STATEMENT OF ENVIRONMENTAL EFFECTS

Establishment of a Solar PV Power Generation Plant

962 Black Gully Road, Werris Creek NSW 2341

PREPARED FOR WYNERGY | OCTOBER 2020

KDC

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1 INTRODUCTION

This Statement of Environmental Effects (SEE) is submitted to Liverpool Plains Shire Council (Council) in support of a Development Application (DA) for a solar photovoltaic (PV) power generation plant at part Lot 1 in DP509915; 962 Black Gully Road, Werris Creek 2341 (the site).

Specifically, the proposed development includes:

- Establishment of a grid-connected solar photovoltaic (PV) plant including associated electrical generation, supplying no greater than 5 megawatts (MW AC);
- Installation of an estimated 12,960 PV panels using a single axis tracking system, tilted +/- 60° along the north-south axis;
- Access road varying between 3m and 5m in width;
- Earthworks required for site preparation including and a concrete slab to support the ancillary infrastructure and underground cabling; and
- Other associated works as shown on the Plans at Appendix A.

This SEE has been prepared by KDC Pty Ltd (KDC) on behalf of Wynergy Pty Ltd. It describes the site, its environs, the proposed development and provides an assessment of the proposal in terms of the matters for consideration under Section 4.15 (1) of the *Environmental Planning and Assessment Act 1979* (EP&A Act 1979). It should be read in conjunction with the supporting information and Plans prepared by Daniel Lawless Drafting Service appended to this report (Appendix A).

1.1 CONSULTATION WITH COUNCIL

A formal pre-development application meeting was held on 9 July 2020 via Microsoft Teams with Günther Weidenmann (Town Planner), Alice Elsley (Senior Town Planner) and Ian George (Economic Development Officer) of Liverpool Plains Shire Council. At this meeting, the proposed development was presented by the proponent with a general discussion around planning implications. No formal pre-DA minutes were taken. Overall, the meeting feedback was positive.

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2 THE SITE AND SURROUNDS

2.1 SITE DESCRIPTION

The land is known as 962 Black Gully Road, Werris Creek NSW 2341 and legally referred to as Part Lot 1 DP509915 (refer to Figure 1). A topographical and detail survey is included at Appendix H.

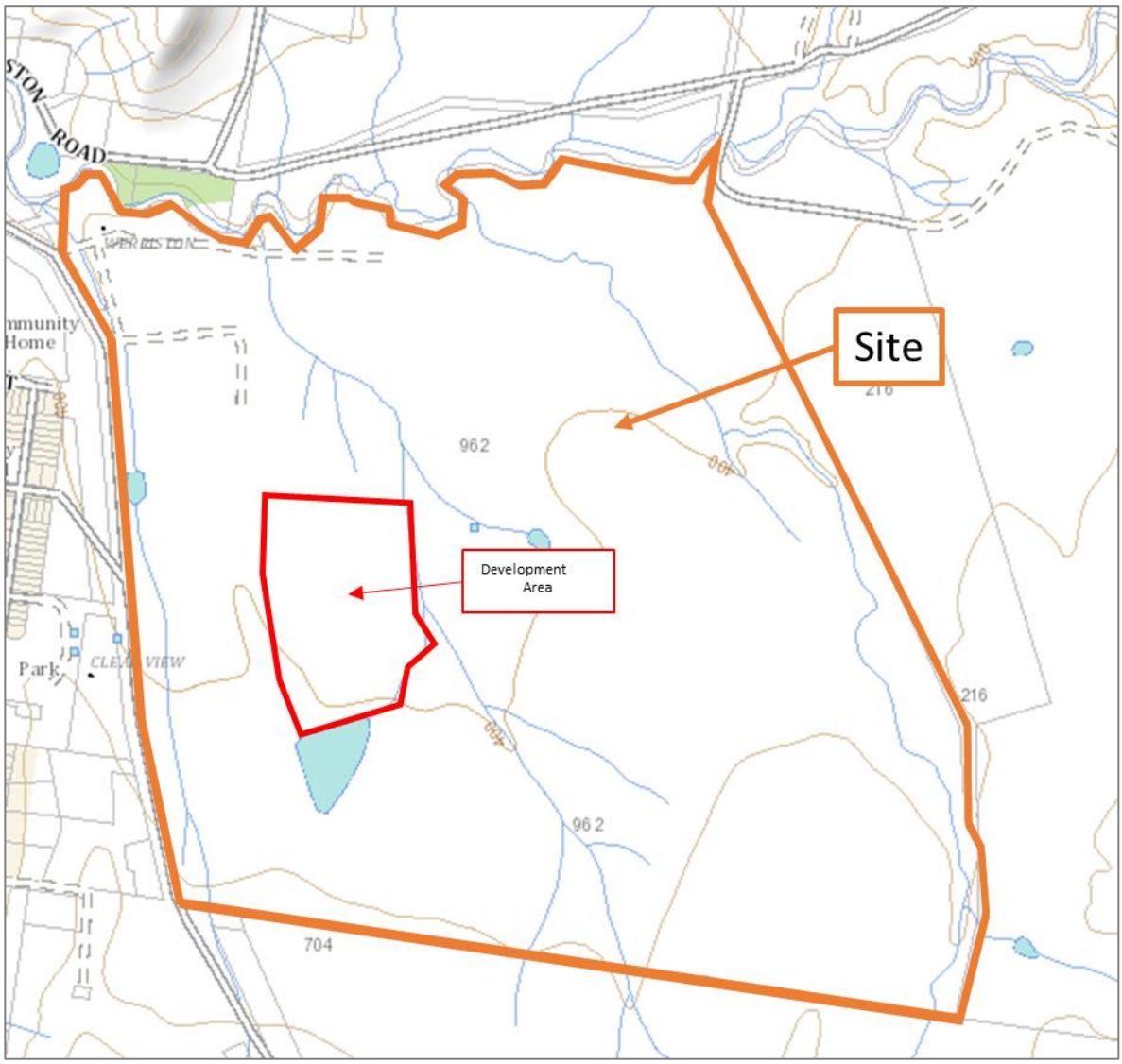
The land consists of a large rural type lot which is predominantly used for primary production and comprises scattered trees, low grassland, drainage lines and associated dams. A number of unnamed but mapped watercourses are present draining to Werris Creek which forms the northern boundary of the lot.

A dwelling house is located in the north western corner of the lot, outside the proposed development area, with access provided via a crossover from Russell Street. The lot contains electrical feeder lines connecting to an electrical substation located approximately 290m south of the site.

The development site extends to approximately 10ha and is comprised of exotic agricultural cropping and exotic grasslands.

Figure 1 – Locality Plan (Source: Six Maps)

Figure 2 – Cadastral Plan (Source: Six Maps)



2.2 SITE LOCATION AND CONTEXT

The site is located on the eastern side of Black Gully Road and Russell Street, within the Liverpool Plains Shire Council Local Government Area (LGA). West of the site is the main township of Werris Creek and is represented with largely residential dwellings, small retail and accommodation offerings and the Werris Creek Community Hospital. Approximately 440m to the north of the site is the Werris Creek waste management facility. To the south and east of the site is made up of rural land uses including primary production. The nearest dwellings are located approximately 500m to the west of the area to be developed on the opposite side of Black Gully Road.

3 PROJECT DESCRIPTION

The proposed agrivoltaic solar farm project is one of Wynergy's solar initiatives to be rolled out across regional Australia, with multiple benefits for rural and regional communities. The proposal aims to maximise solar energy production whilst at the same time coexisting with the existing agricultural production. It is intended that livestock would graze the land under the panels once the solar farm is constructed.

The proposal includes a no larger than 5MW grid-connected solar PV installation. Once established, the solar farm power generation will be connected and transmitted via the adjacent powerline originating from the existing substation of Black Gully Road.

The proposed development will erect approximately 12,960 solar PV panels each producing 405W. Other electrical generation infrastructure is proposed on the site including overhead transmission lines for grid connection to the adjacent substation, overhead or underground electrical conduits and cabling to connect the arrays, an onsite substation containing one transformer and associated switchgear, skid-mounted MV Power Station consisting of inverters, transformer and switchgear and internal inverter stations to allow conversion of DC module output to AC electricity. Due to the capacity of the inverter system, the proposed development will produce less than 5MW. Most of the infrastructure would be pre-fabricated off-site, delivered and assembled on-site.

The PV arrangement will consist of 216 ground mounted single axis trackers. The PV arrays will have a clearance above the existing ground surface and extend to approximately 2m at maximum tilt. The PV mounting structure would comprise steel posts driven to approximately 1.5m below ground using a small pile driver. Additional support structures will be attached to the piles, which would then support the PV panels.

The project layout has been designed to avoid native vegetation and mapped waterways. The proposed development will not require significant earthworks but rather involves trenching which is required for cabling of each PV array/module to inverters and a substation. Other minor earthworks are required including the establishment of the access road, drainage swales and batters, laydown area, and detention basin. The earthworks proposed will have minimal environmental impact and will be supported with appropriate sediment and erosion controls.

