

COUNCIL ASSESSMENT REPORT

WESTERN REGIONAL PLANNING PANEL

PANEL REFERENCE & DA NUMBER	PPSWES-123 – DA0170/2022
PROPOSAL	5MW Electricity Generating Works and Associated Infrastructure
ADDRESS	Lot 286 DP756894, Lot 90 and 91 DP756897 33 Blain Road, CAERLEON
APPLICANT	Simon Jones C/-Mid-Western Regional Council
OWNER	Mid-Western Regional Council
DA LODGEMENT DATE	11 November 2021
APPLICATION TYPE	Development Application
REGIONALLY SIGNIFICANT CRITERIA	Clause 3, Schedule 6 of <i>State Environmental Planning Policy (Planning Systems) 2021</i> : <i>Council development with a capital investment value exceeding \$5,000,000.</i>
CIV	\$6,810,900 (excluding GST)
CLAUSE 4.6 REQUESTS	Not applicable
KEY SEPP/LEP	<ul style="list-style-type: none"> • State Environmental Planning Policy (Biodiversity and Conservation) 2021 • State Environmental Planning Policy (Planning Systems) 2021 • State Environmental Planning Policy (Resilience and Hazards) 2021 • State Environmental Planning Policy (Transport and Infrastructure) 2021 • Mid Western Regional Local Environmental Plan 2012
TOTAL & UNIQUE SUBMISSIONS ISSUES KEY IN SUBMISSIONS	One (1) submission of objection
DOCUMENTS SUBMITTED FOR CONSIDERATION	Statement of Environmental Effects Traffic Assessment Site Plans Noise and Vibration assessment Geotechnical Investigation

	Biodiversity Development Assessment Report Land Use Conflict Risk Assessment Stormwater Management Plan Visual Plan Cost Estimate Cultural Heritage Statement Landscape Plan Land and Water Management Plan Submission
RECOMMENDATION	Approval
DRAFT CONDITIONS TO APPLICANT	YES
SCHEDULED MEETING DATE	14 June 2022
PLAN VERSION	14 February 2022 Version No 6
PREPARED BY	Kayla Robson
DATE OF REPORT	27 May 2022

EXECUTIVE SUMMARY

The development application (DA0170/2022) seeks consent for a 5MW electricity generating works (solar farm) with associated infrastructure (the proposal) immediately adjacent to the Mudgee sewerage treatment plant.

The subject land comprises of three (3) allotments, legally identified as Lot 289 DP756894 and Lots 91 and 91 DP756897, commonly known as 33 Blain Road, Caerleon ('the site'). Access to the site is only available via the Mudgee waste facility and sewerage treatment plant, which are owned and operated by Council. The Sewerage Treatment Plant also occupies a portion of the development site (Lot 90 DP756897). The site is 4 kilometres west of the Mudgee CBD, 1 kilometre south of Hill End Road and 1.6 kilometres west of the Castlereagh Highway.

The site has a total area of 34.25 hectares and contains a portion of dense vegetation along the western boundary, with the residue of the site being vacant grassland.

The site is located in the RU1 – Primary Production zone pursuant to Clause 2.2 of the *Mid Western Regional Local Environmental Plan 2012* ('LEP 2012'). An electricity generating works is permitted with consent in the RU1 zone, along with the Section 2.36 of the State Environmental Planning Policy (Transport and Infrastructure) 2021.

There were no concurrence requirements from agencies for the proposal however, the application was submitted as integrated development under the *Water Management Act 2000* pursuant to Section 4.46 of the *Environmental Planning and Assessment Act 1979* ('EP&A Act'). Referral to Essential Energy and Transgrid were undertaken pursuant to *State Environmental Planning Policy (Transport and Infrastructure 2021* ('Transport and Infrastructure SEPP') and following lodgement of additional information to address the requirements of Transgrid, conditions have been provided.

Jurisdictional prerequisites to the grant of consent imposed by the following controls have been satisfied including:

- Section 4.6 of the Transport and Infrastructure SEPP for consideration of whether the land is contaminated;
- Section 2.48(2) of the Transport and Infrastructure SEPP in relation to electricity distribution pole.

The proposal was notified in accordance with the Council's Community Participation Plan from 26 November 2021 until 17 January 2022

The application was placed on public exhibition from 26 November 2021 to 17 January 2022, accommodating the Christmas period, with one (1) submission received. The submission raised issues relating to impacts on scenic views, glare, noise and dust, landscaping effectiveness, consultation regarding 'alternate access road' via the Estate, sediment and erosion control measures and stormwater management and detention basin details. These issues are considered further in this report.

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 3 of Schedule 6 of *State Environmental Planning Policy (Planning Systems) 2021* as the proposal is a Council owned development with a CIV over \$5 million.

A briefing was held with the Panel on 8 March 2022 where key matters were discussed, including an overview of the proposal, existing use of the site, access, surrounding land uses, mapped constraints, submission concerns, landscaping details, referral to Transgrid, consideration of Caerleon future development and zone boundary interfaces.

The key issues associated with the proposal included:

1. *Access during construction and conflicts with waste facility*
2. *Visual and glare impact mitigation measures*
3. *Landscaping details*
4. *Impacts to Transgrid easement*
5. *DCP compliance with Part 6.5 Solar Energy Farms (side setback requirement)*

Following a detailed assessment of the proposal under Section 4.15(1) of the EP&A Act and, pursuant to Section 4.16(1)(a) of the *EP&A Act*, DA0170/2022 is recommended for approval subject to the conditions contained at **Attachment A** of this report.

1. THE SITE AND LOCALITY

1.1 The Site

The subject land comprises of three (3) allotments, legally identified as Lot 289 DP756894 and Lots 91 and 91 DP756897 ('the site').

The subject site is located to the south of the Mudgee Waste and Recycling Facility and the Sewerage Treatment Plant (which also occupies a portion of Lot 90 DP756897), found 4 kilometres west of the Mudgee CBD, 1 kilometre south of Hill End Road and 1.6 kilometres west of the Castlereagh Highway.

The development site has a total area of 34.25 hectares and contains a portion of dense vegetation along the western boundary, with the residue of the site being vacant grassland and few paddock trees. Two dams are located within the site.

The land is undulating from a natural ground level of 520mAHD in the north western corner of the site (where the proposed access road is to be extended from the waste facility), to 500mAHD in the south eastern corner of the site, abutting Lot 535 DP1272615, which is known as 'Caerleon Estate' – a residential estate that has partly been developed from Hill End Road.

The subject land is identified in Figure 1 below and is affected by the following mapped site constraints:

1. Bushfire Prone Land
2. Groundwater Vulnerability
3. High Sensitive Biodiversity
4. Visually Sensitive Land
5. Mudgee Airspace Operations (OLS)



Figure 1 – Site location Plan

1.2 The Locality

The surrounding land is characterised by the following key features:

1. To the north is the Mudgee Sewerage Treatment Plant, Mudgee Waste and Recycling Facility, and currently under construction is a new Industrial Estate on the opposite side of Hill End Road.
2. To the east is 'Caerleon Estate' which to date has an approved 'Neighbourhood One' precinct accessed from Hill End Road (comprising approximately 260 residential lots) with up to 1,400 lots (including a mix of residential, large lot residential, and a neighbourhood centre) proposed.
3. To the south is vacant rural grass land and dense vegetation following the south-western boundary.
4. To the west is dense vegetation which covers part of the steeper hilltops forming the 'backdrop' of Mudgee and extends to the Avisford Nature Reserve to the south of the site.

Refer to the site locality plan in Figure 2, below.

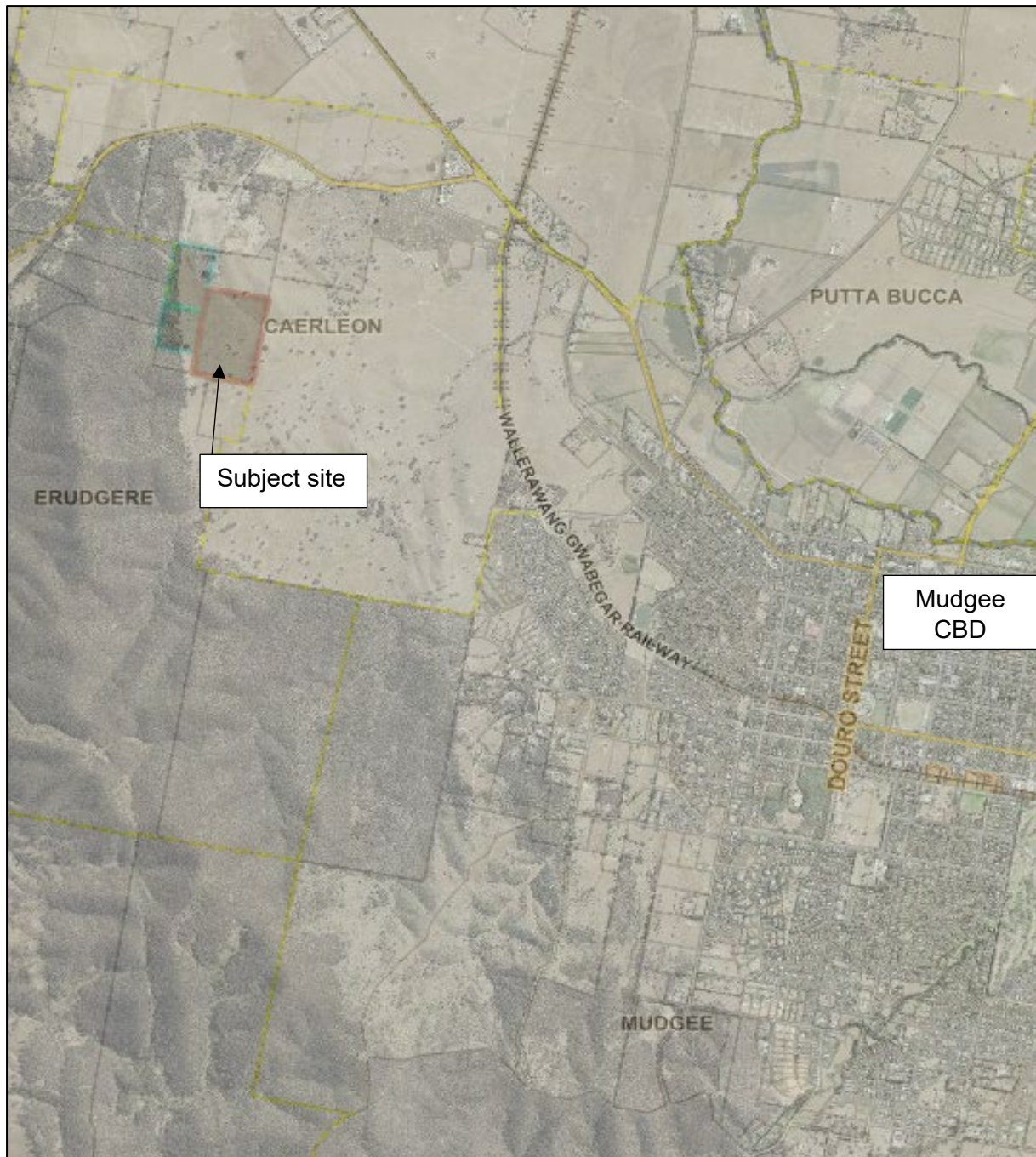


Figure 2 – Site locality Plan

2. THE PROPOSAL AND BACKGROUND

2.1 The Proposal

The proposal seeks consent for an electricity generating works (solar farm) of up to 5MW.

Specifically, the proposal involves:

- Filling of a small existing water storage / farm dam located within Lot 289,

- Construction of a new access road from the waste facility and sewer treatment plant to a temporary parking/laydown area with construction office and storage container at the northern portion of the site.
- Construction of a 5MW grid connected solar farm with future battery storage, inverter station and approximately 9,408 solar PV panels on a single axis tracking system installed on steel driven posts,
- Construction of a stormwater detention basin and regrading/levelling of the site,
- Construction of a 2 metre high security fence with barbed wire top around the development footprint,
- Landscaping of the eastern and southern boundaries of the site on the outside of the security fencing,
- CCTV and motion activated security lighting may be installed at gateways.

Limited mature vegetation and native grasses are to be cleared to support the proposal. Up to 25 workers are proposed during the construction phase and up to 10 workers are required for maintenance inspections, 4 – 12 times yearly. No permanent staff facilities are proposed on the subject land.

Further, as the development is proposed to be developed and operated by Council, it is expected that existing Council staff will also be involved in the construction and operation of the facility.

The key development data is provided in **Table 1** and **Figure 3** provides the proposed site layout.

Table 1: Development Data

Control	Proposal
Site area	34.25 ha (solar farm footprint of approximately 8.6 ha)
GFA	Not applicable
FSR (retail/residential)	Not applicable
Clause 4.6 Requests	Not applicable
No of apartments	Not applicable
Max Height	2.8 metres
Landscaped area	Southern and eastern boundaries of the site
Car Parking spaces	Informal parking area for construction proposed
Setbacks	<ul style="list-style-type: none"> • 10 metres from solar panels to security fencing • Minimum of 20.3 metres from security fencing to eastern boundary

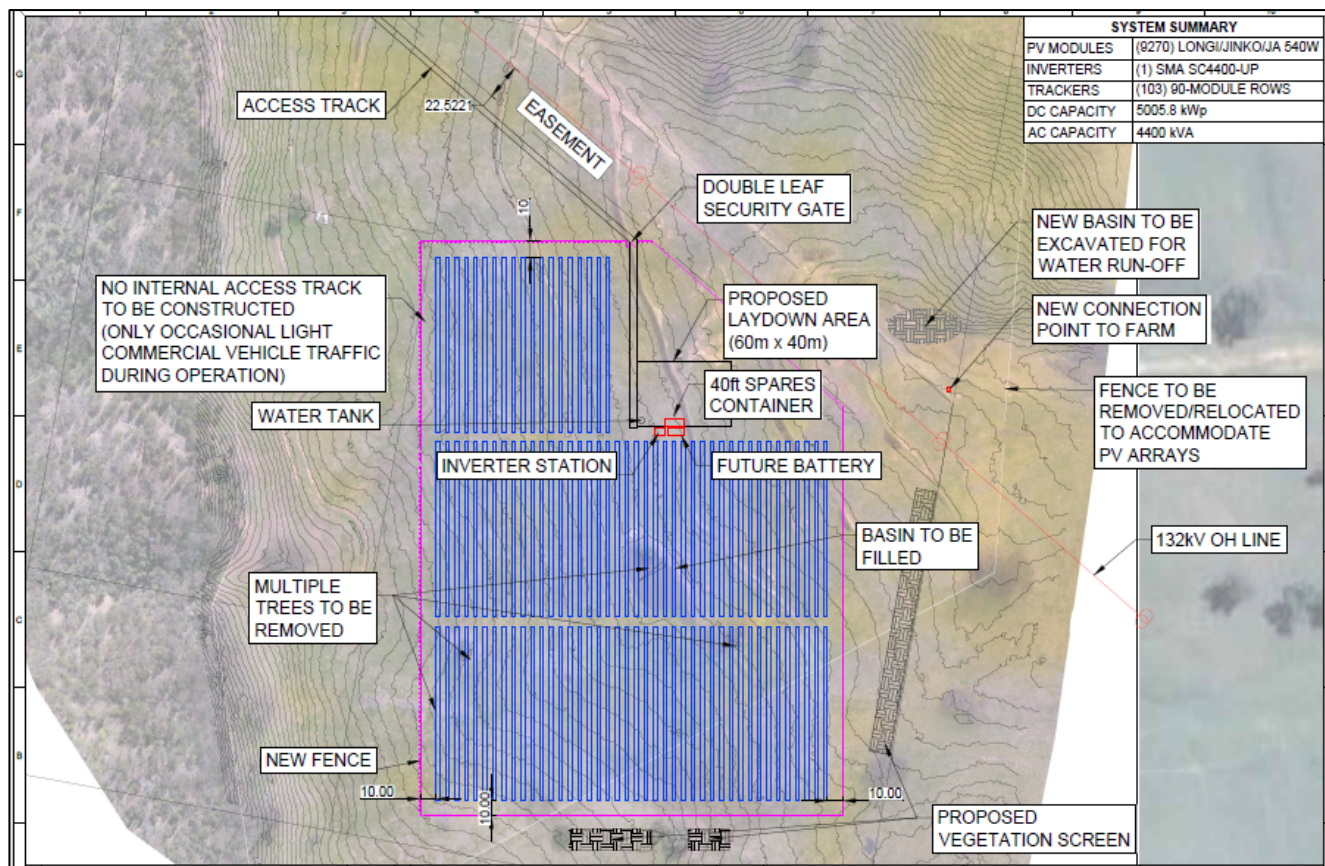


Figure 3 – Proposed Site Layout

2.2 Background

The development application was lodged on 11 November 2021. A chronology of the development application since lodgement is outlined in **Table 2**.

Table 2: Chronology of the DA

Date	Event
11 November 2021	Application lodged
16 November 2021	Referral to Western Regional Planning Panel
25 November 2021	Further information request to applicant regarding: <ul style="list-style-type: none"> - Proposed access road over land in separate ownership – no consent provided or traffic impacts assessed. - Landscape plan details of the 'vegetation screen by others'. - Plan details / updated storm water management plan with depths and grading. - Confirmation on impacts to existing EPL covering the site for the sewerage treatment plan and any amendments to the EPL required.
26 November 2021 to 17 January 2022	Exhibition and advertising of the application for 28 days as 'Integrated Development' and excluding the Christmas period.
29 November 2021	DA referred to external agencies: <ul style="list-style-type: none"> - Essential Energy - NRAR

	<ul style="list-style-type: none"> - Transgrid - NSW RFS
6 December 2021	Essential Energy response received – advisory comments provided.
21 December 2022	Further additional information request from Council's Development Engineer regarding access road and traffic conflicts with Waste Facility / Sewer treatment plant.
24 December 2021	NSW RFS response received – conditions recommended. Conditions provided to applicant.
28 January 2022	Transgrid response received and <u>objection</u> to application.
28 January 2022	Amended details provided to address Development Engineering concerns.
1 February 2022	NRAR response received – CAA not required.
15 February 2022	Amended plans lodged by applicant and accepted to address Transgrid objection. Amended plans and information referred back to Transgrid to resolve objection.
28 February 2022	Further details provided on Landscaping management.
1 March 2022	Health and Building internal referral response received – no objections and conditions provided.
8 March 2022	Panel briefing. Request for greater detail on landscaping. Request for information made to applicant on an improved landscaping plan.
11 March 2022	Development Engineering internal referral response received – no objections and conditions provided.
13 April 2022	Final landscape plan provided by applicant.
4 May 2022	Final Transgrid approval provided with conditions. Conditions also provided to applicant and confirmed acceptable.

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 should be noted that the application was submitted as Integrated Development pursuant to Section 4.6 of the EP&A Act however, upon referral to NRAR in accordance with the Water Management Act 2000, it was determined that no Controlled Activity Approval is required.

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

The following Environmental Planning Instruments are relevant to this application:

- *State Environmental Planning Policy (Biodiversity and Conservation) 2021*
- *State Environmental Planning Policy (Planning Systems) 2021*
- *State Environmental Planning Policy (Resilience and Hazards) 2021*
- *State Environmental Planning Policy (Transport and Infrastructure) 2021*
- *Mid Western Regional Local Environmental Plan 2012*

A summary of the key matters for consideration arising from these State Environmental Planning Policies are outlined in **Table 3** and considered in more detail below.

Table 3: Summary of Applicable Environmental Planning Instruments

EPI	Matters for Consideration	Comply (Y/N)
State Environmental Planning Policy (Biodiversity & Conservation) 2021	Chapter 3: Koala Habitat Protection 2020 Chapter 4: Koala Habitat Protection 2021 There is no koala plan of management applying to the land and the land is not identified as core koala habitat. No impact is identified on koalas or koala habitat.	Y
State Environmental Planning Policy (Planning Systems) 2021	Chapter 2: State and Regional Development • Section 2.19(1) declares the proposal regionally significant development pursuant to Clause 3 of Schedule 6 as it comprises Council related development over \$5 Million.	Y
SEPP (Resilience & Hazards)	Chapter 4: Remediation of Land	Y

	<ul style="list-style-type: none"> • Section 4.6 - Contamination and remediation has been considered in the assessment and review of the history of the site. The proposal is satisfactory subject to conditions. 	
State Environmental Planning Policy (Transport and Infrastructure) 2021	Chapter 2: Infrastructure <ul style="list-style-type: none"> • Section 2.48(2) (Determination of development applications—other development) – electricity transmission. The application has been referred to Essential Energy and Transgrid. Essential Energy have provided advisory conditions however Transgrid originally objected to the development design and impacts on their easement / infrastructure. Amended plans and information have been provided to Transgrid which has resolved this objection. The proposal is satisfactory subject to conditions. 	Y
LEP	Section 2.3 – Permissibility and zone objectives Section 6.3 – Earthworks Section 6.4 - Groundwater vulnerability Section 6.5 – Terrestrial biodiversity Section 6.8 - Airspace operations Section 6.9 – Essential Services Section 6.10 – Visually Sensitive land near Mudgee	Y

Consideration of the relevant SEPPs is outlined below.

State Environmental Planning Policy (Biodiversity and Conservation) 2021

The development site is greater than 1 hectare and Mid-Western Regional Council is listed within Schedule 2 of the SEPP. The subject land is not identified as potential or core koala habitat and no plan of management exists for the area.

The proposed development will not require removal of any significant vegetation or koala habitat under this Policy. Therefore, no further consideration of this SEPP is considered necessary.

