

## JOINT REGIONAL PLANNING PANEL

(Western Region)

JRPP No	<b>2016WES009</b>
DA No	<b>DA 80/16</b>
Local Government Area	<b>Narromine Shire Council</b>
Proposed Development	<b>Construct and operate a ground-mounted Solar Photovoltaic (PV) Farm</b>
Address	<b>Part Lot 32 DP 1129935, Eumungerie Road Narromine</b>
Applicant/Owner	<b>Applicant: Neoen Pty Ltd Land Owner: MS &amp; JS Bennett</b>
Number of submissions	<b>No submissions</b>
Regional Development Criteria (Schedule 4A of the EP & A Act)	<b>Clause 6 – Private Infrastructure and Community Facilities over \$5 million</b>
List of all relevant s79C(1)(a) matters	<b>State Environmental Planning Policy (State and Regional Development) 2011 State Environmental Planning Policy (Rural Lands) 2008 State Environmental Planning Policy (Infrastructure) 2007 State Environmental Planning Policy No 55-Remediation of Land (SEPP 55) State Environmental Planning Policy No 44- Protecting Koala Habitat (SEPP 44) Environmental Planning and Assessment Regulation 2000 Narromine Local Environmental Plan 2011 Narromine Development Control Plan 2012</b>
List all documents submitted with this report for the panel's consideration	<b>Development Application 80/16 Statement of Environmental Effects, GHD, April 2016 Additional Information submitted to Council 17 May 2016 Response/advice from RMS, Parkes</b>
Recommendation	<b>Approval subject to conditions</b>
Report by	<b>Melissa Ward, Manager of Planning</b>
Report date	<b>08/06/2016</b>

## Executive Summary

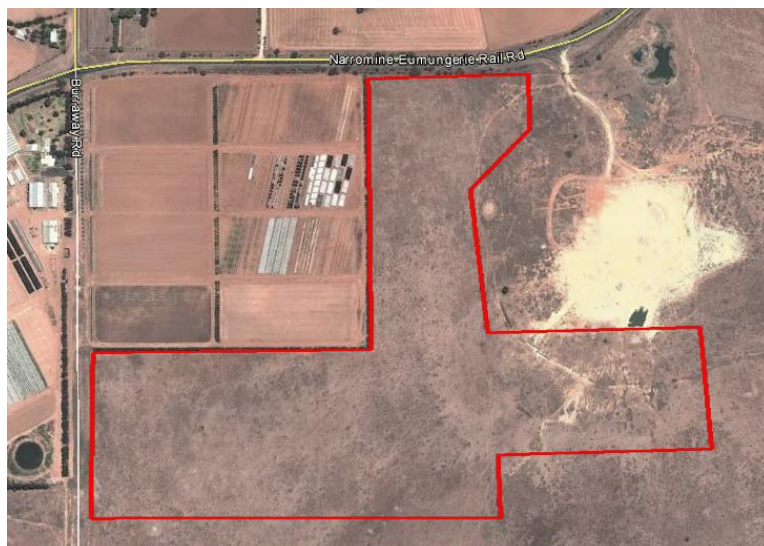
### 1.1 Reason for Consideration by Joint Regional Panel

The Development Application (DA) has been referred to the JRPP for determination pursuant to Clause 6, Schedule 4A of the Environmental Planning and Assessment Act 1979, as the proposal is private infrastructure works with a capital investment value (CIV) of more than \$5 million.

### 1.2 Brief Description of Proposed Development

The DA is seeking consent for:

- Construction and operation of an 11 MW peak solar photovoltaic electricity generating facility. This is to consist of arrays of photovoltaic panels. The mounting technology is to depend on final negotiations with construction companies. Options being considered include:
  - North facing tilt panels
  - Single –axis tracking panels
  - East- west facing fixed tilt panels
- Construction of electrical substations and worker and storage facility. Construction of internal access roads. The site is to be accessed via an existing access to an adjacent gravel pit on Eumungerie Road. As expanded upon in the report, if this access is to be utilized for the solar farm, upgrades will be necessary.



### 1.3 Compliance with Planning Controls

The proposal does not fall within the State Significant or Designated development thresholds as outlined respectively in the State Environmental Planning Policy (State and Regional Development) 2011 and Schedule 3 of the Environmental Planning and Assessment Regulation 2000.

The application has been lodged as a local development application, subject to clause 6 of Schedule 4A of the EP&A Act 1979 with referral to Roads and Maritime Services (RMS) due to the development's access road connection to a classified road, being Main Road 572 (section 138 Roads Act 1993).

### 1.4 Advertising

The development application was exhibited and notified in accordance with *Part 6, Division 7, Clause 91* of the *Environmental Planning and Assessment Regulation 2000*. The Narromine Development Control Plan 2012, Chapter 4 required that the application be notified to adjoining and surrounding neighbours and advertised in the local paper for a minimum period of 10 days. Council did not receive any submissions during this period.

### 1.5 Recommendation

That DA 80/16 be approved subject to conditions as outlined in Annexure 2.

