COUNCIL ASSESSMENT REPORT

Panel Reference	PPSNTH-30
DA Number	DA-17-2020
LGA	Armidale Regional
Proposed Development	Construct and Operate a utility scale 29.9MW Solar Farm and Associated Infrastructure
Street Address	1060 Grafton Road METZ NSW 2350
Applicant/Owner	Applicant: Olive Grove Solar Farm – Ms Jane Ross Owner: Mrs Sarah J Quaife
Date of DA lodgement	13 February 2020
Number of Submissions	Nil
Recommendation	Approval with Conditions
Regional Development Criteria (Schedule 7 of the SEPP (State and Regional Development) 2011	Clause 5 – Private infrastructure and community facilities over $5 million (a) Electricity generating works
List of all relevant s4.15(1)(a) matters	• *SEPP No 44 – Koala Habitat Protection;* • *SEPP No 55 – Remediation of Land;* • *SEPP (Infrastructure) 2007;* • *SEPP (Primary Production and Rural Development) 2019;* • *SEPP (State and Regional Development) 2011;* • *Armidale Dumaresq Local Environmental Plan 2012;* • Armidale Dumaresq Development Control Plan 2012; • The Application has been publicly notified and advertised for 28 days;
List all documents submitted with this report for the Panel's consideration	• Proposed conditions of consent
Report prepared by	John Goodall
Report date	24 June 2020

Summary of s4.15 matters

Have all recommendations in relation to relevant s4.15 matters been summarised in the Executive Summary of the assessment report?	**Yes**

Legislative clauses requiring consent authority satisfaction

Have relevant clauses in all applicable environmental planning instruments where the consent authority must be satisfied about a particular matter, been listed and relevant recommendations summarized, in the Executive Summary of the assessment report? *e.g. Clause 7 of SEPP 55 - Remediation of Land, Clause 4.6(4) of the relevant LEP*	**Yes**

Clause 4.6 Exceptions to development standards

If a written request for a contravention to a development standard (clause 4.6 of the LEP) has been received, has it been attached to the assessment report?	**No**

Special Infrastructure Contributions

Does the DA require Special Infrastructure Contributions conditions (S7.24)? *Note: Certain DAs in the Western Sydney Growth Areas Special Contributions Area may require specific Special Infrastructure Contributions (SIC) conditions*	**Not Applicable**

Conditions

Have draft conditions been provided to the applicant for comment? *Note: in order to reduce delays in determinations, the Panel prefer that draft conditions, notwithstanding Council's recommendation, be provided to the applicant to enable any comments to be considered as part of the assessment report*	**No**

Further Application Details:

DA Lodgement Date:	13 February 2020
Additional Information received? / date?	Additional information in regards to proposed minor changes to the development were received from the Applicant on 9 April 2020. These changes to the development include: *The changes to the development layout for the proposed Olive Grove Solar Farm DA seek to link the proposed Olive Grove Solar Farm to the approved Stringybark Solar Farm via an underground cable, so that electricity can be exported through a single connection to the distribution network (Essential Energy 66 kV line) via the Stringybark substation.* *This would involve the following changes to the Olive Grove DA:* • *The extension of the underground cable from the Olive Grove DA to the Stringybark substation to allow the transmission of energy from the Olive Grove Solar Farm through the consented Stringybark development.* • *The deletion of the proposed Olive Grove substation and the associated portion of the substation access track.* • *The deletion of the proposed overhead transmission line connecting the Olive Grove substation location area to the Essential Energy 66kV line.* • *The extension of the proposed Olive Grove substation access track to connect to the consented Stringybark substation access track.* *The changes have been brought about following discussions with Essential Energy, with the efficiency of the connection to the 66 kV distribution line being improved by utilising a single connection point, enabling a minor reduction in project footprint and reduced above ground environmental impacts associated with the Proposal.*
Estimated Construction Value of Development:	$32,670,000.00
Capital Investment Value:	$29,700,000.00

Glossary of terms used in this report:

ACHA – Aboriginal Cultural Heritage Assessment

ADLEP – Armidale Dumaresq Local Environmental Plan 2012, as amended

AHIMS – Aboriginal Heritage Information Management System

BAM – Biodiversity Assessment Method

BC Act – Biodiversity Conservation Act 2016

BCA – Building Code of Australia

BDAR- Biodiversity Development Assessment Report

BOS- Biodiversity Offset Scheme

BSAL – Biophysical Strategic Agricultural Land

CIV – Capital Investment Value

DA – Development Application

DCP - Armidale Dumaresq Development Control Plan 2012, as amended

DPIE – Department of Planning, Industry and Environment

EEC – Endangered Ecological Community

EP&A Act – Environmental Planning and Assessment Act 1979

MW - Megawatt

NRPP – Northern Regional Planning Panel

NSR – Noise sensitive receiver

PV – Photovoltaic

RMS – Roads and Maritime Services

RSD – Regionally Significant Development

SEE – Statement of Environmental Effects

SEPP – State Environmental Planning Policy

Assessment Report and Recommendations – Table of Contents

Assessment Report and Recommendations

DA-17-2020 / JRPP Ref PPSNTH-30

Executive Summary

Consideration by Northern Regional Planning Panel:

The Northern Regional Planning Panel is the determining authority for this DA pursuant to Clause 5(a), Schedule 7 of *State Environmental Planning Policy (State and Regional Development) 2011*, as the proposed development is for private infrastructure works, being electricity generating works, with a capital investment value (CIV) of more than $5 Million and as such is considered to be 'Regionally Significant Development' (RSD). The capital investment value of the project, as estimated by the Applicant, is $29.7 Million (excl. GST).

Proposal:

The proposed development is for the construction and operation of a utility-scale photovoltaic (PV) solar farm with associated infrastructure, with a nameplate capacity of no more than 29.9 megawatts (MW), located approximately 12km east of Armidale NSW. Once fully operational the facility will have the capacity to produce enough energy to power the equivalent of 15,500 average NSW households each year.

Permissibility:

The subject lots being Lot 3 DP 786950 & Lot 13 DP 822753 and known as 1060 Grafton Road, are currently zoned RU1 Primary Production under ADLEP 2012.

The proposed development is considered to be *electricity generating works* which is defined under *State Environmental Planning Policy (Infrastructure) 2007* as:

- *a building or place used for the purpose of*

  (a) making or generating electricity, or

  (b) electricity storage.

Development for the purpose of *electricity generating works* on land within a prescribed rural zone, is permitted with consent under Clause 34(1)(b) of *State Environmental Planning Policy (Infrastructure) 2007.*

The development could also be considered to be a *solar energy system* which is defined under *State Environmental Planning Policy (Infrastructure) 2007* as:

- any of the following systems—

  (a) a photovoltaic electricity generating system,

  (b) a solar hot water system,

  (c) a solar air heating system.

Development for the purposes of *solar energy systems* is also permissible with consent under Clause 34(7) of *State Environmental Planning Policy (Infrastructure) 2007.*

Key Issues

From the attached Assessment Report, key issues for this project can be summarised as follows:

- Roads and Maritime Services have reviewed the proposed development and provided their assessment of potential road impacts and recommendations regarding any upgrades.
- The subject site has been assessed in accordance with *SEPP No 44 - Koala Habitat Protection* and found not to contain potential or core Koala habitat.
- The subject site has been assessed in accordance with Clause 7 of *SEPP No 55 – Remediation of Land* and is considered to be suitable for the proposed development.
- The proposed development has been assessed in accordance with *SEPP (Infrastructure) 2007* and is considered to be permissible under either Clause 34(1)(b) and/or Clause 34(7) of the ISEPP.
- The proposed development has been assessed in accordance with *Clause 45 'Determination of development applications—other development', of SEPP (Infrastructure) 2007* and is considered to be satisfactory subject to conditions.
- The proposed development has been assessed in accordance with *Clause 101 'Development with frontage to classified road', of SEPP (Infrastructure) 2007* and is considered to be satisfactory subject to conditions.
- The proposal has been assessed in accordance with *SEPP (Primary Production and Rural Development) 2019* and is considered satisfactory having regard to the SEPP.
- The proposal is Regionally Significant Development (RSD) under Clause 5(a) of Schedule 7 of *SEPP (State and Regional Development) 2011.*
- The proposal is considered to be consistent with relevant provisions of *Armidale Dumaresq Local Environmental Plan 2012.*
- No draft environmental planning instruments apply to this proposal.
- The proposal has been assessed under the relevant Chapters of Armidale Dumaresq Development Control Plan 2012 and is considered to be satisfactory have regard to the relevant provisions and subject to conditions.
- There are no planning agreements for this proposal.
- Relevant Clauses of the Regulations have been considered during the assessment of this proposal.
- The likely impacts of the development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality have been assessed during the assessment of this proposal and are considered to be satisfactory in the circumstances of the case, subject to recommended conditions as detailed throughout this report.
- The site has been assessed for its suitability for the proposed development and is considered to be suitable, subject to conditions.

