction phase only) and a carpark adjoining the site entrance
- a new site access point at the eastern end of Hawkins Road
- filling a created dam located centrally within the site

As the site has been cleared, the proposal does not involve tree removal. Exotic grasslands are to be removed as part of earthworks for the new vehicle access, placement of

underground cables (running from the solar arrays to the central inverter, then to the HV kiosk and finally to power poles, where the cable will then go above ground and connect to the 33kv overhead line on Mirrool Branch Canal Road which would transfer the electrical load to an Essential Energy substation), footings for solar arrays, HV kiosk, central inverter and BESS containers, as well as installation of fence posts and power poles.

The solar farm is proposed to be constructed over a six-month period. There will be up to 50 staff onsite during the construction phase. In the operational phase the facility will be remotely monitored, with up to 4 staff visiting the site fortnightly for general maintenance as well as occasional repairs and upgrades. The useful life of the infrastructure is approximately 31 years, after which the solar farm would be decommissioned. The decommissioning and subsequent rehabilitation of the land will include removal of all infrastructure (above and below ground), followed by on site works to ensure the property is returned to its current agricultural capacity.

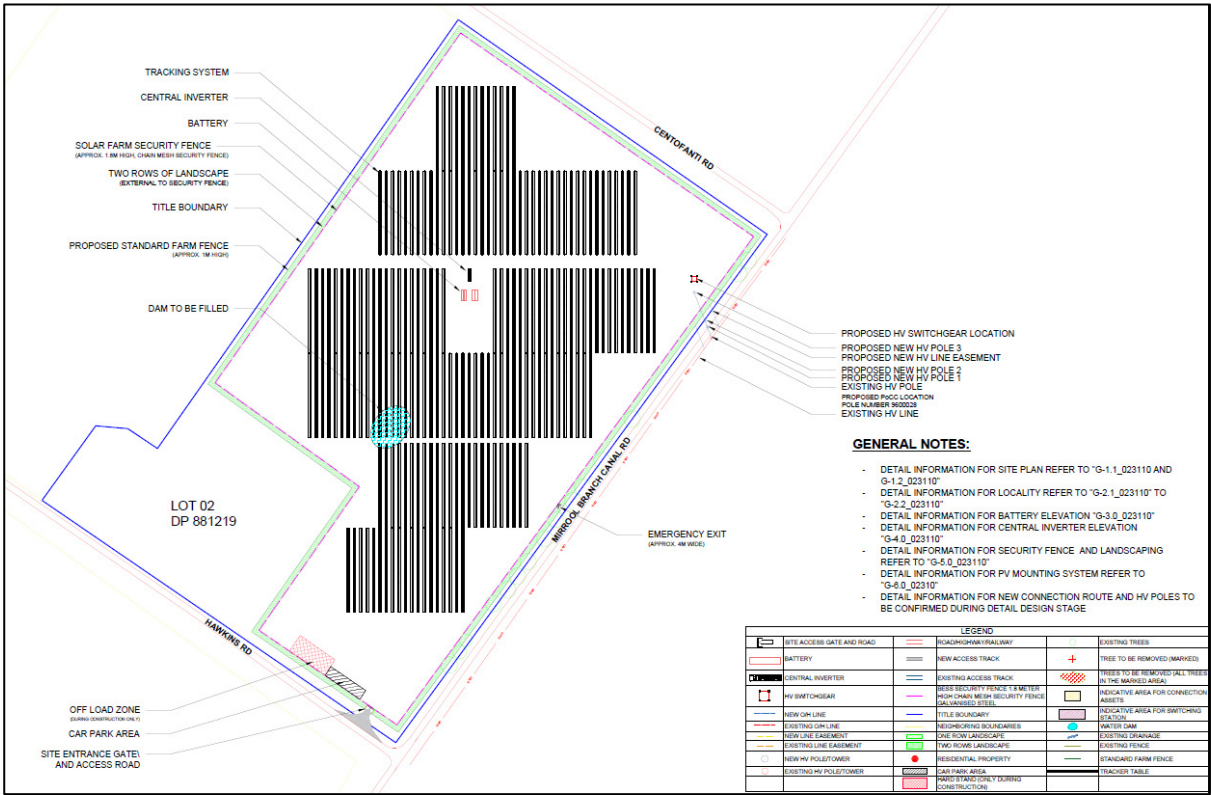


Figure 5 – Development Site Plan (source ACEnergy)

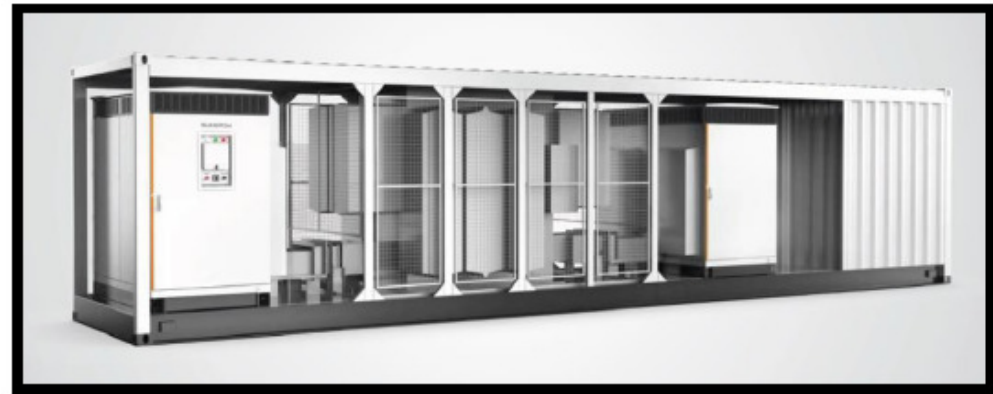


Figure 6 – Typical central inverter, transformer and switchgears (source: SEE)



Figure 7 – typical HV Kiosk and platform (source: SEE)



Figure 8 – typical BESS container (source: SEE)

There are no specific numerical development controls that apply, although key development data is provided in **Table 1**.

Table 1: Key Development Data

Control	Proposal
Site area	21ha
Clause 4.6 requests	Not applicable
Max height	Panel height of 2.8m at maximum rotation and 3m height for the inverter, HV Kiosk and BESS
Landscaping	A 5m wide landscape strip with a double row of planting along the entire outside perimeter of the security fence

Car parking spaces	A dedicated car parking area with 15 spaces is proposed to the western side of the Hawkins Road entrance. Ample informal parking space is available to cater for fluctuations in workers during the construction phase.
Setbacks	Solar panel arrays will be setback a minimum of 19m from the property boundaries

2.2 Background

A pre-lodgement meeting was held prior to the lodgement of the application on 3 August 2023 where various issues were discussed. A summary of the key issues and how they have been addressed by the proposal is outlined below:

- use of irrigable land for non-agricultural purposes – refer to comments below under the heading SEPP (Primary Production).
- whether the land is flood liable – the land is not flood liable. Refer to comments below under the heading clause 5.21 flood planning.

The development application was lodged on 22 September 2023. A chronology of the development application since lodgement is outlined in **Table 2**, including the Panel's involvement with the application:

Table 2: Chronology of the DA

Date	Event
3 August 2023	Pre-lodgement meeting
22 September	DA lodged
13 to 27 October	Exhibition of the application
3 November	DA referred to Essential Energy
23 November	Response received from Essential Energy
28 November	Engineering referral response received
29 November 2023	Request for Information (RFI) issued
14 December	Extension of time granted for RFI response until mid-January 2024
15 January 2024	Second extension of time granted for RFI response to mid-March 2024
23 February	RFI response received
12 March	Panel briefing held

3. STATUTORY CONSIDERATIONS

When determining a development application, the consent authority must take into consideration the matters outlined in Section 4.15(1) of the *Environmental Planning and Assessment Act 1979* ('EP&A Act'). These matters as 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*
 - (i) *any environmental planning instrument, and*
 - (ii) *any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Planning Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved), and*
 - (iii) *any development control plan, and*
 - (iiia) *any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4, and*
 - (iv) *the regulations (to the extent that they prescribe matters for the purposes of this paragraph),*
- (b) *that apply to the land to which the development application relates, 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.

It is noted that the proposal is not considered to be:

- Integrated Development (s4.46)
- Designated Development (s4.10)
- Requiring concurrence/referral (s4.13)
- Crown DA (s4.33)

3.1 Environmental Planning Instruments, proposed instrument, development control plan, planning agreement and the regulations

The relevant environmental planning instruments, proposed instruments, development control plans, planning agreements and the matters for consideration under the Regulation are considered below.

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

A summary of the key matters for consideration arising from the relevant EPIs are outlined in **Table 3** and considered in more detail below.