### 1.6 Annexures

Annexure 1 Plan showing provisional layout of the solar farm

Annexure 2 Draft conditions of consent

Annexure 3 RMS submission

## 2. Assessment of Development Application

### 2.1 Proposed Development

- Construction of an 11 MW peak solar photovoltaic electricity generating facility. This is to consist of arrays of photovoltaic panels. The mounting technology is to depend on final negotiations with construction companies. Options being considered include:
  - North facing tilt panels
  - Single –axis tracking panels
  - East- west facing fixed tilt panels
- •Construction of electrical substations and worker and storage facility.
- Connected to an existing 22kv overhead transmission line. No additional overhead lines are anticipated.
- Construction of internal access roads. The site access is to be connected to via a new road connecting to Eumungerie Road by existing bitumen sealed access.
- Life span of the development is currently expected to be 25 years.

### 2.2 Site Description

The site is located at Lot 32 DP 1129935. An area of approximately 30 hectares on this lot is to be leased for the development. Two options for the final layout of the site have been presented in the application with the final option requiring further investigation. The site has frontage to Yates and Eumungerie Roads.

An intensive agricultural operation borders the site to the west, and a quarry borders the site to the east. All other land neighbouring the site is used for grazing and broad-acre agriculture. The ground has a minor slope with a south-westerly aspect. There are no existing structures on the site with the land being cleared of trees and no significant vegetation . The land has previously been used for the grazing of livestock.

### 2.3 Background

As mentioned above, this site has been used in the past for agricultural purposes – grazing and some limited cropping. An area separate to this site to the east but on the same parcel of land has been, and is still being used, as a gravel pit. Lot 31 in DP 1129935 to the west of the proposed development was previously created for the purpose of expanding an intensive agricultural business already located to the west of the site on Yates and Eumungerie Roads.

## **2.4 Environmental Planning and Assessment Act 1979 (EPAA)**

Section 79C has been used to evaluate the proposal as seen below:

S79C(1)(a)(i) any environmental planning instrument

### State Environmental Planning Policies (SEPPs)

- SEPP 44 (Koala Habitat Protection)

This SEPP applies because the Narromine LGA is listed in Schedule 1 of this policy and the land size is greater than 1 hectare. The next step in the assessment is to determine whether the land is potential koala habitat. The site has been cleared of the canopy, sub-canopy and shrub layers and only grasses and weeds are present (OzArk EHM, 2014). Because there are no tree species present, the site cannot be considered potential koala habitat and further assessment under this SEPP is not required.

- SEPP 55 (Remediation of Land)

As this site is proposed to change in use from agricultural to light industrial/commercial, an assessment under SEPP 55 was required. The current owner has informed Council that the site has in the past been used for agricultural purposes, namely cropping and grazing. No other contaminating uses have been carried out on the site. As the use is not becoming more intensified (such as changing to a residential purpose), SEPP 55 requires no further assessment of this site in regard to potential risk from contamination. Additionally, if a risk of contamination is not envisaged, a preliminary investigation is not required according to the Contaminated Land Planning Guidelines which support this SEPP.

- SEPP (Infrastructure) 2007

Clause 34 of the Infrastructure SEPP permits solar energy systems to be carried out with consent on any land. This SEPP requires no further assessment and is complied with.

- SEPP (State and Regional Development) 2011

Clause 21 of this SEPP outlines the administrative and consent functions conferred on the relevant planning authority- in this case, the Regional Panel.

- SEPP (Rural Lands) 2008

This policy sets the intended planning and subdivision principles for rural lands across relevant LGAs noted in the SEPP. The Narromine LGA is captured by this SEPP.

The Rural Planning Principles under this SEPP are:

- (a) the promotion and protection of opportunities for current and potential productive and sustainable economic activities in rural areas,*
- (b) recognition of the importance of rural lands and agriculture and the changing nature of agriculture and of trends, demands and issues in agriculture in the area, region or State,*
- (c) recognition of the significance of rural land uses to the State and rural communities, including the social and economic benefits of rural land use and development,*
- (d) in planning for rural lands, to balance the social, economic and environmental interests of the community,*
- (e) the identification and protection of natural resources, having regard to maintaining biodiversity, the protection of native vegetation, the importance of water resources and avoiding constrained land,*
- (f) the provision of opportunities for rural lifestyle, settlement and housing that contribute to the social and economic welfare of rural communities,*
- (g) the consideration of impacts on services and infrastructure and appropriate location when providing for rural housing,*
- (h) ensuring consistency with any applicable regional strategy of the Department of Planning or any applicable local strategy endorsed by the Director-General.*

This proposal does not conflict with the above rural planning principles as it provides for a new renewable energy economic activity in a rural area. It should be noted in accordance with this SEPP that this land is zoned for primary production of agricultural purposes so the future re-use of this site for such agricultural purposes is to be encouraged and unencumbered.

## Narromine Local Environmental Plan 2011

### 2.3 Zone objectives and Land Use Table

The subject site is zoned RU1 – Primary Production.

The objectives of this zone are:

- *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.*

NLEP definition of the proposal: **electricity generating works**

Electricity generating works are prohibited in the RU1 zone. Despite this, clause 8 of SEPP (Infrastructure) 2007 outlines that in the event of any inconsistency between the SEPP and another environmental planning instrument, that the SEPP prevails, and in particular, clause 34(1) of this SEPP states:

*(1) Development for the purpose of electricity generating works may be carried out by any person with consent on any land in a prescribed rural, industrial or special use zone.*

The proposal does not conflict with the objectives of the zone. The proposal is not anticipated to generate any local conflicts which would prevent neighbouring land from being used for primary production. The proposal will not permanently affect the ability of the land to be used for primary production. Following the end of life of the development the land may be returned to agricultural use.