State Environmental Planning Policy (Planning Systems) 2021 ('Planning Systems SEPP')

Chapter 2: State and Regional Development

The proposal is *regionally significant development* pursuant to Section 2.19(1) as it satisfies the criteria in Clause 3 of Schedule 6 of the Planning Systems SEPP as the proposal is a Council development valued over \$5 Million. Accordingly, the Western Regional Planning Panel is the consent authority for the application. The proposal is consistent with this Policy.

State Environmental Planning Policy (Resilience and Hazards) 2021

Chapter 4: Remediation of Land

The provisions of Chapter 4 of *State Environmental Planning Policy (Resilience and Hazards) 2021 ('the Resilience and Hazards SEPP')* have been considered in the assessment of the development application. Section 4.6 of Resilience and Hazards 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.

The subject site has been retained as vacant rural land for a significant period of time, providing a buffer to adjacent land as part of the Council operated sewerage treatment ponds. The subject land has also never been subject to waste disposal or associated with the immediately adjoining waste facility.

On the basis of all available Council records and aerial imagery, the subject site is not considered to be contaminated land and is therefore suitable for the proposed development.

State Environmental Planning Policy (Transport and Infrastructure) 2021

Chapter 2: Infrastructure

Division 4 Electricity Generating works or solar energy systems

The provisions of Chapter 2, Division 4 relates to the permissibility and determination considerations of solar farms in NSW. In accordance with Section 2.36 (1)(b) the development of electricity generating works is permitted with consent in a prescribed rural zone.

In accordance with Section 2.38, whilst the development is proposed adjacent to existing public infrastructure (sewerage treatment plant), it is also proposed to connect into the electricity grid and therefore development consent is required.

Further, as Mudgee is not identified on the 'Regional Cities Map', the provisions of Section 2.42 do not apply.

Division 5 Electricity transmission or distribution

The provisions of Chapter 2, Section 2.48(2) - (Determination of development applications—other development) relates to works adjacent to electricity transmission lines. The proposed development was referred to Essential Energy and Transgrid with comments and conditions provided. The proposal is satisfactory subject to those conditions.

Mid Western Regional Local Environmental Plan 2012

The relevant local environmental plan applying to the site is the *Mid Western Regional Local Environmental Plan 2012* ('the LEP'). The aims of the LEP relevant to the proposal include:

- (b) *to encourage the proper management, development and conservation of resources within Mid-Western Regional by protecting, enhancing and conserving—*
 - (i) *land of significance to agricultural production, and*
 - (ii) *soil, water, minerals and other natural resources, and*
 - (iii) *native plants and animals, and*
 - (iv) *places and buildings of heritage significance, and*
 - (v) *scenic values,*

The proposal is considered to remain consistent with the relevant aims of the LEP as the proposal has been appropriately sited to minimise impacts on significant agricultural land found elsewhere in the Region and established, and future residential areas nearby. Site selection has allowed for the protection of high biodiversity values, flora and fauna and scenic locations also found in nearby locations. The topography of the site allows the development to

be predominately obscured from adjoining lands and enables proper and orderly use of the land that is otherwise constrained by buffers of the waste facility and sewer treatment plant.

Zoning and Permissibility (Part 2)

The site is located within the RU1 Primary Production Zone pursuant to Clause 2.2 of the LEP. A copy of the zoning map is provided in Figure 4 below.

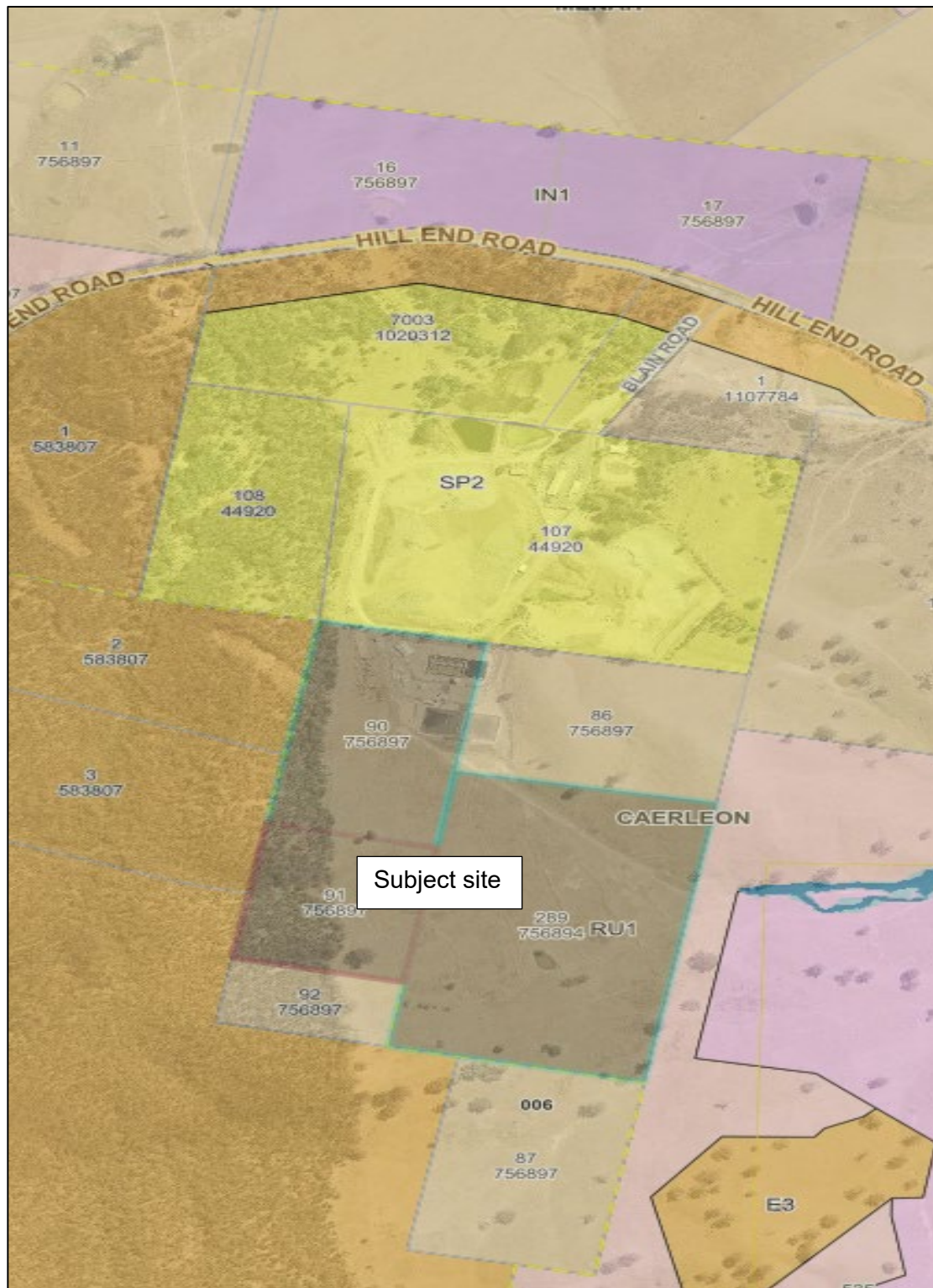


Figure 4 – MWRLEP 2012 Zoning Map

According to the definitions in Clause 4 (contained in the Dictionary), the proposal satisfies the definition of ‘electricity generating works’ which is a permissible use with consent in the zone and is also permitted in accordance with Section 2.36 of *State Environmental Planning Policy (Transport and Infrastructure) 2021* as the RU1 zone is a prescribed rural zone.

The zone objectives include the following (pursuant to the Land Use Table in Clause 2.3):

- *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 maintain the visual amenity and landscape quality of Mid-Western Regional by preserving the area’s open rural landscapes and environmental and cultural heritage values.*
- *To promote the unique rural character of Mid-Western Regional and facilitate a variety of tourist land uses.*

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

- The development minimises the fragmentation and alienation of resource lands due to the location and topography of the subject site.
- The development does not generate conflict between land uses within the zone or on the subject site, due to established infrastructure found on the site. Appropriate setbacks with landscaping has been proposed on the southern and eastern boundaries to ensure future development of the Caerleon Estate is able to continue in an appropriate manner.
- The proposal will maintain visual amenity and landscape qualities of the region due to good site selection, suitable arrangement of the panels, landscaping and associated infrastructure that will be obscured from public and private viewpoints.

General Controls and Development Standards (Part 2, 4, 5 and 6)

The LEP also contains controls relating to development standards, miscellaneous provisions and local provisions. The controls relevant to the proposal are considered in **Table 4** below.

Table 4: Consideration of the LEP Controls

Control	Requirement	Proposal	Comply
Section 2.3 – Permissibility and zone objectives	<i>The development is permitted or prohibited on the land and considerations is given to the objectives of the zone.</i>	The development is permitted with consent in the zone and remains consistent with the relevant objectives of the zone.	YES
Section 6.1 Salinity	<i>Provide for the appropriate management of land that is subject to salinity and the minimisation and mitigation of adverse</i>	The development has been designed to predominately avoid known saline areas of the site (which follow natural drainage lines) and has mitigated	YES

	<i>impacts from development that contributes to salinity</i>	impacts to groundwater salinity accordingly.	
Section 6.3 – Earthworks	<i>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.</i>	No significant impacts identified. The proposal is satisfactory subject to conditions.	YES
Section 6.4 - Groundwater vulnerability	<i>Maintain the hydrological functions of key groundwater systems and Protect vulnerable groundwater resources from depletion and contamination as a result of development.</i>	No significant impacts identified. The proposal is satisfactory subject to conditions.	YES
Section 6.5 – Terrestrial biodiversity	<i>Protect native fauna and flora, protect the ecological processes necessary for their continued existence, and encourage the conservation and recovery of native fauna and flora and their habitats.</i>	No impacts are identified on moderate or high biodiversity sensitivity land which is located on the western boundary of the site and not located within the development footprint.	YES
Section 6.8 Airspace operations	<i>Provide for the effective and ongoing operation of the Mudgee Airport and protect the community from undue risk from that operation.</i>	There are no impacts identified to the airspace operations or the Obstacle Limitation Surface in this location.	YES
Section 6.9 – Essential Services	<i>To ensure that water, electricity, sewer, storm water and road access is available or that adequate arrangements have been made to make them available for the development.</i>	All services required to support the development will be available. The proposal is satisfactory subject to conditions.	YES
Section 6.10 – Visually Sensitive land near Mudgee	<i>Protect the visually and environmentally significant land on the urban fringe of the town of Mudgee.</i>	No impacts are identified on the urban fringe of the town of Mudgee given the significant obstruction of views to and from the subject site. This is due to the undulating rural nature of the land and existing surrounding development comprising of the sewerage treatment plant and waste facility. The only area identified to be impacted by direct views is the land to the western and southern boundary which is proposed	YES

		to be managed via fencing and landscape screening (noting southern Lot 87 DP756897 is also owned by Council and provides an additional buffer of over 350m to separately owned land). Conditions are recommended.	
Section 6.12 Development in designated buffer area	<i>To protect the operational environment of the sewage treatment plant in Mudgee</i>	The proposal is not for residential accommodation and the development has been designed to avoid impacts to the operational environment of the plant, including making allowances for future expansion of the plant outside of the development footprint.	YES

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 instruments have been the subject of public consultation under the EP&A Act, and are relevant to the proposal.

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

The following Development Control Plan is relevant to this application:

- *Mid Western Regional Development Control Plan 2013* ('the DCP')

An assessment is made of the relevant chapters and sections of this DCP. Those chapters or sections not discussed here were considered not specifically applicable to this application or are discussed elsewhere in this report.

Part 5.1 Car Parking

The proposal seeks to provide onsite parking for up to 25 workers during construction. It is considered there is sufficient onsite area to accommodate parking however this area will require formalisation and will be conditioned accordingly to minimise impacts such as dust, and sediment and erosion control.

Part 5.3 Stormwater Management

Council's Development Engineer has provided recommended conditions concerning management of stormwater runoff over the site. A new onsite detention basin is proposed to manage stormwater and sediments, with grading of the site to also occur to control the rate of runoff in order to reduce impacts on adjoining land to the south and east of the site.

Part 5.4 Environmental Controls

All relevant considerations have been discussed elsewhere in this report.

Part 6.1 Development in Rural Areas

Whilst Part 6.1 discusses dwelling development in the rural zones, it is important to highlight that the minimum setback requirements applicable to development in the RU1 zone is as follows:

- 60 metre Street Setback unless the lot is located on a State Highway; the required setback is 200 metres.
- 20 metre Side / Rear Setback and 15 metres for secondary frontage or corner lots.

The proposed development seeks to provide a minimum setback of 10 metres from the panel rows to the new internal security fence along with a further minimum of 10 metres to the side boundary from the internal fencing (which will accommodate landscaping to the eastern and southern boundaries). The development therefore complies with the DCP requirements.

Part 6.5 Solar Energy Farms

The proposed development is considered to be generally compliant with the requirements of Part 6.5 of the DCP, with the exception to the side setback to a non-related property boundary. A full assessment is contained within the compliance table located in **Attachment B**.

The following contributions plans are relevant pursuant to Section 7.18 of the EP&A Act and have been considered.

- *Mid Western Regional Development Contributions Plan 2019*

This Contributions Plan has been considered and as the proposed development is to be carried out by a public authority, no contributions can be levied under the plan.

(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 being proposed for the site.

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

These provisions of the EP&A Regulation 2021 have been considered and are addressed in the recommended draft conditions (where necessary).

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

The likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality must be considered. In this regard, potential impacts related to the proposal have been considered in response to SEPPs, LEP and DCP controls outlined above and the Key Issues section below.

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

- Context and setting – The proposal is considered to be generally consistent with the context of the site which is located in the buffer area of Council's sewer treatment plant and to the south of the Mudgee Waste Facility (refer to Figure 5 below). The development of an electricity generating works in this location is considered an appropriate use of the otherwise constrained parcel of land. Due to the existing topography of the area, the sites isolated nature from existing residential property and the proposed fencing and landscape screening to be implemented, any potential visual and glare impacts on both public and private viewpoints are appropriately mitigated.

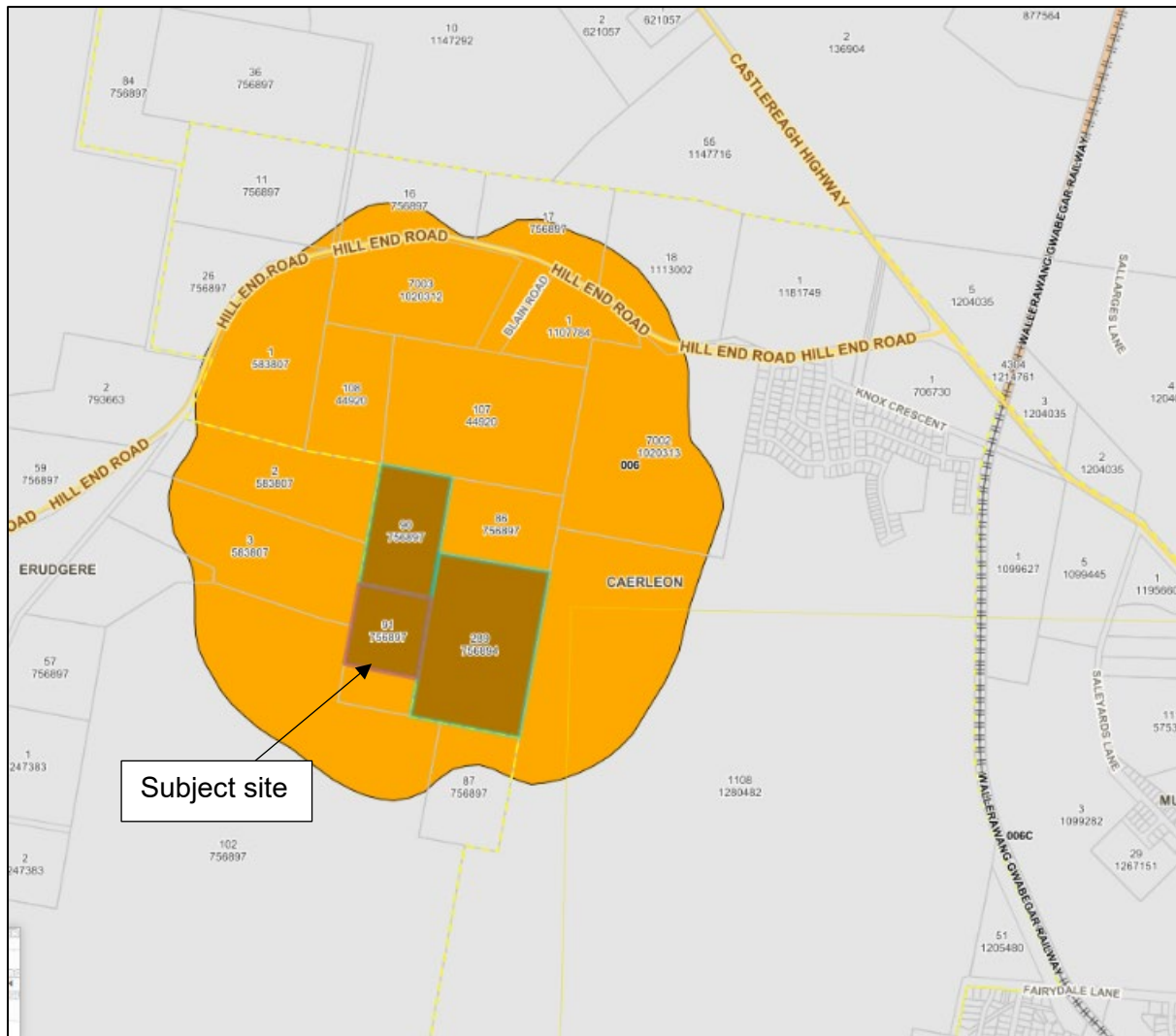


Figure 5 – MWRLEP 2012 Clause 6.12 Sewerage Buffer Map

The land to the east of the site forms part of the undeveloped area of Caerleon Estate, as shown by Figure 6 below. The zoning of the immediate interface with the subject site is currently R5 Large Lot Residential. However, this area is also constrained by the sewerage treatment plant buffer in accordance with Clause 6.12 of the Mid-Western Regional Local Environmental Plan 2012. The existing buffer area will also impact future development of Caerleon Estate (of up to 400 metres within the Caerleon Estate allotment from the eastern boundary of the subject development site). As a result, any future development within this location of the Estate must consider the requirements of Clause 6.12 of the LEP and if development for the purposes of residential accommodation is proposed, the consent authority must consider the following:

- *the impact that any odour, noise and other emissions associated with the operation of the Mudgee sewage treatment plant would have on the development.*

As a result, the area of interface with the subject site is already constrained by the existing operations of the sewerage treatment plant and any future development in this location would need to equally consider the operational environment of the plant.

Subsequently, an electricity generating works would not further constrain future

development of the Caerleon Estate land and therefore would not generate any additional land use conflicts that need to be considered.

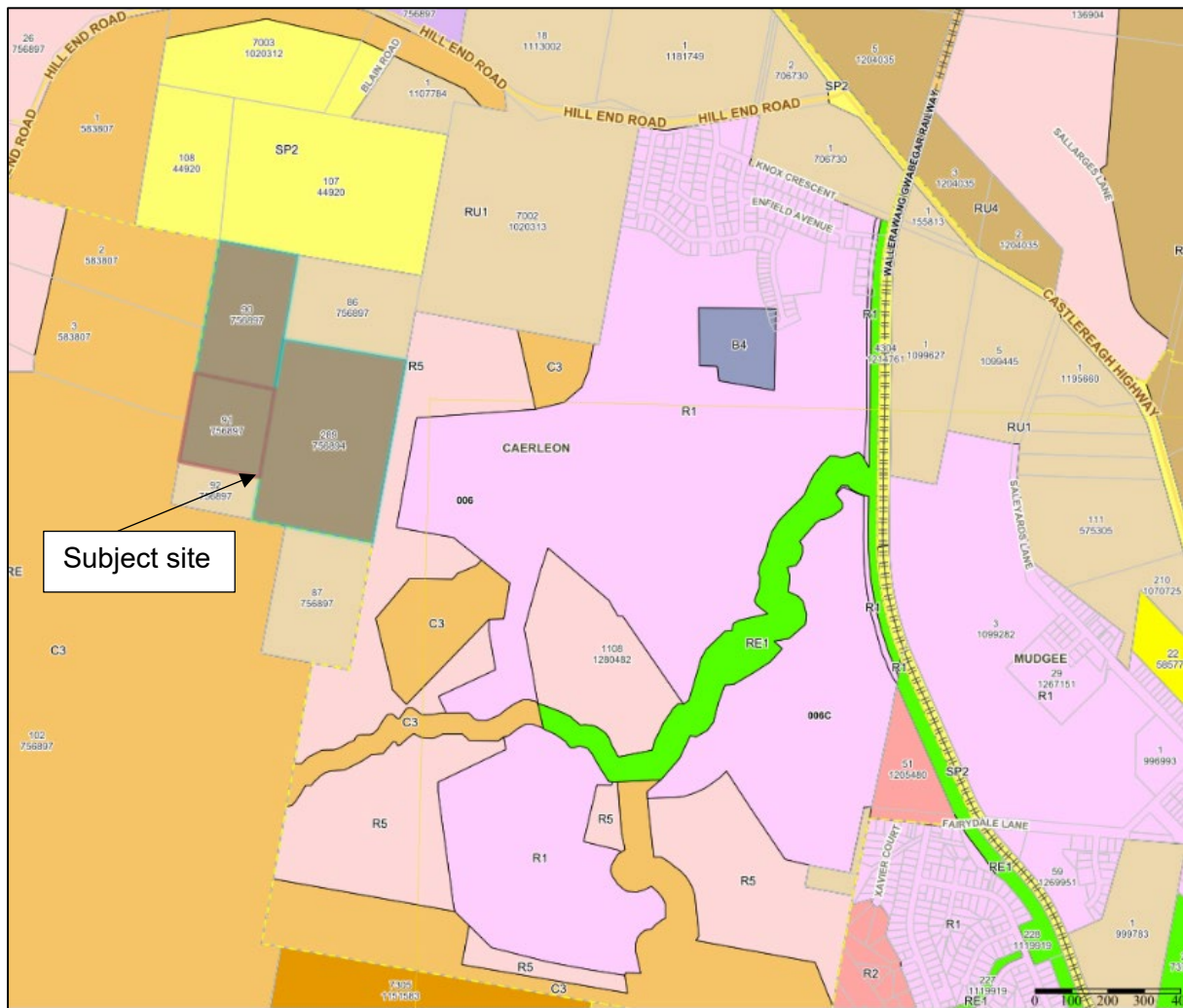


Figure 6 – MWRLEP 2012 Zoning Map including Caerleon Estate

- Access, traffic and parking – The application was supported by a Traffic Report, with the application also considered by Councils Development Engineer. The access arrangements during construction will only occur via the Mudgee Waste and Recycling Facility which is already designed and constructed to accommodate heavy vehicle movements. The proposed development plan has been updated to remove the proposed 'secondary access arrangement' via the Caerleon Estate. Upgrades and extension to the internal access road via the sewerage treatment plant and to the development site will be required to accommodate the construction and operational traffic, and conditions of consent have been recommended. Additionally, a 'laydown' area will be required to accommodate the construction phase with sediment and erosion control and dust mitigation measures are to be conditioned accordingly. The assessment has determined that there will be no significant adverse impacts as a result of the proposal from an access, traffic generation or parking perspective.
- Public Domain – The proposed development will not impact the public domain in terms of recreation opportunities, the amount, location, design, use and management of public spaces, or pedestrian linkages between public spaces.