- The Application was notified for 28 days to property owners within a 2km radius of the subject site and was also advertised in the local newspaper from 26 February 2020 until 26 March 2020. At the conclusion of the notification period nil submissions had been received by Council.
- Having regard to the matters considered throughout this report and the assessment of the Application against the relevant heads of consideration under S4.15(1) of the Act, the proposal is not considered to be detrimental to the public interest.

As a result of this assessment, the proposed development is recommended for conditional consent. **Appendix 1** to this report contains all relevant conditions identified throughout the assessment process and as discussed in the Council officer's report.

Recommendations

(a) That having regard to the assessment of the Application, DA-17-2020 (JRPP Ref PPSNTH-30) be granted conditional consent in the terms set out in Appendix 1 to this report.

(b) That any relevant integrated/concurrence authorities be notified of the determination in writing.

Subject site and locality

The proposed development known as Olive Grove Solar Farm, is to be located on Lot 3 DP 786950 and Lot 13 DP 822753, 1060 Grafton Road Armidale.

The subject site is located in a rural area of the LGA approximately 12km to the east of the city of Armidale. The site is accessed via Grafton Road (Waterfall Way).

The subject site is zoned RU1 Primary Production and is currently used for extensive agricultural/grazing purposes. Land immediately surrounding the subject site, is currently also largely used for similar purposes in conjunction with associated residences.

The landholding is bound by Grafton Road (Waterfall Way) to the north, Commissioners Waters to the south, the Armidale Landfill to the east and other rural holdings to the west.

The Development Envelope (Site) located on Lot 3 DP 786950 and Lot 13 DP 822753, 1060 Grafton Road, consists of approximately 104 ha and lies to the north of the ridgeline on the property and forms part of a greater landholding of approximately 490 ha that has been largely cleared of native vegetation and sown to improve pastures for grazing of livestock. The property contains patches of retained/regenerated woodland which largely lie outside the Development Envelope.

An existing residence located on the landholding lies to the west and outside the Development Envelope area.

The Development Envelope has been intentionally located in the most disturbed areas of the northern section of the wider landholding to avoid patches of retained or regenerated native vegetation and to minimise other potential environmental impacts identified during the environmental assessment. The Site has been largely cleared for grazing. A number of scattered paddock trees remain within the Development Envelope, while the Substation Location Area has been located approximately 0.5 km south of Grafton Road within an unsuccessful section of an olive grove.

The Development Envelope is currently productive agricultural land, but is not mapped as Biophysical Strategic Agricultural Land (BSAL) nor is it Flood Prone Land. The Development Envelope and Substation Location Area have been located to avoid mapped Bushfire Prone Land. A limited area of the Substation Access Track and the associated underground cable to connect the Development Envelope to the Substation passes through a small area which is classified as a buffer for a nearby patch of Category 1 Bushfire Prone Land.

Situated on the northern face of a tree capped ridge, the Site is gently undulating and slopes in an easterly direction down into a natural amphitheatre which rises up again towards Grafton Road. The Site is intersected by three ephemeral first order streams that drain offsite towards Gara River to the east (approximately 1.5 km downstream). There are a number of electricity distribution lines that cross the Site including an Essential Energy 66 kV distribution line that would be used to connect the Proposal to the national electricity network.

An existing underground water main connecting Gara River Dam with Armidale crosses the Development Envelope within a 6m easement. Gara River Dam does not currently provide potable water to Armidale, but remains an alternative source to local water users, and may provide an emergency water supply under drought conditions.

Five non- involved residences are located within 1km of the site. The closest non involved residence is located approximately 305m from the northern boundary of the site.

Subject Site and Justification Selection Criteria

The proponent has advised that a multi-criteria site selection process was undertaken to identify the most suitable location for the proposal, which included consultation with network operators. The capacity to export electricity from a development site to the National Energy market was a key factor in selecting a suitable site for large scale generation in NSW.

The following site selection criteria were considered in the identification of suitable development sites for the Proposal:

- Solar radiation;
- Access to the existing road network;
- Access to the electricity grid;
- Capacity of the local transmission/distribution lines;
- Topography and key landscape features;
- Minimal environmental constraints / impact;
- Compatible existing land uses;
- Access to suppliers and materials;
- Proximity to residential settlement; and
- Landowner support.

With this in mind, the proponent reviewed sites across the local area and elsewhere in NSW and determined that the subject site represented the most favourable location, taking the above matters into consideration. Initially the proposal was envisaged to be for a much larger development which also incorporated the adjacent landholding at Lot 3 DP 1206469, 597 Gara Road.