*Please note, clause numbers hereafter may not follow numerical sequence as only those relevant to this application have been included from the LEP.*

### **5.9 Preservation of trees or vegetation**

Council's Development Control Plan does not prescribe any trees or species of vegetation for preservation. No significant trees have been identified on the development site.

## **5.10 Heritage Conservation**

The site has not been mapped as containing significant cultural/heritage items. No items of environmental heritage have been identified on this site in Council's Community Based Heritage Study 2002. An aboriginal heritage assessment has been undertaken on the site by OzArk Pty Ltd. The study concluded that:

- The proposal may proceed without further assessment of Aboriginal heritage.
- All land-disturbing activities must be confined to within the assessed Study Area. Should project impacts change, additional assessment may be required.
- In the unlikely event that objects are encountered that are suspected to be of Aboriginal origin (including skeletal material), the Unanticipated Finds Protocol (Appendix 2) should be followed.

A Condition of consent will require that if objects are encountered which could potentially be items of aboriginal heritage, that the unanticipated finds protocol as outlined in Appendix 2 of the Aboriginal Due Diligence Assessment be followed.

## **6.1 Earthworks**

Earthworks will be required as part of the construction phase of the development. Earthworks will be carried out for:

- Leveling out of sites for the placement of infrastructure and facilities.
- Excavations for the foundations of the solar panels.
- Installation of underground wiring.

No significant adverse effects from these earthworks are anticipated as the ground level of the site post-development will remain substantially the same as existing. The destination of any clean fill from the site can be accepted at the



Narromine Waste Management Facility. The site will need to be protected from erosion during excavation works. This will be conditioned.

## **6.2 Flood Planning**

The development site has not been identified as being within a flood planning area in the Narromine LEP flood planning map. There is therefore no perceived flood risk to life and property arising from this development.

## **6.4 Terrestrial Biodiversity**

Although Lot 32 is identified as containing a sensitive area for Terrestrial Biodiversity, this area is confined to the banks of the Macquarie River some 400 metres from the development site. The development is therefore not proposed to affect the riparian zone which houses sensitive terrestrial biodiversity.

## **6.5 Riparian land and watercourses**

The development site is not within 40 metres of the top of the bank of a watercourse; in this case, the Macquarie River.

## **6.6 Groundwater vulnerability**

Lot 32 has been identified as vulnerable on the groundwater vulnerability map, notably due to its proximity to the river. As the proposal is located 400 metres from the riparian zone and no on-site sanitary facilities are proposed, no impacts on groundwater are expected.

## **6.8 Essential Services**

Electricity will be connected via an existing 22kV overhead transmission line which runs east of Yates Road. New electrical connections will be required to the panels and substations. These lines are proposed underground. Essential energy has provided a statement that connection to the electricity supply is feasible provided necessary engineering works are undertaken.

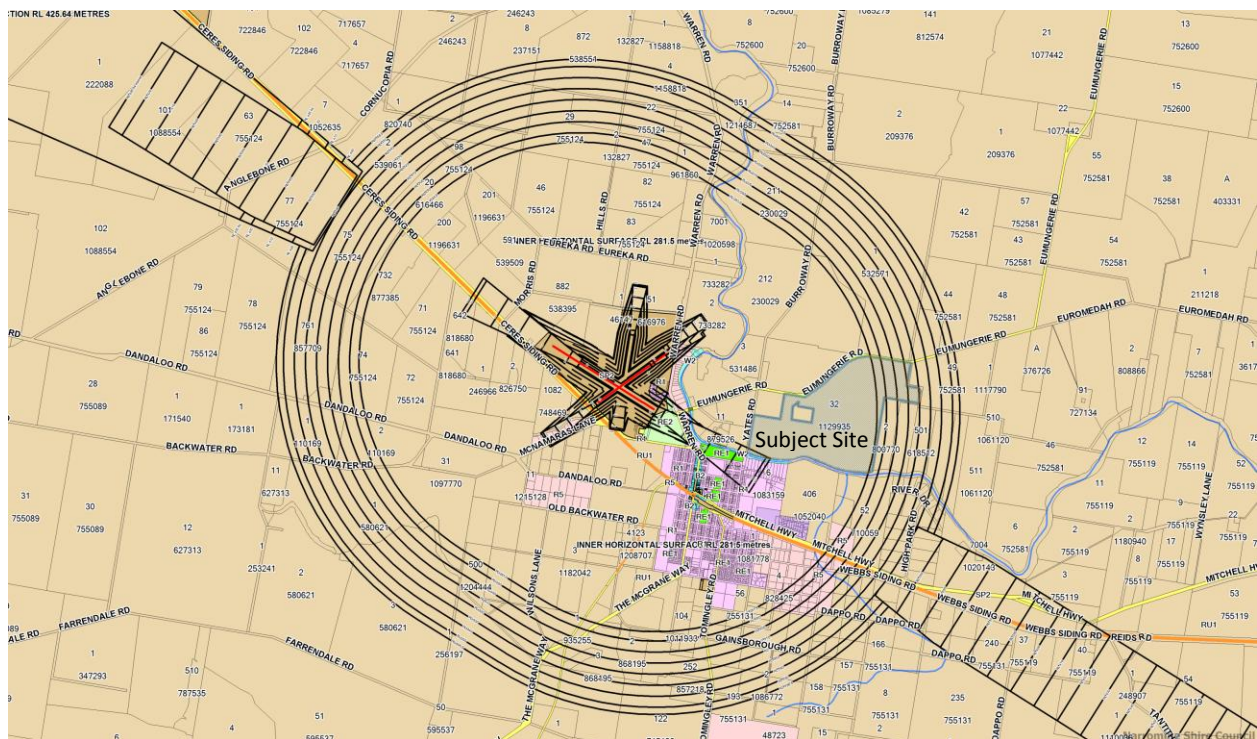
Access to a public road will be provided by a new internal road within Lot 32 DP 1129935. This will connect at Eumungerie Road where an existing access is located. This access arrangement is adequate given the anticipated traffic demand to the development unless the applicant determines that access via Yates Road will be a better solution. Additional information will be provided on access under **Narromine Development Control Plan – Access Traffic and Parking.**