- Utilities – The development is located immediately adjacent to a Transgrid easement and electrical infrastructure identified as the Wallerawang – Beryl 132KV transmission line. The development will also require internal road extension works to occur within the easement / under the electrical infrastructure. Whilst the initial referral to Transgrid resulted in an objection, amended details were provided and referred to enable conditions to be provided. Conditions have been included accordingly. The proposed development will require water to be maintained for landscaping and site maintenance purposes. Conditions have been recommended accordingly which can be supplied via tanks (in addition to firefighting requirements) and / or an extension to water supply which is already provided to the Waste Facility.
- Heritage – The subject site is not located adjacent to a heritage item or a heritage conservation area. Standard conditions have been recommended in relation to unexpected finds however during construction.
- Other land resources – The subject site will not have impacts to other natural resources in this location. The site is currently vacant land that has previously been utilised for grazing purposes. The site is identified as containing class 4 and class 7 soils which have moderate to severe land capability. As a result, there are significant constraints to the use of this land for productive agricultural purposes and therefore, the development is considered an appropriate alternative use of this land, subject to conditions.
- Water / air / soils / contamination impacts - The proposed development, as part of the construction activities, will generate dust and will require careful management practices, including dust suppression during construction. This is however not expected to significantly impact on the site or surrounding land. As noted under the SEPP (Resilience & Hazards) assessment, the development footprint is not identified as contaminated land.
- Flora and fauna impacts - The proposal is unlikely to impact on significant flora or fauna, with the existing site predominately cleared land and remnant paddock trees located within the footprint of the development. The proposal was supported by a Biodiversity Assessment Report which confirmed that the development does not exceed the biodiversity clearing thresholds under the Biodiversity Conservation Regulation and there are no significant ecological impacts associated with the proposal.
- Natural environment – The proposed development footprint has been selected to minimise significant clearing and earthworks however, re-grading of the site will be required to divert runoff to a proposed new detention basin at the lowest point of the site in order to reduce sediment runoff onto the adjoining lands, particularly to the eastern side of the site. The site currently contains contour banks that have been historically maintained and run north / south, commencing at the sewerage treatment plant. The contour banks currently mitigate the extent of runoff to adjoining lands and conditions have been recommended to ensure mitigation measures are maintained as a result of the proposed development.
- Noise and vibration – The application was supported by a Noise Assessment which seeks to quantify potential environmental noise emissions associated with the construction and operation of the proposal along with providing recommendations for noise mitigation and management measures. Key noise and vibration generating activities during construction include earthworks onsite using machinery and traffic movements during the morning and afternoon peak periods. Operational noise

activities are limited to the transformer/inverter stations, tracking motors of the panels, and onsite maintenance activities such as cleaning of the panels on a quarterly basis. The report confirms that the predicted levels will not exceed the relevant noise criteria at any residential or industrial receivers and there will be no potential for sleep disturbance due to maximum noise emission from the site. As a result, there will be no adverse noise or vibration impacts generated by the development.

- Natural hazards –The site is mapped as bushfire prone land pursuant to Section 4.14 of the Environmental Planning and Assessment Act. The subject land is a modified grassland with forest vegetation to the western boundary of the site, sewer treatment plant and waste facility to the north, with grassland to the south and east. The application was referred to the NSW RFS for comment with conditions provided. This included the requirement for a 10 metre defendable space within the development which is to be managed in accordance with the Rural Fire Service requirements as an 'Inner Protection Area'. As no onsite water supply exists in this area, a static supply is also to be provided. Conditions are included accordingly.
- Safety, security and crime prevention – The proposed development is considered to be able to be adequately secured with significant security fencing of the footprint and CCTV also proposed. The proposal is not considered to contribute to, or increase crime in the locality however, the maintenance of the site is required to be upheld to ensure there are no risks of fire which may spread to nearby properties. Conditions have been imposed accordingly.
- Social impact – The proposal is not considered to generate adverse social impacts with local employment proposed to be utilised to remove the potential impacts of accommodation pressures being generated in the Mudgee region.
- Economic impact – The proposed development is considered to have a modest positive economic impact with Council required to maintain its local purchases policy during construction. Further, by utilising the existing Council workforce and contractors for construction, cumulative negative impacts on tourism and accommodation in the Region as a result of many renewable or large scale construction projects is also mitigated accordingly.
- Site design and internal design – The development has been designed and sited to reduce impacts on the natural environment and avoid high ridgelines to ensure visual and glare impacts are mitigated. The addition of landscape screens in the south and east will ensure that by the time Caerleon Estate is further developed, any direct views are significantly obscured. Currently, no residential properties can view the development footprint due to the significant buffer of vacant land, the existing topography and elevated ridge that is located immediately east of the sewer treatment plant and the estate.
- Construction – All construction, including roadways must comply with the applicable Australian Standards, Council Policies and the BCA where relevant.
- Cumulative impacts – The proposal is generally consistent with all relevant planning controls and an assessment of potential cumulative impacts has not generate any significant concerns owing to the appropriate site selection and design, appropriate buffers already in place and the ability to utilise an existing local workforce and contractors for construction.

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

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

Based on the proposed location, arrangement of the development to minimise impacts on adjoining land and ability to utilise land that would otherwise be constrained by public infrastructure operating over the site, the site is considered to be suitable for the proposed development. Appropriate setbacks, landscape screening and an asset protection zone has been incorporated into the design of the development with the topography of the site and ridgelines within adjoining lands, mitigating visual and glare impacts to sensitive receptors in the locality.

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

These submissions are considered in Section 4 of this report.

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

The proposed development is considered to be broadly within the public interest. In comparison to other solar proposals that have been put forward within the Region, only one submission was received during the public exhibition period. This clearly demonstrates that site selection and the scale of the development is suitable and there will be no significant adverse impacts on the Mid-Western community as a result of the proposal.

4 REFERRALS AND SUBMISSIONS

4.1 Agency Referrals and Concurrence

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

There are no outstanding issues arising from these concurrence and referral requirements subject to the imposition of the recommended conditions of consent being imposed.

Table 5: Concurrence and Referrals to agencies

Agency	Concurrence/ referral trigger	Comments (Issue, resolution, conditions)	Resolved
Concurrence Requirements (s4.13 of EP&A Act)			
Water NSW	Section 8.9(1) of the Biodiversity and Conservation SEPP (Chapter 8 – Sydney Drinking Water Catchment)	N/A	N/A
Environment, Energy & Science Group within DPIE	S7.12(2) - <i>Biodiversity Conservation Act 2016</i>	No concurrence required. Biodiversity Assessment Report provided which determines there is no impact on threatened species or their habitat with	N/A

		conditions to be imposed including tree removal where hollows are present.	
Rail authority for the rail corridor	Section 2.98(3) - <i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i>	N/A	N/A
Referral/Consultation Agencies			
RFS	S4.14 – EP&A Act Development on bushfire prone land	Referral to NSW RFS occurred with a determination issued on the 24 December 2021.	Y
Electricity supply authority	Section 2.48 – <i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i> Development near electrical infrastructure	Comments and conditions provided from both Essential Energy and Transgrid.	Y
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.	N/A	N/A
Design Review Panel	CI 28(2)(a) – SEPP 65 Advice of the Design Review Panel ('DRP')	N/A	N/A
Integrated Development (S 4.46 of the EP&A Act)			
RFS	S100B - <i>Rural Fires Act 1997</i> bush fire safety of subdivision of land that could lawfully be used for residential or rural residential purposes or development of land for special fire protection purposes	N/A	N/A
Natural Resources Access Regulator	S89-91 – <i>Water Management Act 2000</i> water use approval, water management work approval or activity approval under Part 3 of Chapter 3	The application was submitted as integrated development under the Water Management Act 2000. A response was received from NRAR which determined that no controlled activity approval is required.	Y

4.2 Council Officer Referrals

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

Table 6: Consideration of Council Referrals

Officer	Comments	Resolved
Development Engineer	No objections, subject to conditions.	Yes
Health and Building Surveyor	No objections subject to recommended conditions.	Yes

4.3 Community Consultation

The proposal was notified in accordance with the Council's Community Participation Plan from 26 November 2021 until 17 January 2022. The notification included the following:

- An advertisement in the local newspaper – the Mudgee Guardian;
- Notification letters sent to adjoining and adjacent properties – five (5) letters sent;
- Notification on the Council's website.

A total of one (1) unique submissions, comprising 1 objection was received.

The issues raised in the submission is considered in **Table 7 below**.

Table 7: Community Submissions

Issue	Council Comments
Impacts on scenic views	<p>The proposed development has been appropriately located within the subject site, avoiding ridges and the extent of clearing in order to avoid impacts on any scenic views in this area.</p> <p>Outcome: This issue has been satisfactorily addressed.</p>
Glare	<p>With the installation of fencing and landscape screening to the east and south, along with a condition recommended to ensure the panels are non-reflective, there are no glare impacts identified to the future development of Caerleon.</p> <p>Outcome: This issue has been satisfactorily addressed.</p>
Noise and dust	<p>The acoustic impact assessment confirms that there will be no noise impacts to any sensitive receptor during construction or operations. Conditions have been recommended however in relation to construction hours and dust mitigation measures accordingly.</p> <p>Outcome: This issue has been satisfactorily addressed subject to the imposition of relevant recommended conditions of consent.</p>
Landscaping effectiveness	<p>The proposed landscaping detail has been updated by the applicant to ensure greater effectiveness at the DA stage is demonstrated. This will include a 200m long and 20m wide native screen to the east and 100m long 20m wide native screen to the south. This is proposed outside of the security</p>

	<p>fencing therefore providing direct obstruction of views to the infrastructure. Water will also be required to be provided onsite to ensure effective maintenance occurs.</p> <p>Outcome: This issue has been satisfactorily addressed subject to the imposition of relevant recommended conditions of consent.</p>
Consultation regarding 'alternate access road' via the Estate	<p>The 'alternate access road' has been removed from the proposed plans.</p> <p>Outcome: This issue has been satisfactorily addressed via amended plans.</p>
Sediment and erosion control measures	<p>Sediment and erosion control measures will be required to be installed and conditions have been imposed accordingly. Further, the proposed detention basin will also contain a rock armoured drainage channel to direct surface water into weirs and reduce sedimentation and erosion.</p> <p>Outcome: This issue has been satisfactorily addressed subject to the imposition of relevant recommended conditions of consent.</p>
Stormwater management and detention basin details	<p>The application proposes an appropriate stormwater management concept design which will capture and control discharge of surface water to ensure there will be no negative impact on downstream properties.</p> <p>Council's Development Engineer has reviewed the proposal and raises no objections to the proposed stormwater management arrangements.</p> <p>Outcome: This issue has been satisfactorily addressed subject to the imposition of relevant recommended conditions of consent.</p>

5 KEY ISSUES

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

- *Access during construction and conflicts with waste facility*
- *Visual and glare impact mitigation measures*
- *Landscaping details*
- *Impacts to Transgrid infrastructure*
- *DCP compliance with Part 6.5 Solar Energy Farms (side setback requirement)*

5.1 Access during construction and conflicts with waste facility

A traffic report was submitted with the application that demonstrated there will be no impacts to the existing road network with the waste facility able to accommodate the construction traffic, subject to onsite management during the construction period. Access during construction will be managed via conditions of consent and in particular a traffic management plan will be required to reduce traffic conflicts on the existing internal access road to existing facilities.

5.2 Visual and glare impact mitigation measures

The proposal is compliant with the requirements of the Mid-Western Regional Council DCP 2013. Due to the use of non-reflective coating on the panels, existing site buffer distances and topography to sensitive receivers and transport networks, along with the proposed landscaping screening, potential for glare impacts on the surrounding area is negligible.

Resolution: The issue has been resolved through recommended conditions of consent for non-reflective coating on the panels, black security fencing and landscape screening.

5.3 Landscaping details

The proposed development design incorporates landscape screening to the south and the east with vegetation corridors of native trees, shrubs and ground covers. The landscaping details submitted dated April 2022 have up to 880 plantings proposed within the screening corridors consisting of 200m long and 20m wide to the east and 100m long and 20m wide to the south. Existing remnant trees are also proposed to be maintained within this corridor. The installation of the landscaping will be required prior to the installation of the panels, maintenance required frequently and additional water infrastructure to be installed to ensure effectiveness. Conditions have been imposed accordingly.

Resolution: The issue has been resolved through recommended conditions of consent.

5.4 Impacts to Transgrid infrastructure

Following submission of amended details by the applicant, resolution to the objection made by Transgrid has been provided. There are no significant impacts identified to the easement of Transgrid or its infrastructure as a result of construction or operations.

Resolution: The issue has been resolved through advice and recommended conditions of consent (advised by Transgrid) in order to resolve the objection made.

5.5 DCP compliance with Part 6.5 Solar Energy Farms (side setback requirement)

In accordance with Part 6.5 of the DCP, solar farms '*Should not be located within 100m from a non-related property boundary*'. The applicant seeks to vary this requirement on the basis of the following:

The distance to the adjoining eastern lot boundary is approx. 20m at the nearest point. The solar farm however avoids a more elevated position by reducing this side setback.

In due consideration of the design remaining more sympathetic to the topography of the site in order to reduce visual and glare impacts, the proposed variation is supported in the circumstances of the case. Further, as outlined in section 3.2 as part of the section 4.15(1) assessment, the area of the adjoining land is currently impacted by the sewerage treatment buffer of up to 400 metres. Any future residential development in this location is likely to be already constrained by the existing operations of the sewer plant than the proposed development.

6 CONCLUSION

This development application has been considered in accordance with the requirements of the EP&A Act and the Regulations as outlined in this report. Following a thorough assessment of the relevant planning controls, issues raised in submissions and the key issues identified in this report, it is considered that the application can be supported.

It is considered that the key issues as outlined in Section 5 have been resolved satisfactorily through amendments to the proposal and/or in the recommended draft conditions at **Attachment A**.

7 RECOMMENDATION

That the Development Application DA No 0170/2022 for a 5MW Electricity Generating Works and associated infrastructure at 33 Blain Road, CAERLEON 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**.

The following attachments are provided:

- Attachment A: Draft Conditions of consent
- Attachment B: Compliance Table – Part 6.5 Solar Farms - DCP 2013
- Attachment C: Architectural Plans and Landscape Detail
- Attachment D: Submission

Attachment A: Draft Conditions of Consent

Draft Conditions

APPROVED PLANS

1. The development is to be carried out generally in accordance with the following stamped plans except where amended as required by the following conditions. Approved documentation may include any Planning or Engineering reports submitted with and in support of the Application as detailed below.

Title / Name:	Drawing No. / Document Ref. / Sheet No.:	Revision:	Date:	Prepared by:
PV Layout(2) for DA	102	6	14/02/2022	EQUANS
Civil Works	400	5	14/02/2022	EQUANS
Key Equipment Elevations	300	2	10/11/2021	EQUANS
Mudgee Solar Farm Landscape Plan	Sheets 1 - 4	B	13/04/2022	Ecostaff
Land and Water Management Plan	-	-	-	Constructive Energy

Any minor modification to the approved plans other than as required by following conditions will require the lodgement and consideration by Council of amended plans and lodgement of a Modification Application.

2. For clarity, this development consent provides approval for a 5MW electricity generating works (solar farm) with ancillary infrastructure. No battery storage or advertising signage is authorised by this development consent.

GENERAL

3. There shall be no clearing of native vegetation other than to the extent nominated within the application without the prior consent of Council.
4. In the event of any Aboriginal archaeological material being discovered during earthmoving/construction works, all work in that area shall cease immediately and the Office of Environment, Energy and Science (OESS) notified of the discovery as soon as practicable. Work shall only recommence upon the authorisation of the (OESS).
5. All earthworks, filling, building, driveways or other works, are to be designed and constructed to ensure that at no time any ponding of stormwater occurs on the subject site or adjoining land as a result of this development. Design must also ensure that no diversion of runoff onto other adjacent properties occurs.
6. The only waste derived fill material that may be received at the development site must be:
 - a) Virgin excavated natural material, within the meaning of the *Protection of the Environment Operations Act 1997*; and
 - b) Any other waste-derived material the subject of a resource recovery exemption

under cl.91 of the *Protection of the Environment Operations (Waste) Regulation 2014* that is permitted to be used as fill material.

7. Costs associated with all development works including any necessary alteration, relocation of services, public utility mains or installations must be met by the developer. The developer is responsible to accurately locate all existing services before any development works commence to satisfy this condition.
8. Any damage which is caused to Council's infrastructure as a result of the proposed development must be repaired immediately to Council's satisfaction and at no cost to Council.
9. Where required, all private sanitary drainage and water supply works which require Council's permit and private stormwater drainage works must be carried out in strict accordance with AS/NZS 3500, Plumbing and Drainage Act 2002 and Plumbing and Drainage Regulations to the complete satisfaction of the Plumbing and Drainage Inspector.
10. The Applicant must ensure that the development does not cause any water pollution, as defined under Section 120 of the Protection of the Environment Operations Act 1997.
11. The Applicants shall, at their own expense, engage a registered surveyor to relocate any survey mark that may be disturbed by the development or any associated work. Any information regarding relocation should be supplied to the Land Registry Services and Council.
12. To reduce the likelihood of air emissions, dust and noise impacts, the Applicant shall ensure that all the plant and equipment used at the site is:
 - a) maintained in a proper and efficient condition; and,
 - b) operated in a proper and efficient manner.
13. The developer and / or the landowner, as relevant, is responsible for all costs associated with construction and rehabilitation of the site.
14. The Applicant must minimise the noise generated by any construction, upgrading or decommissioning activities on site in accordance with the best practice requirements outlined in the *Interim Construction Noise Guideline* (DECC, 2009), or its latest version.
15. The Applicant must minimise the dust generated by the development at all times.
16. The Applicant must:
 - a) minimise the off-site visual impacts of the development, including the potential for any glare or reflection;
 - b) ensure the visual appearance of all ancillary infrastructure (including paint colours) blends in as far as possible with the surrounding landscape; and
 - c) not mount any advertising signs or logos on site, except where this is required for identification or safety purposes.
17. The Applicant must:
 - a) ensure the solar panels and ancillary infrastructure (including security fencing) are designed, constructed and maintained to reduce impacts on localised groundwater at the site;
 - b) minimise any soil erosion associated with the construction, upgrading or

decommissioning of the development in accordance with the relevant requirements in the *Managing Urban Stormwater: Soils and Construction* (Landcom, 2004) manual, or its latest version; and

- c) ensure the solar panels and ancillary infrastructure are designed, constructed and maintained to avoid causing any erosion on site.

18. The Applicant must:

- a) store and handle all dangerous or hazardous materials on site in accordance with AS1940-2004: The storage and handling of flammable and combustible liquids, or its latest version;
- b) ensure the materials or goods stored are suitably banded; and
- c) minimise any spills of hazardous materials or hydrocarbons, and clean up any spills as soon as possible after they occur.

19. The Applicant must commission and pay the full cost of Independent Environmental Audits of the development. The audits must:

- a) be led and conducted by a suitably qualified, experienced and independent team of experts;
- b) be prepared, unless otherwise agreed with Council:
 - i. within 3 months of commencing construction;
 - ii. within 3 months of commencement of operations; and
 - iii. as directed by Council;
- c) be carried out in consultation with the relevant agencies;
- d) assess whether the development complies with the relevant requirements in this consent, and any strategy, plan or program required under this consent; and
- e) recommend appropriate measures or actions to improve the environmental performance of the development and any strategy, plan or program required under this consent.