Following more detailed environmental studies it was identified that the location was not suitable for a large scale development, due to the site design principles that seek to avoid and/or minimise impacts where possible. Initial topographic, visual and ecological assessments indicated that the area was better suited to two smaller scale developments.

The Development Envelope is located on undulating landscape with elevations ranging from approximately 1000m AHD on the western edge of the solar array down to 960m AHD on the south-eastern edge.

The site has been historically cleared and cultivated for improved pastures and for the purposes of sheep and cattle grazing. Surrounding land uses include:

- Agriculture
- Transportation – Grafton Road is a major road connecting Armidale to the coast; and
- Armidale Regional Council has identified and developed the new Armidale Regional Landfill on the adjoining block immediately to the east of the Development Envelope (Lot 1 DP 1206469).

The proposal will involve the use of approximately 104ha of the existing land holding, for the lifespan of the proposal, which is estimated to be around 30 years. Given the relatively small footprint on the agricultural holding and the relatively temporary nature of the proposal it is not anticipated that it would significantly impact on agricultural production at a regional or state level.

The subject site is not identified as containing any Biophysical Strategic Agricultural Land nor is it identified on Council's GIS as being classified as significant agricultural land. The land/soil capability of the site has been identified as being low to moderate classification, based on the biophysical features of the soils and landscape.