## 6.9 Airspace Operations

This clause aims to protect the airspace operations at the Narromine Aerodrome by ensuring that the Obstacle Limitation Surface is not impeded by any proposed development.

This proposal, although located some distance from the Narromine Aerodrome, is shown on the Obstacle Limitation Surface map as having an obstacle limitation of 282m AHD. Any structures proposed above this height will impede the Aerodrome height surface and may restrict aircraft flight patterns and pose safety concerns. For this reason, a draft condition is proposed to mention this height restriction and advise that Council is to be supplied with a final construction plan noting the height of the panels at the highest elevation on the site to ensure the OLS is not impeded.

### Plan showing location of the site in relation to the Narromine Aerodrome OLS



***S79C(1)(a)(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 Secretary has notified the consent authority that the making of the proposed instrument has been deferred indefinitely or has not been approved)***

The Narromine Draft Local Environmental Plan 4/2014 (Department's Reference PP\_2015\_NARRO\_006) is, at the time of writing, on public exhibition. This Draft LEP proposes to change part of the land use zoning at the Narromine Aerodrome from SP2 to SP1. The changes proposed under this Draft LEP will have no bearing on the proposed development.

## **Narromine Development Control Plan 2011**

### **2. Plan Objectives**

#### **Rural Development Objectives**

The proposal is consistent with the objectives of the rural zone. Due to the nature of the development there will be a low level impact on the ability of surrounding land to be used for primary production. The effect the development will have on the amenity of the locality and rural landscape is acceptable.

### **4. Notification Requirements**

As the development involves major works the development is considered locally significant and was subsequently notified. All neighbours with a common boundary and across roads were sent a letter notifying them of the development. An advertisement was placed in the Narromine News on 25<sup>th</sup> May 2016.

Council received two telephone enquiries and one counter enquiry relating to the development. No written submissions were received.

### **5. Industrial Development**

#### **Setbacks**

The setback distance between the facility and the neighbouring land uses are considered sufficient to ensure there are no land use conflicts. All internal setbacks will comply with the Building Code of Australia as the SEE notes on page 25 that the infrastructure will be set back 30 metres from boundaries.

## **Building Aesthetics**

The majority of the construction work for the plant will consist of photovoltaic arrays. In addition, there will be associated components and infrastructure including substations, storage facilities and internal roads. Internal power lines are to be located in trenches. The transformer stations are to be housed within sections of the Solar Arrays. To the north of the array there will be a lay down and car parking area and an operations and maintenance facility. While details of this facility were not able to be provided it can be assumed that this facility will be characteristic of a standard transportable building. Security fencing is proposed to surround the site.

### *Access area*

The area of the laydown / parking and storage facility will be observable from Eumungerie Road. It is proposed that a condition of consent require this area to be screened off with landscaping to maintain the rural character of the locality as seen from Eumungerie Road.

### *Panel array heights and glare*

The panels proposed, at their highest, will be 2.3m above natural ground levels. Supporting steel work is proposed to be galvanized steel. The panels themselves are manufactured to absorb as much light as possible, hence reducing glare. According to Spaven Consulting (2011) as mentioned on page 9 of the SEE,

'The commercial viability of the NSF project is linked to maximizing the amount of electricity that can be generated and sold. Developing a PV farm that is not efficient and generates glare (i.e. which is effectively reflected and therefore lost energy), does not maximize a return on assets and compromises the economics of the technology'.

Glare and visual intrusion is therefore not expected to cause a nuisance to adjoining landholders or traveling motorists. It is human nature however to want to see the vast spectacle of a solar farm from a public road so boundary plantings, particularly on the northern Eumungerie Road side, are considered necessary. A draft condition relates to this matter.

## **Landscaping**

The Infrastructure and Layout plan provides a provisional location of landscaping treatment. This includes lines of vegetation screening the north and east section, as well as the section facing Yates Road. A condition of consent is proposed to be imposed requiring landscaping treatment to be carried out on the land to screen parts of the development. This is so that the rural landscape is maintained and enhanced, and to lessen the visual impact on some parts of the development.

It is recommended that endemic, hardy species be used and planted at a sufficient density to provide screening. The details of the proposed plantings within the landscaping plan are to be submitted to Council prior to the issuing of a construction certificate.

## **Access, Traffic and Car Parking**

The plant is to gain access to a public road via an existing access from Eumungerie Road. The requirements for this intersection were referred to the RMS due to the Eumungerie Road being a classified road. The RMS made formal comment on the application and an extract of their comments regarding access are shown below. Their full comments are shown in Annexure 3.