A 3m and 5m wide access road is proposed connecting the solar farm to Black Gully Road in the southwest portion of the lot. The solar farm will be fully fenced with 2.2m security fencing including barbed wire at the top. Gate access will be provided in the southwest corner. Once the plant has been commissioned, a small car park will remain for the minimal staff and occasional visitor.

Stormwater at the site will be suitably managed including an onsite stormwater detention basin holding a total volume of 286.4m3 supported with a low flow outlet. Refer to the Stormwater Management Plans at Appendix B.

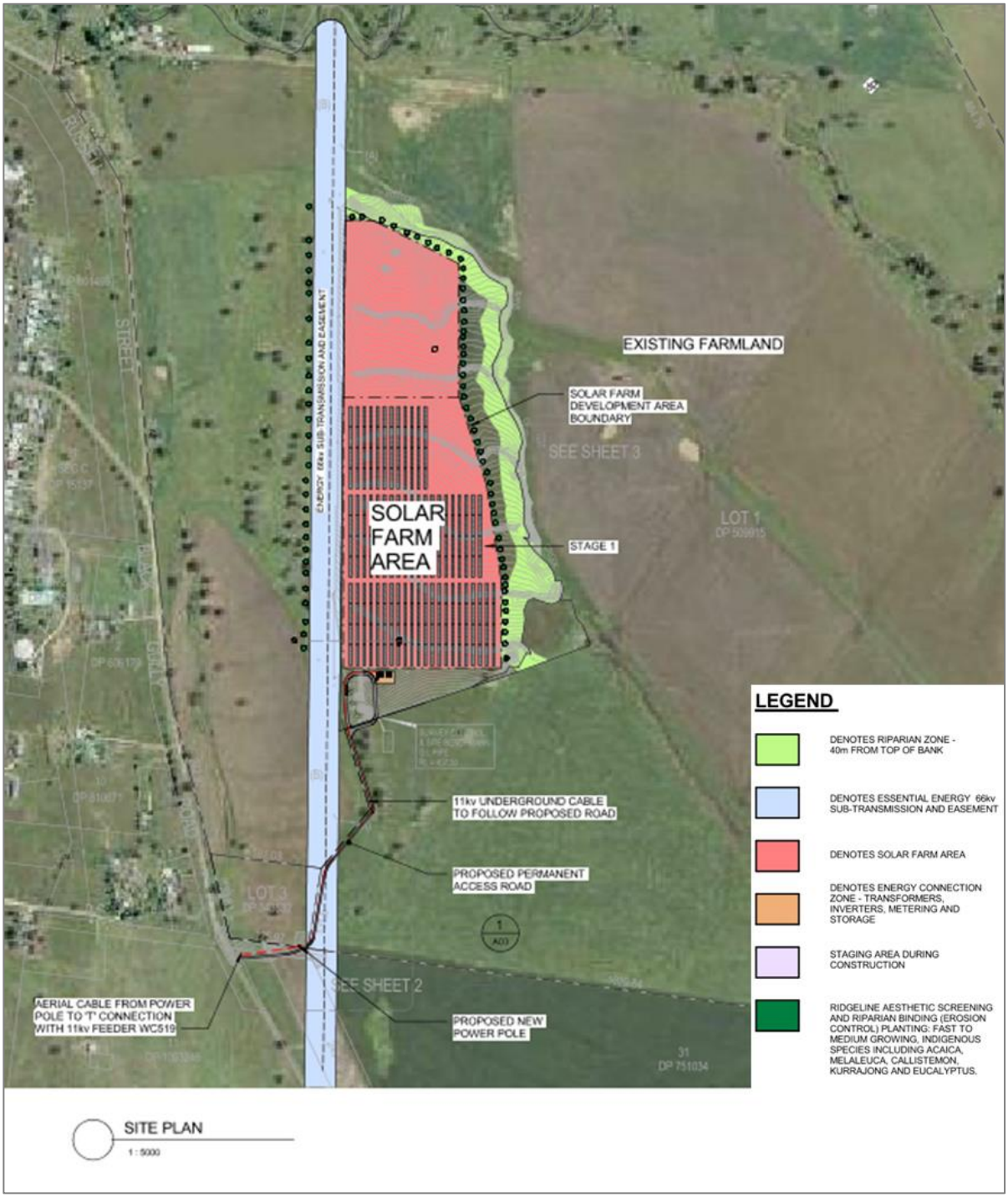
Extensive landscaping is proposed to help break-up views of the development from Werris Creek township residences and nearby rural homesteads to the Northeast. This will involve plantings along the eastern and western boundaries of the solar farm. A plant selection of hardy native species indigenous to the local environment will be selected to enhance the local urban ecology, growing to 6m in height. The design is responsive to the bulk and scale of the development. Where possible the species selected are endemic to the local landscape, low maintenance, drought and frost tolerant. This will allow the project to integrate as seamlessly as possible with the character of the existing landscape elements.

The solar PV farm will operate 24 hours a day, 7 days a week, with no permanent staff on site. Maintenance inspections will be undertaken on an as needs basis. It is expected that the development will be expected to operate for approximately 30 years.

During construction period some additional temporary facilities would be located within the development boundary such as material laydown areas, temporary construction site offices and toilet, and temporary car parking areas for construction

worker's transportation (refer to Figure 3). During the construction period there is estimated to be up to 30 personnel on site for up to 6 months.

Figure 3 – Proposed Development Layout



4 RELEVANT LEGISLATION AND PLANNING CONTROLS

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

- Environmental Planning and Assessment Act 1979;
- Environmental Protection and Biodiversity Conservation Act 1999;
- Water Management Act 2000;
- Biodiversity Conservation Act 2016;
- National Parks and Wildlife Act 1974;
- Rural Fires Act 1997;
- State Environmental Planning Policy (Infrastructure) 2007;
- State Environmental Planning Policy (Koala Habitat Protection) 2019;
- State Environmental Planning Policy (State and Regional Development) 2011;
- State Environmental Planning Policy 55 – Remediation of Land;
- Liverpool Plains Local Environmental Plan 2011 (LEP 2011);
- Liverpool Plains Development Control Plan 2012 (DPC 2012);
- New England North West Regional Plan 2036; and
- Liverpool Plains Shire Council Local Strategic Planning Statement (LSPS) 2040.

4.1 ENVIRONMENTAL PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999

The Ecological Assessment Report contained at Appendix M revealed that impacts on Matters of National Environmental Significance (MNES) are unlikely to occur. No EPBC listed species, ecological communities, migratory species or important habitat for such entities was identified within the subject site. The assessment determined that as impacts to MNES are unlikely, an EPBC referral to the Commonwealth Minister for the Environment is not recommended.

Full details are included in the Ecological Assessment Report at Appendix M.

4.2 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

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

Section 4.46 What is "integrated development"?

Pursuant to Section 4.46 of the EP&A Act 1979, the proposed development will trigger integrated development if the proposal includes any works within 40m of a watercourse and approval from the NSW Natural Resource Access Regulator (NRAR) will be required.

It is noted that although the site is mapped as bushfire prone land, integrated development is not triggered under Section 100b of the Rural Fires Act 1997 given the proposal does not include subdivision nor any special fire protection purpose. Further comments on bushfire are provided in Section 4.7 of this Report.

4.3 WATER MANAGEMENT ACT 2000

Under this Act, waterfront land includes the bed and bank of any river, lake or estuary and all land within 40m of the highest bank of the river, lake or estuary (NRAR, 2018). Four first order watercourses are mapped within the immediate vicinity of the development area, two to the north of the site, one along the site's south-eastern boundary, and one crossing the proposed site access to the south-west of the site. Therefore, the proposal requires referral to NRAR for a controlled activity.

4.4 NATIONAL PARKS AND WILDLIFE ACT 1974

The National Parks and Wildlife Act 1974 includes provisions for the protection and recording of Aboriginal objects in NSW. An Aboriginal Archaeological Assessment has been undertaken by Virtus Heritage in accordance with the provisions of the National Parks and Wildlife Regulations 2009 and the accompanying Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (OEH 2010). The Assessment found no Aboriginal objects during the site inspection. Further, no Aboriginal places are registered within the project area and no areas of archaeological potential are identified within the project area requiring archaeological testing, salvage or mitigation. See Appendix J for a copy of the Due Diligence Aboriginal Archaeological Assessment.

4.5 BIODIVERSITY CONSERVATION ACT 2016

The Biodiversity Conservation Act 2016 (BC Act 2016) aims to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development. To achieve its goals, the BC Act 2016 governs endangered species and communities and provides a framework for a Biodiversity Offset Scheme.

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

No threatened ecological communities or any listed flora or fauna were identified on site with the proposed development considered unlikely to cause any significant impact to any threatened species, populations or communities listed within the BC Act. Entry into the NSW BOS is not triggered by the proposed development. Further details are provided in Section 5.5 of this Report.