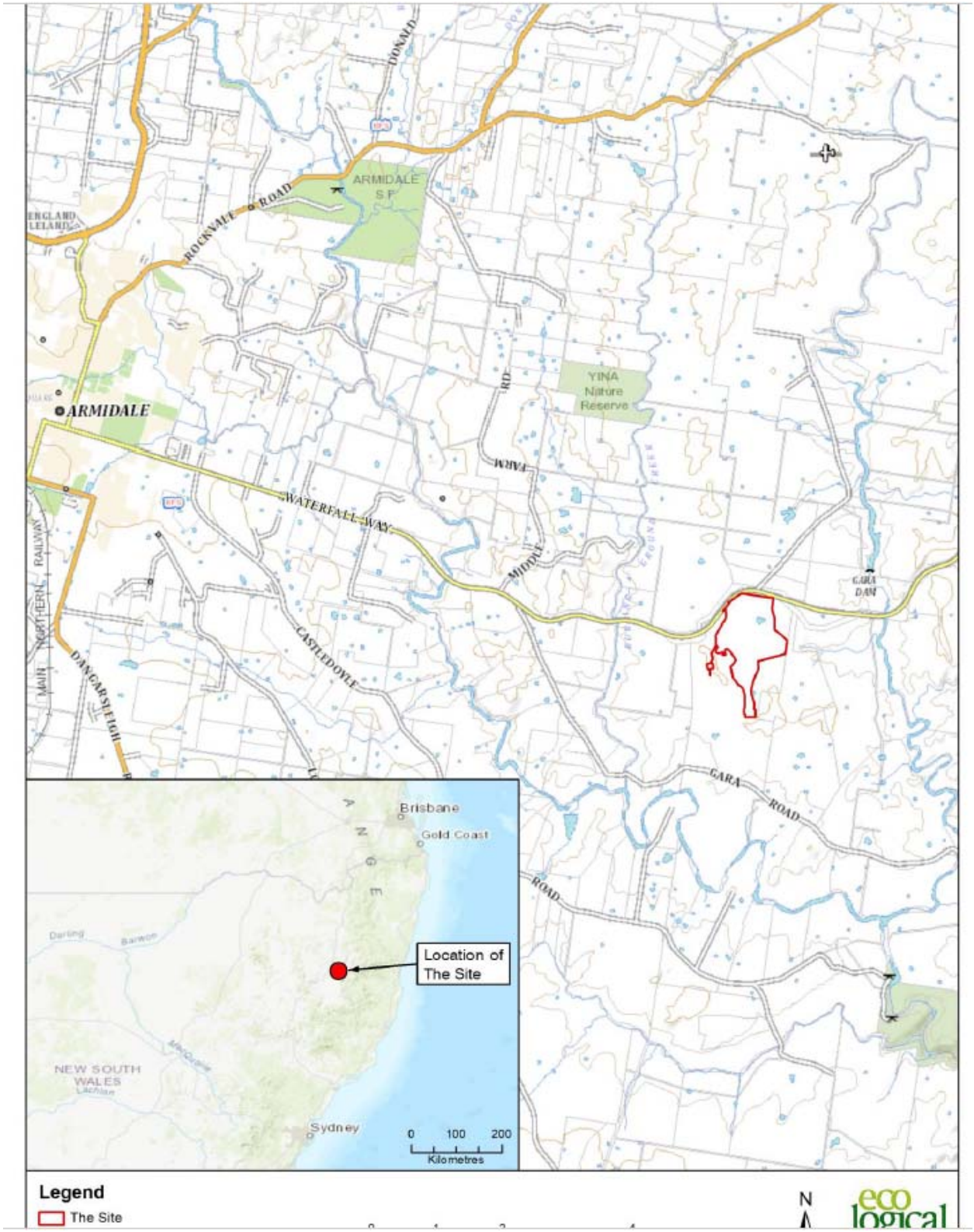

Figure 1 – Location of subject site in context with surrounding area

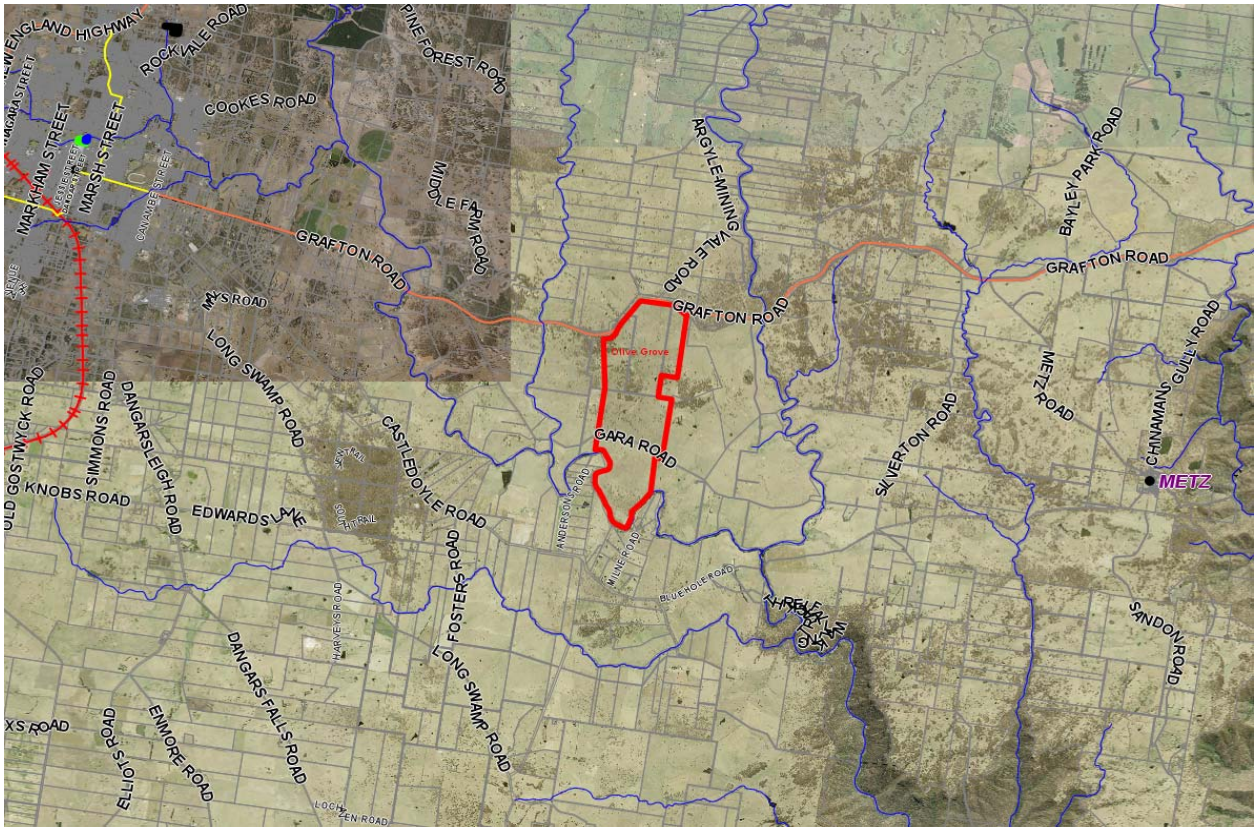