Table 3: Summary of Key Matters in the Relevant Environmental Planning Instruments

EPI	Key Matters for Consideration	Comply (Y/N)
State Environmental Planning Policy (Planning Systems) 2021	Section 2.19(1) declares the proposal regionally significant development pursuant to clause 5(a) of Schedule 6 as it comprises private infrastructure (electricity generating works) with a CIV of more than \$5m.	Y
State Environmental Planning Policy (Primary Production) 2021	Chapter 2: Primary production and rural development	Y
State Environmental Planning Policy (Resilience and Hazards) 2021	Chapter 3 Hazardous and offensive development Section 4.6 Contamination and remediation	Y
State Environmental Planning Policy (Transport and Infrastructure) 2021	<p>Chapter 2: Infrastructure, Part 2.3 Development controls</p> <p>Section 2.36 Development permitted with consent</p> <p>Section 2.42 applies to a regionally significant development application for electricity generating works in a regional city – not applicable as the site is not located in the Renewables Zone on the Regional Cities Map – Griffith.</p> <p>Section 2.48(2) Determination of development applications, other development – as the development is in proximity to existing electricity infrastructure and may influence the electricity network including capacity at the substation, Essential Energy has been consulted.</p> <p>Section 2.119 – Development with frontage to a classified road – not applicable as the development does not have frontage to a classified road.</p> <p>Section 2.122 Traffic generating development – referral to TfNSW is not required. Further details are provided below.</p>	Y
State Environmental Planning Policy (Biodiversity and Conservation) 2021	Chapters 3 and 4 Koala Habitat – do not apply to the RU1 Primary Production Zone within Griffith City Council.	N/A
Griffith Local Environmental Plan 2014	<ul style="list-style-type: none"> • Clause 2.3 Permissibility and zone objectives • Clause 5.10 Heritage conservation • Clause 5.21 Flood planning • Clause 7.1 Earthworks • Clause 7.3 Terrestrial biodiversity • Clause 7.10 Essential services 	Y
Griffith Development Control Plan No.1 -	Part 2 - Table 2	Y

Non-Urban Development		
Griffith DCP No. 20 Off Street Parking (2011)	Table 1.7.1	Y

Consideration of the relevant SEPPs is outlined below.

State Environmental Planning Policy (Planning Systems) 2021

Chapter 2: State and Regional Development

Development for the purpose of private infrastructure (a solar farm is defined as “electricity generating works” which is private infrastructure) is considered regionally significant if it has a capital investment value (CIV) of more than \$5 million. As the project's CIV is \$6,040,041, it is therefore ‘regionally significant development’. Accordingly, the Western Regional Planning Panel is the consent authority for the application.

State Environmental Planning Policy (Primary Production) 2021

Chapter 2: Primary Production and Rural Development

The proposal is not for the purposes of primary production and electricity generating works are not specifically mentioned in the policy. However, the proposal is consistent with the broad aims of the policy (as outlined below), particularly regarding reducing land use conflict and sterilisation of rural land, as well as the protection of native vegetation and biodiversity.

The land will not be sterilised, given that sheep grazing will be undertaken post construction as a fire management strategy. The proposal has a limited life span of approximately 31 years, after which it is proposed to decommission the solar farm by removing all infrastructure relating to the approved development from the site. At that time, subject to appropriate conditions of consent, the land would again be suitable for a range of primary production purposes, including cropping.

It is unlikely that the development as proposed will result in any significant land use conflicts, negatively impact the ability of neighbouring businesses to operate, or sterilise the land for future primary production purposes, subject to conditions of consent to address construction traffic, noise and dust and the decommissioning phase. The solar farm is not anticipated to have any long-term detrimental impact on soil productivity, and this is addressed in the draft condition re decommissioning. Substantial landscape screening is proposed to address visual impacts.

The development area on the site has been previously cleared and used for sheep grazing purposes. Given the historical use of the property there will be insignificant impacts on native vegetation and biodiversity.

The site is within the Murrumbidgee Irrigation Area and therefore the proposal represents a potential loss of irrigated cropping land. The Agricultural Assessment Report estimates that the site is capable of contributing 70 tonnes of rice annually (0.022% of the rice production from the Murray and Murrumbidgee Irrigation Areas), 4.3 tonnes/hectare of wheat (0.0007% of NSW wheat production in 2022) or could be used for irrigated horticultural crops. Therefore, the loss of irrigated cropping land would not significantly impact agricultural production at a regional or State level, particularly given that the small lot size would limit its appeal to a broad acre cropping farmer and may preclude its use as a viable cropping operation. Furthermore, irrigation water allocation is subject to annual fluctuation and water entitlements can be prohibitively expensive in years when water entitlements are low. As irrigated water is transferrable on a trading basis, water may be traded downstream, resulting in no loss of irrigation capacity.

Clause 2.8 State Significant Agricultural Land

In section 2.8 of the SEPP, it is established that land is deemed State significant agricultural land if it is listed in Schedule 1. However, Schedule 1 has yet to be finalised and does not identify any lands. Therefore, the development is not located on State significant agricultural land.

Given the above factors, the proposal is considered to be consistent with SEPP (Primary Production) 2021.

State Environmental Planning Policy (Resilience and Hazards) 2021

Chapter 3: Hazardous and Offensive Development

Under Griffith LEP 2014, the definition of “industry” includes a place used to carry out an industrial activity and the definition of “industrial activity” includes the production of goods/products for commercial purposes. The proposed solar farm is therefore classified as “industry” given it’s a place where electricity will be produced for commercial purposes. A potentially hazardous industry or storage establishment under the SEPP would, without measures to reduce impact, pose significant risk to human health, life, property or the biophysical environment. If the SEPP applies, a Preliminary Hazard Analysis (PHA) is required.

Hazardous and Offensive Development Application Guidelines – Applying SEPP 33 (2011) (the Guideline) assist to identify development to which the SEPP applies. The Guideline includes risk screening tests for potentially hazardous industry that refer to the Australian Dangerous Goods Code 2020. The only dangerous goods associated with the proposal are lithium batteries used in the BESS which are classified under the Code as a class 9 dangerous good. Class 9 dangerous goods are excluded from risk screening under the Guideline as they pose little threat to people or property. The facility is therefore not classified as potentially hazardous and a PHA under the SEPP is not required.

Chapter 4: Remediation of Land

Under the SEPP a preliminary investigation is required if development would involve a change of use on any land specified under clause 4.6(4), including where development for a purpose referred to in Table 1 of the *Managing Land Contamination - Planning Guidelines (1998)* is being, or is known to have been carried out. As Table 1 in the Guideline includes the previous

use of the site for agricultural/horticultural activities and the proposal involves a change of use to electricity generating works, a preliminary investigation was undertaken.

The preliminary investigation consisted of a search of historical records, a review of any environmental reports for the site, aerial images and mapping (topographical, geological, soil), as well as identification of any registered groundwater bores within 500m and a site inspection. A review of the EPA Contaminated Land Record indicated that no statutory notices have been issued under the provisions of the *Contaminated Land Management Act 1997*. The EPA public register did not contain information on any scheduled activities or penalty notices issued under the *Protection of the Environment Operations Act 1997*.

The investigation found that previous uses were limited to low intensity agricultural uses, including cropping, with no known uses that would be likely to have substantially contaminated the site. There was no evidence of illegal dumping, cut and fill, use for sheep or cattle dips or storage of fuel, oil or chemicals. The potential sources of contamination were considered to be heavy metals, pesticides and herbicides, although the investigation found no evidence of contamination.

Section 4.6 of the SEPP requires consent authorities to consider whether the land is contaminated, and 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. On the basis of the available information, the subject site in its current state is considered to be suitable for the proposed development, which will neither involve significant excavation, nor staff permanently on site, except during the construction phase. The draft conditions include measures identified in the preliminary investigation to ensure work health and safety during excavation and handling of excavated material.

State Environmental Planning Policy (Transport and Infrastructure) 2021

Part 2.3 Development Controls

Division 4 Electricity Generating Works and Solar Energy Systems

Section 2.36(1)(b) of the SEPP enables electricity generating works to be carried out with consent on any land in a prescribed non-residential zone. As prescribed non-residential zones include RU1 Primary Production and the subject site is zoned RU1 Primary Production, the development is permissible with consent under the SEPP. These provisions prevail over any inconsistency in any other planning instruments, inclusive of Griffith LEP 2014.

Section 2.42 includes heads of consideration for a regionally significant development application for electricity generating works in a regional city. This clause is not applicable as the site is not located in the Renewables Zone on the Regional Cities Map – Griffith.

Division 5 Electricity Transmission or Distribution Networks

Section 2.48 requires development within nominated distances from an electricity distribution pole, easement, substation or power line to be referred to the electricity supply authority for the area for comment. As the application involves erecting and connecting two new power poles to the overhead power line and will impact capacity within the sub-station, the application was referred to Essential Energy for comment. The response from Essential Energy does not object to the proposed development and outlines general safety risks.

Division 17: Roads and traffic

Electricity generating works are not identified in Schedule 3 of the SEPP as traffic-generating development and as such would be classified in the schedule as 'any other purpose' which requires referral to TfNSW if it involves a development that generates:

- 50 or more motor vehicles per hour in the case of it having access to classified road or to a road that connects to classified road (if access is within 90m of connection, measured along the alignment of the connecting road)', or
- 200 or more motor vehicles per hour if the site has access to any other road.

The application was not referred to TfNSW as Hawkins Road is not a classified road, nor is the proposed access within 90m of connection to a classified road and the proposal will not generate the traffic volumes indicated above.

Griffith Local Environmental Plan 2014

The relevant local environmental plan applying to the site is *Griffith Local Environmental Plan 2014* (the LEP). The aims of the LEP include:

- (aa) to protect and promote the use and development of land for arts and cultural activity, including music and other performance arts,
- (a) to prevent unnecessary urban sprawl by promoting business, industrial, rural and residential uses within and adjacent to existing precincts related to those uses,
- (b) to minimise land use conflict in general by creating areas of transition between different and potentially conflicting land uses,
- (c) to provide a variety of development options to meet the needs of the community with regard to housing, employment and services,
- (d) to manage and protect areas of environmental significance,
- (e) to recognise the historical development of the area and to preserve heritage items associated with it.

The proposal is consistent with these aims as it will provide employment during both the construction and operational phases and will not impact heritage items or areas of environmental significance, subject to appropriate conditions of consent.