4.6 RURAL FIRES ACT 1997

The site has been identified within a bushfire prone zone within the s10.7 Planning Certificate received from Liverpool Plains Shire Council. Under Clause 100B of the Rural Fires Act 1997, certain development requires Bush Fire Safety Authority under concurrence from the Rural Fires Service (RFS).

(1) The Commissioner may issue a bush fire safety authority for:

(a) a subdivision of bush fire prone land that could lawfully be used for residential or rural residential purposes, or

(b) development of bush fire prone land for a special fire protection purpose.

(2) A bush fire safety authority authorises development for a purpose referred to in subsection (1) to the extent that it complies with standards regarding setbacks, provision of water supply and other matters considered by the Commissioner to be necessary to protect persons, property or the environment from danger that may arise from a bush fire.

(3) A person must obtain such a bush fire safety authority before developing bush fire prone land for a purpose referred to in subsection (1).

(4) Application for a bush fire safety authority is to be made to the Commissioner in accordance with the regulations.

(5) Development to which subsection (1) applies:

(a) does not include the carrying out of internal alterations to any building, and

(a1) does not include the carrying out of any development excluded from the operation of this section by the regulations, and

(b) is not complying development for the purposes of the Environmental Planning and Assessment Act 1979, despite any environmental planning instrument.

(6) In this section:

***special fire protection purpose** means the purpose of the following:*

(a) a school,

(b) a child care centre,

(c) a hospital (including a hospital for the mentally ill or mentally disordered),

(d) a hotel, motel or other tourist accommodation,

(e) a building wholly or principally used as a home or other establishment for mentally incapacitated persons,

(f) seniors housing within the meaning of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004,

(g) a group home within the meaning of State Environmental Planning Policy No 9—Group Homes,

(h) a retirement village,

(i) any other purpose prescribed by the regulations.

The proposed development is not a special fire protection purpose, nor does it include any subdivision and as a result no concurrence from RFS is required.

4.7 STATE ENVIRONMENTAL PLANNING POLICY (KOALA HABITAT PROTECTION) 2019

The State Environmental Planning Policy (Koala Habitat Protection) 2019 (Koala Habitat Protection SEPP) aims to encourage the conservation and management of areas of natural vegetation that provide habitat for Koalas to support a permanent free-living population over their present range and reverse the current trend of Koala population decline.

A review of the SEPP spatial viewer indicates that the subject site is not mapped by the Koala Development Application Map. No trees are proposed to be removed for this development therefore the Koala Habitat Protection SEPP has no bearing on the proposal and a Koala Habitat Assessment Report by a suitably qualified person is not required for the project.

4.8 STATE ENVIRONMENTAL PLANNING POLICY (STATE AND REGIONAL DEVELOPMENT) 2011

Regional development classification applies to both local and designated development applications exceeding certain criteria defined by Schedule 7 of the SEPP State and Regional Development 2011 (SEPP SRD).

5 Private infrastructure and community facilities over $5 million

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

> *(a) air transport facilities,* ***electricity generating works****, port facilities, rail infrastructure facilities, road infrastructure facilities, sewerage systems, telecommunications facilities, waste or resource management facilities, water supply systems, or wharf or boating facilities,*
>
> *(b) affordable housing, child care centres, community facilities, correctional centres, educational establishments, group homes, health services facilities or places of public worship.*

The proposed development is 'private infrastructure' with a CIV greater than $5 million and as a result the development is deemed to be regionally significant development and the application will be referred to the Joint Regional Planning Panel (JRPP) for determination.

4.9 STATE ENVIRONMENTAL PLANNING POLICY (INFRASTRUCTURE) 2007

Division 4 Electricity generating works or solar energy systems

34 Development permitted with consent

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

> *(a) in the case of electricity generating works comprising a building or place used for the purpose of making or generating electricity using waves, tides or aquatic thermal as the relevant fuel source—on any land,*
>
> *(b) in any other case—any land in a prescribed rural, industrial or special use zone.*

Definition:

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

> ***(a) RU1 Primary Production,***
>
> *(b) RU2 Rural Landscape,*
>
> *(c) RU3 Forestry,*
>
> *(d) RU4 Primary Production Small Lots,*
>
> *(e) IN1 General Industrial,*
>
> *(f) IN2 Light Industrial,*
>
> *(g) IN3 Heavy Industrial,*
>
> *(h) IN4 Working Waterfront,*
>
> *(i) SP1 Special Activities,*

(j) SP2 Infrastructure.

Clause 34 allows a solar energy system to be carried out with consent within prescribed rural, industrial or special use zones which includes RU1 Primary Production. The solar PV farm is not a permissible use under the Liverpool Plains Local Environmental Plan 2011 in the RU1 zone, therefore this clause will need to be relied upon in terms of land use permissibility.

Clause 45 - Determination of development applications—other development

The proposed development includes works to connect to the overhead electricity power lines therefore the proposed development will require referral to the electricity supply authority, Essential Energy during the assessment period.

Clause 104 - Traffic-generating development

The proposed development will not generate the necessary vehicle movements as detailed within Schedule 3 of this SEPP to trigger traffic generating development. Referral under this clause to Transport for NSW (formerly known as RMS) is therefore not required.

4.10 STATE ENVIRONMENTAL PLANNING POLICY NO 55 REMEDIATION OF LAND

This SEPP requires the consent authority to consider the potential contamination status of the land prior to approving a development. Noting that the land has been historically used for grazing and agriculture (farming), it is unlikely that contamination requiring remediation exists.

A search of the NSW EPA's *'List of NSW contaminated sites notified to the EPA'* and *'POEO Public Register'* has been undertaken which revealed no contaminated sites listed on or in the vicinity of the site. A total of 5 licences have been issued under the Protection of the Environment Operations Act in Werris Creek however none are noted within proximity to the site. Environmental protection licences issued within Werris Creek include:

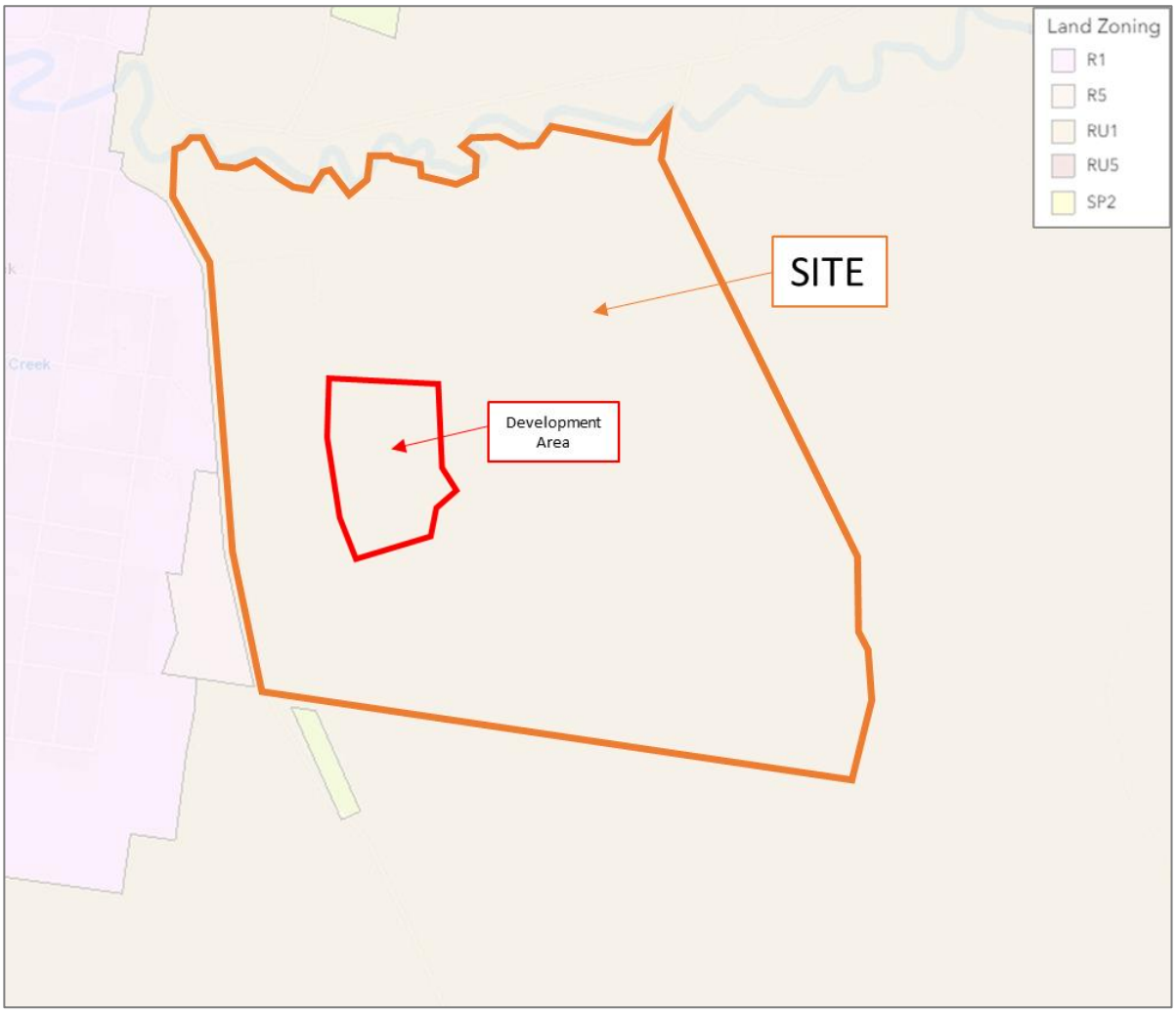
- Licence 2153 – Crawfords Freightlines Pty Ltd – 127 Railway Parade, Werris Creek – Operational;
- Licence 7191 – Hunter And New England Area Health Service – Health Service North Street, Werris Creek – Surrendered;
- Licence 575 – Liverpool Plains Shire Council – Werris Creek – Operational;
- License 6142 - Pacific National (Nsw) Pty Ltd - Single Street, Werris Creek – Surrendered;
- License 12290 – Werris Creek Coal Pty Limited – 1435 Werris Creek Coal, Werris Creek – Operational; and
- License 6378 Zeolite Australia Pty Limited – Escott Road, Werris Creek – Operational.