Figure 2 – Locality Plan – Site highlighted in red

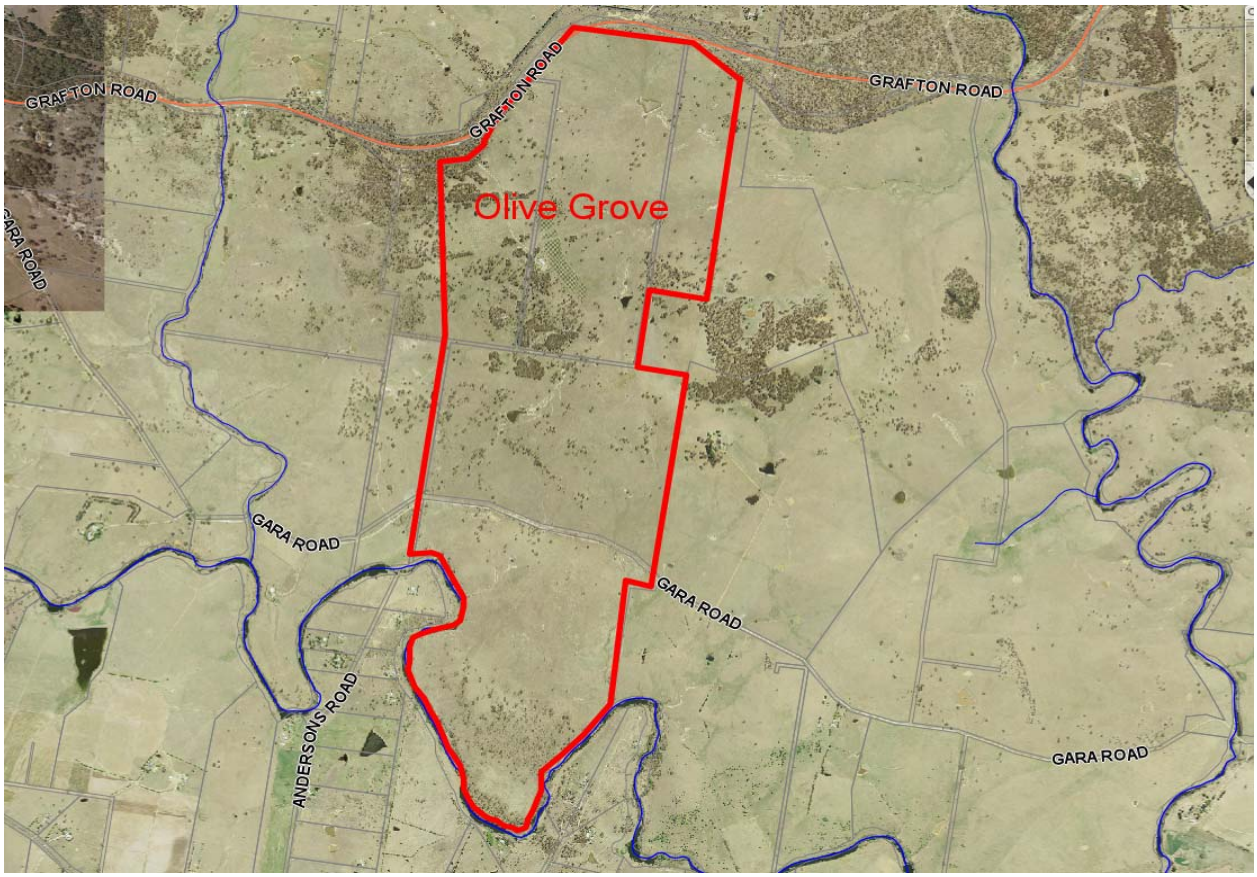

Figure 3 – Site Plan

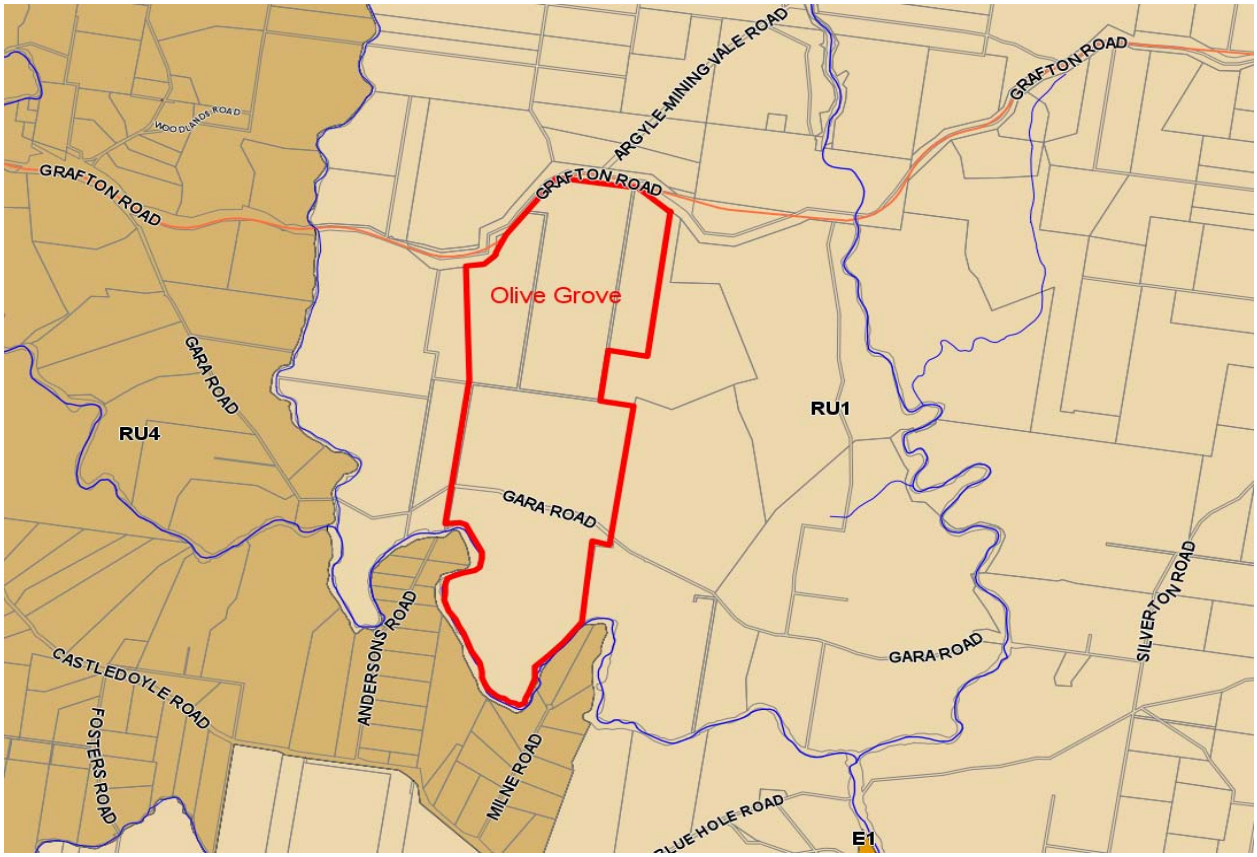