Zoning and Permissibility

The site is located within the RU1 Primary Production zone pursuant to clause 2.3 of *Griffith Local Environmental Plan 2014* (the LEP) (**Figure 8**). The proposal for electricity generating works is prohibited in the zone under the LEP, although is permissible with consent on any land in a prescribed non-residential zone under clause 2.36(1)(b) of *State Environmental*

Planning Policy (Transport and Infrastructure) 2021 (the SEPP). As the RU1 Primary Production zone is a prescribed non-residential zone under the SEPP, electricity generating works are therefore permissible with consent within the zone.

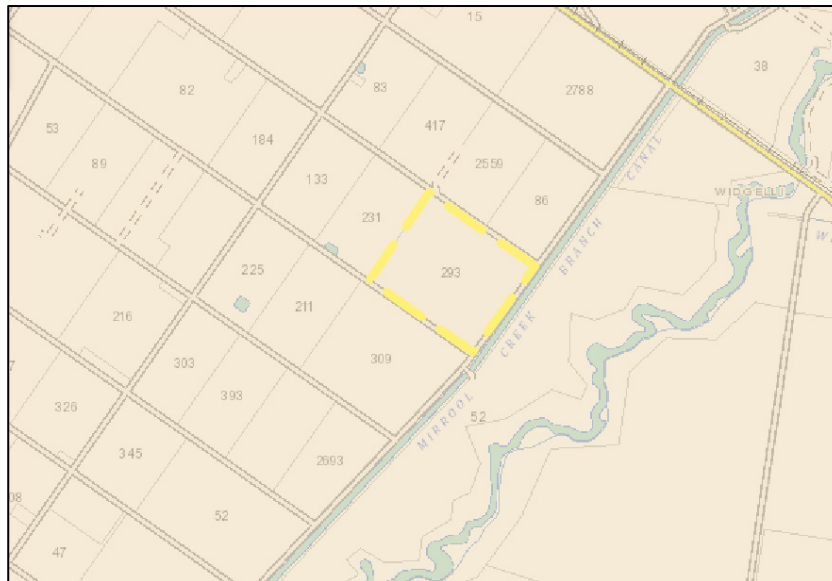


Figure 8 – RU1 Primary Production zone applies to the property (bordered yellow) and the surrounding area (source: NSW Planning Portal Spatial Viewer)

The zone objectives (pursuant to the Land Use Table in clause 2.3 of the LEP) include the following. To:

- encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- encourage diversity in primary industry enterprises and systems appropriate for the area.
- minimise the fragmentation and alienation of resource lands.
- minimise conflict between land uses within this zone and land uses within adjoining zones.
- permit a range of activities that support the agricultural industries being conducted on the land and limit development that may reduce the agricultural production potential of the land.
- permit tourist facilities that promote an appreciation of the rural environment and associated agricultural and horticultural activities, while ensuring the continued economic viability of the land.

The proposal is considered to be consistent with these zone objectives for the following reasons:

- The proposal will provide renewable energy and enhance the natural resource base.
- The facility will be decommissioned, and all infrastructure removed at the end of its effective life (approximately 31 years), so permanent alienation of land for primary industry will not occur.

- The development of the solar farm will have minimal impact on the surrounding land uses during the operational phase and can coexist with existing agricultural practices.
- Sheep grazing of the site is proposed during operation of the solar farm and therefore the site will continue to support agricultural activity.

5.10 Heritage conservation

The site is not identified as, or located within close proximity to, any items of environmental heritage significance listed in Griffith LEP 2014. It is the responsibility of the applicant to ensure compliance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (the Code). A search of the Aboriginal Heritage Information Management System (AHIMS) undertaken under the Code found no Aboriginal sites or places on or within 1km of the site. Aboriginal objects are unlikely to occur on the site given the site is disturbed land, having been laser levelled and utilised for agricultural purposes. Therefore, the development will not have any impact on any Aboriginal or non-Aboriginal heritage. Procedure in the event of any unexpected find is included in the recommended conditions.

Clause 5.21 Flood planning

The site is not flood prone land (**Figure 9**). A Flood Risk Report prepared by Water Technology identifies the site as being located outside the 1% AEP flood event and is therefore outside the flood planning area. Pre and post development, the depth of water across the site in a 1% AEP storm event ranges from 50mm to 180mm with runoff generally contained within the site due to the irrigation channels. Stormwater modelling took into consideration the proposal to fill the dam consistent with the surrounding ground level. The report recommended that critical solar panel infrastructure be located a minimum of 200mm above ground level and that any critical electrical infrastructure (such as batteries and transformers) be located a minimum of 300mm above ground level. **Figure 10** and **Figure 11** below indicate that solar panels and critical infrastructure will be installed to be clear of ground level, although the details of the height above ground are not shown, and therefore an appropriate advisory note is included with the draft conditions. As anticipated floodwater depths and velocities are low, any maintenance staff on-site in the event of a flood will have ample time for evacuation. Council's Engineers are satisfied that the development is compatible with the land given it is not flood prone and subject to a condition that stormwater is not to cross property boundaries unless easements are created.

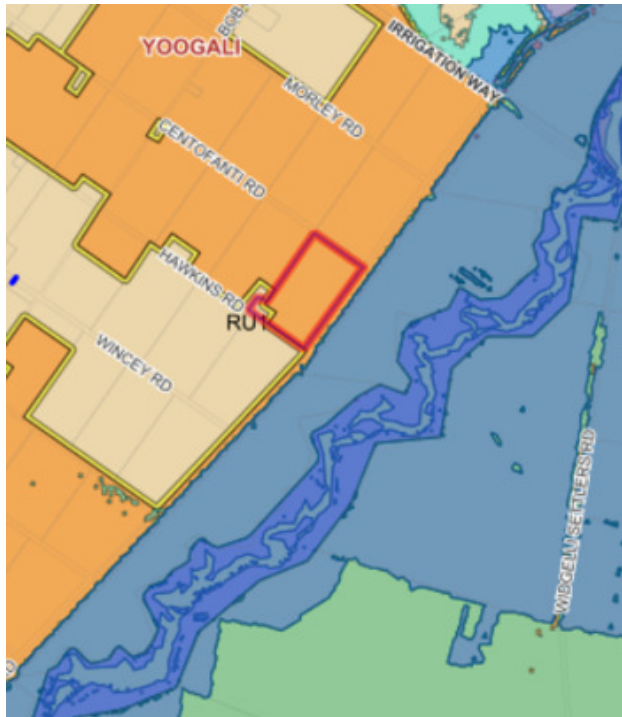


Figure 9 – Flood Prone Land (shown blue) in proximity to the site (bordered red) (source: Council’s database)

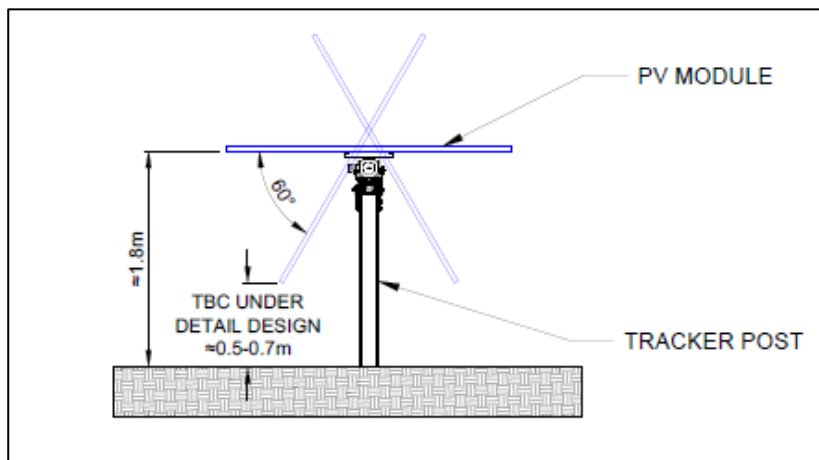


Figure 10 – PV Mounting System – side view (source: Plans provided by ACEnergy)

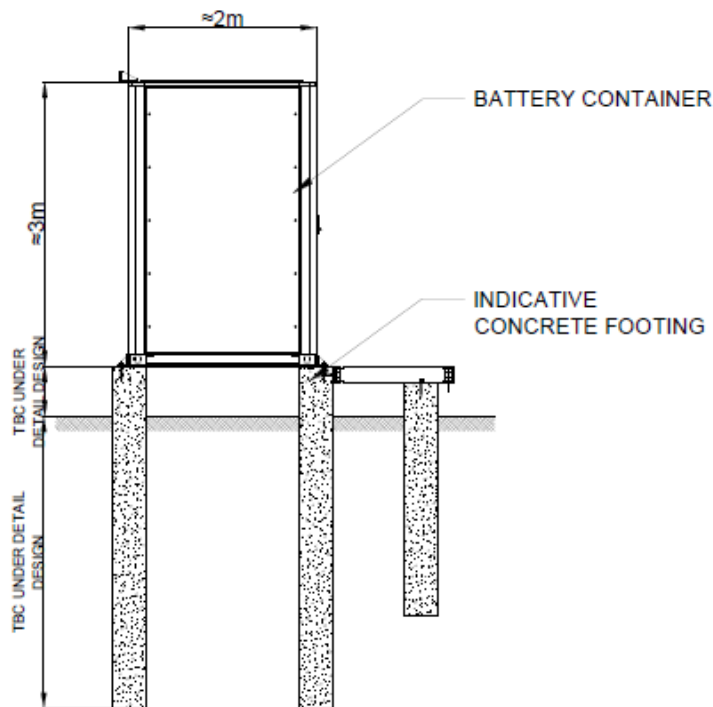


Figure 11 – Battery Container – side view (source: Plans provided by ACEnergy)

Clause 7.1 Earthworks

The proposed development includes minor ancillary earthworks associated with the construction of the solar farm. These works include:

- construction of new vehicle access from Hawkins Road
- footings for the solar panels, HV kiosk, central inverter and BESS containers
- installation of security fence posts and power poles
- placement of underground cables

Clause 7.1 includes the following matters for consideration:

- (a) *the likely disruption of, or any detrimental effect on, drainage patterns and soil stability in the locality of the development,*

Comment: The proposed excavation will not alter the existing drainage patterns and mitigation measures to reduce soil erosion and pollutant run-off during construction have been included within recommended conditions of consent.