Within 3 months of commencing an Independent Environmental Audit, or unless otherwise agreed, a copy of the audit report must be submitted to Council, and any other NSW agency that requests it, together with a response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations of the Independent Environmental Audit must be implemented to the satisfaction of Council.

- 20. All internal driveways and access tracks must be constructed of compacted gravel to a suitable standard to sustain all construction and future maintenance traffic requirements. Pavement must be wide enough to allow two vehicles to safely pass or with provision made for localized widening. Where necessary culverts or suitable erosion protection measures must be made for stormwater drainage.
- 21. Car parking areas must be provided of sufficient size to allow for one car parking space per two employees for the life of the proposal. Car parking areas must generally provide sufficient space for parking and manoeuvring as specified in AS2890.1 - Parking facilities – Part 1: Off-street car parking. Car parking and laydown areas must be constructed of compacted gravel / crushed rock / road base and maintained to the satisfaction of Council at all times. The car parking and laydown areas must also be provided with appropriate erosion and sediment controls maintained to ensure no sediment enters downstream waterways.
- 22. Stormwater runoff from pavement areas must be managed within the site and dispersed to landscaped areas.

23. All earthworks must ensure that the site shall be graded so as to be free draining.
24. Any permanent facilities on the site must provide for adequate treatment of waste water. No treated waste water contaminated with oil, grease or other contaminants is permitted to discharge into any natural water course or/and Council stormwater system.
25. Access driveways and pavements must be maintained to the satisfaction of Council at all times.

NSW RURAL FIRE SERVICE REQUIREMENTS

26. The Applicant must:

- a) minimise the fire risks of the development by preparing and implementing a Bush Fire Emergency Management and Operations Plan which should identify all relevant risks and mitigation measures associated with the construction and operation of the solar farm. This should include:
 - detailed measures to prevent or mitigate fires igniting;
 - work that should not be carried out during total fire bans;
 - availability of fire-suppression equipment, access and water;
 - storage and maintenance of fuels and other flammable materials;
 - notification of the local NSW RFS Fire Control Centre for any works that have the potential to ignite surrounding vegetation, proposed to be carried out during a bush-fire fire danger period to ensure weather conditions are appropriate; and
 - appropriate bush fire emergency management planning.

Note: It is important to be aware of operations that may be carried out on days of Total Fire Ban and any prohibited activities or exemptions that are notified by the Commissioner of the NSW RFS under the Rural Fires Act s.99.

27. Property access road must comply with the following requirements of Table 7.4a of Planning for Bush Fire Protection 2019:
 - property access roads are two-wheel drive, all weather roads with minimum 4 metre carriageway width;
 - minimum vertical clearance of 4 metre to any overhanging obstructions, including tree branches;
 - the capacity of road surfaces and any bridges/causeways is sufficient to carry fully loaded firefighting vehicles, bridges and causeways are to clearly indicate load rating;
 - hydrants are provided in accordance with the relevant clauses of AS 2419.1:2005;
 - there is suitable access for a Category 1 fire appliance to within 4 metre of the static water supply where no reticulated supply is available;
 - property access must provide a suitable turning area in accordance with Appendix 3;
 - curves have a minimum inner radius of 6 metre and are minimal in number to allow for rapid access and egress;
 - the minimum distance between inner and outer curves is 6 metre;
 - the crossfall is not more than 10 degrees; and
 - maximum grades for sealed roads do not exceed 15 degrees and not more than 10 degrees for unsealed roads.

Note: Some short constrictions in the access may be accepted where they are not less than 3.5 metre wide, extend for no more than 30 metre and where the obstruction cannot

be reasonably avoided or removed.

28. The provision of water, electricity and gas must comply with the following in accordance with Table 7.4a of *Planning for Bush Fire Protection 2019*:
- A 20,000 litre static water supply must be provided on site;
 - a connection for firefighting purposes is located within the IPA or non-hazard side and away from the structure;
 - 65mm Storz outlet with a ball valve is fitted to the outlet;
 - ball valve and pipes are adequate for water flow and are metal;
 - supply pipes from tank to ball valve have the same bore size to ensure flow volume;
 - underground tanks have an access hole of 200mm to allow tankers to refill direct from the tank;
 - a hardened ground surface for truck access is supplied within 4 metres;
 - above-ground tanks are manufactured from concrete or metal;
 - raised tanks have their stands constructed from non combustible material or - bush fire - resisting timber (see Appendix F of AS 3959);
 - unobstructed access can be provided at all times;
 - underground tanks are clearly marked;
 - tanks on the hazard side of a building are provided with adequate shielding for the protection of firefighters;
 - all exposed water pipes external to the building are metal, including any fittings;
 - where pumps are provided, they are a minimum 5hp or 3kW petrol or diesel-powered pump, and are shielded against bush fire attack; any hose and reel for firefighting connected to the pump shall be 19mm internal diameter; and
 - fire hose reels are constructed in accordance with AS/NZS 1221:1997, and installed in accordance with the relevant clauses of AS 2441:2005;
 - where practicable, electrical transmission lines are underground;
 - where overhead, electrical transmission lines are proposed as follows:
 - lines are installed with short pole spacing (30 metre), unless crossing gullies, gorges or riparian areas; and
 - no part of a tree is closer to a power line than the distance set out in accordance with the specifications in *ISSC3 Guideline for Managing Vegetation Near Power Lines*.
 - reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 and the requirements of relevant authorities, and metal piping is used.
29. Landscaping within the required asset protection zone must comply with Appendix 4 of *Planning for Bush Fire Protection 2019*. In this regard, the following principles are to be incorporated:
- a) A minimum 1 metre wide area (or to the property boundary where the setbacks are less than 1 metre), suitable for pedestrian traffic, must be provided around the immediate curtilage of the building;
 - b) Planting is limited in the immediate vicinity of the building;
 - c) Planting does not provide a continuous canopy to the building (i.e. trees or shrubs are isolated or located in small clusters);
 - d) Landscape species are chosen to ensure tree canopy cover is less than 15% (IPA), and less than 30% (OPA) at maturity and trees do not touch or overhang buildings;
 - e) Avoid species with rough fibrous bark, or which retain/shed bark in long strips or retain dead material in their canopies;
 - f) Use smooth bark species of trees species which generally do not carry a fire up the bark into the crown;
 - g) Avoid planting of deciduous species that may increase fuel at surface/ ground level (i.e. leaf litter);
 - h) Avoid climbing species to walls and pergolas;
 - i) Locate combustible materials such as woodchips/mulch, flammable fuel stores away from the building;

- j) Locate combustible structures such as garden sheds, pergolas and materials such as timber garden furniture away from the building; and
- k) Low flammability vegetation species are used.

ESSENTIAL ENERGY REQUIREMENTS

- 30. Any existing encumbrances in favour of Essential Energy (or its predecessors) noted on the title of the above property should be complied with.
- 31. Satisfactory arrangements are to be made with Essential Energy with respect to the proposed photovoltaic system which will form part of the development. It is the Applicant's responsibility to enter into the required Connection Agreement/s and any other requirements with Essential Energy for the development, which may include the payment of fees and contributions. Refer Essential Energy's Network Connections team for requirements via email networkconnections@essentialenergy.com.au.
- 32. Essential Energy's records indicate there is electricity infrastructure located within the property and within close proximity to the property. Any activities within these locations must be undertaken in accordance with the latest industry guideline currently known as *ISSC 20 Guideline for the Management of Activities within Electricity Easements and Close to Infrastructure*. Approval may be required from Essential Energy should activities within the property encroach on the electricity infrastructure.
- 33. Prior to carrying out any works, a "Dial Before You Dig" enquiry should be undertaken in accordance with the requirements of *Part 5E (Protection of Underground Electricity Power Lines)* of the *Electricity Supply Act 1995* (NSW).
- 34. Given there is electricity infrastructure in the area, it is the responsibility of the person/s completing any works around powerlines to understand their safety responsibilities. SafeWork NSW (www.safework.nsw.gov.au) has publications that provide guidance when working close to electricity infrastructure. These include the *Code of Practice – Work near Overhead Power Lines* and *Code of Practice – Work near Underground Assets*.

TRANSGRID REQUIREMENTS

- 35. TransGrid shall be notified of any amendments / modifications to the proposal which may change distances to Transgrid structures or conductors.
- 36. All works must be carried out in accordance with NSW WorkCover 'Working near overhead powerlines' Code of Practice 2006.
- 37. All fencing (including temporary fencing) must comply with Transgrid's Fencing Guidelines, including earthing and/or isolation requirements.
- 38. If fence heights are not stipulated on the plans, then approval is based on the assumption that all fences will be no higher than 2.5m. If fences are planned taller than 2.5m then full details must be provided.
- 39. No metallic structures or infrastructure shall be installed unless they form part of the approved plans.
- 40. Any works proposed **MUST NOT** reduce clearance to conductors below that required in AS7000.
- 41. Where transmission lines are 132kV and below activities/development/structures must be located at least 20 metres away from any part of a transmission structure or supporting

guy wire, or for metallic structures, be located at least 22 metres away from any part of a transmission structure or supporting guy wire and be located at least 10 metres from the centre of the transmission line.

42. Where transmission lines are 220kV and above activities/development/structures must be located at least 30 metres away from any part of a Transmission structure or supporting guy wire, and be located at least 17 metres from the centre of the transmission line.
43. Precautions must be in place to prevent damage to transmission line structures and guys. Any damage due to construction activities to be reported immediately to Transgrid.
44. No mounds of earth or other materials may be left on the easement during and after earthworks, as this creates a hazard by reducing the vertical clearances to transmission lines.
45. Excavations deeper than 2m such as trenches and pits need individual assessment to ensure there are no adverse impacts, particularly to Transgrid structures and earth straps.
46. Any cut operations as part of bulk earthworks are generally not a concern, provided they do not adversely impact access or encroach within 30m of a structure.
47. Any earthworks involving fill need to be assessed to determine impacts on conductor height clearances. This will require provision of a 3D DXF or otherwise detailed survey plans with before and after RLs to enable a height clearance check to be undertaken. Minor resurfacing works which do not increase ground levels by more than 100mm can be excluded provided this is clearly stated on the plans.
48. Any construction work within the easement shall maintain safety clearances to the exposed conductors in accordance with NSW WorkCover 'Working near overhead powerlines' Code of Practice 2006 (Transgrid may provide preferred crane locations, for the purpose reducing static induction).
49. During construction phase Transgrid access is to be maintained 24/7. Transgrid to provide suitable padlock/s for any gates.
50. The works shall not impede or restrict Transgrid from undertaking normal maintenance and inspection activities and, at completion of works, access to Transmission Lines and structures shall always be available for Transgrid plant and personnel for future TransGrid maintenance activities.
51. Dust: Works must not create excessive quantities of dust and proponent must employ dust suppression. A dust management plan is not expected to be provided to Transgrid, but provision must be made for such a plan to avoid causing damage to the transmission line such as dust pollution on insulators.
52. The easement area shall not be used for temporary storage of construction spoil, topsoil, gravel or any other construction materials.
53. Vehicles or equipment having a height exceeding of 4.3m when fully extended may traverse the easement if stowed and locked for travel. Operation within the easement must be done in accordance with NSW WorkCover Working near overhead powerlines' Code of Practice 2006.

54. Consideration is to be given in the design works for any proposed access ways/roads over Transgrid's easement to cater for the weight and size of Transgrid's maintenance vehicles - to withstand the 40 tonne load capacity of maintenance trucks.
55. For where travel is required by Transgrid's maintenance vehicles, Batter slope is to be no steeper than 1 in 6.
56. Traffic control: During construction, traffic control measures need to be implemented to prevent vehicles colliding with Transgrid's transmission towers.
57. Where temporary vehicular access for parking during the construction period is within 17m of transmission line structure, adequate precautions shall be taken to protect the structure from accidental damage.

PRIOR TO ISSUE OF CONSTRUCTION CERTIFICATE

58. Prior to issue of a Construction Certificate, amended plans / information shall be provided to the Certifying Authority detailing the following:
 - a) All landscaping shrubs or trees must be mature (i.e. not seedlings / tube stock) at the time of planting;
 - b) Include full details of the vegetation management for the development, with commitment to a replacement frequency over the life of the proposal to ensure mortality is kept low (a maximum of 10%), and include confirmation of a water source and minimum watering schedule to ensure survival;
 - c) Provision of a minimum of 40,000L of dedicated onsite water storage, or an approved alternative water supply, for the purposes of onsite maintenance to the landscaping and panel cleaning. This supply is required in addition to dedicated firefighting water requirements.
59. Evidence shall be provided to the Certifying Authority, prior to issue of the Construction Certificate, demonstrating that the solar panels have an anti-reflective coating.
60. Prior to issue of a Construction Certificate, the developer is to prepare and submit to Council's satisfaction a comprehensive Site Environmental Management Plan that includes, but shall not be limited, to the following:
 - Management strategies to limit noise and vibration impacts during construction and operation on surrounding land;
 - Management strategies to limit traffic impacts on surrounding land;
 - Measures to reduce air emissions, including dust to surrounding land;
 - Management strategies to ensure groundwater is not contaminated;
 - Measures to conserve water during construction and operation such as during regular cleaning of the infrastructure during operation;
 - Measures to manage groundcover vegetation and reduce bushfire risks to surrounding land;
 - Management strategies to limit the spread and contamination of the site from all waste material including oil used in the integrated transformer and inverter stations along with full details of how each type of waste material will be disposed during construction and operation;
 - Measures to maintain site landscaping for the life of the operations;
 - Rehabilitation objectives and strategies for the site including timeframes for rehabilitation and decommissioning;
 - Specific measures to protect productive capacity including soil and erosion mitigation and weed management practices;
 - Topsoil management proposals to make best use of this resource and

- maximise rehabilitation and revegetation success;
- Proposals to reform the landscape to blend with surrounding land and avoid land use conflicts; and,
- Complaints management procedures and contact person for the site including notification processes to be implemented when the owner and / or operator of the site changes over time.

PRIOR TO COMMENCEMENT OF WORKS

61. Prior to commencing works relating to the installation of solar panels, all landscaping is to be installed in accordance with the approved landscaping plan and is to be maintained in accordance with the conditions of this consent.
62. Prior to the commencement of any works within the site the Developer must submit a detailed Stormwater Management Plan (SMP) to Council for assessment and approval prior to commencing any works. The SMP must be supported by full and detailed calculations and must show all proposed measures to provide for the detention and discharge of stormwater runoff from the site at a rate not exceeding existing rate of runoff for the undeveloped land. Any Detention Basin or other features must be located clear of existing sewer infrastructure.

NOTE: Where possible existing contour banks should be retained or re-located and existing dams should be retained as a permanent feature to provide for fire-fighting purposes.

63. No construction must take place until appropriate erosion control, dust control and silt collection measures are in place to the satisfaction of Council and to relevant engineering standards. Such erosion control, dust control and silt collection measures must remain onsite for the remainder of the construction period.
64. Prior to the commencement of any construction within the proposed development site the applicant must upgrade and construct the proposed access road from Blain Road. The road upgrade must incorporate any and all intersection construction requirements necessary to provide safe and convenient access at all times for other users of the road. Works must comply with all Council requirements.
65. Prior to the commencement of construction detailed design for road and intersection works must be submitted for Council approval. Design requirements to be addressed include:
 - (i) All access roads must provide a sealed pavement of suitable width to provide for two-way traffic.
 - (ii) Appropriate intersection treatments at all intersection with existing access roads and crossovers.
 - (iii) Provision must be made for all existing and proposed services and utilities within the road corridor.
 - (iv) Appropriate controls for stormwater runoff are to include appropriate measures to ensure runoff by-passes the existing landfill leachate pond and ensure no scouring or erosion of the embankment occurs.
66. Prior to the commencement of any construction within the proposed development site the applicant must submit detailed plans of the final layout of the development to Council. Details must include the siting of solar panels, the design and layout of any internal access roads and driveways (including provision for stormwater drainage and culverts where necessary), car parking and laydown areas, and the location and design of all ancillary infrastructure.
67. No work shall commence until a Construction Certificate has been issued and the Applicant has notified Council of:

- a) the appointment of a Principal Certifying Authority and
- b) the date on which work will commence.

Such notice shall include details of the Principal Certifying Authority and must be submitted to Council at least two (2) days before work commences.

- 68. Prior to commencement of solar array construction activities, landscaping of the site shall be completed in accordance with the approved landscaping plan provided to the Certifying Authority.
- 69. Prior to commencement of works, the Applicant must prepare a Traffic Management Plan including Driver Code of Conduct for the development which is to be submitted to Council. This plan must include:
 - a) details of the transport route to be used for all development-related traffic in accordance with the conditions of consent;
 - b) a protocol for undertaking independent dilapidation surveys to assess the existing condition of all nominated access roads prior to the commencement of construction;
 - c) a protocol for the repair of any public road if dilapidation surveys identify the road to be damaged during construction, upgrading or decommissioning works;
 - d) details of the measures that would be implemented to minimise traffic impacts during construction, upgrading or decommissioning works, including:
 - temporary traffic controls, including detours and signage;
 - notifying the local community about project-related traffic impacts;
 - procedures for receiving and addressing complaints from the community about development-related traffic;
 - minimising potential for conflict with school buses, other motorists and rail services as far as practicable;
 - minimising dirt tracked onto the public road network from development-related traffic;
 - details of any employee shuttle bus service and measures to ensure employee use of this service;
 - scheduling of haulage vehicle movements to minimise convoy length or platoons;
 - responding to local climate conditions that may affect road safety such as fog, dust and wet weather;
 - responding to any emergency repair or maintenance requirements; and
 - a traffic management system for managing over-dimensional vehicles;
 - e) a driver's code of conduct that addresses:
 - travelling speeds;
 - driver fatigue;
 - procedures to ensure that drivers adhere to the designated transport routes; and
 - procedures to ensure that drivers implement safe driving practices;
 - f) a program to ensure drivers working on the development receive suitable training on the code of conduct and any other relevant obligations under the Traffic Management Plan;
 - g) A flood response plan detailing procedures and options for safe access to and from the site in the event of flooding.

Following approval, the Applicant must implement the Traffic Management Plan during construction and operation.

70. Prior to commencement of construction, a comprehensive Fire Management Plan (FMP) shall be prepared in consultation and to the satisfaction of NSW RFS District Fire Control Centre, Fire and Rescue NSW and Council. The FMP shall include:
- 24/7 contact details including alternative telephone contact;
 - Site infrastructure plan;
 - Firefighting water supply plan;
 - Site access and internal road plan;
 - Construction of asset protection zones and their continued maintenance;
 - Location of hazards (Physical, Chemical and Electrical) that will impact on fire fighting operations and procedures to manage identified hazards during firefighting operations;
 - Detail all site management activities including scheduling of site, infrastructure and vegetation maintenance and be consistent with the Department's *Hazardous Industry Planning Advisory Paper No. 2 'Fire Safety Study'* guideline, the NSW Government's *Best Practice Guidelines for Contaminated Water Retention and Treatment Systems*, the Department's *Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning'*;
 - Include procedures that would be implemented if there is a fire on-site or in the vicinity of the site; and,
 - Such additional matters as required by the NSW RFS District Office, Fire and Rescue NSW or Council.

Following approval, the Applicant must keep two copies of the plan on-site in a prominent position adjacent to the site entry points at all times and must implement the measures described in the Fire Management Plan during both construction and operations.

71. From the start of building works, the property around the proposed works must be managed as an inner protection area (IPA) for a distance of 10 metres in accordance with the requirements of Appendix 4 of *Planning for Bush Fire Protection 2019*. When establishing and maintaining an IPA the following requirements apply:
- tree canopy cover should be less than 15% at maturity;
 - trees at maturity should not touch or overhang the building;
 - lower limbs should be removed up to a height of 2 metres above the ground;
 - tree canopies should be separated by 2 to 5 metres;
 - preference should be given to smooth barked and evergreen trees;
 - large discontinuities or gaps in vegetation should be provided to slow down or break the progress of fire towards buildings;
 - shrubs should not be located under trees;
 - shrubs should not form more than 10% ground cover;
 - clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation;
 - grass should be kept mown (as a guide grass should be kept to no more than 100mm in height); and
 - leaves and vegetation debris should be removed.
72. The site shall be provided with a waste enclosure (minimum 1800mm X 1800mm X 1200mm) that has a lid or secure covering for the duration of the construction works to ensure that all wastes are contained on the site. The receptacle is to be emptied periodically to reduce the potential for rubbish to leave the site. Council encourages the separation and recycling of suitable materials.

NOTE: ALL WASTE GENERATED FROM THE CONSTRUCTION PROCESS IS TO BE CONTAINED ON-SITE.

73. A sign must be erected in a prominent position on any work site on which involved in the erection or demolition of a building is carried out;
- a) stating that unauthorised entry to the work site is prohibited, and
 - b) showing the name of the person in charge of the work site and a telephone number at which that person may be contacted outside working hours.
 - c) the name, address and telephone number of the principal certifying authority for the work,
 - d) The sign shall be removed when the erection or demolition of the building has been completed.
74. The development site is to be managed for the entirety of work in the following manner:
- a) Erosion and sediment controls are to be implemented to prevent sediment from leaving the site. The controls are to be maintained until the development is complete and the site stabilised with permanent vegetation;
 - b) Appropriate dust control measures;
 - c) Construction equipment and materials shall be contained wholly within the site unless approval to use the road reserve has been obtained;
 - d) Toilet facilities are to be provided on the work site at the rate of one toilet for every 20 persons or part of 20 persons employed at the site.
75. If the work involved in the erection/demolition of the building;
- a) is likely to cause pedestrian or vehicular traffic in a public place to be obstructed or rendered inconvenient, or
 - b) building involves the enclosure of a public place

A hoarding or fence must be erected between the work site and the public place. If necessary, an awning is to be erected, sufficient to prevent any substance from, or in connection with, the work falling into the public place. Any such hoarding, fence or awning is to be removed when the work has been completed.