Figure 4 – Extract from land zoning map

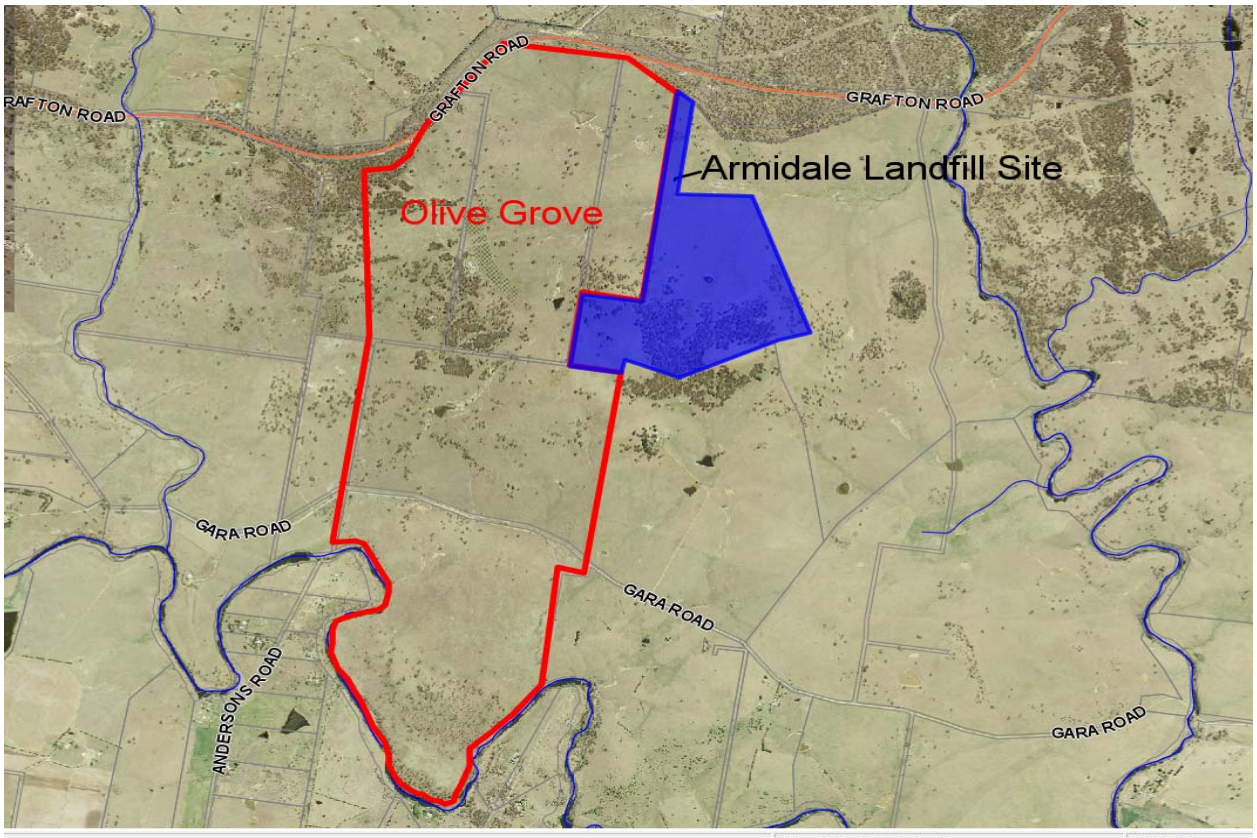

Figure 5 – Proposed site showing proximity