In granting its concurrence, Roads and Maritime notes under Clause 101 of *State Environmental Planning Policy (Infrastructure) 2007*, that even though Roads and Maritime has issued its concurrence, before development consent can be granted for the proposed solar farm, as proposed, Council, as the consent authority, must be satisfied that vehicular access to the land cannot be practicably obtained via Yates Road, and, that the safety, efficiency and ongoing operation of Eumungerie Road will not be adversely affected by operation of the development.

Comment: Council has considered this alternative access to the site via Yates Road and provides the following comments regarding such access:

- The Enza Zaden seed propagation enterprise currently is the sole user of Yates Road as their business is located on both sides.
- Enza Zaden currently for security reasons keep part of Yates Road locked with a gate.
- Beyond the locked gate, Yates Road is a gravel road, formed and maintained by Enza Zaden.
- Although the intersection of Yates Road with Eumungerie Road seems a more viable alternative option for access, it is considered appropriate to separate the traffic movements of Enza Zaden, (which

comprise employees to and from the site as well as internal movements of employees from the office site to paddocks across Yates Road) from the construction movements of the solar farm.

- The sight distances for both proposed accesses are similar however there are other benefits for the safe and efficient internal access for Enza Zaden not conflicting with construction and other long term traffic as well as security reasons for recommending the access be as depicted in the proposed plans.
- Council has therefore satisfied Clause 101 of the SEPP (Infrastructure) 2007 that Yates Road has been considered as an alternative access however for the reasons above is not supported.

Roads and Maritime's conditions of concurrence are as follows:

- A Basic Right (BAR) turn treatment as shown in Figure 7.5 Part 4A *Austroads Guide to Road Design* (copy enclosed) is to be provided in Eumungerie Road at its intersection with the vehicular access servicing the proposed solar farm. The widened shoulder is to be sealed and built for a 100km/h speed environment to provide a reasonable level of safety for traffic turning right into the vehicular access road and to allow following traffic an area to pass the right turning vehicle on the left hand side.
- A Basic Left (BAL) turn treatment as shown in Figure 8.2 Part 4A *Austroads Guide to Road Design* (copy enclosed) is to be provided in Eumungerie Road at its intersection with the vehicular access. The BAL facility will also need to be sealed and built for a 100km/h speed environment. The intersection is to be designed to accommodate the turning paths of the largest vehicle required to access the site.
- The access to Eumungerie Road is to be sealed a minimum of forty (40) metres from the edge of Eumungerie Road.
- Safe Intersection Sight Distance (SISD) requirements outlined in Part 4A *Austroads Guide to Road Design* are to be provided and maintained in both directions at the intersection of the vehicular access and Eumungerie Road.
- All required road works are to be completed prior to the commencement of construction works.

Conditions noting the above requirements will be included in the draft conditions of consent.

## **Car Parking**

The arrangement for vehicle parking is adequate given the nature of the development. Outside of the construction phase the development will generate only a low and infrequent demand for traffic and vehicular parking.

## **Open Storage and Loading Areas**

The northern portion of the site will contain a vehicle parking and lay down area. This area will be appropriately screened as mentioned earlier.

## **Advertising and Signage**

There is no advertising or signage proposed with the application.

## **Hazardous Industries**

The maintenance of the panels will require cleaning with the use of water and chemicals. In accordance with page 34 of the Statement of Environmental Effects all fuels and liquids would be stored within an impervious bunded area within compound sites. A draft condition of consent will require that chemicals and fuels be stored in an appropriately bunded area which has the following specifications:

- Has impervious flooring
- Has sufficient capacity to contain 110% of the largest container stored within the bund, and
- Is designed in accordance with pages 40-44 of the document *Storing and Handling Liquids: Environmental Protections, Participants Manual* published by the Department of Environment and Climate Change NSW.

## ***S79C(1)(b) the likely environmental impacts on the natural and built environments and social and economic impacts in the locality***

- *Context & setting*

The development site is cleared with no significant vegetation or buildings on site. The site is located to the east of an established seed and plant breeding enterprise and to the west of a gravel pit. The solar farm is not expected to conflict with either of these operations.

The site is located to the north of the Narromine township, on the northern side of the Macquarie River. Limited numbers of the surrounding properties contain dwelling houses and associated buildings.

Landscaping is to be carried out around the solar arrays within the lot, to reduce the visual amenity and potential for glare hazards for motorists and occupants within the surrounding area.

- *Access, transport and traffic*

The site has frontages to Eumungerie and Yates Roads, with Lot 32 gaining direct access from Eumungerie Road at the entrance to the existing gravel pit. The use of this existing access for the solar farm is not

anticipated to create conflicts with vehicular movements for the gravel pit due to its infrequent use.

The development will generate additional truck and car movements during construction phase, which is expected to be up to a maximum of 18 vehicles per day. As suggested in the additional information submitted with the application, a Traffic Management Plan is to be prepared by a suitably qualified person conversant with the Roads Act 1993 and submitted to Council. It should be noted that this TMP will not be approved or endorsed by Council; rather it is a requirement that this be submitted and be prepared in accordance with the above-mentioned Act and associated RMS recommendations.