DURING CONSTRUCTION

76. During construction, all relevant requirements of the approved Site Environmental Management Plan shall be implemented at all times.
77. All building work must be carried out in accordance with the provisions of the National Construction Code, the Environmental Planning & Assessment Act 1979 and Regulations and all relevant Australian Standards.
78. All plumbing and drainage work must be carried out by a licensed plumber and drainer and must comply with the requirements of the Plumbing & Drainage Act 2011 and the Plumbing Code of Australia.
79. Construction work noise that is audible at other premises is to be restricted to the following times:
- Monday to Saturday - 7.00am to 5.00pm

No construction work noise is permitted on Sundays or Public Holidays.

80. All mandatory inspections required by the Environmental Planning and Assessment Act 1979 and any other inspections deemed necessary by the Principal Certifier being carried out during the relevant stage of construction.
81. Vehicles must be clean and free of debris prior to leaving the site during construction. Deposited material may be ordered to be removed at the Applicant/operator's expense.
82. During construction the proponent must undertake measures to minimise dust and noise and ensure that the impact on neighbouring properties is minimised.
83. During construction solar panels shall not be left in a fixed position (in particular horizontal).
84. All trucks and mobile plant operating within the premises must be fitted (where there is a requirement for such devices to be fitted under the Work Health and Safety legislation) with broad-spectrum reversing alarms, subject to such alarms not causing an acoustic or amenity impact on adjoining or adjacent residents.
85. Movement of heavy vehicles associated with the development shall only occur in accordance with the approved Traffic Management Plan.
86. Any fill material that is imported to the site must be analysed and classified by an appropriately qualified and experienced environmental consultant in accordance with the relevant NSW EPA Guidelines, including the *Waste Classification Guidelines* (2014). To ensure that fill material is suitable for the proposed use, only material classified as Virgin Excavated Natural Material (VENM) or Excavated Natural Material (ENM) is permitted to be imported onsite.
87. If unexpected soil contaminants are discovered during works which has the potential to alter previous conclusions regarding site contamination; work must cease and Council or NSW Environmental Protection Authority must be notified immediately. The contaminants located are to be evaluated by a supervising environmental consultant and an appropriate response determined in consultation with the developer, which is agreed to by Council.

Note – Council may also request that a NSW Environmental Protection Authority accredited site auditor is involved to assist with the assessment of the contaminated land situation and review and new contamination information. The developer must also adhere to any additional conditions which may be imposed by the accredited site auditor.

88. The Applicant must:
 - a) minimise the waste generated by the development;
 - b) classify all waste generated on site in accordance with the EPA's *Waste Classification Guidelines 2014* (or its latest version);
 - c) store and handle all waste on site in accordance with its classification;
 - d) not receive or dispose of any waste on site;
 - e) remove all waste from the site as soon as practicable, and ensure it is sent to an appropriately licensed waste facility for disposal, capable of receiving such waste; and
 - f) must not be reliant on disposal at any of Council's waste management facilities.

PRIOR TO ISSUE OF AN OCCUPATION CERTIFICATE / COMMENCEMENT OF USE

89. Prior to the occupation of a new building, or occupation or use of an altered portion of, or

an extension to an existing building, an Occupation Certificate is to be obtained from the Principal Certifying Authority appointed for the erection of the building.

90. Prior to issue of an Occupation Certificate, all approved landscaping, stormwater, fencing, road and associated works are to be completed.
91. Council must be notified of the completion of the works and the site must be rehabilitated and stabilised. Surplus construction materials and temporary structures (other than silt fences and other erosion and sediment control devices) installed during the course of the works must be removed.
92. Prior to commencing operations, or following the upgrades of any solar panels or ancillary infrastructure, the Applicant must submit work as executed plans of the development to Council.
93. Prior to issue of an Occupation Certificate, a Rehabilitation and Decommissioning/Closure Plan must be prepared and submitted for approval by Council. The plan must include rehabilitation objectives and strategies, including:
 - a) a plan for decommissioning, prepared or certified by an engineer, confirming that full remediation / restoration of the site to its former primary production use;
 - b) expected timeline for the rehabilitation program;
 - c) management controls regarding decommissioning and removal of all solar arrays and ancillary infrastructure, including methods, responsibilities of personnel and locations proposed for all waste disposal;
 - d) a commitment to remove all solar farm infrastructure including all works installed below the surface of the site;
 - e) the anticipated present value cost of decommissioning works, along with an explanation of the calculation of that cost (including a buffer for changes in market values/ inflation);
 - f) commitment to a financial security to cover the cost of decommissioning
 - g) Management and waste reduction initiatives proposed during all 3 phases of the development and a commitment as to where this waste will be disposed and/or recycled, without impacting on local waste facilities and in accordance with:
 - Protection of the Environment Operations Act 1997
 - Protection of the Environment Operations (Waste) Regulation 2014
 - Waste Avoidance and Resource Recovery Act 2001
 - NSW Environment Protection Authority (EPA) Waste Classification Guidelines

Note: the Rehabilitation and Decommissioning/Closure Plan should be updated every 5 – 7 years to keep up with changes.

DURING OPERATION

94. The site must be monitored and maintained to a satisfactory condition by maintenance staff, for the management of grass and weed growth including maintenance of ground cover, and any indications of erosion. Particular attention must be given to site management during the annual Bushfire Danger Period.
95. All requirements of the Site Environmental Management Plan shall be implemented onsite for the life of the development.
96. All requirements of the Fire Management Plan shall be implemented onsite for the life of the development.

97. All requirements of the Traffic Management Plan including Driver Code of Conduct shall be implemented onsite for the life of the development.
98. Should the site operator / manager change at any time over the life of the proposal, Council shall be notified immediately.
99. If any of the vegetation comprising the approved landscaping dies or is removed, it must be replaced with vegetation of the same species and the same maturity, as the vegetation that died or was removed.
100. All vehicles entering or leaving the subject property shall be driven in a forward direction.
101. The loading and unloading of all vehicles and equipment must be done entirely within the property.
102. The internal access road is to be maintained so that it is trafficable to all vehicles including fire-fighting trucks and emergency services (two-wheel drive traffic), at all times.
103. The development must ensure that the water supply is accessible and reliable for firefighting purposes for the life of operations.
104. A complaints register is to be maintained by the operator for the life of the development. Details of the date, time, complainant contact details (if offered), nature of the complaint and adopted corrective actions are to be recorded in the complaints register. A copy of the complaints register is to be given to Council upon request.
105. No materials are permitted to be disposed of or stored on roads or waterways at any time.
106. Over the life of the proposal, the Applicant may upgrade the solar panels and ancillary infrastructure on site provided these upgrades remain within the approved development footprint of the site and will not increase the height or overall size of the solar panels or ancillary infrastructure. Prior to carrying out any such upgrades, the Applicant must provide revised layout plans and project details of the development to Council incorporating the proposed upgrades. Should the upgrades change the approved development configuration, a modification application is to be submitted and approved by Council prior to upgrade works commencing onsite.

OTHER APPROVALS

N/A

ADVISORY NOTES

1. The removal of trees within any road reserve requires the separate approval of Council in accordance with the policy "Tree Removal and Pruning - Public Places".
2. Underground assets may exist in the area that is subject to the application. In the interests of health and safety and in order to protect damage to third party assets please contact Dial Before You Dig at www.1100.com.au or telephone on 1100 before excavating or erecting structures. If alterations are required to the configuration, size, form or design of the development upon contacting the Dial Before You Dig service, an amendment to the development consent (or a new development application) may be necessary.
3. Given there is electricity infrastructure in the area, it is the responsibility of the person/s completing any works around powerlines to understand their safety responsibilities. SafeWorkNSW (www.safework.nsw.gov.au) has publications that provide guidance

when working close to electricity infrastructure. These include the Code of Practice – Work near Overhead Power Lines and Underground Assets.

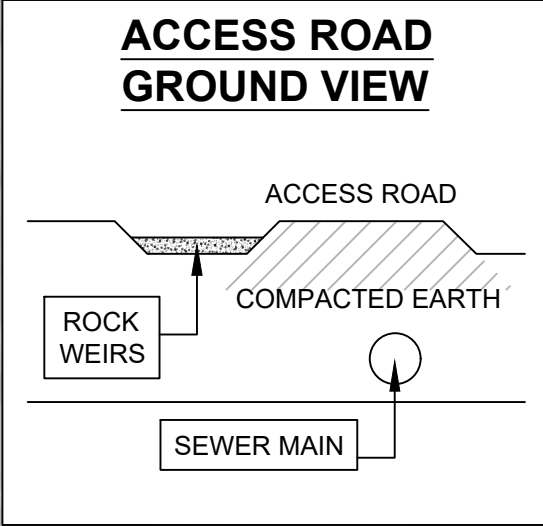
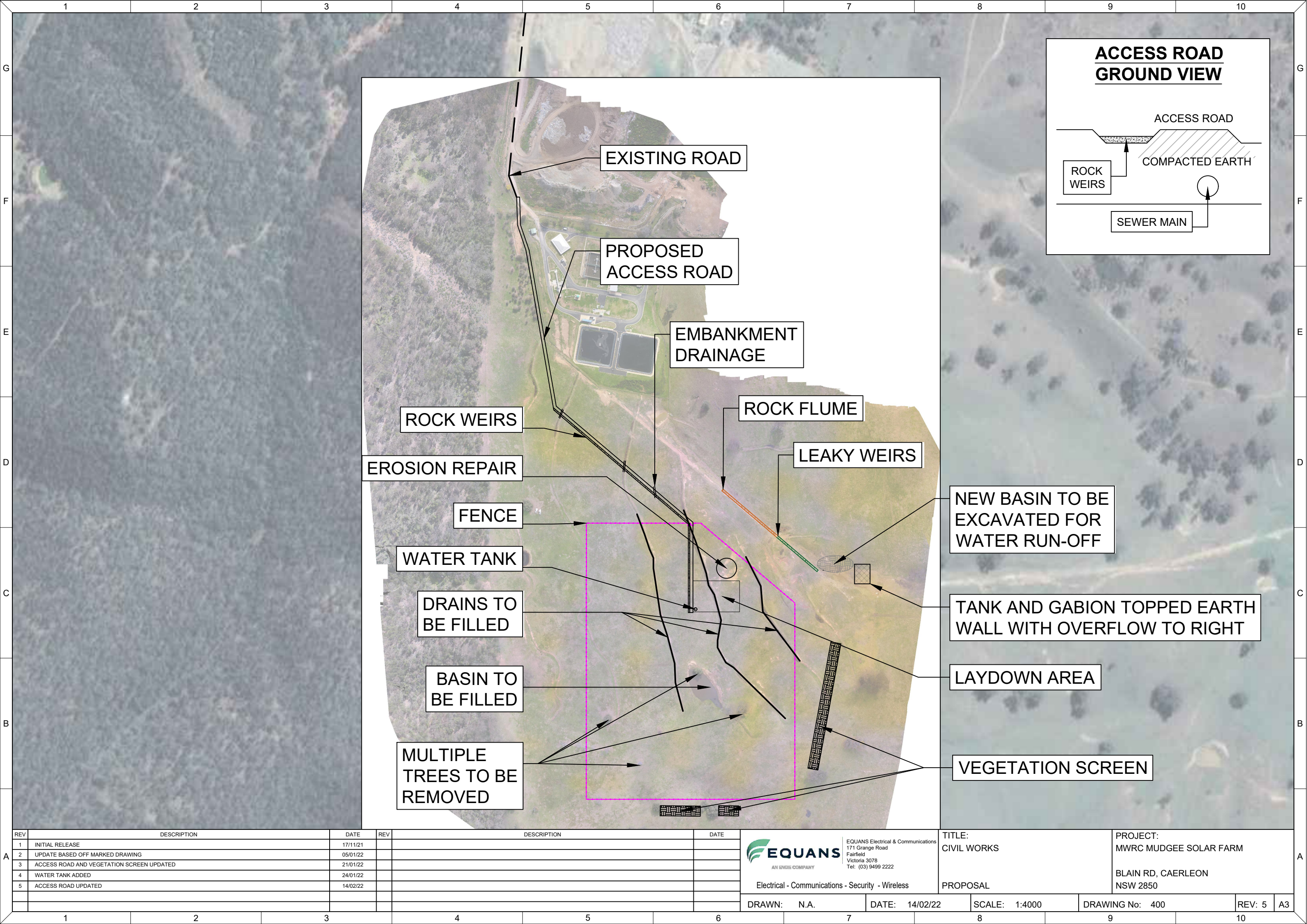
4. If the proposed development changes, there may be potential safety risks and it is recommended that Essential Energy is consulted for further comment.
5. The land upon which the subject building is to be constructed may be affected by restrictive covenants. This approval is issued without enquiry by Council as to whether any restrictive covenant affecting the land would be breached by the construction of the building, the subject of this approval. Persons to whom this approval is issued must rely on their own enquiries as to whether or not the building breaches any such covenant.
6. Division 8.2 of the Environmental Planning and Assessment Act (EP&A Act) gives you the ability to seek a review of the determination. This request is made to Council and must be made within 12 months after the date on which you receive this notice. The request must be made in writing and lodged with the required fee; please contact Council's Development Department for more information or advice.
7. If you are dissatisfied with this decision section 8. 7 of the EP&A Act 1979 gives you the right to appeal to the Land and Environment Court within 12 months after the date on which you receive this notice.
8. To ascertain the extent to which the consent is liable to lapse, refer to Section 4.53 of the EP&AAct.

Attachment B Compliance Table – Part 6.5 Solar Farms - DCP 2013

Part 6.5 Solar Energy Farms	
Visual Impact	
<ul style="list-style-type: none"> – Must include an assessment of the scenic value and character of the locality, all significant vistas and local community values. 	<p>Complies - The application has provided an assessment of the impacts on scenic value and character within the Statement of Environmental Effects along with a land use conflict risk assessment to assess impacts on adjoining lands.</p> <p>Due to the location and site arrangement of the proposal, the development is not considered to have an adverse visual, scenic or character impact to the area with obstruction of views to the site maintained and additional measures such as fencing and landscaping proposed.</p>
Siting to minimise impacts	
<ul style="list-style-type: none"> – The development should be sited and carried out to minimise impacts on or restrictions to grazing, farming, residential, tourism, business and forestry practices. 	<p>Complies - site selection seeks to avoid impacts on surrounding land by the appropriate placement and arrangement of the development, utilising existing ridgelines to obscure the development in addition to onsite controls such as fencing and landscaping.</p>
Physical adverse effects on adjoining land minimised	
<ul style="list-style-type: none"> – The development should be carried out that minimises any adverse physical effects on adjoining land and the development site. 	<p>Complies - Management of adverse physical impacts has been considered in the design including a 10 metre defendable space and a condition will be imposed relating to onsite static supply of water for firefighting purposes.</p>
Cumulative impacts from other solar developments	
<ul style="list-style-type: none"> – Assessment to be included for existing built and approved but not constructed solar farms with identified cumulative impacts. 	<p>Complies – No nearby solar farms (proposed or approved) have an impact on the proposed development. It is important to also note that the proposed development is to be constructed by a public authority that has an existing labour workforce to accommodate construction and ongoing maintenance activities.</p>
Consideration with the DPIE Solar Farm Guidelines, NPI and other Guidelines applicable to Solar Farms	
<ul style="list-style-type: none"> – Consideration with State Significant Development Guidelines for Solar Farm guidelines including site selection, NPI and other solar farm Acts, Rules or Regulations. 	<p>Considered. The assessment within the Statement of Environmental Effects addresses the DPIE Solar Farm Guidelines - <i>The relevant rules have been considered and implemented where possible in the design of this development.</i></p>
Within 5km of any township	
<ul style="list-style-type: none"> – Assessment to demonstrate that the proposal will not impact on the scenic value and character of the locality where the proposal is within 5km of main townships. 	<p>The SEE and supporting land use conflict risk assessment notes that the development is within 5km of Mudgee. The SEE has included due consideration of scenic issues and mitigation of views possible to the east are proposed to be managed with landscaping.</p>

Locational requirements	
<ul style="list-style-type: none"> – Should not be located within 500m of any dwelling not associated with the development. – Should not be located within 200m from a formed public road or 500m from a Regional or State Road. – Should not be located within 100m from a non-related property boundary. – Screening is not the only preferred method of minimising visual impact, solar arrays to be located in positions so as to have minimal visual impact on nearby properties. – Sensitive to existing related dwellings – noise and glare minimised. – Not surround a non-related property. 	<p><u>Does not comply and a variation is sought</u> – The distance to the adjoining eastern lot boundary is approx. 20m at the nearest point. The solar farm however avoids a more elevated position / ridgeline by reducing this side setback from 100m to 20m and is supported in the circumstances of the case.</p> <p>The land is not within the vicinity of existing dwellings and is over 200m from a local road and over 500m from a regional or State road.</p> <p>As previously noted, the land is affected by the association with the Mudgee Waste Depot and the buffer to the Mudgee STP. The nearest dwellings are noted in the LUCRA and no concern due to conflict with dwellings is raised. The visual assessment mapping shows these dwelling sites are not within line of sight of the solar arrays.</p>
Construction Traffic shall only travel on approved route	
Assessment included in Traffic Report having regard to public safety, school bus hours and peak travel to work.	Complies - Traffic Assessment included and deemed to satisfactorily consider impacts on the local road network during construction. A traffic management plan will be required however to address internal traffic conflicts with the existing waste and sewer operations.
Road upgrades to support traffic movements	
Road works and / or bond may be required and determined by Council costs borne by developer. Internal roads shall be the responsibility of the developer and shall be adequately designed and constructed.	Complies – relevant conditions imposed accordingly.
Infrastructure including temporary facilities	
<p>All infrastructure to be included in the application including temporary facilities.</p> <p>All infrastructure to be located in low visual impact locations.</p>	<p>Complies - Proposal seeks to provide limited portable facilities during construction for 25 workers noting existing facilities within Council operations at the waste facility and sewer treatment plant.</p> <p>All cables are to be located underground to support the solar farm with container style metal inverters and transformer station to be located on the site.</p>
Rights of Carriageways	
Rights of carriageways to be extinguished within 6 months of the proposal ceasing to operate, unless otherwise agreed with the landowner.	Not Applicable.
Removal of infrastructure	
Within 12 months of the solar farm ceasing to operate, all infrastructure is to be dismantled and removed from the site	Conditional matter and capable of compliance.