- (b) *the effect of the development on the likely future use or redevelopment of the land,*

Comment: The facility will be decommissioned at the end of its useful life and returned to its former condition, therefore not altering the likely future use of the land.

- (c) *the quality of the fill or the soil to be excavated, or both,*

Comment: The proposal includes filling a dam located centrally within the site. The dam is approximately 15.2m by 14.3m across and 1.45m in depth. When

the dam was constructed, the excavated material was stored on site by spreading and compaction at the boundary of the dam. Therefore, this excavated material will be reused to fill the dam, rather than importing fill for this purpose.

- (d) *the effect of the development on the existing and likely amenity of adjoining properties,*

Comment: The potential impact of earthworks on adjoining properties regarding noise and dust is addressed in the recommended conditions.

- (e) *the source of any fill material and the destination of any excavated material,*

Comment: A draft condition has been included to ensure that any fill material imported to, or removed from, the site is adequately managed.

- (f) *the likelihood of disturbing relics,*

Comment: Given the highly disturbed nature of the site there is a low likelihood of disturbing relics, although this is addressed in the recommended conditions.

- (g) *the proximity to, and potential for adverse impacts on, any waterway, drinking water catchment or environmentally sensitive area,*

Comment: The site is not in proximity to any of these features, although there is potential that sediment may impact irrigation channels. Sediment and erosion control is addressed in the recommended conditions.

- (h) *any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.*

Comment: The recommended conditions include measures to address the potential impacts of excavation.

It is considered that the earthworks associated with this proposal will have minimal environmental impact, as it will not involve significant disturbance of the ground. Earthworks should not alter any existing drainage patterns or be detrimental to the soil stability in the area. Mitigation measures to reduce soil erosion and pollutant run-off arising from filling of the dam and construction have been included within the conditions of consent.

Clause 7.3 Terrestrial Biodiversity

Although the site is highly disturbed having been cleared and used for agricultural purposes, a small area of land adjoining the boundary with Hawkins Road is mapped as terrestrial biodiversity (**Figure 12**). Part of the Centofanti Road reserve and the entire section of Mirrool Branch Canal Road reserve adjoining the site are also identified on the terrestrial biodiversity map. Clause 7.3 of the LEP requires the following matters to be considered:

- (3) *In deciding whether to grant development consent for development on land to which this clause applies, the consent authority must consider—*

- (a) *whether the development is likely to have:*

- (i) *any adverse impact on the condition, ecological value and significance of the fauna and flora on the land, and*

- (ii) *any adverse impact on the importance of the vegetation on the land to the habitat and survival of native fauna, and*
- (iii) *any potential to fragment, disturb or diminish the biodiversity structure, function and composition of the land, and*
- (iv) *any adverse impact on the habitat elements providing connectivity on the land, and*
- (b) *any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.*
- (4) *Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that—*
 - (a) *the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or*
 - (b) *if that impact cannot be reasonably avoided by adopting feasible alternatives—the development is designed, sited and will be managed to minimise that impact, or*
 - (c) *if that impact cannot be minimised—the development will be managed to mitigate that impact*

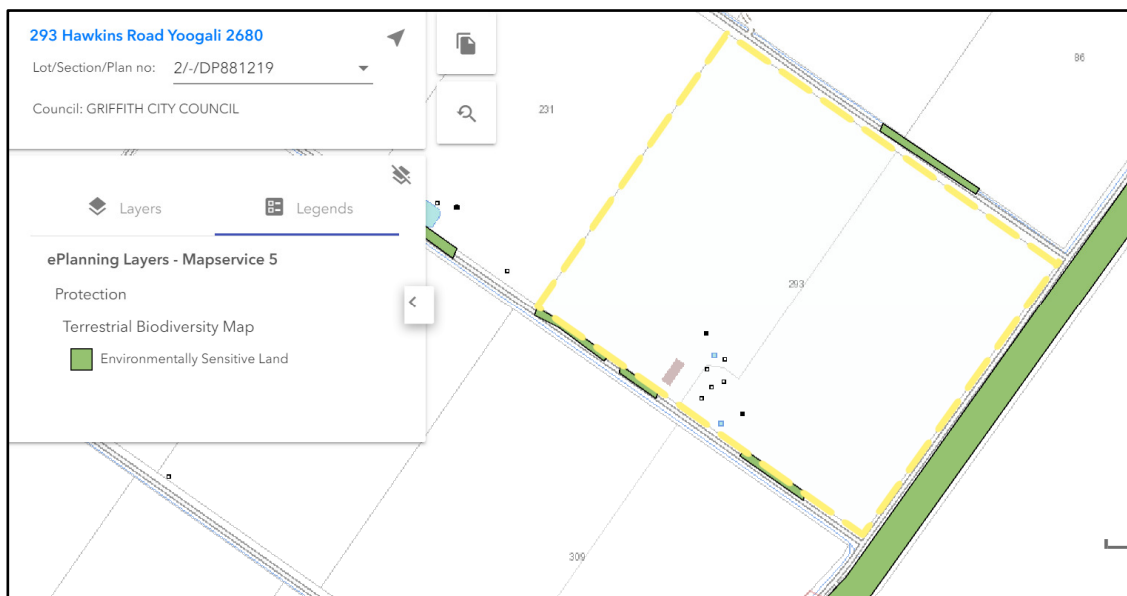


Figure 12 -Terrestrial Biodiversity (source: NSW Planning Portal Spatial Viewer)

A Biodiversity Assessment Report (BAR) has been prepared by Habitat Environmental Services that addresses these matters. The BAR found that vegetation within the study area (**Figure 13**) is predominantly exotic grasslands (greater than 90%) with native vegetation limited to Weeping Myall open woodland fragments within the road reserves that border the site. No threatened flora or fauna species were detected within the site. Weeping Myall is listed as an endangered ecological community under the *NSW Biodiversity Conservation Act 2016* and the *Commonwealth Environment Planning and Biodiversity Conservation Act 1999*. A draft condition therefore requires Weeping Myall to be one of the species included within the landscaping buffer to compliment existing native plantings along the road reserves.

The development footprint (**Figure 14**) has been designed to sit within cleared areas of the site. A setback will be implemented between the road reserve's native vegetation and the external perimeter fencing to avoid disturbance to trees and undergrowth. The connection

between the solar farm and the existing overhead power line on Mirrool Branch Canal Road will traverse the area of terrestrial biodiversity but will not require the removal of any native vegetation. The proposed site access point from Hawkins Road (shown in grey on **Figure 14**) has been positioned to avoid trees in the road reserve. Therefore, no trees would need to be removed for construction of the project.



Figure 13 - Vegetation Mapping (green is exotic grassland, brown is Weeping Myall Open Woodland and blue is the existing constructed dam)