- *Public domain*

The development does not propose to include any public reserves. The Narromine Shire Council Development Contributions Plan, drafted and adopted in accordance with Section 94A of the EPAA, applies to this site. The applicant has requested that any contribution payable under Section 94A be waived for the following reasons:

- The Narromine Solar Farm (NSF) will be setup for unattended operation and will be remotely monitored.
- Local personnel will be on-call to service faults. There will be minimal traffic movements during the operational life, which is expected to be approximately 25 years.
- The PV panels only require occasional cleaning if any (up to three times per year) and only attract minimal maintenance. However, there may be occasions where some of the panels need to be replaced due to either defects or damage.
- Other maintenance activities would include servicing and repairs to inverters, switchgear, cabling and tracking drives (usually up to two times per year). Based on this information, there will be limited traffic and would mean that this project will not likely have any impact on council infrastructure.
- We should highlight that Neoen is also developing other similar and larger solar PV projects within NSW, which have not attracted contribution fees. An example is the Parkes Solar Farm (PSF) where the NSW Department of Environment & Planning & Environment has mentioned that solar PV projects in general do not cause any additional burdens to local infrastructures, and therefore are not relevant to the Section 94A Contribution Fee.
- Please also consider, that any additional fees would decrease the project's competitiveness in the ARENA tender process, which may be considered by ARENA as a lack in support of the project, and therefore reduce the chances for this project to be successful.



- Based on all these circumstances we believe the contribution is not appropriate, as there would be virtually no impact from our development and therefore no burden or demand for council services.
- However, it is worthy to mention, that Neoen is looking into and planning to contribute to a community based funding scheme and would welcome the council's input. We would be keen to dialog further in a separate discussion.

Comment: Whilst a solar farm seems to place limited burden on local infrastructure, there is still a material impact on the local road infrastructure and an opportunity cost in the agricultural land not being used for farming/grazing purposes which otherwise contributes to the local economy. A life span for the project of 25 years means that this 30 hectare site will not be able to be used for any other purpose in that time and due to it's co-location with an intensive agriculture/seed and transplants hub, effectively ties up this land otherwise appropriate for expansion or co-location with other similar employment-generating enterprises permissible in the RU1 zone. It is therefore recommended that the development consent levy payable under Council's Development Contributions Plan be levied at the required rate of 1% of the estimated cost of the development. This levy is akin to contributions levied by other NSW Councils for solar farm developments.

- *Utilities*

The provision of adequately sized utilities is discussed previously in this report.

- *Heritage*

There are no identified items of heritage significance on the development site or surrounding land.

A search of the Aboriginal Heritage Information Management System (AHIMS) was done for Lot 32. No significant items were identified in this AHIMS search.

Despite the above, any items of potential Aboriginal or European heritage that are uncovered during construction works or any demolition works undertaken as part of the development will require operations to be ceased and the Office of Environment and Heritage contacted, as mentioned above.

- *Other land resources*

The development site is identified as Class 3 agricultural land according to the Department of Primary Industries. The land is therefore mostly suitable for grazing. A gravel pit is also located on Lot 32, the bounds of which do not extend close to the proposed solar farm.

- *Water & Sewer*

The site is not proposed to be connected to the reticulated water and sewer network.

- *Soils*

Council is not aware of the soils on site having saline qualities. The site is undulating, vastly cleared with grass cover. The site has no history of subsidence however due to the proximity of the development to a historic gravel pit, the applicant will be required to conduct soil testing prior to construction to ensure the subsoil is well structured to cope with the load of the panels. Suitable sediment and erosion controls are to be implemented during construction works. Erosion controls are to be retained for the duration of the development.

- *Air and microclimate*

The proposed development is considered to have minimal impact on the existing microclimate in the area. The proposed land use for the solar development will not result in any dust emissions from the site.

The internal driveway for the development will be required to be constructed to a hard-sealed surface from the property boundary to the first or northern-most line of solar arrays. This is to ensure that traffic movements do not create dust nuisance over the classified road to the north of the development. All internal access driveways are to be of a gravelled, dust-free standard in accordance with Council's Property Access and Nature Strips Policy, and regularly maintained.

- *Flora and fauna*

As previously mentioned the site has been cleared of vegetation some years ago and now contains grasses and rocky outcrops. As the site is cleared, an extensive flora and fauna assessment was not required as no impact is envisaged.

- *Waste*

Waste expected to be generated on site during construction is excess soil, packaging of the panels (cardboard) and timber pallets. The Narromine Waste Management Facility is able to accept such recyclables and fill.

If the volume of recyclables proposed to enter the Waste Management Facility is too large for the facility's capacity, the recyclables may have to be stored on site, providing they are housed in an appropriate area or shed to prevent winds blowing them away. This will be conditioned.

- *Energy*

The applicant has contacted Essential Energy for an opinion on connections into the grid for their project. They have a number of options from which to choose and further assessment on these connection options are to be carried out. One of the recommended draft conditions states that any new connections/lines or infrastructure are to be supported by a final route option analysis Review of Environmental Factors (REF) in accordance with Essential Energy's Connection Process for Negotiated High Voltage.