Attachment C: Architectural Plans and Landscape Detail



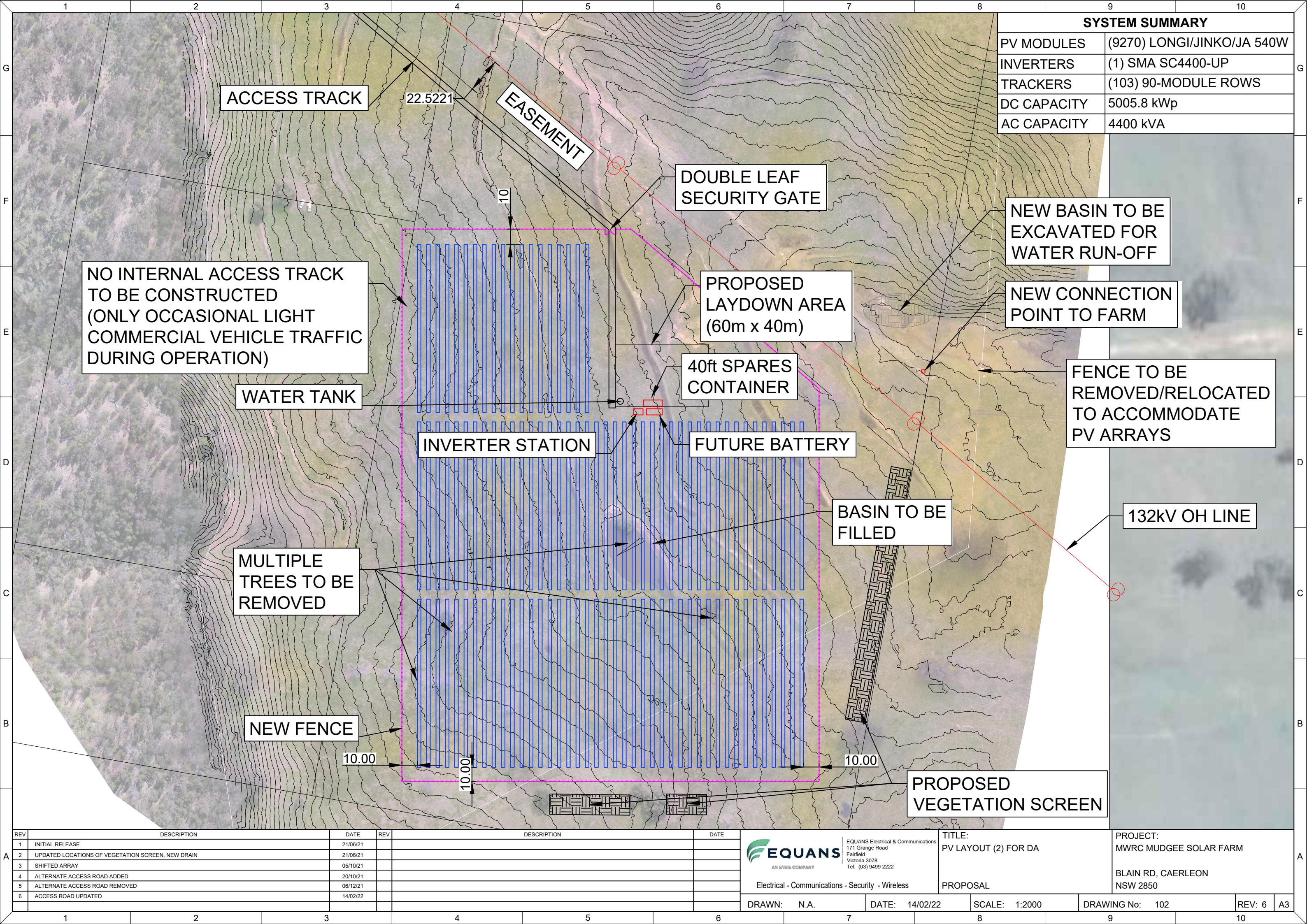
REV	DESCRIPTION	DATE	REV	DESCRIPTION	DATE
1	INITIAL RELEASE	17/11/21			
2	UPDATE BASED OFF MARKED DRAWING	05/01/22			
3	ACCESS ROAD AND VEGETATION SCREEN UPDATED	21/01/22			
4	WATER TANK ADDED	24/01/22			
5	ACCESS ROAD UPDATED	14/02/22			



EQUANS Electrical & Communications
171 Grange Road
Fairfield
Victoria 3078
Tel: (03) 9499 2222

Electrical - Communications - Security - Wireless

TITLE: CIVIL WORKS	PROJECT: MWRC MUDGEE SOLAR FARM
PROPOSAL	BLAIN RD, CAERLEON NSW 2850
DRAWN: N.A.	DATE: 14/02/22
SCALE: 1:4000	DRAWING No: 400
REV: 5	A3



SYSTEM SUMMARY	
PV MODULES	(9270) LONGI/JINKO/JA 540W
INVERTERS	(1) SMA SC4400-UP
TRACKERS	(103) 90-MODULE ROWS
DC CAPACITY	5005.8 kWp
AC CAPACITY	4400 kVA

NO INTERNAL ACCESS TRACK
TO BE CONSTRUCTED
(ONLY OCCASIONAL LIGHT
COMMERCIAL VEHICLE TRAFFIC
DURING OPERATION)

WATER TANK

INVERTER STATION

MULTIPLE
TREES TO BE
REMOVED

NEW FENCE

EASEMENT

DOUBLE LEAF
SECURITY GATE

PROPOSED
LAYDOWN AREA
(60m x 40m)

40ft SPARES
CONTAINER

FUTURE BATTERY

BASIN TO BE
FILLED

NEW BASIN TO BE
EXCAVATED FOR
WATER RUN-OFF

NEW CONNECTION
POINT TO FARM

FENCE TO BE
REMOVED/RELOCATED
TO ACCOMMODATE
PV ARRAYS

132kV OH LINE

PROPOSED
VEGETATION SCREEN

REV	DESCRIPTION	DATE	REV	DESCRIPTION	DATE
1	INITIAL RELEASE	21/06/21			
2	UPDATED LOCATIONS OF VEGETATION SCREEN, NEW DRAIN	21/06/21			
3	SHIFTED ARRAY	05/10/21			
4	ALTERNATE ACCESS ROAD ADDED	20/10/21			
5	ALTERNATE ACCESS ROAD REMOVED	06/12/21			
6	ACCESS ROAD UPDATED	14/02/22			



EQUANS Electrical & Communications
171 Grange Road
Fairfield Victoria 3078
Tel: (03) 9499 2222

Electrical - Communications - Security - Wireless

TITLE:
PV LAYOUT (2) FOR DA

PROPOSAL

PROJECT:
MWRC MUDGEE SOLAR FARM

BLAIN RD, CAERLEON
NSW 2850

DRAWN: N.A. DATE: 14/02/22 SCALE: 1:2000 DRAWING No: 102 REV: 6 A3

Mid-Western Regional Council

Mudgee Solar Farm - Land and Water Management Plan

Introduction

Mid-Western Regional Council intends to construct and operate a 5MW solar farm on Council held land south of the Mudgee Waste and Water Treatment facility on Hill End Road. The land forms part of an operational exclusion zone and is also held to safeguard future plant expansion. Previous land use for agriculture has seen biodiversity decline and the associated loss of ground cover has resulted in erosion and soil degradation. Contour embankments were constructed around the 1980s to slow the run-off of water and sediment erosion with two of these embankments feeding into small stock watering dams.

Upslope and to the west of the site is a significant area of high-quality remnant vegetation which includes rare plant species and is habitat to several rare and endangered animals. More detail is available through the Biodiversity Assessment Report created by Access Environmental Planning.

Land to the south is likely to continue to be used for livestock grazing into the foreseeable future, however land to the east is likely to become increasingly residential as the Cacleron Estate expands.

The intent of this document is to guide decision making before, during and after construction so that site management is complementary to neighbouring uses on all sides.

Land Management Principles:

MWRC accepts that, as for any Council owned and operated asset, there is a responsibility to manage the solar powerplant and site in a way that minimises any negative impacts on and creates opportunities for positive outcomes for the wider community. While the renewable energy project in itself has positive community-wide impacts, there is a need to consider how land management will occur, particularly in the context of nearby landholders.

MWRC has a principles-led approach based on the following 3 key outcomes.

1. Prevent soil mobility and erosion
2. Preserve and improve biodiversity and ecosystem function values
3. Be a good neighbour

Each of these principles can be related to activities at each stage of developing and operating the solar farm and these are reflected in the tables below.



1.0 Prevent soil mobility and erosion

This is important to prevent erosion that could subsequently require repair, increasing the cost of maintenance. It also assists in maintaining healthy groundcover with reduced weeds and associated need for management. Prevention of soil mobility will also avoid filling the detention basin/wetland with silt, thereby reducing its effectiveness over time in mitigating high intensity rainfall events and associated peak flows.

Activity	Why	Pre-construction	During construction	Ongoing Operation
Maintain groundcover	Optimises infiltration rate reducing runoff. Reduces emergent weed species	Maintain light/nil stocking rates or intensive cell grazing techniques	Minimise soil disturbance. Pre-strip and replace top-soil.	Short duration intensive grazing and/or groundcover mowing. No broadscale herbicide application.
Reduce but do not remove contours	The presence of panels will marginally increase % runoff. Contours will catch this.	Repair breached contours and reduce wall height	Maintain the integrity of site contours	Repair any breaches to maintain the integrity of site contours
Gently direct water to the north of site into the existing channel	The pre-existing channel can be enhanced for biodiversity and stormwater control.	Batter existing erosion cuts and revegetate. Install leaky weir structures in stream to slow water	Maintain the integrity of swales / leaky weirs, installing sediment controls as required around excavations	Maintain and repair as necessary the integrity of swales / leaky weirs

2.0 Preserve and improve biodiversity and ecosystem function values

It is both easy and ethical to make space for nature and doing so positions Council as a leader in developments of this type. Simple, low-cost management actions will enable the site to create both energy and habitat for improved natural values. Construction and operation of a solar generator on the site will result in increased habitat and resource opportunities for threatened species, most notably the critically endangered Regent Honeyeater.

Activity	Why	Pre-construction	During construction	Ongoing Operation
Minimise vegetation disturbance	All vegetation supports wildlife which is part of the food chain, especially insects	Maintain light/nil stocking rates or intensive cell grazing techniques	Contractors to prepare and put in place environmental Management plan that minimises vegetation clearance and includes for remedial works if required	Manage groundcover to allow plant flowering and some long growth for bird seed and spider habitat
Keep biomass on site	Logs and mulch can be used to create habitat, control water and control weeds	Allow trees to grow and watch for nesting habitat	Reposition any felled trees to create habitat for birds, reptiles, etc. Create chip mulch for bank stabilisation	Use mulching mowers or stock for grass control
Biodiverse veg screening	It is possible to have both visual barriers and create quality habitat	Align fencing on lot boundaries to create a managed screening zone. Pre-rip planting lines. Plant when the season is good	Maintain planting through weed suppression and maintenance watering	Complete infill planting where necessary. Water as required for first 2 years.

Encourage pollinators	Pollinators are important to agriculture, gardens and bushland	Avoid use of systemic pesticides and allow all plants to flower	Avoid use of systemic pesticides	Encourage flowering groundcover. Host beekeeper hives. Construct "bee hotels"
Enhance stormwater design for habitat	It is possible to create both effective stormwater control and quality habitat	Integrate leaky weirs into all stormwater ways, especially off hard surfaces. Create a 'tank and shallows' profile for detention pond	Correctly manage runoff with sediment controls. Repair/maintain stormwater structures as required until vegetation is sustained	Observe wildlife and enjoy!

3.0 Be a good neighbour

Solar farm operators are obliged to fulfil the same obligations that any rural landholder carries. In addition, the likely proximity of future urban development adds a further layer of responsibility.

Activity	Why	Pre-construction	During construction	Ongoing Operation
Control noxious weeds	Some introduced plants are bad for agriculture and create allergens for people	Observe the prevalence of any noxious weeds	Mechanically remove weeds or selectively spray as appropriate	Include weed observation and control logs in O&M schedule
Control fire risk	This is a primary responsibility for all landowners	Maintain low vegetation buffer zones around boundaries.	Maintain fire suppression equipment on site. Maintain low-veg buffers. Cut or crash graze long grass	Maintain fire suppression equipment on site. Maintain low-veg buffers. Cut or crash graze long grass
Minimise noise	No-one likes a noisy neighbour!	Continue as normal	As per CEMP.	Operate equipment, such as slashers, brush cutters, etc during permissible hours
Minimise peak runoff	To mitigate the risk of increased storm surges	Repair breached contours. Construct detention basin, stabilise erosion and install leaky weirs.	Install temporary and permanent stormwater control structures first and maintain them.	Maintain structures and ensure adequate capacity in detention pond
Soften the visual impact	Not everyone loves the look of solar panels.	Start vegetation screening activities	Complete and maintain vegetation screening plantings	Maintain screening vegetation including infill/replacement plantings
Improve northern access track	Avoid the need to organise site access through Caerleon	Undertake modest grading to formalise access including stabilising the existing track.	Top dress if required, further stabilise and monitor drainage	Monitor track condition and repair any holes, etc if they develop.



Plan of Works

The works required for each stage are set out below.

Preconstruction

- Grade and stabilise to formalise existing track.
- Improve and monitor groundcover for fire risk and either crash-graze or mow as required.
- Remove existing agricultural fencing and replace along eastern boundary.
- Pre-rip tree planting lines and order plants.
- Repair breaches in contour banks, reduce height and batter.
- Undertake tree clearance and repositioning/mulching.
- Construct detention basin/wetland.
- Stabilise/batter erosion banks and install leaky weirs.

During construction

- Install, maintain and repair stormwater controls as appropriate.
- Complete plantings for vegetation screening and fence.

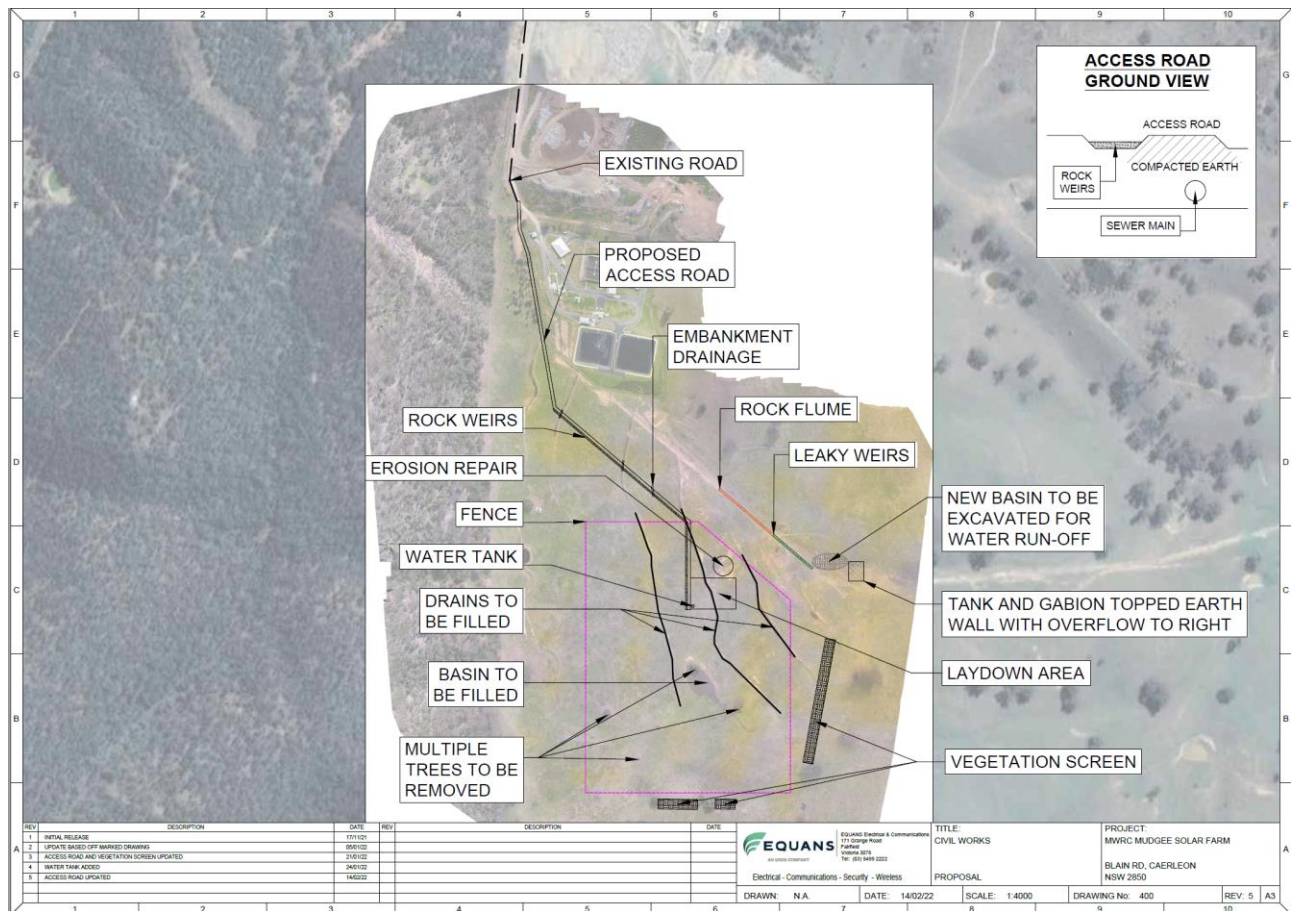
Ongoing operation

- Complete mowing / brush-cutting and/or crash-grazing as appropriate to preference low grasses.
- Water, weed, replace and mulch vegetation plantings as required.
- Monitor, maintain and repair leaky weirs, erosion control structures and contours if required.



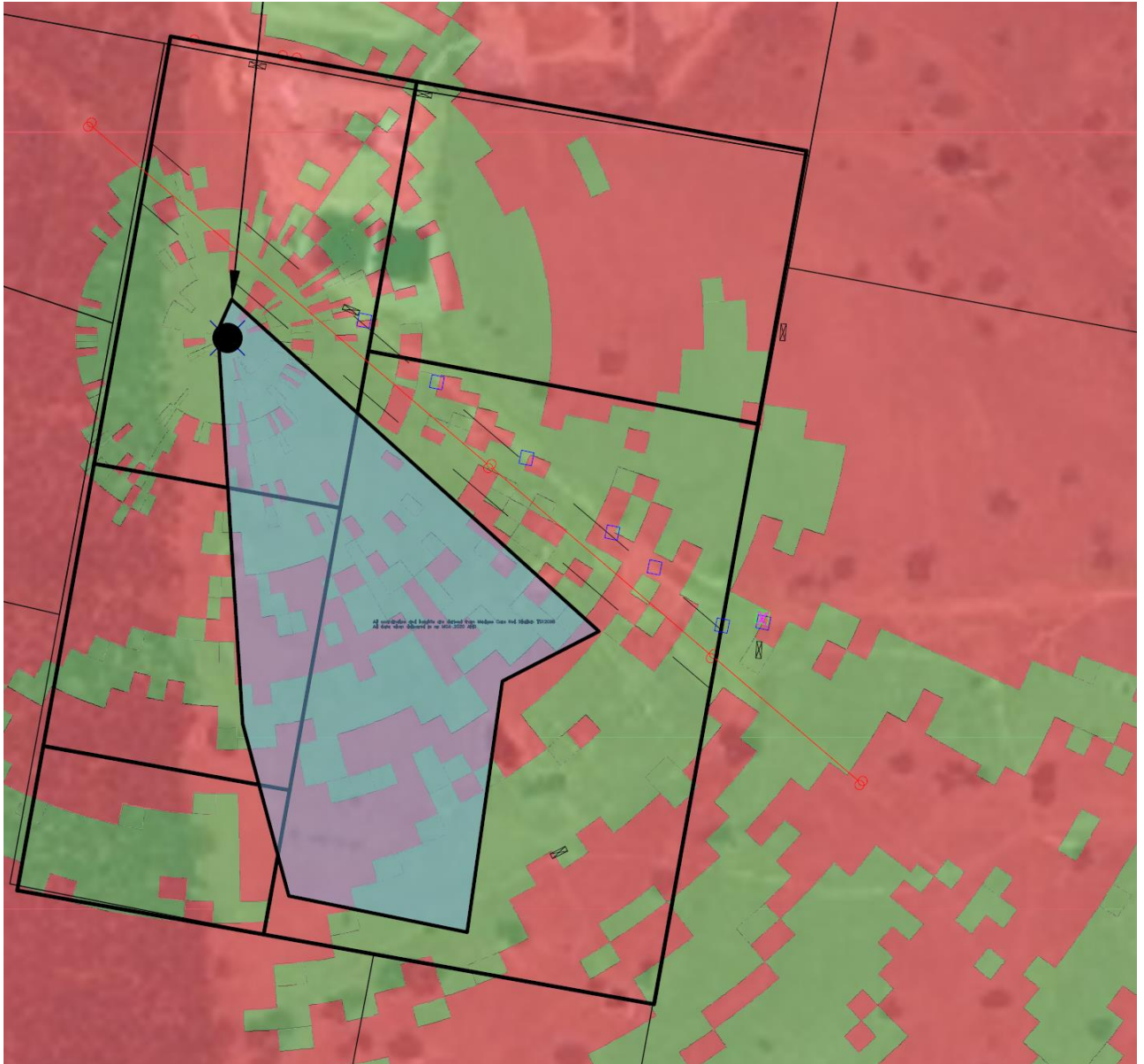
Site plan of works

The image below represents a high-level plan of works and is subject to feedback from appropriately skilled earthmoving contractors.



Triaxial Consulting produced a 3km radius Visual Plan based on Lidar data and with a reference point slightly above the highest extent of the solar array. An excerpt of this plan is included below to indicate which sections of boundary require, or would benefit most from, vegetation screening.

The results of this mapping were factored into designing vegetation screening for the eastern boundary from its intersection with the watercourse south to an existing large tree near the south-east corner. On the southern boundary, vegetation will extend 50m east and west from the existing mature trees.