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

4.11 LIVERPOOL PLAINS LOCAL ENVIRONMENTAL PLAN 2011

The site is zoned RU1 Primary Production under the Liverpool Plains Local Environmental Plan 2011 (LEP 2011), see Figure 4.

Figure 4 – Land Zone Extract (Source: Planning Portal)



Zone RU1 Primary Production

1 Objectives of zone

- *To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.*
- *To encourage diversity in primary industry enterprises and systems appropriate for the area.*
- *To minimise the fragmentation and alienation of resource lands.*
- *To minimise conflict between land uses within this zone and land uses within adjoining zones.*

2 Permitted without consent

Building identification signs; Environmental protection works; Extensive agriculture; Farm buildings; Forestry; Home-based child care; Home occupations; Roads; Sewerage systems; Water supply systems

3 Permitted with consent

Agriculture; Airstrips; Animal boarding or training establishments; Aquaculture; Boat launching ramps; Boat sheds; Business identification signs; Cellar door premises; Cemeteries; Community facilities; Crematoria; Depots; Dual

occupancies (attached); Dwelling houses; Environmental facilities; Extractive industries; Freight transport facilities; Function centres; Funeral homes; Group homes; Helipads; Home businesses; Home industries; Information and education facilities; Intensive livestock agriculture; Intensive plant agriculture; Jetties; Mortuaries; Open cut mining; Recreation areas; Recreation facilities (major); Recreation facilities (outdoor); Roadside stalls; Rural industries; Rural workers' dwellings; Tourist and visitor accommodation; Truck depots; Veterinary hospitals; Water recreation structures

4 Prohibited

Hotel or motel accommodation; Sawmill or log processing works; Serviced apartments; Any other development not specified in item 2 or 3

The proposed land use, defined as electricity generating works (see below), is not permitted on the site with consent under the Liverpool Plains LEP 2011. Notwithstanding, the proposal is permissible under Clause 34 of SEPP (Infrastructure) 2007 as discussed in Section 4.9.

Definition:

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

The proposed development is consistent with the relevant objectives of the RU1 zone as it will provide a sustainable rural compatible land use whilst *maintaining and enhancing the existing natural resource base.*

Clause 4.1 Minimum Lot Size

The site has been mapped as having a minimum lot size of 200ha under the LEP 2011. Notwithstanding, subdivision does not form part of the scope of works for the solar PV farm.

Clause 4.3 Height of Buildings

This clause has not been adopted under LEP 2011.

Clause 4.4 Floor Space Ratio

This clause has not been adopted under LEP 2011.

Clause 5.10 Heritage Conservation

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

Clause 7.1 Earthworks

The objectives of this clause are:

> *(a) 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.*
>
> *(b) to allow earthworks of a minor nature without separate development consent*

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

Clause 7.2 Flood Planning

The site is not mapped within a flood prone land area under the LEP 2011. However, due to the proximity to Werris Creek modelling was undertaken by GHD in a Flood Impact Study where it was calculated that the site is not impacted by flooding from Werris Creek during the 1 in 100 (1%) AEP peak median flood event.

Local flows during this event are modelled in the channel along the eastern boundary of the site. Thus, the Flood Impact Study concludes by recommending that no infrastructure be located within this flooded area, with a finer resolution model be used at the detailed design stage to model flows within this channel. This higher resolution modelling will not need to include modelling of Werris Creek.

Clause 7.4 Essential Services

Adequate provision of essential services are available, or will be made available to the site and proposal including water, electricity, sewage, stormwater and access.

Clause 7.5 Airspace Operations

The site is located approximately 22km from Quirindi Airport. The proposed solar farm including temporary buildings will not penetrate the Limitation or Operations Surface of the airport and therefore consultation with the relevant Commonwealth body is not required. Notwithstanding, an aviation glare assessment is included within the Reflexivity Report at Appendix K which found that the proposal will not compromise the effective and ongoing operation of the Quirindi Airport.

4.12 LIVERPOOL PLAINS DEVELOPMENT CONTROL PLAN 2012

The Liverpool Plains Development Control Plan (DCP) 2012 applies to all land within the Liverpool Plains Local Government Area (LGA), including the subject site. The project has been assessed against Section 4 – General Development Specifications of the DCP 2012.

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

4.13 NEW ENGLAND NORTH WEST REGIONAL PLAN 2036

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

The regional plan distinctly highlights the role of renewable energy in the growth of the New England North West region with *Goal 1 – A strong and dynamic regional economy* identifying renewable energy as a priority growth sector. It further calls for the identification and promotion of wind, solar and other renewable energy production opportunities under the Local Government narratives section of the New England North West Regional Plan.

The proposed development on the subject site will align with the goals of the regional plan as it will provide an appropriately sized renewable energy project in a location with ready access to the electrical network which will support the regional development of Werris Creek and the Liverpool Plains LGA.

4.14 LIVERPOOL PLAINS SHIRE COUNCIL LOCAL STRATEGIC PLANNING STATEMENT 2040

The Liverpool Plains Shire Council Local Strategic Planning Statement (LSPS) 2040 delivers a holistic long-term vision that integrates economic, environmental, social and cultural factors whilst acknowledging that circumstances may change and

strategies need to adapt over time. It also provides a linkage between Council's Community Strategic Plan and Local Environmental Plan.

The LSPS planning priority 5 is to manage resources and renewable energy as the LGA is well placed to take advantage of its wind and solar resources as well as its strategic location on the transmission network.

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5 ASSESSMENT OF PLANNING ISSUES

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

5.1 COMPLIANCE WITH PLANNING INSTRUMENTS AND CONTROLS

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

- Referral under the EPBC Act to the Commonwealth Minister for the Environment is not recommended given the unlikely impacts on any Matters of National Environmental Significance (MNES) from the proposal.
- Potential impacts of the proposed development have been assessed via an 'assessment of significance' pursuant to Section 7.3 of the BC Act 2016 where it was found that the proposal is unlikely to cause a significant impact to any threatened species, populations or ecological communities;
- The development is classified as Regional Development under SEPP State and Regional Development and will therefore be determined by the JRPP;
- The proposal does not trigger integrated development and does not require approval from the RFS under the Rural Fires Act 1997;
- The proposal is permissible under the provisions of Clause 34 contained within SEPP Infrastructure;
- The proposal complies with the relevant clauses of LEP 2011 presenting no variations to any development standards;
- The proposal is generally consistent with the objectives and relevant controls contained within the Liverpool Plains Development Control Plan (DCP) 2012. A detailed assessment of the proposed development against the relevant provisions of the DCP is provided in the table at Appendix C; and
- The proposal is consistent with the goals, planning priorities and general direction of strategic planning documents covering the region which advocate for growth in renewable energy.

5.2 TRAFFIC, ACCESS AND PARKING

Traffic

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

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

Traffic movements generated during operation would include a single staff light vehicle movement associated with maintenance inspections and specific maintenance work (on an as needs basis) which would be short term and infrequent.

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

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

Access and Internal Circulation

The proposed entrance width at the combined entry / exit access at Black Gully Road will need to be a minimum 12.5 metres wide to cater for the swept turning paths for delivery vehicles during construction stage and satisfy the requirements of Australian Standard *AS2890.1-2004 Parking Facilities – Part 1 Off-street car parking and Australian Standard AS2890.2-2002 Parking Facilities – Part 2 Off-street commercial vehicle facilities*.

Overall with suitable conditions of consent included for special travel conditions, the proposed local and state road network is considered suitable to cater for the expected construction traffic associated with the development.