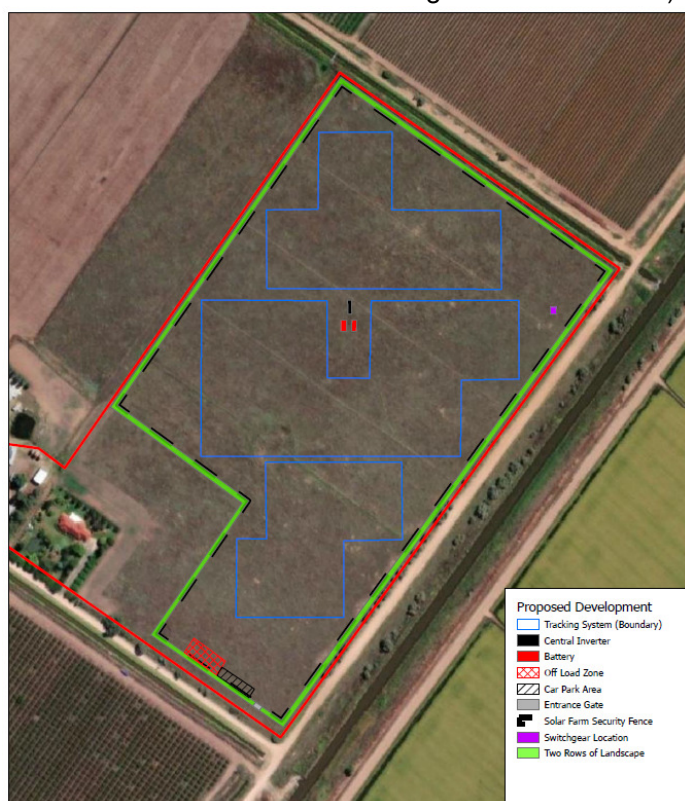


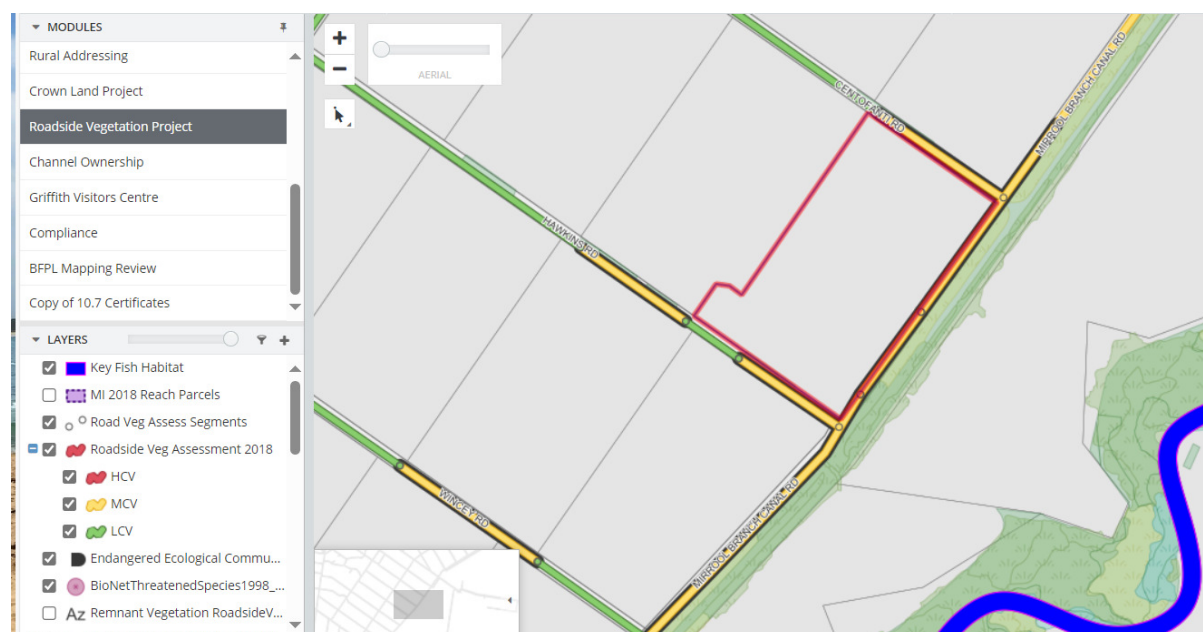
Figure 14 - Proposed development within the site (source: Biodiversity Assessment Report)
The construction phase will include the decommission of a dam that was found to show evidence of disturbance (**Figure 15**) due to use by stock, and lacked aquatic or emergent vegetation, making it unsuitable breeding habitat for most native fauna, including water birds

and amphibians. Therefore, filling of the dam is not considered to generate any significant adverse environmental impact.

In accordance with clause 7.3(4), the development has been designed, sited and will be managed to avoid any significant adverse impact on the local ecosystem. Nonetheless, the construction and operation of the solar farm have the potential to cause some direct and indirect impacts on flora and fauna. To address this, the BAR has outlined a number of mitigation measures that are included in the conditions of draft consent.



Figure 15 - Existing dam to be decommissioned (source: Biodiversity Assessment Report)



Council's Roadside Vegetation mapping project identifies the habitat in the locality as medium conservation endangered ecological community

7.10 Essential services

The SEE indicates that the development will not require reticulated water or sewage disposal, as post construction, the development will be remotely monitored and generally unmanned. Water required during operation for maintenance of the landscaped buffer will be sourced by a 1,000Ltr tank delivered via a utility vehicle with trailer or a 10,000Ltr tank via a heavy rigid truck. Solar panel cleaning will occur on an annual basis and will utilise an 18,000 to 21,000Ltr

tank delivered via semi-trailer. Stormwater drainage will remain within the site as currently and dedicated vehicle access will be provided from Hawkins Road.

The proposal is considered to be generally consistent with the LEP.

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

There are no draft environmental planning instruments relevant to this development application.

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

The following Development Control Plans apply to the development:

- *Griffith Development Control Plan No.1 – Non-Urban Development*, and
- *Griffith Development Control Plan No.20 – Off Street Parking (2011)*

Table 4 below provides an assessment of applicable controls within these DCPs.

Design Element	Minimum Development Standard	Assessment	Complies
<i>Griffith Development Control Plan No.1 – Non-Urban Development</i>			
(a) Bulk, scale, setbacks and general amenity issues	The structure is to be setback a minimum of ten (10) metres from the front boundary or setback a minimum of one hundred (100) meters from the front boundary where the lot has frontage to an “arterial road” or “proposed by-pass route”.	The nearest structures are set back approximately 50m from the Hawkins Road front boundary and the security fence is setback approximately 15m. The site is not adjacent to an arterial road or proposed by-pass route.	Yes
b) Open space, additional buffer areas	A minimum buffer distance (by way of an easement) of fifty (50) metres shall apply from natural watercourses.	There are no natural watercourses within the site and Mirrool Creek is approximately 500m distance.	Yes
	A minimum buffer distance (by way of an easement) of twenty (20) metres shall apply over drainage lines and canals.	The Mirrool Creek Branch Canal runs along the opposite side of Mirrool Branch Canal Road. The landscaping strip is located 20m from the canal and the nearest solar array is 36m.	Yes

(c) Landscaping	<p>The required setback area in sub clause (a) to all boundaries is to be soft landscaped to a minimum of 90% of that part of the lot.</p> <p>Note: soft landscaping can include lawns and the like.</p> <p>All buffer areas are to be planted out using tree species and shrubs that are suitable to the area. The above information shall be incorporated in the Management Plan to be submitted to Council.</p>	<p>A 5m wide landscape buffer around the entire perimeter of the development site is proposed, consisting of a double row of planting along the outside of the security fence that will grow up to 3m high at maturity to mitigate the visual impacts of the development.</p> <p>The proposed landscaping is satisfactory and although a plan has been submitted entitled "Security Fence and Landscaping Details", it is not an adequate Landscape Plan, which has therefore been conditioned.</p>	Yes
(d) Site access	<p>Where the access connects to a gravel road, the access way and suitable tapers are to be constructed to gravel road standard, between the property boundary and the road carriageway.</p> <p>Driveways shall be a minimum of six (6) metres wide between the edge of the road carriageway and the property boundary. Internal driveways shall be a minimum of three (3) metres wide.</p>	<p>The proposed vehicle access from Hawkins will be implemented as a gravel road. The construction of this access will adhere to the standards required for gravel roads, extending from the proposed boundary to the road carriageway.</p> <p>The width of vehicle access is not shown on the plans and therefore this has been conditioned to ensure the accessway is wide enough to allow for the two-way movement of a truck and passenger vehicle.</p> <p>There is no internal access road shown on the site plans. An internal access road is required to ensure that all loading and unloading occurs on-site and that vehicles (up to a 19m semi-trailer) can leave the site in a forward direction. The requirement for an internal access road a minimum of 3m wide has been conditioned.</p>	Yes (subject to conditions)
(f)(i) Fire management – All structures where a fire threat has been Identified on	Adequate provision is to be made for the access of firefighting and emergency service vehicles.	The site is identified as Bushfire Prone Land. A Bushfire Management and Emergency Response Plan was prepared.	Yes

Council's 'Environmental and Bushfire Threat' map	<p>An adequate supply of water is to be made available for firefighting purposes. A minimum supply of twenty thousand (20 000) litres of water shall be provided solely for firefighting purposes. A suitable connection is to be made available for the purpose of the Rural Fire Service.</p> <p>Consultation required with the NSW Rural Fire Service.</p> <p>Developments shall also incorporate measures to promote bushfire protection through site selection, building design and materials and garden vegetation management.</p>	<p>Access for firefighting and emergency vehicles is provided via both Hawkins Road and an emergency access point halfway along the Mirrool Branch Canal Road boundary. A minimum 20,000 litre water tank is also proposed. Although the location of the water tank is not shown on the submitted plans, this requirement will be conditioned.</p> <p>Despite the requirement of the DCP to consult with NSW Rural Fire Service, the agency has advised council previously that it does not undertake reviews of the Bushfire and Emergency Response Plan. This generic response from the NSW Rural Fire Service is considered to meet this DCP requirement.</p> <p>Site selection, site layout and building materials have taken bushfire protection into account. A condition will be imposed to require fire-retardant local native plants be used within the landscape buffer strip.</p>	
(f)(ii) Fire management – fire access trails and firebreaks are to be sensitively sited within the landscape especially in steep terrain	Mowing and slashing is the preferred method of construction of firebreaks.	An Asset Protection Zone is proposed, extending for 10m around the immediate perimeter of the solar arrays.	Yes
<i>Griffith Development Control Plan No.20 – Off Street Parking (2011)</i>			

Electricity generating works	Comparative analysis required – council will use comparative data based on similar existing land uses within the LGA where available.	<p>Other solar farms generally provide car parking at a rate of one space per construction worker employed. This is then more than adequate to cater for ongoing operational parking requirements. Although there will be a maximum of 50 workers onsite at any one time during the construction phase (and up to 4 maintenance staff during the operational phase), a total of 15 parking spaces are proposed.</p> <p>The applicant has indicated that it's standard practice with ACEnergy projects for construction staff to carpool to and from the site. Staff will be collected from pre-arranged locations within Griffith. 15 designated car spaces are therefore considered acceptable, particularly given that there is ample room on-site to accommodate additional vehicles if required. A draft condition is included that precludes off-site parking.</p>	Yes
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The following contributions plan is relevant pursuant to section 7.12 of the EP&A Act and has been considered and included in the recommended conditions (notwithstanding Contributions Plans are not DCPs, they are required to be considered):

- *Section 94A Development Contributions Plan 2010 (Amendment 2013)*

Under this Contributions Plan, all development types are levied at the rates specified in clause C.10. For this development with an estimated cost greater than \$300,000, the levy is 1%. This is consistent with clause 209(2)(c) of the *Environmental Planning and Assessment Regulation 2021* (the EP&A Regulation) that sets a maximum percentage of the proposed cost of development that may be imposed by a development levy (for development not specified in the relevant table) at 1% for development with a proposed cost of more than \$200,000.