Methodology – vegetation screening

MWRC have adopted the revegetation approach promoted by local group Watershed Landcare who have developed a Native Species Revegetation Guide. The guide lists suggested species for a range of situations, the most relevant to this project being “Trees and Shrubs suitable for Flats and Lower Slopes areas in the MWRC” Ref. <http://watershedlandcare.com.au/documents/resources/NativeSpeciesRevegetationGuide.pdf>

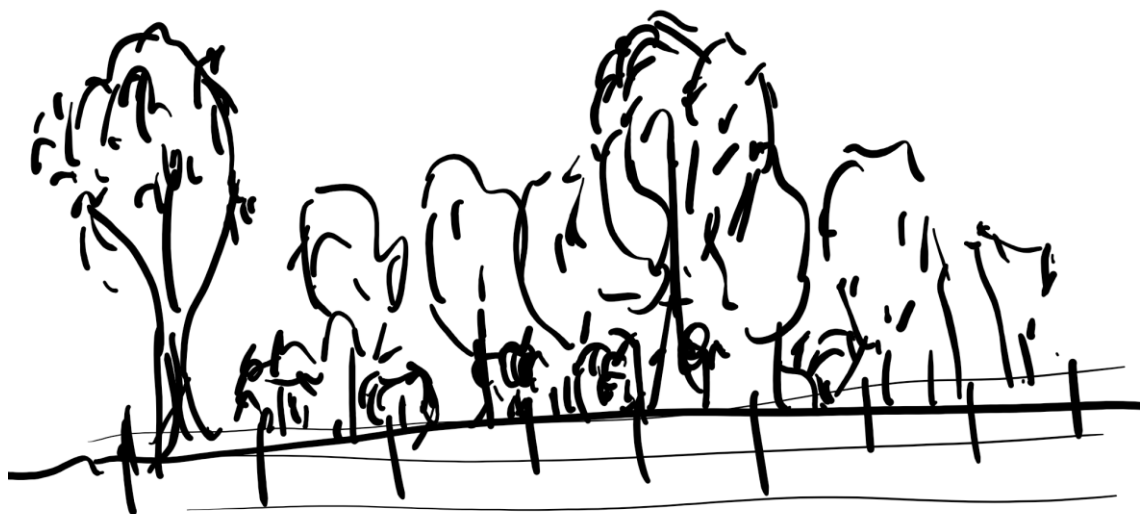
TREES and SHRUBS suitable for MID & UPPER SLOPE areas in the MWRC.			Ilford	Rylstone/Kandos	Olinda	Pyramul	Queens Pinch	Hargraves	Lue	Mudgee	Piambong	Cooyal	Goolma	Gulgong	Turill	Wollar	Upper Bylong
Common Name	Scientific Name	Comments															
Black Cypress	<i>Callitris endlicheri</i>	Narrow tree to 15m, stony rocky soils	X	✓	X	X	X	±	✓	✓	✓	✓	✓	✓	✓	✓	✓
White Cypress	<i>Callitris glaucophylla</i>	Narrow tree to 20m, mostly sandy soils, widespread	X	X	X	±	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kurrajong	<i>Brachychiton populneus</i>	To 20m, sandy loams, good shade & fodder tree	✓	✓	✓	±	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	±
White Box	<i>Eucalyptus albens</i>	To 25m, various fertile soils	X	✓	X	±	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Broad-leaved Ironbark	<i>Eucalyptus fibrosa</i>	To 35m, shallow infertile soils	X	X	X	±	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	X
Mountain Gum	<i>Eucalyptus dalrympleana</i>	To 40m, loamy, sandy soils at higher elevations	✓	✓	✓	±	X	X	X	X	X	X	X	X	X	X	X
Slaty Box	<i>Eucalyptus dawsanii</i>	To 30m, loamy soils of moderate fertility	X	X	X	X	X	X	X	X	X	✓	X	✓	✓	✓	✓
Tumble-down Red Gum	<i>Eucalyptus dealbata</i>	To 15m, skeletal soils	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bundy Box	<i>Eucalyptus goniocalyx</i>	To 15m, dry shallow soils, sloping sites	±	±	±	✓	✓	✓	✓	✓	✓	✓	X	✓	✓	±	✓
Red Stringybark	<i>Eucalyptus macrorhyncha</i>	To 30m, shallow poor soils on rises, widespread	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X
Western Grey Box	<i>Eucalyptus microcarpa</i>	To 25m, loamy soils of moderate fertility	X	X	X	±	±	±	±	✓	✓	✓	✓	✓	✓	✓	✓
Red Box	<i>Eucalyptus polyanthemus</i>	To 20m, light shallow soils, widespread	±	✓	±	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X
Grey Gum	<i>Eucalyptus punctata</i>	To 35m, soils of low to moderate fertility	✓	✓	✓	±	X	X	✓	±	±	✓	X	✓	✓	✓	✓
Scribbly Gum	<i>Eucalyptus rossii</i>	To 20m, poor shallow stoney soils	✓	✓	✓	±	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X
Mugga Ironbark	<i>Eucalyptus sideroxylon</i>	To 35m, light poor soils	X	X	X	±	±	✓	✓	✓	✓	✓	✓	✓	✓	✓	X
Small-leaved Stringybark	<i>Eucalyptus tenella</i>	To 15m, poor shallow soils on rises	✓	✓	✓	✓	±	X	X	X	X	X	X	X	X	X	X
Drooping She-oak	<i>Allocasuarina verticillata</i>	To 10m, dry rocky soils	±	±	±	✓	✓	✓	✓	✓	✓	✓	±	✓	✓	✓	✓
Hickory wattle	<i>Acacia implexa</i>	To 12m, variety of soils	✓	±	✓	✓	✓	✓	±	✓	✓	✓	✓	✓	✓	X	✓
Blue Bush	<i>Acacia caesiella</i>	1-3m, dry soils and rocky situations	±	✓	✓	±	±	✓	✓	✓	✓	✓	X	✓	✓	X	✓
Western Silver Wattle	<i>Acacia decora</i>	1-4m, variety of soils including rocky situations	✓	±	±	±	✓	✓	±	✓	✓	✓	✓	✓	✓	X	✓
Kangaroo Thorn	<i>Acacia paradoxa</i>	1-4m, variety of soils, widespread	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	±	✓	✓	✓	✓
Box-leaf Wattle	<i>Acacia buxifolia</i>	1-4m, dry soils, widespread	±	✓	±	✓	✓	✓	±	✓	✓	✓	✓	✓	✓	X	✓
Spiny Bitter Pea	<i>Daviesia genistifolia</i>	Slender shrub, 0.5-2m, mostly dry rocky or sandy sites	✓	✓	X	✓	✓	✓	±	✓	✓	±	✓	±	±	✓	✓
Hairy Wattle	<i>Acacia vestita</i>	Rounded shrub, 1-4m, variety of soils or sheltered gullies	X	✓	✓	X	X	✓	✓	✓	X	X	✓	X	X	X	X
Sticky Daisy Bush	<i>Olearia elliptica</i>	Rounded shrub, 1-2m, sandy or dark silty soils	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	X
Tree Violet / Gruggly Bush	<i>Meliclytus dentatus</i>	Spiny shrub 1-3m, loamy soils amongst rocks	X	✓	✓	✓	✓	±	✓	✓	±	±	X	✓	±	X	✓

Where shading of the solar array is likely to be problematic, species selected are limited to 15 m, otherwise all species are eligible for inclusion. Select grasses and forbs from the table below will also be included. While these are low growing plants and not valuable from a screening perspective, they will provide aesthetic and biodiversity value to the plantings.

GRASSES and FORBS suitable for MID & UPPER SLOPE areas in the MWRC.			Ilford	Rylstone/Kandos	Olinda	Pyramul	Queens Pinch	Hargraves	Lue	Mudgee	Piambong	Cooyal	Gulgong	Goolma	Turill	Wollar	Upper Bylong
Common Name	Scientific Name	Comments															
Weeping Grass	<i>Microlaena stipoides</i>	Cool season perennial, variety of soils, highly acid tolerant	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Snow Grass	<i>Poa sieberiana</i>	Perennial, widespread more common on well drained sites	✓	✓	✓	✓	✓	✓	✓	✓	✓	±	±	±	±	±	±
Speargrass	<i>Austrostipa scabra</i>	Widespread, light textured, well drained, or rocky soils	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Red Anther Wallaby Grass	<i>Rytidosperma pallidum</i>	Large perennial tussock, shallow infertile well drained soils	✓	✓	±	✓	✓	✓	±	✓	✓	±	±	±	✓	✓	±
Barbed-wire Grass	<i>Cymbopogon refractus</i>	Perennial, widespread, free draining soils of lower fertility	±	±	±	✓	✓	✓	✓	✓	✓	✓	✓	✓	±	✓	X
Mountain Wallaby Grass	<i>Rytidosperma monticola</i>	Widespread, not common, free draining acid soils	±	✓	±	✓	X	±	±	✓	±	✓	X	✓	±	±	±
Wallaby Grass	<i>Rytidosperma racemosum</i>	Widespread and common, variety of soils & habitats	±	✓	±	✓	✓	✓	✓	✓	✓	±	±	±	±	±	±
Native Pennyroyal	<i>Mentha satereioides</i>	Mat forming perennial forb, widespread sandy to clay rich soils	±	±	±	✓	✓	✓	±	✓	✓	±	✓	✓	±	±	✓
False Sarsaparilla	<i>Hardenbergia violacea</i>	Climbing or prostrate subshrub, widespread various habitats	X	±	±	✓	✓	±	±	✓	±	✓	✓	✓	X	X	✓
Rock Isotome	<i>Isotoma axillaris</i>	Erect perennial forb, rock crevices & shallow sandy soils	X	✓	✓	✓	✓	✓	✓	±	✓	±	✓	±	✓	✓	X
Common Fringe Lily	<i>Thysanotus tuberosus</i>	Tuberous perennial, variety of soils & habitats	✓	✓	±	✓	✓	✓	±	✓	±	±	X	±	±	±	±
Yellow Buttons	<i>Chryscephalum apiculatum</i>	Perennial forb, widespread various soils & habitats	✓	✓	±	✓	✓	✓	✓	✓	±	✓	✓	✓	✓	✓	✓
Ivy Goodenia	<i>Goodenia hederacea</i>	Low growing perennial forb, widespread various soils & habitats	✓	±	X	✓	✓	✓	±	✓	✓	✓	±	±	✓	✓	X
Flannel Flower	<i>Actinotus helianthii</i>	Annual or perennial forb, often shallow sandy soils	X	±	✓	✓	X	X	✓	✓	X	✓	X	✓	±	±	±
Variable Sword-sedge	<i>Lepidosperma laterale</i>	Mostly sandy soils, often rocky hillsides	✓	±	✓	X	X	✓	✓	X	✓	✓	±	±	±	±	X
Rough Saw-sedge	<i>Gahnia aspera</i>	Widespread, dryish situations	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	±
Australian Bindweed	<i>Convolvulus erubescens</i>	Trailing perennial, various soils with some moisture	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	±	✓	±
Austral Bugle	<i>Ajuga australis</i>	Sheltered sites, prefers loamy soils	±	±	✓	±	±	✓	±	✓	✓	✓	✓	✓	±	±	✓
Black-anthered Flax-lily	<i>Dianella revoluta var. revoluta</i>	Clumping to spreading perennial, pref. dryish sandy loams	✓	±	✓	✓	✓	✓	±	✓	✓	✓	✓	✓	±	±	±
Stinking Pennywort	<i>Hydrocotyle laxiflora</i>	Creeping perennial forb, rock crevices, sandy/loamy/skeletal soils	✓	±	✓	✓	✓	±	±	✓	✓	✓	✓	✓	±	±	±
Native Geranium	<i>Geranium solanderi</i>	Ascending perennial to 50cm, widespread, various soils	✓	✓	✓	✓	✓	✓	±	✓	✓	✓	✓	✓	±	✓	✓
Kidneyweed	<i>Dichondra repens</i>	Creeping perennial widespread, various soils & habitats	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Swainson Pea	<i>Swainsona galegifolia</i>	Perennial to 1m, widespread, various soils & habitats	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Native Soya	<i>Glycine tabacina</i>	Slender trailing perennial, widespread various soils	±	±	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Spiny-headed Mat-Rush	<i>Lomandra longifolia</i>	Clumping perennial to 1m, variety of soils & habitats	✓	✓	✓	±	✓	✓	✓	✓	✓	✓	±	±	±	±	±
Many-flowered Mat-Rush	<i>Lomandra multiflora</i>	Perennial, widespread var. soils, widespread woodland & forest	✓	✓	✓	✓	✓	✓	✓	✓	±	±	±	±	±	±	±

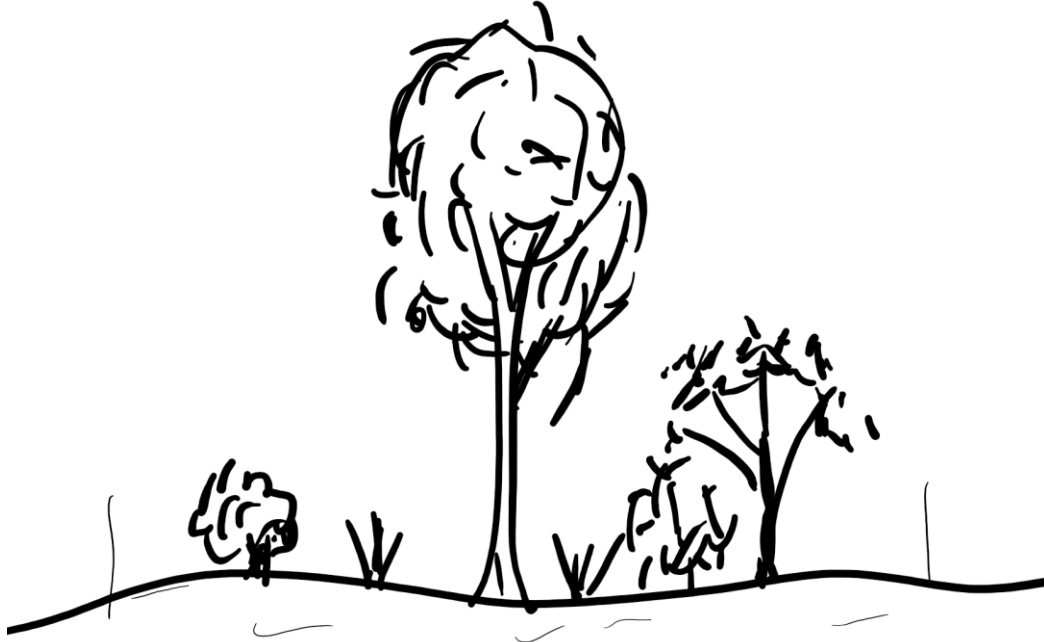
Plants are to be planted using best practice revegetation techniques such as inclusion of micro-nutrients and growth stimulants, water crystals, mulching, core-flute guards and follow-up watering and maintenance. Pre-ripping and weed control are required prior to planting.

In order to create an effective screen and also to optimise biodiversity outcomes, the planting zone will be a minimum of 10 – to a maximum of 30m wide where possible. To avoid the appearance of a vegetation wall, plantings will be structured to create a mixed profile as per the image below.



Vegetation screen – Transverse View

In section view, the vegetation will be planted with taller trees in the centre tapering out to shrubs and bushes on the outside. This creates both a stronger barrier to wind and a more dense visual screen but also diversifies the potential for feed and habitat.



Vegetation screen – Section View

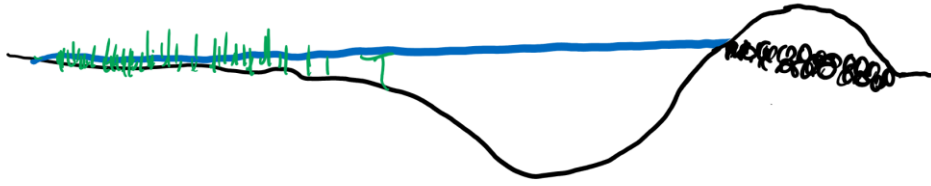
Methodology – erosion control and waterway stabilisation

A 'soft engineering' approach will be taken to erosion control and waterway stabilisation, preferencing natural materials and the establishment of vegetation to de-energise water rather than engineered solutions like concrete, geo-textiles or plastic piping.

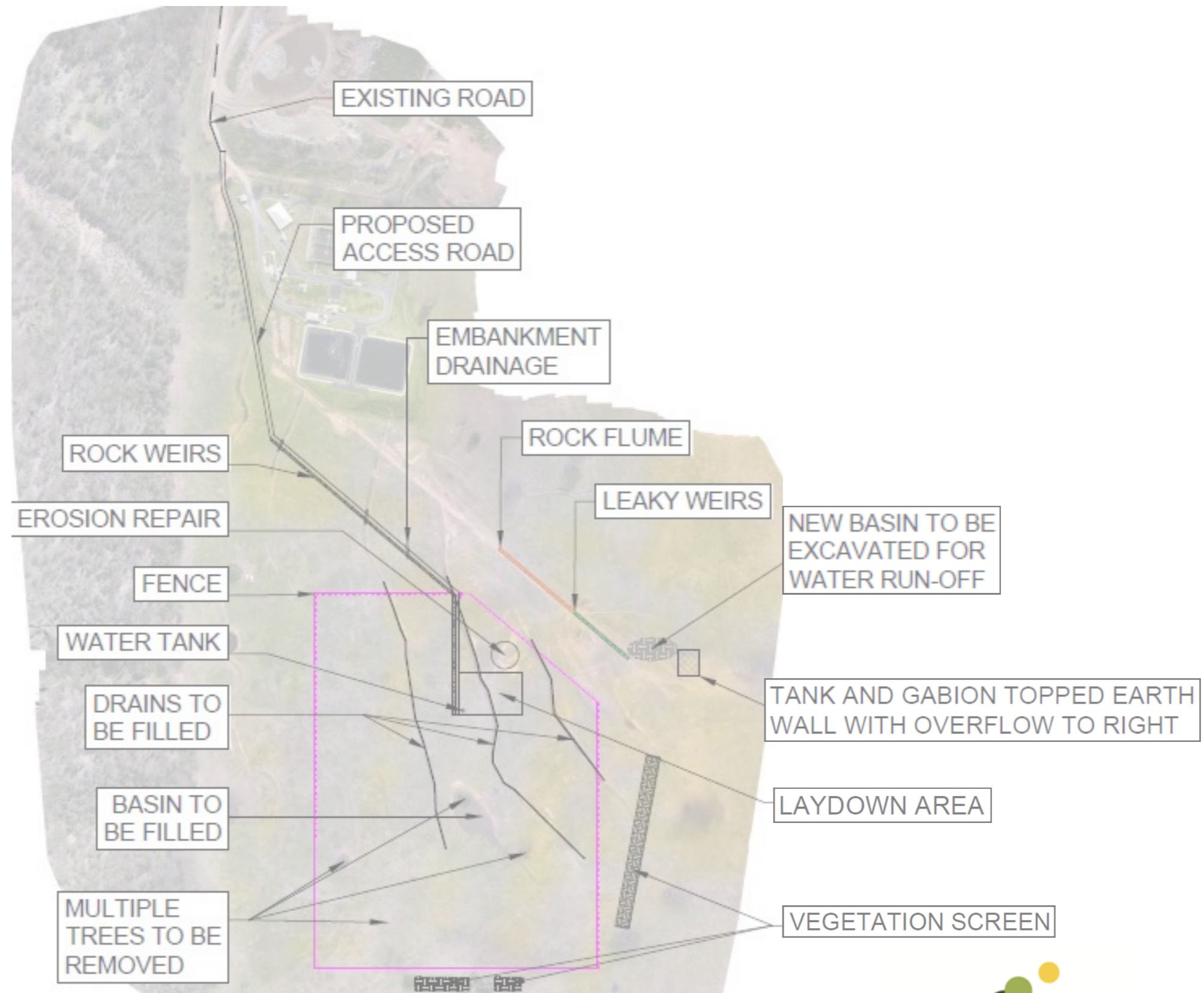
That said, geofabrics may be an important part of maintaining structural integrity in the first 2 years as silt and vegetation naturally stabilise structures. Simple, well placed leaky weirs constructed of stone and or logs/branches will regularly intersect all draining lines but particularly the main waterway at the north of site.

There are a range of resources available at <https://www.catchmentsandcreeks.com.au/index.html> including guides on type and placement of structures and Standard Drawings.

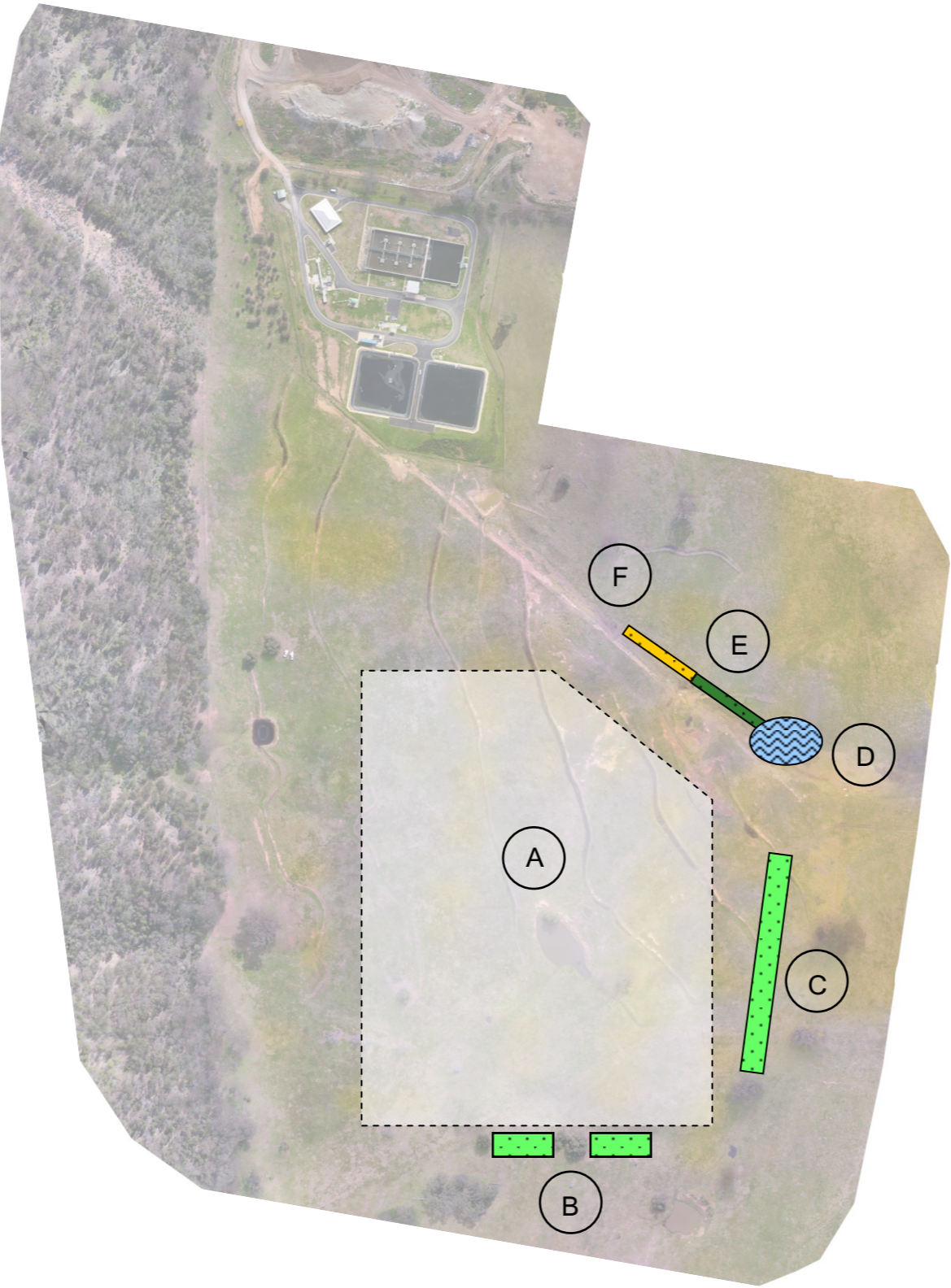
The detention basin is designed to consist of a deeper tank (creating a permanent source of water in drought) and shallows that allow reeds and sedges to flourish. A rock flume stabilises the overflow as indicated in the drawing below.