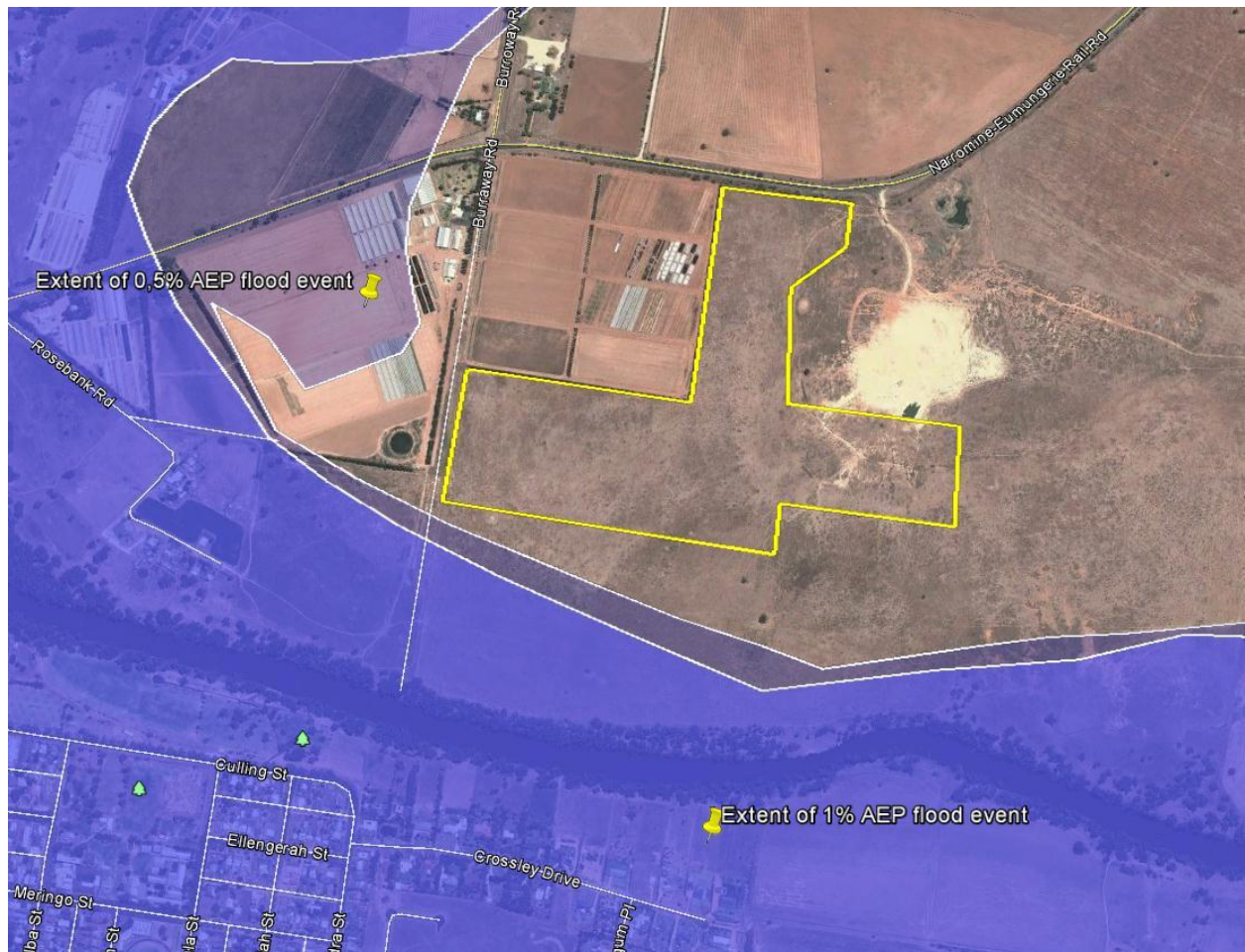
- *Noise and Vibration*

The development will not result in any noise and vibration with the exception of the construction and decommissioning phases. As construction phase will be short term only, restrictions on standard hours of operation will not be imposed. Depending on the type of arrays used, noise may emanate from tracking panels however due to the vast distances of the panels from any residential receptors, any such noise is expected to be minimal.

- *Natural hazards*

Although Lot 32 is partly flood liable, this section follows the Macquarie River to the south of the development site and as such, flooding does not pose a threat to the development.