(d) Section 4.15(1)(a)(iiia) – 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 proposed for the site.

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

Section 61 of the 2021 EP&A Regulation contains additional matters that must be taken into consideration by a consent authority in determining a development application, although none of the matters are relevant to the proposal. It is considered the application is consistent with the objectives of the regulations.

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

Under section 4.15(1)(b) of the *Environmental Planning and Assessment Act 1979*, the likely impacts of the development on both the natural and built environments, and the social and economic impacts in the locality must be considered. Potential impacts related to the proposal that have not been considered above in response to SEPPs, LEP and DCP controls are assessed below.

Bulk, scale and character

The proposed solar farm project is located in a rural area and is predominantly surrounded by horticultural uses and broadacre cropping. To preserve the character of the area, care has been taken in the design of the solar farm with infrastructure set back from all boundaries and the new vehicle access located to avoid the need for tree removal. Extensive landscaping will screen the bulk and scale of the proposal and integrate the development with the natural environment to minimise any negative visual effects on the surroundings.

Visual Impact

Environmental Ethos Pty Ltd conducted a Glint and Glare Assessment on behalf of the applicant. Glint is defined as a momentary flash of light and glare is a continuous excessive brightness potentially caused by reflection from solar panels. Solar panels are designed to absorb rather than reflect sunlight and generally have an anti-reflective coating. The proposed use of a solar tracking system will further reduce the potential for glare. The central inverter and BESS will be comprised of non-reflective surfaces. Proposed landscape screening around the entire perimeter will block the line of sight to nearby dwellings and roads once the plants reach maturity and mitigate potential for glint and glare. The assessment determined that there is likely to be no impact during operation on residential dwellings within 3km or local roads within 1km as modelling indicated that no glare is geometrically possible. Furthermore, there are no aviation facilities within 5km or active railway infrastructure within 1km that may be impacted.

The assessment indicated that with the solar farm's tracking system operating under normal conditions, including backtracking and a resting angle of at least 5 degrees, no additional measures are required to mitigate potential glare impacts on receivers. Despite this, measures for managing and monitoring glare are required to prevent any potential impacts and have been included in the conditions of consent.

As well as reducing glint and glare, the 5m wide perimeter landscaping will further mitigate any potential visual impacts by screening the security fence and electrical infrastructure from local roads and neighbouring rural dwellings as well as integrate the solar farm into the surrounding environment. The landscaping buffer will include trees reaching a height of up to 3m which compares to a maximum height of 2.8m for the solar panels. The solar farm will be visible prior to the landscaping reaching maturity (with solar arrays set back a minimum of 19m from all property boundaries), although solar farms have become an increasingly

common feature in regional NSW due to broader community and government support for renewable energy facilitated by the Infrastructure SEPP.

Traffic, parking and access

There are two existing vehicle access points to the property along Hawkins Road, one to access a residence and the other to access the farm. The proposal includes a new vehicle access point from Hawkins Road (approximately 50m to 70m from the intersection with Mirrool Branch Canal Road) to separate traffic between the existing resident/farming use and the electricity generating works (**Figure 16**). Council's Engineer has recommended a condition that the access width facilitate the two-way movement of a 19m wide semi-trailer and passenger vehicle. A draft condition is also provided to require that the gate in the security fence is setback sufficient distance to enable adequate storage space for a 19m semi-trailer should a delivery occur when the gate is closed.



Figure 16 – Existing and proposed site access (source: Google Earth)

In terms of sight distance from the proposed access point to the intersection with Mirrool Branch Canal Road, AS/NZ 2890.1 indicates that for road frontages with a speed limit of 100km/hr, the access point should be a minimum distance of 139m. At an approximate distance of 70m from the intersection, the site access point does not meet this requirement. Council's Engineer therefore inspected the site and based on observation that sightlines to the intersection are clear (**Figure 17**) and that vehicles will likely travel at a speed of 50 to 60km due to the intersection and road conditions, it was considered that the location of the proposed accessway is satisfactory (subject to details on driveway width and an accessway plan to be submitted to council prior to the issue of a construction certificate, as well as a condition that the road reserve be maintained to provide safe sight distance). It is also noted that AS/NZ 2890.1 requires a minimum site distance of 45m for vehicles travelling at 50km/hr and 65m for vehicles travelling at 60km/hr and this is consistent with the proposed access location.



Figure 17 – Sightlines at the proposed access point on Hawkins Road facing towards Mirrool Branch Canal Road (source: Council site inspection)

A 4m wide emergency access point to Mirrool Branch Canal Road is proposed for both pedestrian and vehicular use as required by the Bushfire Management and Emergency Response Plan. A draft condition is included requiring signage indicating that this access is for emergency use only and indicating the location of the main entrance.

During the 6-month construction phase it is anticipated that 15 construction staff vehicles will access the site daily resulting in 30 light vehicle movements per day. In addition, it is anticipated that at the peak of the two-week construction delivery period, up to 4 heavy vehicles, being a 12.5m rigid truck or a 19m semi-trailer, will access the site per day, resulting in an additional 8 heavy vehicle movements per day. The recommended heavy vehicle traffic route is shown at **Figure 18**. There is a separate arrival and departure route to and from the site which forms a loop with Burley Griffin Way, in order to achieve left turn movements only at the intersection of Irrigation Way and Mirrool Branch Canal Road.

movements are staggered during the day and occur predominantly during off-peak traffic periods to avoid the potential for traffic conflicts on the local road network.

Mirrool Branch Canal Road and Hawkins Road are both unsealed and have the potential to be compromised due to heavy vehicle traffic during the construction phase. A dilapidation report should be prepared prior to and post construction to monitor the condition of the road surface. Truck turning movements from the unsealed Mirrool Branch Canal Road are likely to result in loose gravel being dragged onto Irrigation Way. The TIA therefore recommends sealing the bellmouth of the Mirrool Branch Canal Road approach to the intersection, although Council's Engineer has indicated that this is not required due to the short construction period, low volume of heavy vehicle traffic that will be generated during the construction phase and to avoid ongoing maintenance issues.

During the operational phase, the solar farm will have remote monitoring, allowing for surveillance of the operation without the need for staff permanently on site. As such it is expected that up to four staff in 2 light vehicles will attend the site every fortnight for general maintenance of the facility, as well as occasional repairs and upgrades. These low operational traffic volumes will generate minimal impact.

The TIA identifies that a total of 15 car parking spaces will be required during the 6-month construction period and 2 parking spaces will be required during the operational period of the solar farm. The site plans identify an area allocated for parking, but provides no further details of the size, number of parking spaces available or surfacing materials to be used. Conditions of consent are proposed to ensure adequate provision for off-street parking.

The Site Plan does not include provision for an internal access road that would be required to ensure that loading and unloading of vehicles occurs wholly within the site and vehicles are able to exit the site in a forward direction. An all-weather internal access road with a turning head suitable for the largest size vehicles to access the site is therefore included in the recommended conditions.

Council's Development Engineer has reviewed the proposal and raised no concerns, subject to conditions. The development does not require referral to TfNSW and no public objections were raised. Therefore, following a thorough assessment, it's considered that traffic, access and parking are satisfactory and potential impacts can be adequately managed through conditions of consent.

Noise and vibration

The potential for noise and vibration to impact adjoining properties was considered in an Acoustic Report that accompanied the application, prepared by WatsonMossGrowcott Acoustics, dated September 2023. The report identified sensitive receivers being a detached dwelling at 293 Hawkins Road (located on the subject property but outside the site area) and another dwelling at 231 Hawkins Road (100m of the site boundary), that will be impacted by noise exceedances (**Figure 19**). The report also noted a commercial use (Atkinson Tomatoes) located 1km west of the site may also be impacted by noise.



Figure 19: location of sensitive receivers (source: Acoustic Report)

Operational noise sources include inverters, a transformer and battery containers which will be located centrally within the site to maximise the distance to sensitive receivers. 180 to 190 solar tracker motors, one for each row of solar panels, will also generate noise. Solar trackers only operate during daylight hours to orient the panels toward the sun. The acoustic report found that the proposed development will comply with the EPA's *Noise Policy for Industry* during the operational phase.

In terms of traffic noise during operation, there will be no permanent staff based on site and therefore no regular traffic movements. Operational traffic noise, given its infrequency (fortnightly maintenance visits), will therefore be negligible. Noise generated by construction phase traffic movements was assessed to fall below the criteria within the *Road Noise Policy 2011* (NSW Department of Environment and Conservation) for residential uses on local roads.

Noise generated during the proposed six (6) month construction phase is anticipated to exceed the relevant criterion in the EPA's *Interim Construction Noise Guideline* (ICNG) at 293 Hawkins Road, during most phases of construction. The Acoustic Report recommended that a Construction Management Plan (CMP) be prepared that includes mitigation measures aimed at reducing noise impacts arising from work practices, plant and equipment, use of powered hand tools, impact piling works, concrete truck pouring, use of a water cart, reversing and warning alarms. Maintaining community relations with impacted residents will need to be an important part of the CMP.