Parking

The Liverpool Plains DCP 2012 sets out the relevant on-site car parking rates for land uses within the Liverpool Plains area, however no specific car park rate is provided for solar projects and no permanent gross floor area is proposed as part of the development.

Adopting the industrial development rates for this project, the relevant on-site car parking provision during the operation of the Solar Farm is 1 space per 75m^2 GFA.

With no buildings on the site and only 1 employee engaged in the day to day operation of the Solar Farm, the development is only required to provide 1 on-site car parking space.

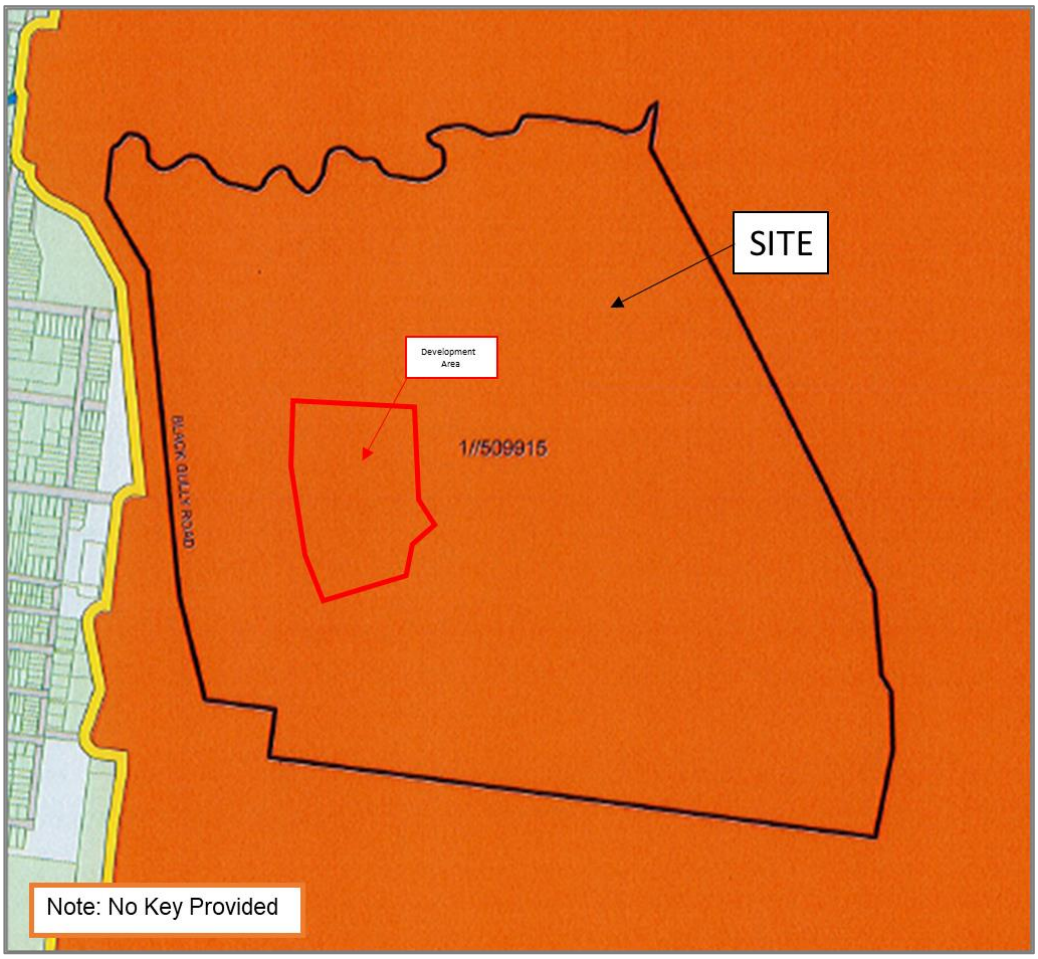
Consideration of construction parking demand has also been considered with potential for up to 30 employees projected. A total of 10 temporary construction car parks are proposed with additional space afforded for potential onsite overflow if required. A review of the development plans indicates the car parking area is sufficient in size such that parking bays and aisle widths would comply with the requirements of Australian Standard AS2890.1-2004 Parking Facilities – Part 1 Off-street car parking and this could be suitably conditioned on the consent for inclusion in Construction Certificate drawings. Therefore, the on-site car parking is considered suitable for the development ensuring all vehicle movements to and from the site off Black Gully Road will be undertaken in a forward direction.

5.3 BUSHFIRE

The site has been identified as bushfire prone land (Vegetation Category 3) refer to Figure 5.

The proposed solar farm has considered the requirements of the Planning for Bushfire Protection 2019, in that the design includes a 10m Asset Protection Zone (APZ) for the structures and associated buildings/infrastructure. The APZ will be maintained to the standard of an Inner Protection Area for the life of the development. Considering there is minimal risk to life as the development does not require permanent employees on site, the proposal is considered an appropriate development for the location. Access for fire fighting vehicles is available from Black Gully Road.

Figure 5 – Biodiversity Values Map extract (Source: Biodiversity Values Map and Threshold Tool)



5.4 STORMWATER, SOIL AND EROSION CONTROL

The proposed stormwater management system has been designed to reduce post-development flows to align with the pre-development conditions on the site. To achieve this, an onsite stormwater detention basin is proposed. This basin provides a holding volume of 286.4m^3 and is supported via sheet flow and the existing earth berm. The stormwater management system proposed has been designed in accordance with Council requirements and with the proposed mitigation measures achieves compliance with the pre-development stormwater flows.

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

i. All impervious runoff from the proposed Photovoltaic Arrays will discharge to the existing ground surface where the natural flow regime will be maintained.

ii. Runoff from the proposed gravel/hardstand area catchment will be conveyed via sheet flow and grass-lined swales to the proposed above ground onsite stormwater detention basin.

iii. Discharge from the above ground onsite stormwater detention basing will be limited to the pre-development flow rates.

Provided the above stormwater drainage philosophy is adopted for the site, the proposed Werris Creek Solar Farm will limit the Post-Development peak flows to Pre-Development flow rates for the 1 EY, 10% AEP and 1% AEP events. Refer to Appendix C for a copy of the Stormwater Management Report and Plans.

5.5 FLORA AND FAUNA

Kleinfelder have undertaken a detailed Flora and Fauna Assessment of the proposed development (refer Appendix M). This assessment has been undertaken with reference to all relevant legislation including (but not limited to) the EP&A Act 1979, the BC Act 2016 and the EPBC Act 1999.

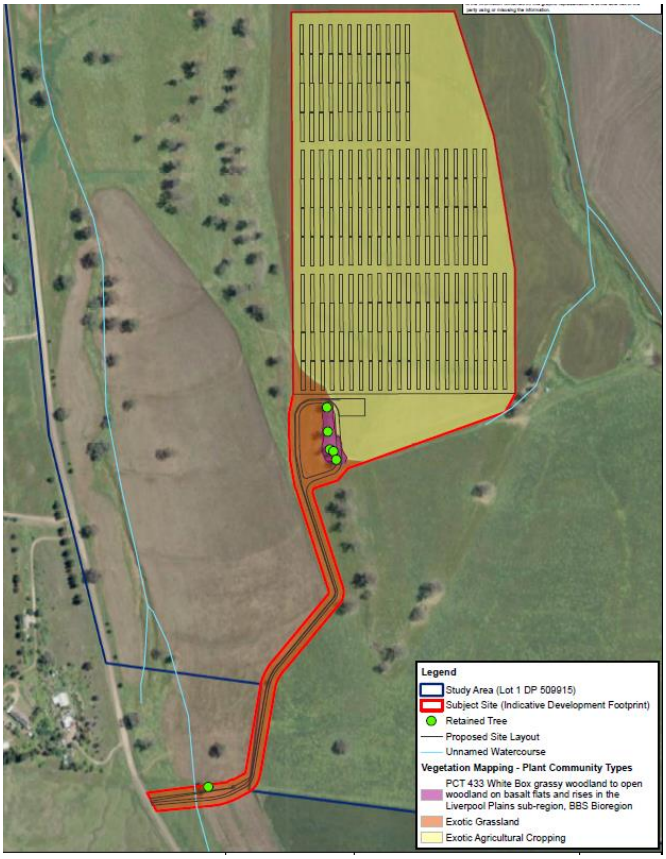
As noted within the Flora and Fauna Report, the development area is comprised of exotic grassland and will not require the removal of native trees or vegetation. Impacts on biodiversity values have been addressed through an iterative design process to avoid areas of higher biodiversity value within the site. Figure 6 overlays the proposal against vegetation mapping.

Field surveys undertaken by qualified ecologist(s) recorded no threatened flora or fauna species on the site with the proposed development unlikely to cause a significant impact to any threatened species, populations or ecological communities listed under the BC Act 2016. Entry into the NSW Biodiversity Offset Scheme (BOS) is not triggered by the proposed development.