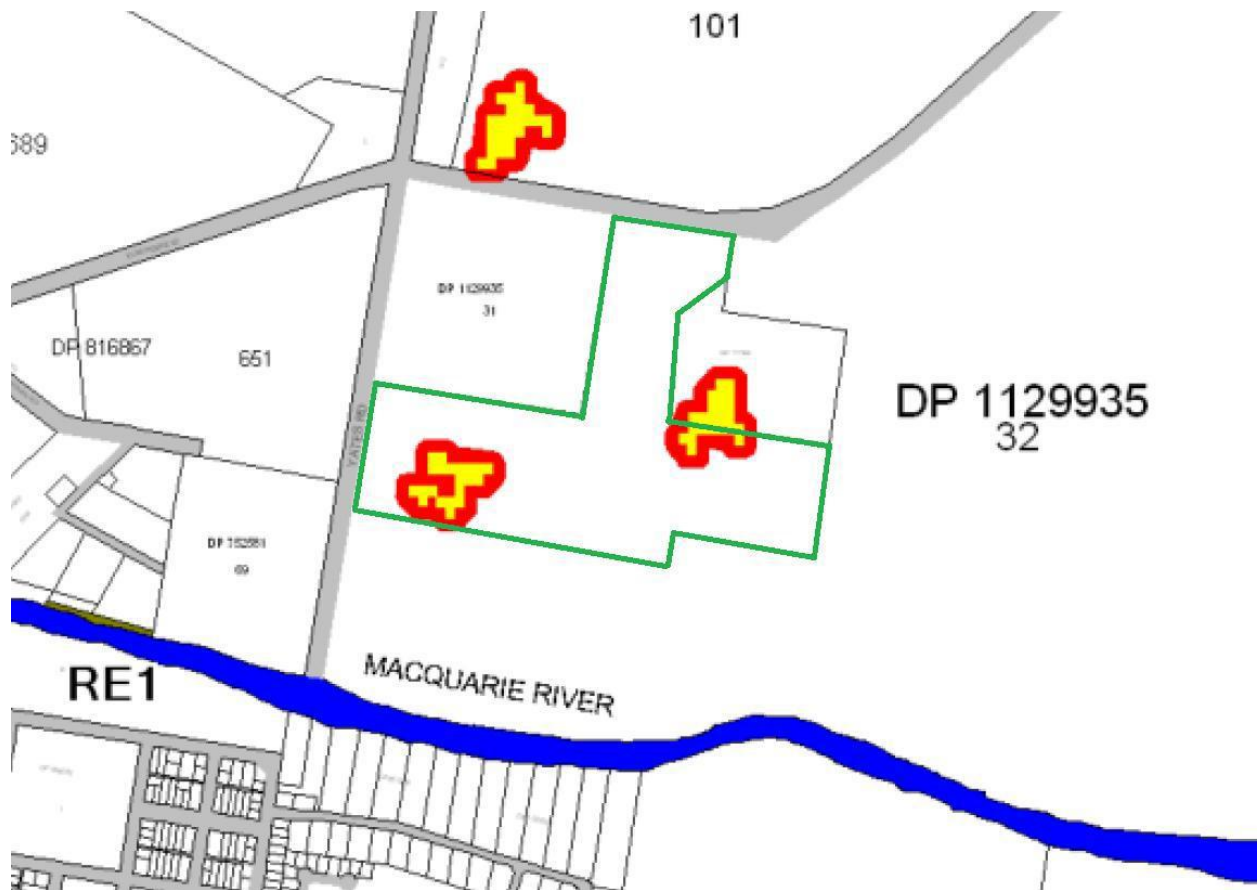
## Flood Liable Land from Narromine LEP



(GHD, 2016, p.12)

The land is bushfire prone according to the Narromine Bushfire prone land maps, despite the land being cleared. The following requirements under section 79BA of the Act and *Planning for Bushfire Protection 2006* (PBP) were taken into consideration.

### Bushfire Prone Land map extract



(GHD, 2016, p.13)

To ensure safe access for emergency vehicles to the site, internal roads should be built to the following specifications from *Chapter 4 – Access (2) – Property Access of PBP*:

- Are to maintain the ability to carry a load of 15 tonnes,
- Roads leading into and out of the site area to be a minimum width of four (4) metres,

The above requirements are included in the draft conditions of consent.

- *Safety, security and crime prevention*

The development itself does not enhance the opportunity for crime in the locality. The site will be surrounded by perimeter 2 - 3 metre high chain wire security fencing, which is appropriate. Landscaping is proposed to screen the

fencing from roads and adjoining neighbours. A Landscaping Plan is to be submitted for the development depicting species and planting spacings and locations.

- *Social and economic impacts*

Due to the very low density of dwellings in the locality, limited to no social impacts are envisaged. Likewise, the development is not expected to have any major social or economic impacts.

- *Site design and internal design*

The solar arrays, although not specifically mentioned as being fixed or tracking in the SEE, are shown on the provisional layout plan as facing east-west which indicates tracking panels which follow the sun from east to west (refer to **Annexure 2** for this plan). This internal design is appropriate.

- *Construction*

Any construction works are to comply with the Building Code of Australia. A draft condition will be applied requesting for a construction certificate if concrete footings are proposed for the frames which hold the panels.

Coupled with construction is de-construction or decommissioning of the solar farm if the development becomes financially unviable to continue after a period of approximately 25 years. The applicant has advised Council that warranty periods for the panels generally do not exceed 25 years and that after this time, the company may either intend to continue to operate the plant or decommission the plant. To effectively place a check point on this aspect, it is proposed to time limit the development consent to 25 years to enable the decommissioning to be effectively managed through active conditions of consent or alternatively, for the applicant to reapply to Council to continue to use the site for a further specified number of years. This ensures that the site is either being actively used or the structures disassembled and the site is then able to be used again for agricultural or other purposes intended in the RU1 zone.

- *Cumulative Impacts*

No cumulative impacts are envisaged.

***S79c(1)(c) the suitability of the site for the development***

The site of the development is separated from more densely populated areas. There are no environmentally significant assets on the land. Appropriate measures have been taken to reduce the affect the development will have on the rural landscape. The development of the site will not restrict the use of nearby land from being used for any permissible or planned land uses. The site of the development is considered suitable for what is proposed.

***S79c(1)(d) any submission made in accordance with this Act or the regulations***

No submissions were received as part of the notification period for this development.

***S79c(1)(e) the public interest***

Council advertised the development for 10 days in accordance with the Notification Requirements in Council's DCP. No submissions were received. The public interest is not impacted by this proposal.

**Conclusion**

This application is seeking development consent only at this stage for the operation of an 11 MWp solar farm on a portion of a lot approximately 30 hectares in size. The lot is not proposed to be subdivided from the existing lot as part of this proposal. An existing access is to be utilized from Eumungerie Road and the RMS has given advice to Council regarding this component as Eumungerie Road is a classified road. The electricity generated is to be fed back into the grid via appropriate methods as determined in consultation with the relevant energy retailer and following full utilization of its life span, the solar farm will either be reverted back to agricultural uses or continued on for future renewable energy uses. The proposal is considered viable and the application is recommended to be approved subject to conditions as seen in Annexure 1.