Construction noise impacts, including access road construction, are considered to be significant, although:

- only two residential receptors (one is located on the subject property) will be impacted by noise exceedances,
- no public submissions were made in objection to the proposal,
- noise generating works will predominantly occur during the first four months of the six-month construction period, and
- construction will only occur during the day.

Therefore, the proposal development is considered acceptable subject to a Construction Noise and Vibration Management Plan that ensures noise management levels within the relevant guideline are not exceeded except to the satisfaction of Council. This will ensure that all reasonable and feasible noise mitigation measures are implemented.

Vibrating equipment will be used during construction including an impact piling rig. As there will be a minimum separation distance of 150m between locations where piling is likely to occur and the sensitive receptors, this complies with the TfNSW Construction Noise Strategy which sets a minimum distance of 50m for human comfort and 15m to avoid building cosmetic damage. Therefore, vibration is unlikely to have a significant impact on the adjoining dwelling and its occupants.

Dust

Dust will occur during the construction and decommissioning phases resulting from earthworks, excavation and vehicle movements. Temporary air quality impacts can be effectively managed using a consent condition requiring identification and implementation of mitigation measures within an approved CMP.

Electro-Magnetic Fields (EMF)

The BESS and transmission equipment are EMF generating sources. Exposure to EMF can be harmful to human health. The International Commission on Non-Ionizing Radiation Protection prolonged exposure guideline indicates an exposure limit of 2,000 milligauss in a 24-hour period. Given typical EMF levels generated by the transmission equipment and a distance of approximately 330m from the nearest dwelling to the BESS, the Statement of Environmental Effects indicates that the potential for EMF to exceed the exposure limit is negligible.

Bushfire

The site is mapped as bushfire prone land, part category 3 and part vegetation buffer (**Figure 20**) as it may be used for cropping, which has the potential to cure and sustain a fire. In the case of the proposed development, vegetation in the adjoining road reserves is a potential source of fuel, although the predominant natural risk to the development is from grassland fires impacting the site or spreading from the site. It's proposed to use sheep grazing between the solar panels during the operational phase as a method of managing grass fuel loads. The proposed Battery Energy Storage System (BESS) is also a potential fire hazard, however conditions are recommended to mitigate this risk.

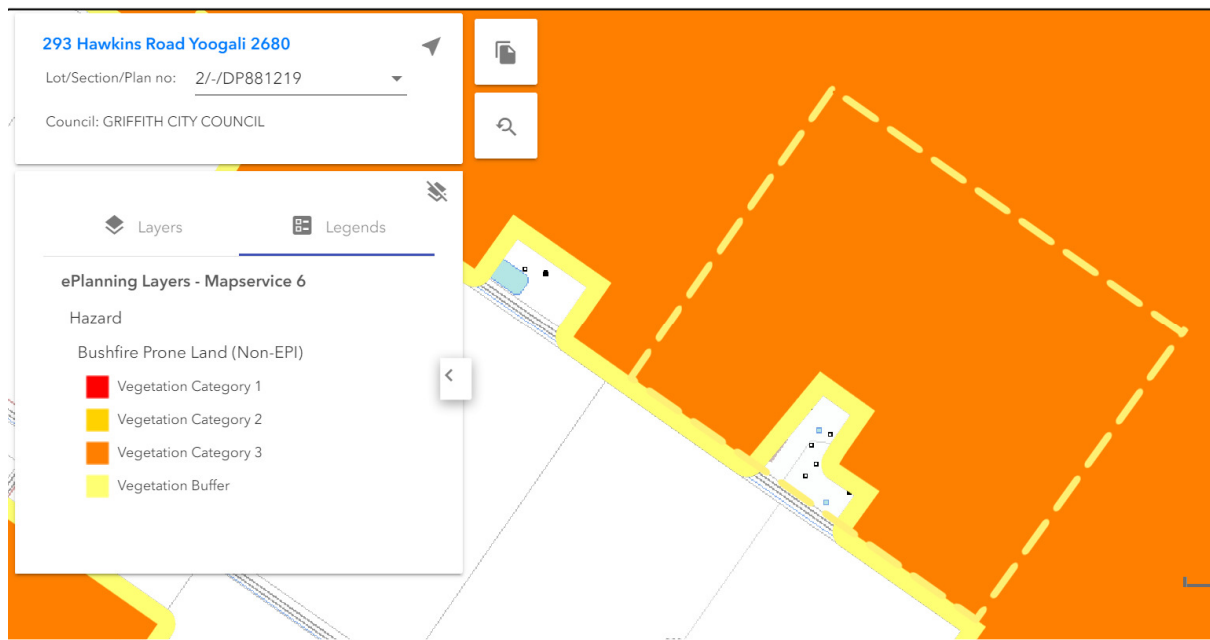


Figure 20 - Bushfire Prone Land (source: NSW Spatial Viewer)

A Bushfire Risk Management and Emergency Response Plan identified the main bushfire risk to be to solar farm infrastructure, rather than to life or the environment. The flammability of the solar farm is considered to be low as the components are predominantly constructed of glass, silicon, steel and aluminium. The Plan recommends a Fuel Free Zone (FFZ) of up to 5m surrounding the central inverter and BESS as well as a 10m Asset Protection Zone (APZ) extending around the perimeter of the solar arrays. The Site Plan at **Figure 21** shows that the solar arrays are located at between 10m and 13m from the security fence and therefore the site layout achieves the APZ requirements.

To address potential risk to site workers and assets, an emergency access point will be located centrally along the Mirrool Branch Canal Road frontage. This access point will be 4m wide to enable a secondary access point for emergency vehicles and pedestrians.

The construction phase also requires some consideration in relation to potential bushfire management with the movement of machinery, use of welders and grinders and the like, storage of flammable liquids, etc. These matters will need to be identified and managed on site with appropriate measures identified in the CMP.

It is considered that the proposed mitigation measures for fire hazard from bushfires, construction activities or failures in the BESS, including grazing to reduce fuel loads, providing and maintaining an APZ and FFZ, provision of a 20,000ltr water tank and a secondary emergency access point, are adequate.

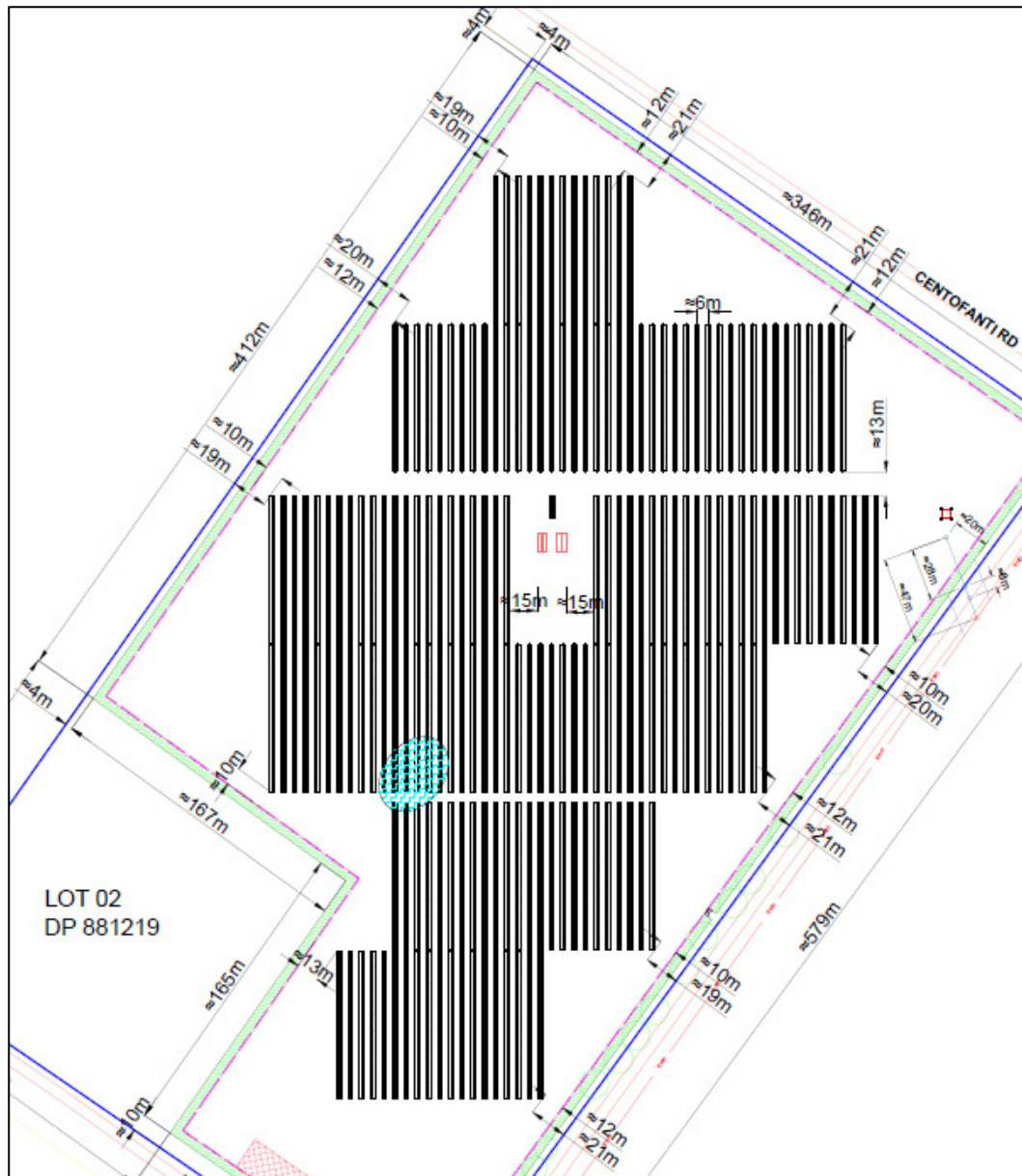


Figure 21 – Setbacks from the solar arrays to the security fence allow for a 10m APZ.