No EPBC listed species, ecological communities, migratory species or important habitat for such entities were identified within the subject site. The Flora and Fauna Assessment determined that impacts to Matters of National Environmental Significance (MNES) are unlikely; therefore, an EPBC referral to the Commonwealth Minister for the Environment is not recommended.

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

Figure 6 – Vegetation Impacts (Extract from Kleinfelder Flora and Fauna Assessment)



5.6 NOISE

A Noise Assessment (NA) undertaken by Muller Acoustic Consultants (MAC) measured and modelled the potential noise generation for the development (both during construction and once operational), refer to Appendix G.

Construction Noise

Modelled noise emissions from project construction activities identify that relevant noise management levels may be exceeded at six receiver locations. The exceedance would be temporary, and of short duration and is primarily due to piling and earthworks activities when at their closest point to receivers.

Noise management measures as provided in the enclosed Noise Assessment (refer to Appendix G) are to be implemented to reduce potential impacts on surrounding receivers during construction activities, including:

- A construction noise management protocol to minimise noise emissions, manage out of hours (minor) works to be inaudible, and to respond to potential concerns from the community;
- Where possible use localised mobile screens or construction hoarding around plant to act as barriers between construction works and receivers, particularly where equipment is near the site boundary and/or a residential receiver including areas in constant or regular use (eg unloading and laydown areas);
- Operating plant in a conservative manner (no over-revving), shutdown when not in use, and be parked/started at farthest point from relevant assessment locations;
- Selection of the quietest suitable machinery available for each activity;
- Avoidance of noisy plant/machinery working simultaneously where practicable;
- Minimise impact noise wherever possible;
- Utilise a broadband reverse alarm in lieu of the traditional high frequency type reverse alarm;
- Provide toolbox meetings, training and education to drivers and contractors visiting the site during construction so they are aware of the location of noise sensitive receivers and to be cognisant of any noise generating activities;
- Signage is to be placed at the front entrance advising truck drivers of their requirement to minimise noise both on and off-site; and
- Utilise project related community consultation forums to notify residences within close proximity of the site with project progress, proposed/upcoming potentially noise generating works, its duration and nature and complaint procedure.

Operational Noise

The results of the NA demonstrate that operational emissions from the project would satisfy the relevant Project Noise Trigger Levels (PNTL) at all assessed receivers for all assessment periods. A detailed maximum noise level assessment is not required as predicted noise levels for night time operations do not exceed the maximum noise level trigger level of 40dB LAeq(15min) and there are no operational noise sources that could be considered to cause maximum noise events.

Additionally, the NA demonstrates that the road noise criteria as specified in the NSW Road Noise Policy 2011 will be satisfied at receivers on the proposed transport route.

Based on the NA results, there are no noise related issues which would prevent the approval of the project. The results of the assessment show compliance with the relevant operational and road noise criteria, with suitable recommendations provided to minimise the potential noise impacts from construction, albeit of a temporary nature.

5.7 VISUAL IMPACT

Moss Environmental have undertaken a Visual Impact Assessment (VIA) to examine the potential visual amenity and landscape character changes which may occur as a result of the proposed development, see Appendix E.

The proposed development was identified to comprise of one high impact view location, two medium impact view locations and three low impact view locations. For the high and medium locations, additional consultation and vegetative screening both along the development sites western boundary and along the lot boundary to Black Gully Road is proposed.

The VIA recommends the following mitigation measures to mitigate cumulative impacts and lessen the contrast of the infrastructure given the proximity and elevated position of residential properties;

Vegetation Screening

- A medium density screen, 1-2 rows deep, would be established with reference to the Landscaping Plan (Wynergy 2020).
- The screen would be comprised of varying native species appropriate to the area and of varying heights to soften not block the view of the site.
- Breaks in the screen, reflecting natural breaks in existing remnants would be appropriate;
- Planting should be undertaken as soon as practical in the construction process depending on the season, as it will take time for the plants to establish and become effective as a screen. Seasonal requirements for planting should also be considered;
- The screen would be maintained for the operational life of the solar farm. Dead plants would be replaced. Pruning and weeding would be undertaken as required to maintain the screen's visual amenity and effectiveness in breaking up views; and
- Advanced (sapling) plants of native trees to be placed in locations appropriate to screen residential properties of the solar farm

Design Measures

- Where feasible, underground rather than overhead power lines would be considered.
- Where feasible, co-location of powerlines would be undertaken to minimize the look of additional power poles. If additional poles are required, these would match existing pole design as much as possible.
- The materials and colour of onsite infrastructure will, where practical, be non-reflective and in keeping with the materials and colouring of existing infrastructure or of a colour that will blend with the landscape. Where practical:
    - Proposed new buildings will be non-reflective and in eucalypt green, beige or muted wheat.
    - Pole mounts will be non-reflective.
    - Security fencing posts and wire would be non-reflective; green or black rather than grey would reduce the industrial look.

Construction

- During construction, dust would be controlled in response to visual cues;
- Areas of soil disturbance by the project would be rehabilitated progressively or immediately post-construction, reducing views of bare soil.

Operation

- Maintenance of ground cover beneath panels, to reduce dust.
- Minimise traffic movements on unsealed tracks, to reduce dust; and
- Night lighting would be minimized to the maximum extent possible.

As detailed above, in order to manage visual impacts a range of mitigation measures are proposed. Landscaping is to be established to provide a visual buffer and is to consist of a number of mature trees and shrubs planted along the northern and eastern development site boundaries. If possible, structures are to be coloured a neutral pallet consistent with the surrounding area with bright and contrasting colours avoided. All the proposed panels shall utilise an anti-reflective coating to minimise potential for glare caused by the solar panels.

Implementation of the mitigation measures as detailed within the VIA will provide an effective visual buffer compatible with the rural landscape of the Werris Creek area enhancing the visual amenity for local residents and visitors to the area.

5.8 GLARE ANALYSIS

A Reflective Assessment (RGA) has been undertaken (refer Appendix K) to assess the potential for reflected light induced impacts on:

- Aviation Sector Reflective Glare;
- Motorist "Disability" Reflective Glare and Pedestrian "Discomfort" Reflective Glare;
- Industrial critical machinery operators (heavy vehicles, farm machinery) Reflective Glare; and
- Residential "Nuisance" Glare from daytime reflections or night-time illumination

It is noted that solar PV panels are designed to reflect as little sunlight as possible (generally around 2% of the light received).

Due to the site's distances from nearby airports, it has been established that the proposal will have no impact on the commercial aviation industry. Private aeroplane and helicopter flights that fly at very low altitudes may experience negligible dull glare from the project; depending on their angle of approach; angle of incident and array orientation. These instances are classified as atypical/uncommon; and are not anticipated to have any effect on the pilot's continued ability to safely operate the aircraft.

The nature of solar panels combined with the single axis tracking system used in the solar farm significantly reduces the likelihood of any disabling effects on agricultural machinery operators; and is thus considered negligible.

In summary, the potential for glare impacts on the surrounding area is considered to be negligible primarily due to:

- the selection of a single axis tracking mounting system and the distances to nearest receivers of interest in relation to aviation, road traffic, industrial machinery and residential areas;
- The project's location behind a natural ridgeline; and

+ The implementation of the Landscape Plan, which will reduce and remove 'line of sight' adverse glare potential by establishing vegetated buffer zones.

5.9 HERITAGE

5.9.1 INDIGENOUS CULTURAL HERITAGE

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

A site inspection was undertaken on the 28 August 2020 within lands in the Nungaroo Local Aboriginal Land Council (LALC) area. The inspection was carried out by senior archaeologist, Jac Carr in collaboration with Mr David Horton (Sites Officer – Nungaroo LALC). A draft copy of the Aboriginal Archaeological Due Diligence Assessment was provided to the Nungaroo LALC for comment and review. Feedback from Nungaroo LALC is still pending with the final Aboriginal Archaeological Due Diligence Assessment to be provided at Appendix J of this Report once completed.

The AHIMS search identified six sites within a 6km radius of the project area, these are summaries in the Archaeoligical Report. Few archaeological studies exist for the region around Werris Creek, with the exception of reports undertaken for various expansions and assessments for the Whitehaven Coal Werris Creek Mine site.

The Archaeological Report identified that there are no previously recorded sites in the project area based on heritage searches and background research of previous archaeological investigations to date. No Aboriginal objects or sites were observed in the project area and no areas of potential deposit were identified.

The area has been entirely cleared of natural vegetation and due to the distance from water, previous land use history and high level of disturbance observed during the site inspection, the project area has low potential for in-situ Aboriginal objects or intact cultural deposits to occur.

The project area is in a disturbed landscape, however, to ensure the protection of any found Aboriginal artefacts during construction, it is recommended that all site workers and personnel involved in works are to be inducted and briefed on the possible identification of Aboriginal sites and objects during construction and their responsibilities according to the provisions of the NPW Act, 1974, in case any additional unknown objects or items are uncovered during excavation. Further procedures and protocols are to be established as part of any future Construction Management Plan (CMP).