Cross section of detention basin



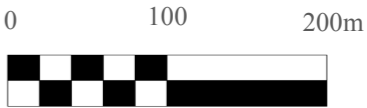
MUDGEES SOLAR FARM LANDSCAPE PLAN



DETAIL

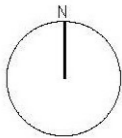
- A - Area of Solar Farm Civil Works
- B - Southern Vegetation Corridor
- C - Eastern Vegetation Corridor
- D - Sediment Basin Wetland
- E - Bio-swale Leaky Weirs
- F - Rock Armoured Channel

ISSUE	DATE	NOTE
A	11/04/2022	Draft for Review
B	13/04/2022	Final for Approval
C		

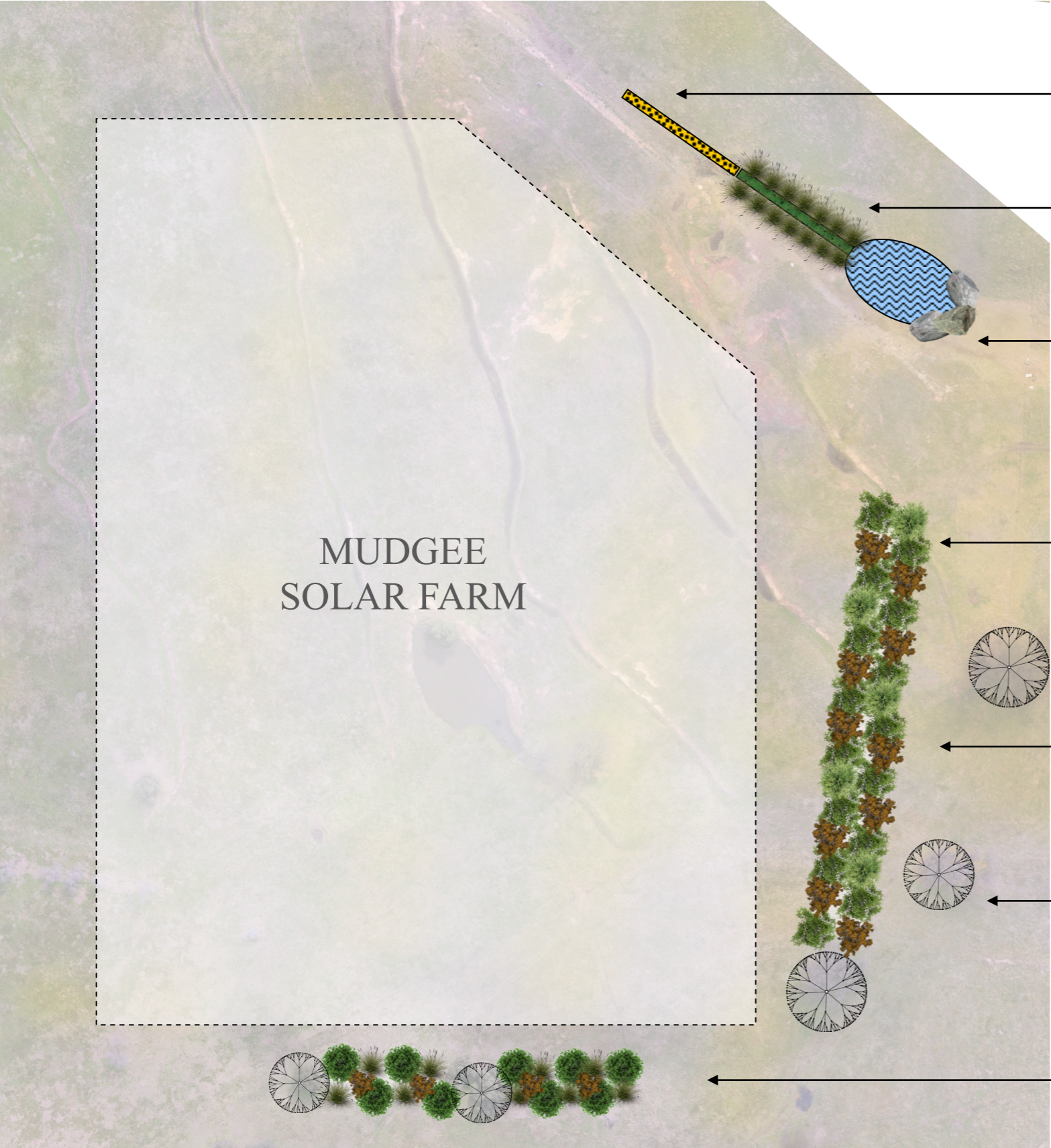


DATE	PAGE
APRIL 2022	2
DRAWN	DRAWING TITLE
TS	Site Function
CHECKED	SITE ADDRESS
AB	Blain Road
	CAERLEON
SCALE	NSW 2850
@A3	

MWRC
SOLAR FARM
LANDSCAPE
PLAN



LANDSCAPE SITE FUNCTION



ROCK ARMoured DRAINAGE CHANNEL WILL DIRECT SURFACE WATER INTO WEIRS AND SEDIMENT BASIN AND REDUCE EROSION AND SEDIMENTATION.

LEAKY WEIR BIO-SWALE WILL SLOW WATER USING CONTOUR AND VEGETATION TO IMPROVE WATER QUALITY.

SEDIMENT BASIN WILL BE RETAINED AND CONVERTED INTO A WETLAND AFTER THE CONSTRUCTION STAGE OF THE PROJECT IS COMPLETE.

EASTERN VEGETATION CORRIDOR IS APPROXIMATELY 200M LONG AND WILL BE PLANTED WITH NATIVE TREES, SHRUBS AND GROUNDCOVER TO CREATE HABITAT AND A VISUAL SCREEN.

VEGETATION CORRIDORS ARE 20M WIDE WITH VARYING SPACINGS FOR PLANT TYPE. CORRIDORS HAVE THREE ROWS OF TREES AND FOUR ROWS OF SHRUBS WITH SCATTERED GROUNDCOVER.

REMNANT TREES TO BE RETAINED AND ENHANCED WITH NATIVE SCREEN PLANTING.


SOUTHERN VEGETATION CORRIDOR IS APPROXIMATELY 100M LONG AND WILL BE PLANTED WITH NATIVE TREES, SHRUBS AND GROUNDCOVER TO CREATE HABITAT AND A VISUAL SCREEN .

ISSUE	DATE	NOTE
A	11/04/2022	Draft for Review
B	13/04/2022	Final for Approval
C		

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DATE	PAGE
APRIL 2022	3
DRAWN	DRAWING TITLE
TS	Concept Plan
CHECKED	SITE ADDRESS
AB	Blain Road
	CAERLEON
	NSW 2850
SCALE	
@A3	

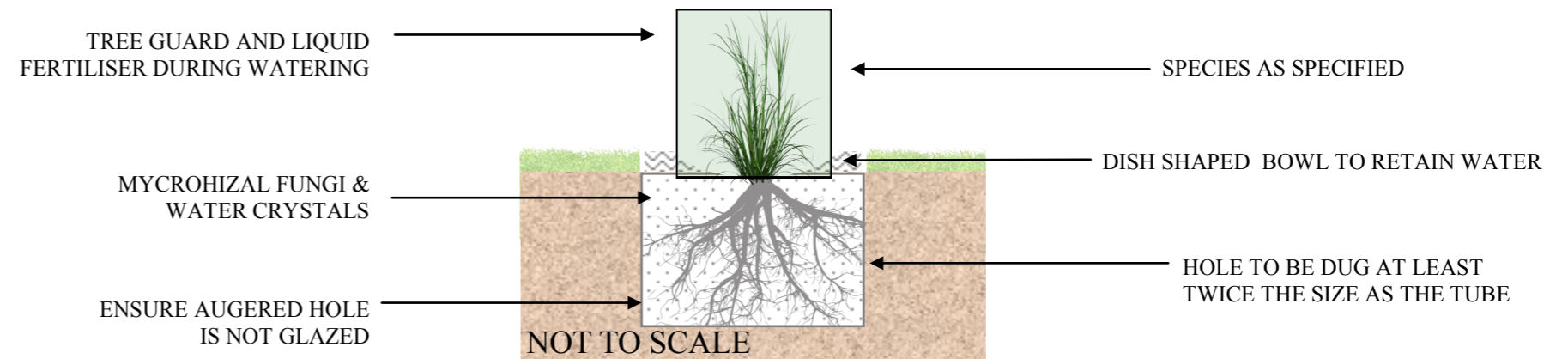
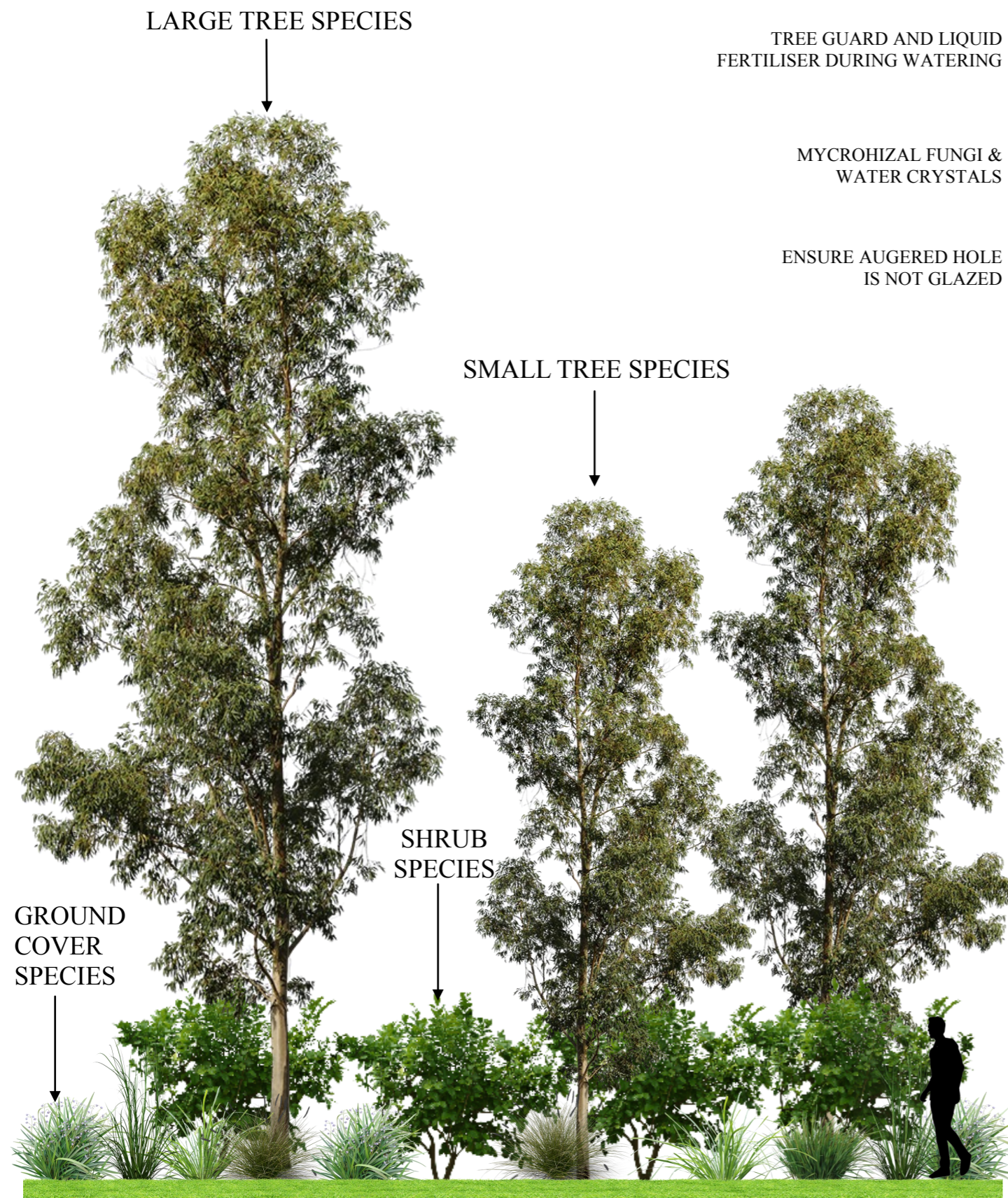
MWRC
SOLAR FARM
LANDSCAPE
PLAN



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LANDSCAPE CONCEPT PLAN



SPECIES	TYPE	HEIGHT	SPACING	# Tubes
<i>Eucalyptus albens</i>	Large Tree	30m	5m	20
<i>Eucalyptus sideroxylon</i>	Large Tree	35m	5m	20
<i>Eucalyptus dalrympleana</i>	Large Tree	40m	5m	20
<i>Eucalyptus punctata</i>	Large Tree	35m	5m	20
<i>Callitris endlicheri</i>	Small Tree	15m	5m	20
<i>Brachychiton populneus</i>	Small Tree	20m	5m	20
<i>Callitris glaucophylla</i>	Small Tree	20m	5m	20
<i>Eucalyptus tenella</i>	Small Tree	15m	5m	20
<i>Acacia implexa</i>	Shrub	12m	5m	40
<i>Acacia decora</i>	Shrub	4m	5m	40
<i>Acacia buxifolia</i>	Shrub	4m	5m	40
<i>Acacia vestita</i>	Shrub	4m	5m	40
<i>Olearia elliptica</i>	Shrub	2m	5m	40
<i>Allocasuarina venticillata</i>	Shrub	10m	5m	40
<i>Mircolaena stipoides</i>	Ground	1m	2m	60
<i>Poa sieberiana</i>	Ground	1m	2m	60
<i>Dianella revoluta</i>	Ground	1m	2m	60
<i>Lomandra longifolia</i>	Ground	1m	2m	60
<i>Rhytidosperma sp.</i>	Ground	1m	2m	60
<i>Austrostipa scabra</i>	Ground	1m	2m	60
<i>Swainsona galegifolia</i>	Ground	1m	2m	60
<i>Cymbopogon refractus</i>	Ground	1m	2m	60

If species aren't available refer to Watershed Landcare species list in MWRC Solar Farm Land and Water Management Plan.

ISSUE	DATE	NOTE
A	11/04/2022	Draft for Review
B	13/04/2022	Final for Approval
C		

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DATE	PAGE
APRIL 2022	4
DRAWN	DRAWING TITLE
TS	Planting Specification
CHECKED	SITE ADDRESS
AB	Blain Road
	CAERLEON
	NSW 2850
SCALE	
@A3	

MWRC
SOLAR FARM
LANDSCAPE
PLAN

VEGETATION CORRIDOR SPECIFICATION

Attachment D: Submission

Our Ref: 319171_LEO_D003_Submission

1 December 2021

The General Manager
Mid-Western Regional Council
PO Box 156
MUDGEES NSW 2850

Attention: Ms Kayla Robson

Dear Ms Robson

SUBMISSION – DEVELOPMENT APPLICATION – PROPOSED SOLAR ENERGY SYSTEM AT LOT 289 DP 756894, 33 BLAIN ROAD CAERLEON NSW

COUNCIL REF: DA0117/2022

I refer to previous correspondence received from Mid-Western Regional Council dated 24 November 2021 in respect of the abovementioned development application.

The following submission has been prepared on behalf of our client, Caerleon Mudgee Pty Limited, and is provided to Council for consideration in determining the subject development application.

Caerleon Mudgee Pty Limited is the current landowner and developer of the property adjoining the subject site (Lot 418 DP 1272614, 26 Hone Creek Drive, Caerleon) known as Caerleon Estate. As Council is aware, Caerleon Estate is the subject of a large primarily residential development ultimately creating over 2000 lots supported by an integrated commercial hub as identified by the B4 Mixed Use zoning on the site. A copy of the proposed development plan is provided as attached.

Currently, over 110 lots have been registered with future plans to develop further as shown on the attached plan and supported by the existing land use zoning regime applying to the site. Although existing residential development is situated at 1km from the subject site, it is anticipated that impacts will be greater as the development creeps south and west.

The concerns relating to the potential impacts on my client's property are as follows:

- Obstruction of natural scenic views as currently enjoyed by the residential development;
- Glare emitted to the east due to the angle and positioning of the proposed solar panels;
- Noise and dust emitted during the construction phase;
- Long term noise generated from inverter/s;
- Proposed landscaping and its effectiveness to shield glare from the panels;
- No initial consultation conducted with our client relating to a proposed "alternate access road" through Lot 418 as listed on the Site Overview Plan attached to the DA notice;

- Sediment and erosion control measures; and
- Stormwater management and detention basin details.

Obstruction of scenic views and effects of glare

The subject site for the proposed solar system is located on and adjoining visually sensitive land as identified on the Visually Sensitive Land Map Sheet CL1_006. The mapping directly relates to the local planning provisions under 6.10 of the Mid-Western Regional Local Environmental Plan 2012 as follows:

"6.10 Visually sensitive land near Mudgee

(1) The objective of this clause is to protect the visually and environmentally significant land on the urban fringe of the town of Mudgee.

(2) This clause applies to land shown as "Visually Sensitive Land" on the [Visually Sensitive Land Map](#).

(3) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development—

(a) will complement the visual setting forming the backdrop to Mudgee, and

(b) will be designed, set back and sited to respond sympathetically to the landform of the site on which the development is proposed to be carried out and will minimise visual intrusion."

The proposed development is for the purposes of a 5MW solar energy system with an overall area of more than 8.6 hectares and is to be constructed on the site at a height of 2.6m. Due to the relatively steep topography and the natural landscape to the west of the subject site, it is considered that the proposed development would obstruct existing views currently enjoyed by the residents to the east.

Additionally, the further significant issue arising from the development is the concern for glare emitted by the solar panels and their relative positioning in relation to the existing and future residential development of land to the east.

The visual plan provided as part of the DA, does not reference the proposed residential development proposed on Caerleon which makes the anticipated visual impacts difficult to interpret. However, from the information shown on the plan, it is apparent that the object would still be visible by a large portion of the adjoining residential allotment.

The development proposal mentions a proposed vegetation screen to mitigate the visual impacts of the new development. There is no detail provided to determine the plant species, height, width and densities, timing, maturity of plantings and ongoing management responsibilities required to establish and maintain the proposed vegetation.

For these reasons, the visual impacts are uncertain and require further consideration.

Operational and Construction Noise Impacts

The proposed development will include the construction and operation of a 5MW solar energy system. The potential noise emitted by the construction and operation of the proposed development are assessed in the supporting noise and vibration assessment. It should be noted that the modelling as mentioned in Logger 2 is located at the extent of the existing residential development on Caerleon located on the adjoining Lot 418, which makes it difficult to determine potential impacts on future residential development as it progresses west and in

due course will be located right up to the boundary of the solar farm. It should be noted that Council has been aware of this residential development since rezoning of the land in 2013.

In addition, the location of both the primary and alternative inverter are not consistent with the other site plans provided with the development application. In respect to the location of the alternative inverter, consideration should be given to relocating from the eastern boundary further west.

To accurately assess the potential impacts, it is requested that noise modelling be undertaken across additional points on the adjoining Lot 418, including at the property boundary with consideration of land contouring and the future residential development as proposed in the Caerleon Estate concept plan.

The other concern is the potential noise impacts during the construction phase of the development. It is considered appropriate that prior to construction a noise management plan be prepared and provided to adjoining landowners for comment.

Stormwater Management and Sediment Control

The Stormwater Management Plan provided with the development application only models the pre-development flow of stormwater across the site and the impacts on the proposed development.

The proposed development will involve earthworks and construction of solar panels to an area of over 8.6 hectares. It is anticipated that the increased surface area of the panels and levelling/ foundation construction of the site would impact the existing nature of stormwater across the site.

The Stormwater Management Plan needs to provide consistency with the Site Overview Plan which identifies the installation of a new detention basin. At this time, it is unclear how the proposed development will manage stormwater and the potential for increased impacts on the property downstream (Caerleon Estate).

It is considered necessary to request that post-development stormwater rates are demonstrated to remain at pre-development rates to ensure management issues do not become the responsibility of the adjoining property.

Detail in respect of erosion and sediment control also needs to be provided up front as part of the development application. I note that it has been mentioned in the Statement of Environmental Effects, however it is unclear what measures will be provided to mitigate the impacts on Lot 418.

Alternative Access Road

The Site Overview Plan and PV Layout Plan both show a proposed alternative access road to the development site. After meeting Council and its consultants on-site on Thursday, it is now understood that Council does not intend to build this access road, however, it would be interested in potentially trenching cable along this route, particularly if Caerleon Estate is looking to build a road in this area. Caerleon Mudgee, as the landowner, is happy to engage in consultation with Council to better understand how this could work and what is required for this to happen.

In summary, my client is opposed to the development of a solar energy system as proposed by DA0170/2022, due to the unresolved issues as mentioned in this correspondence.

Please call or email Nicholas Allatt on 0431 186 069 or nicholas.allatt@premise.com.au with any questions regarding this matter.

Yours faithfully

Premise Australia Pty Ltd



Nicholas Allatt
Town Planner

Attachments:

1. Proposed Residential Subdivision Lot Layout Plan