Waste

The project will generate most waste during the construction and decommissioning phases with waste only anticipated during operation if the replacement of infrastructure is required. Construction waste generated will likely consist of packaging and building materials, scrap metal, excess soil (from hole boring for footings, fencing and electrical poles), plastic and masonry products as well as minor exotic vegetation clearing.

To comply with NSW legislation and polices, waste will need to be removed from the site and recycled or re-used where possible and only disposed of if no alternative is available. This is addressed in the recommended conditions via a Waste Management Plan to be approved by Council.

Decommissioning

The useful life of the solar farm infrastructure is estimated at 31 years from commencement of construction. After this time, the site is to be decommissioned to return the land to its former state, ensuring its suitability for agricultural purposes. Decommissioning would include disconnection from the Essential Energy substation, removal of all solar panels, the inverter, kiosk, BESS, security fencing and any other infrastructure or structures relating to the proposed development. Decommissioning needs to also include removal of all underground infrastructure and works, including cabling and footings as well as rehabilitation of access tracks, and site works to refill and laser level the site. To address this issue, a draft condition is included requiring implementation of a Decommissioning Plan to be prepared and submitted to Council for approval at least 12 months prior to the end of the life of the facility. This condition will be associated with a s.88B Positive Covenant for registration on the title of Lot 2 DP881219. The Decommissioning Plan is to include waste management measures to maximise the recycling or reuse of waste materials and to ensure the BESS is disposed of safely without contaminating the site.

Social Impact

The proposed development is unlikely to pose any significant social impact in the locality. The proposal is to support the electricity needs of homes and businesses within the Griffith Local Government Area.

Economic impact

The project will introduce an additional renewable energy source, providing sustainable power to support the energy requirements of Griffith. The project will also reduce dependence on electricity imports from distant power plants, thereby enhancing the energy self-sufficiency and resilience of the area.

The project brings direct economic benefits to the area through the creation of employment opportunities. Up to 50 jobs are estimated to be generated during the six-month construction phase, with approximately four ongoing maintenance jobs during the 31-year operation phase and approximately 15 jobs during the decommissioning phase. Maintenance staff will undertake fortnightly visits to check infrastructure, undertake repairs and occasional upgrades, wash down panels and maintain landscaping. This not only supports local employment but also contributes to the growth of the local economy.

Given the above factors, the proposed development will generate positive economic impacts.

Cumulative impact

There is an existing solar farm approximately 1.4km to the north, known as Griffith Solar Farm (**Figure 22**), that was approved as a State significant development. It is a 36 MW solar farm with 112,320 solar panels on a 210-hectare site that connects to Transgrid Yoogali substation. Approval has also been given for the Riverina Solar Farm in 2016, which is located adjacent to the Griffith Solar Farm (Figure X), although on-site construction has not yet commenced.

The main potential for cumulative impact arises from heavy vehicle traffic movements, should the construction phase of the subject development overlap with the construction of the Riverina Solar Farm. The EIS and Traffic Management Plan for the Riverina Solar Farm indicates that materials are expected to arrive via container rail to Griffith and then be transferred to the site in heavy vehicles. Otherwise, heavy vehicles arriving from either Sydney or Melbourne will similarly access the site via Burley Griffin Way and Ross Road. Whereas heavy vehicle traffic for the subject proposal will arrive via Burley Griffin Way and then

Irrigation Way, Mirrool Branch Canal Road and then Hawkins Road. Therefore, as traffic separation between these projects will occur once the vehicles enter the local road network, cumulative traffic impacts in the locality are minimised.

The project's design, location, relatively small scale for an energy facility, limited lifespan and eventual decommissioning reduce the potential for cumulative impacts. The Glint and Glare Assessment indicated that as the existing solar farm 1.3km to the NE of the site is to the north of the proposed development, it is unlikely that potential glare could result in cumulative impacts.

Accordingly, it is considered that the proposal will not result in any significant adverse cumulative impacts in the locality.



Figure 22 – Approved solar farms to the north of Irrigation Way (Riverina Solar Farm – shown in red and Griffith Solar Farm shown in blue) (source: Riverina Solar EIS)

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

The subject site is considered suitable for the proposed development, subject to the recommended conditions, for the following reasons:

- with regard to potential hazards, the site is not flood affected or known to be contaminated and mitigation measures have been conditioned to adequately address bushfire risk
- the site is not higher value agricultural land, and the proposed development will incorporate the continued use of the land for sheep grazing
- the site is already cleared, and the development will have no significant adverse effects on flora or fauna
- the proposal incorporates significant landscaping using native vegetation planting around the perimeter of the facility as a mitigation measure to reduce visual impact on the surrounding area

- the site is located a considerable distance from non-related sensitive receivers and as such impacts from the development are expected to be adequately managed with minimal impacts on adjoining properties during the construction phase, and
- given the passive nature of the proposal, as well as its limited life and eventual decommissioning, it is unlikely that there will be significant long-term adverse impacts.

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

There were no public submissions received.

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

It is considered that the public interest is best served by the application of the requirements of the relevant legislation, environmental planning instruments and development control plan to ensure that any adverse effects on the surrounding area and the environment are avoided. On the basis of a thorough review and analysis of the proposed development, it has been determined that the proposal is generally consistent with the relevant planning controls that apply to land use and development in the Griffith region. In light of this comprehensive assessment, it is concluded that the proposed development is unlikely to give rise to any significant adverse impacts that are contrary to the public interest, subject to the recommended conditions of consent to adequately mitigate potential impacts.

Furthermore, the proposal will provide positive public benefits including:

- providing renewable energy to the State grid, which will reduce reliance on existing fossil fuel fired power stations, consistent with the principles of ecologically sustainable development and mitigating climate change in the wider public interest; and
- employment opportunities for the local community during the construction, operation and decommissioning phases.

In view of the above, on balance, it is considered that the proposal is consistent with the local and wider public interest.

4. REFERRALS AND SUBMISSIONS

4.1 Agency Referrals and Concurrence

The development application has been referred to Essential Energy as required by SEPP (Transport and Infrastructure) 2021 and outlined below in **Table 5**. There are no outstanding issues arising from the referral requirements.

Table 4: Concurrence and Referrals to agencies

Agency	Concurrence/ referral trigger	Comments (Issue, resolution, conditions)	Resolved
Concurrence Requirements (s4.13 of EP&A Act)			
			N/A

Referral/Consultation Agencies			
Essential Energy	Section 2.48 – <i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i> . Development near electrical infrastructure	No objections raised by Essential Energy, only general comments regarding safety. These comments are included as advice in the recommended conditions.	Yes
Transport for NSW	Section 2.121 – <i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i> . Development that is deemed to be traffic generating development in Schedule 3.	The proposal is not deemed “traffic generating development and was not referred to TfNSW.	N/A
Integrated Development (S 4.46 of the EP&A Act)			
		The applicant has not nominated the proposal as integrated development.	N/A

4.2 Council Officer Referrals

The development application has been referred to Council’s Development Engineer for technical review as outlined **Table 6**.

Table 5: Consideration of Council Referrals

Officer	Comments	Resolved
Development and Traffic Engineer	<p>Council’s Development and Traffic Engineer reviewed the following aspects of the proposal and raised no objections subject to conditions (Attachment B):</p> <ul style="list-style-type: none"> • Earthworks • Flood planning • Essential services and non-essential utilities • Traffic, access and parking <p>Note: Some recommended conditions in Attachment B have since been amended in consultation with the Development and Traffic Engineer.</p>	Yes

4.3 Community Consultation

The proposal was notified in accordance with Council’s Community Participation Plan, from 13 October 2023 to 27 October 2023.

Notification included the following:

- notification letters were sent to six owners of land within proximity of the site.
- printed and electronic copies of council’s weekly publication “Council Catchup”. Printed copies of “Council Catchup” are available in some supermarkets, the library,

- the council office, council facilities and the like.
- council's website and Facebook page

At the conclusion of the notification period, no submissions were received by council.

5. CONCLUSION

The development application has been considered in accordance with the requirements of the EP&A Act and the associated Regulations as outlined in this report. Following a thorough assessment, the proposal is considered to be generally consistent with the relevant planning objectives and controls. The proposed development is unlikely to have any unreasonable impact on the environment or the locality and no public submissions or agency objections were received. The key issues of construction noise, construction traffic, visual impact, protection of Weeping Myall in proximity to the site entrance, bushfire risk and decommissioning have been resolved satisfactorily through amendments to the proposal and/or in the recommended draft conditions at **Attachment A**. The proposal is suitable for the site, compatible with the locality and is considered to be in the public interest. Given the above factors, it is considered that the application can be supported.

6. RECOMMENDATION

That the Development Application (DA No. 189/2023) for an electricity generating works (solar farm) and battery energy storage system at 293 Hawkins Road, Yoogali be APPROVED pursuant to Section 4.16(1)(a) of the *Environmental Planning and Assessment Act 1979* subject to the draft conditions of consent attached to this report at Attachment A.

7. ATTACHMENTS

The following attachments are provided:

- **Attachment A:** Draft Conditions of Consent
- **Attachment B:** Council internal referral response - Development and Traffic Engineer