5.9.2 EUROPEAN HERITAGE

The site does not contain any listed heritage items under Schedule 5 of LEP 2010, nor is it located within a heritage conservation area. One heritage item is located north of the site and Werris Creek, Item (Io86) generally known as Glen Alpine to the site however, according to a Community Based Heritage Study of the Liverpool Plains LGA undertaken by the heritage Council of New South Wales, this Heritage Item is proposed to be removed from Schedule 5 as the building has been demolished by a fire.

5.10 SOCIAL AND ECONOMIC IMPACTS

An analysis of the social and economic impacts associated with the development of the site is detailed in this section to ensure that, where relevant, social and economic considerations are an integral part of the development assessment process. A Social Impact Statement (SIS) has been prepared by Element Environment and included at Appendix L.

Research of the strategic planning documents provide context for the proposed development. The strategic documents revealed the desire for renewable projects along with NSW State Government research revealing support of renewable

energy projects as generally favourable with the New England and North West which includes the broad Liverpool Plains Shire region. A key 'want' from the community is the exploration and adoption of renewable energy sources for future energy requirements. Council identified a key performance measure to be a reduction in greenhouse gas emissions and an increase in renewable energy use. The proposal therefore strongly aligns with the key 'wants' identified by the Liverpool Plains Shire community.

The most common perceived advantages of renewables included environmental benefits and job opportunity during construction. Some common perceived disadvantages included higher cost and concerns about efficiency and reliability as well as impacting the community sense of place and local aesthetic and amenity. The associated SIS has involved a desktop assessment of potential social impacts of the proposal (positive, neutral and negative). The SIS has adapted the social impact assessment framework of DPIE (2017) which is recognised as best practice for the discipline.

The SIS found that, overall, the proposal would positively impact the way of life in Werris Creek during construction, and the health and wellbeing of community in the long-term. The unmitigated negative impacts of the proposal include temporary changes to the way of life and community composition during construction, and a permanent change to the surroundings. The mitigation measures applied to each negative social impact will minimise their impact. If applied, the negative social impacts of the proposal are precited to be low and immaterial.

In summary, the proposed establishment of a Solar PV Farm on the site is anticipated to have an ongoing positive social

and economic impact on the local area and the broader Werris Creek community. Overall, it is considered that the development:

- Is consistent with the regulatory and business development framework, including state government legislation and Council strategic plans;
- Will contribute to employment particularly during the construction phase;
- Will have positive impacts on housing and commercial accommodation sectors during the construction phase;
- Will have positive economic stimulus with beneficial returns to Council and the community;
- National Grid supply benefits providing NSW households renewable energy;
- Tourism opportunities through potential environmentalist research, eco-tourism, schools and educational groups;
- Will have positive impacts in regards to intergenerational equity, with the provision of cleaner energy in the future;
- Supports Commonwealth and NSW climate change commitments; and
- Would be a benefit contributing to the overall sustainability of the Werris Creek community.

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6 CONCLUSION

The proposed solar PV electrical generation farm located at part Lot 1 DP509915 962 Black Gully Road, Werris Creek will provide much needed, sustainable electrical power to support the needs of the area. It will be the first of its type built in Werris Creek or surrounds. The proposal aims to maximise solar energy production whilst at the same time coexisting with the existing agricultural production of the land.

The development site has been chosen for its suitability in terms of land use permissibility, lack of trees and vegetation, relatively flat topography, limited environmental constraints, distance to surrounding residents, and access to high capacity transmission lines.

The proposed solar PV electrical generation plant is permissible with consent at the site under the provisions of SEPP (Infrastructure) 2007. The proposed development is consistent with the relevant objectives of the RU1 zone as it will provide a sustainable rural compatible land use whilst maintaining and enhancing the existing natural resource base. The development is compliant with the relevant clauses of Liverpool Plains LEP 2011, presenting no variations to any development standard. The proposal is generally compliant with the requirements of Liverpool Plains DCP 2012, as detailed in the compliance table at Appendix C.

The development site undertook a visual impact analysis in order to manage visual impacts, a range of mitigation measures are proposed such as landscaping to be established to provide a visual buffer and is to consist of a number of mature trees and shrubs planted along the northern and eastern development site boundaries.

The VIA undertaken for the proposal found that no high visual impacts would result from the project, taking into account the mitigation measures proposed, including vegetation screening on the western and eastern extend of the development area. This will effectively mitigate cumulative impacts and help maintain the landscape character of the area.

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

The proposed development site and layout has addressed biodiversity values through an iterative design process to avoid areas of higher biodiversity value within the site. It was found that no EPBC listed species, ecological communities, migratory species or important habitat for such entities were identified within the subject site. Further, entry into the NSW Biodiversity Offset Scheme (BOS) is not triggered by the proposed development.

The Aboriginal Archaeological Assessment determined that the development area has low potential for in-situ Aboriginal objects or intact cultural deposits to occur. There are no other heritage items located on the site or within the vicinity of the site.

The proposed establishment of a Solar PV Farm on the site is anticipated to have an ongoing positive social and economic impact on the local area and the broader Werris Creek community. Overall, the proposal would make a positive economic stimulus to Werris Creek, and the health and wellbeing of community in the long-term.

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

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

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Appendix A – Architectural Plans

Daniel Lawless Drafting Service

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Appendix B – Stormwater Management

DRB Consulting Engineers Pty Ltd

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Appendix C – Compliance Tables

KDC Pty Ltd

Table 1 – Liverpool Plains DCP 2012 Compliance

Control	Requirement	Comment	Compliant
3.6 Industrial Development			
3.6.1 Building Setbacks	• Street setback must be a minimum of 5m. • No concession for secondary frontage. • Street setback must be landscaped. • Side and rear setbacks to meet BCA requirements	N/A, the development is located well setback from the roadway. N/A, there is no secondary frontage. Extensive site landscaping has been provided Refer to Appendix F. Achieved.	N/A N/A Y Y
3.6.2 Traffic and Access	• The Traffic Assessment is required to demonstrate the adequacy of: o Road network, o Geometric design for intersections, including pavement impacts, ◊ Site access, o Loading/unloading facilities, o Safe on-site manoeuvring for largest design vehicle, and o Wearing surfaces for access driveways, parking areas, loading/unloading facilities and associated vehicle manoeuvring areas relative to the design vehicle. • Unsealed vehicle movement areas are not acceptable due to environmental management impacts. • Council's intent for the provision requiring sealing of all movement areas on industrial development sites is to mitigate environmental impacts resulting from a large number of vehicles on unsealed roads and internal manoeuvring areas, such as dust, stormwater management, runoff and erosion. However, where it can be demonstrated that the proposed land use (and associated development works) will not be of a scale that generates a high number of daily vehicle movements, alternative	The TIA provided at Appendix D addresses the adequacy of the proposal in terms of traffic, access and parking. Further details can be found in Section 5.2 of the SEE.	Y

Control	Requirement	Comment	Compliant
3.6 Industrial Development			
	treatments (e.g. crushed gravel) will be considered by Council Officers. • All vehicles must be able to enter and exit the site in forward direction. • Separate signposted entrance and exit driveways are required for developments requiring more than 50 parking spaces or where development generates a high turnover of traffic. • The number of access points from a site to any one street frontage is limited to 1 ingress and 1 egress. • Driveways must be provided in accordance with AS2890.1 Parking Facilities and Council's Engineering Guidelines for Development and Subdivision Works		
3.6.3 Utilities and Services	• Servicing strategy required to demonstrate the availability and feasibility of providing water, sewer and stormwater services appropriate for the scale and nature of development.	Due to the nature of the use and the infrequent and limited numbers of people on site once the solar farm is operational, impact on utility services is minimal.	Y
	• Applications must demonstrate adequate provision for storage and handling of solid wastes.	During construction, adequate area for storage and handling of waste will be located adjacent to the temporary site office. Due to the nature of the development, there will be minimal waste accrued once operational.	Y
	• Liquid Trade Waste Application and facilities are required where liquid wastes (excluding domestic waste from a hand wash basin, shower, bath or toilet) are to be discharged to Council's sewerage system.	N/A	N/A
	• Onsite stormwater capture and reuse shall be provided for maintenance of landscaping. Storage tanks shall be appropriately located and screened. NB – reuse facilities shall not form part of stormwater calculations.	Refer to Appendix B for details in relation to the Stormwater Management Plan.	Y
	• Buildings and structures are to be located clear of utility infrastructure.	Noted.	Y
	• For sewer mains, structures are to be located a minimum of one metre plus the equivalent invert depth from the centreline of the main.	N/A	N/A

Control	Requirement	Comment	Compliant
3.6 Industrial Development			
3.6.4 Design	• Building elevations to the street frontage or where visible from a public road, reserve, railway or adjoining residential area are to incorporate variations in façade treatments, roof lines and building materials. • Low scale building elements such as display areas, offices, staff amenities are to be located at the front of premises. • Roofing materials should be non-reflective where roof pitch is greater than 17 degrees or visible from a public road.	The site office is the only building proposed and will be temporary in nature. The solar panels and associated infrastructure will be visible from some view points, however, will not detract from the landscape quality of the area. Refer to the VIA at Appendix E for further details.	Y
3.6.5 Fencing	• Open work or storage areas visible from a public place or street must be fenced by masonry materials or pre-coloured metal cladding of minimum 2m height. Fencing to be located behind the building setback. • Security fencing must be also located behind the building setback area except when of a decorative nature to be integrated in the landscaped area.	Work areas will not be visible from the street due to the large setback of the office building. The solar farm will be fully fenced with 2.2m security fencing however extensive landscaping will provide a buffered view.	Y
3.6.6 Lighting	• Must comply with AS4282 Control of Obtrusive Effects of Outdoor Lighting.	Noted, although at this stage 24/7 lighting is not proposed.	N/A
3.6.7 Outdoor Signage	• Single occupant industrial site: ◊ One free standing advertisement within the 5m landscaped setback; and ◊ One advertisement integrated within the facade of the building, but no higher than the building roof line. • Multiple unit industrial site: o One index board near site entrance or within the 5m landscaped setback; and o One advertisement integrated within the facade of each unit, but no higher than the building roof line. • Signage must comply with SEPP 64 – Advertising and Signage Schedule 1 Assessment Criteria.	N/A. No signage is proposed.	N/A
3.6.8 Loading and Unloading Facilities	• Adequate space and facilities are required to be provided wholly within the site.	Adequate space is provided for loading and unloading adjacent to	Y

Control	Requirement	Comment	Compliant
3.6 Industrial Development			
	• Loading and delivery bays must be designed to allow vehicles to enter and exit the site in a forward direction. • Loading bay(s) must be sited to avoid use for other purposes such as customer parking or materials storage and be line-marked and signposted.	the site office during the construction period. Noted, but not generally appliable for this development.	 N/A
3.6.9 Noise	• Windows, doors and other wall openings shall be arranged to minimise noise impacts on residences where proposed within 400m of a residential zone. • External plant (generators, air conditioning plant etc.) shall be enclosed to minimise noise nuisance where adjoining residential area.	A Noise Assessment is included at Appendix G.	Y
3.6.10 Landscaping	• Landscaping is required: o In the front 5m of street setback; o To side and rear setbacks where visible from public place or adjoining residential area; and o To areas adjacent to building entrances and customer access points. • Landscaping or shade structures shall be provided in outdoor car parking areas where >10 spaces are required, to provide shading and soften the visual impact of large hard surfaces. • Landscaping shall comprise only low maintenance, drought and frost tolerant species.	Achieved. Refer to Appendix F. N/A – no permanent large areas of car parking proposed Achieved. Refer to the species schedule at Appendix F.	Y N/A Y
3.6.11 Parking	• 1 space per 75 m2 or 1 space per 2 employees whichever is greater	A permanent parking space is proposed, thereby complying with this requirement. Sufficient parking areas for construction vehicles is also accommodate for.	Y
4 General Development Specifications			
4.1.1 Development of Flood Affected Land	• The flood planning level adopted in the Liverpool Plains Local Environmental Plan 2011 is defined as the level of a 1:100 ARI (average recurrent interval) flood event plus 0.5 metres freeboard.	The site is not mapped within a flood prone land area under the LEP 2011. No permanent buildings are proposed. Refer to the Flood Impact Study prepared by GHD at Appendix I for further flood comment.	Y

Control	Requirement	Comment	Compliant
3.6 Industrial Development			
4.1.4 Parking	• Parking must be provided as per the requirements stated in the relevant Section. • Where calculation of parking spaces required results in a fraction of a space, the total required number of spaces will be the next highest whole number. • Parking and traffic requirements will be based on consideration of: o Likely peak usage times; o The availability of public transport; o Likely demand for off street parking generated by the development; o Existing traffic volumes on the surrounding street network; and o Efficiency of existing parking provision in the location. • Comply with AS2890.1 Parking Facilities. • Where existing premises are being redeveloped or their use changed, the following method of calculation shall apply:- 1. Determine the parking requirements of the previous or existing premises in accordance with the relevant Section; 2. Determine the parking requirement of the proposed development in accordance with the relevant Section; 3. Subtract the number of spaces determined in (a) from the number of spaces calculated in (b); 4. The difference calculated in (c) represents the total number of parking spaces to be provided either in addition to the existing on-site car parking or as a cash-inlieu contribution to Council where applicable.	As addressed in section 3.6.11. Refer to the TIA at Appendix D for further details.	Y
4.1.5 Landscaping	• Location and grouping of plant types shall be multi-functional providing privacy, security, shading and recreation functions.	As per section 3.6.10 above. Refer to Appendix F for further detail.	Y

Control	Requirement	Comment	Compliant
3.6 Industrial Development			
	• Landscaping or shade structures shall be provided in outdoor car parking areas where >10 spaces are required, to provide shading and soften the visual impact of large hard surfaces. • Landscaping shall comprise low maintenance, drought and frost tolerant species.		
4.2 Environmental Controls			
4.2.1 Environmental Effects	• The application documentation shall identify any potential environmental impacts of the development and demonstrate how they will be mitigated. These impacts may relate to: o Traffic o Flood liability o Slope o Construction impacts o Solid and Liquid Waste o Air quality (odour and pollution) o Noise emissions o Water quality o Sustainability	Please refer to associated sections in the Statement of Environmental Effects.	Y
4.2.2 Erosion and Sediment Control	• Runoff shall be managed to prevent any land degradation including offsite sedimentation. • Reference shall be made to the NSW Governments Managing urban stormwater: soils and construction, Volume 1 (available from LandCom), commonly referred to as "The Blue Book". • Cut and fill will be minimised and the site stabilised during and after construction. • Arrangements in place to prompt revegetation of earthworks to minimise erosion	Suitable erosion and sediment controls will be in place to ensure the proposal complies with "The Blue Book" and relevant stormwater controls.	Y
4.2.3 Land Use Buffers	• There are several statutory and recommended buffers that can apply to a specific sites and situations. These include: o Bushfire protection buffers o Airport buffers o Power line buffers o Rifle range buffers	Sufficient buffers are provided between the development and sensitive land uses. Landscaping is also proposed to enhance the buffers.	Y

Control	Requirement	Comment	Compliant
3.6 Industrial Development			
	○ Railway line buffers ○ Cultural heritage buffers • With regard to Aboriginal cultural heritage issues, including significant sites, places and landscapes, it is recommended that you consult with the local Aboriginal Land Council.	Achieved. Refer to the Aboriginal Archaeological Assessment at Appendix J.	Y
4.2.4 In-Site Wastewater Management Systems	• If on-site sewage management is determined to be the best long-term option for an area certain development standards will apply to relevant applications, including, but not limited to: ○ Minimum Lot Size ○ Climate ○ Soil ○ Geography ○ Environmental sensitivity ○ Potential risks to public health.	N/A	N/A
4.2.5 Waste Management	• General waste storage and collection arrangements shall be specified.	Please refer to Appendix N for further detail.	Y
4.2.6 Stormwater Management	• Reference should be made to Council's Engineering Guidelines for Subdivision and Development.	Refer to Appendix B for details in relation to Stormwater Management.	Y
4.2.7 Noise	• Where relevant, applications are to contain information about likely noise generation and the method of mitigation	Please refer to Appendix G for a copy of the NA. Mitigation measures will be used during construction activities as detailed in Section 5.6 of the SEE.	Y
4.2.8 Geology	• The design process must give consideration to the potential impact of erosive soils, saline soils, soils of low wet strength, highly reactive soils and steep slopes and document how these constraints are addressed.	The proposed development will not require significant earthworks as the site is relatively flat and suitable for the solar panel arrays. The earthworks proposed will have minimal environmental impact and will be supported with sediment and erosion controls.	Y

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Appendix D – Traffic Impact Assessment

Intersect Traffic

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Appendix E – Visual Impact Assessment

Moss Environmental

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Appendix F – Landscape Plan

Wynergy Pty Ltd

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Appendix G – Acoustic Assessment

Muller Acoustic Consulting

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Appendix H – Survey Plan

Fyfe

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Appendix I – Flood Study

GHD

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Appendix J – Aboriginal Cultural Heritage

Virtus Heritage

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Appendix K – Reflectivity Assessment

Wynergy Pty Ltd

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Appendix L – Social Impact Statement

Element Environment

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Appendix M – Flora and Fauna Assessment Report

Kleinfelder

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Appendix N – Waste Management Plan

KDC Pty Ltd

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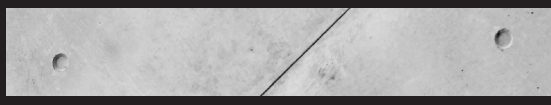


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