to Armidale landfill site

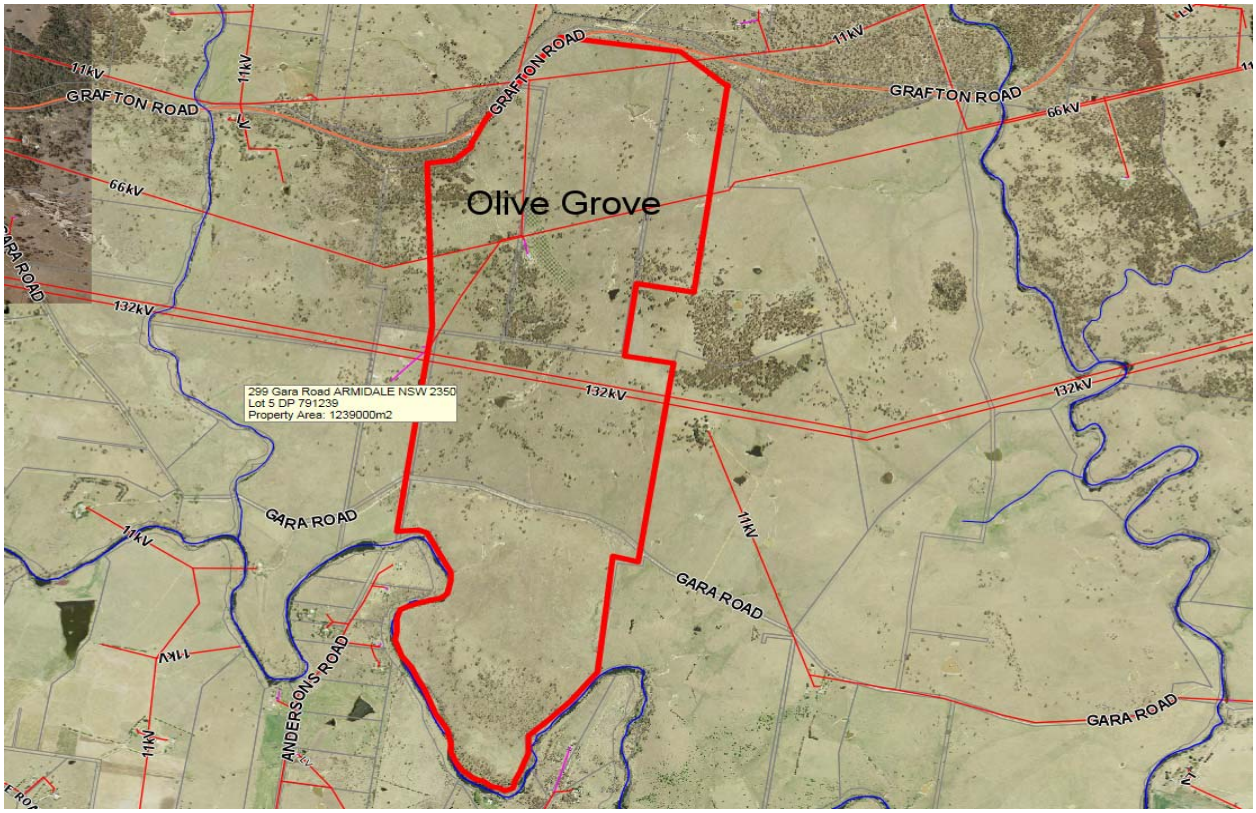

Figure 6 – Location of Electricity lines in relation to the development site

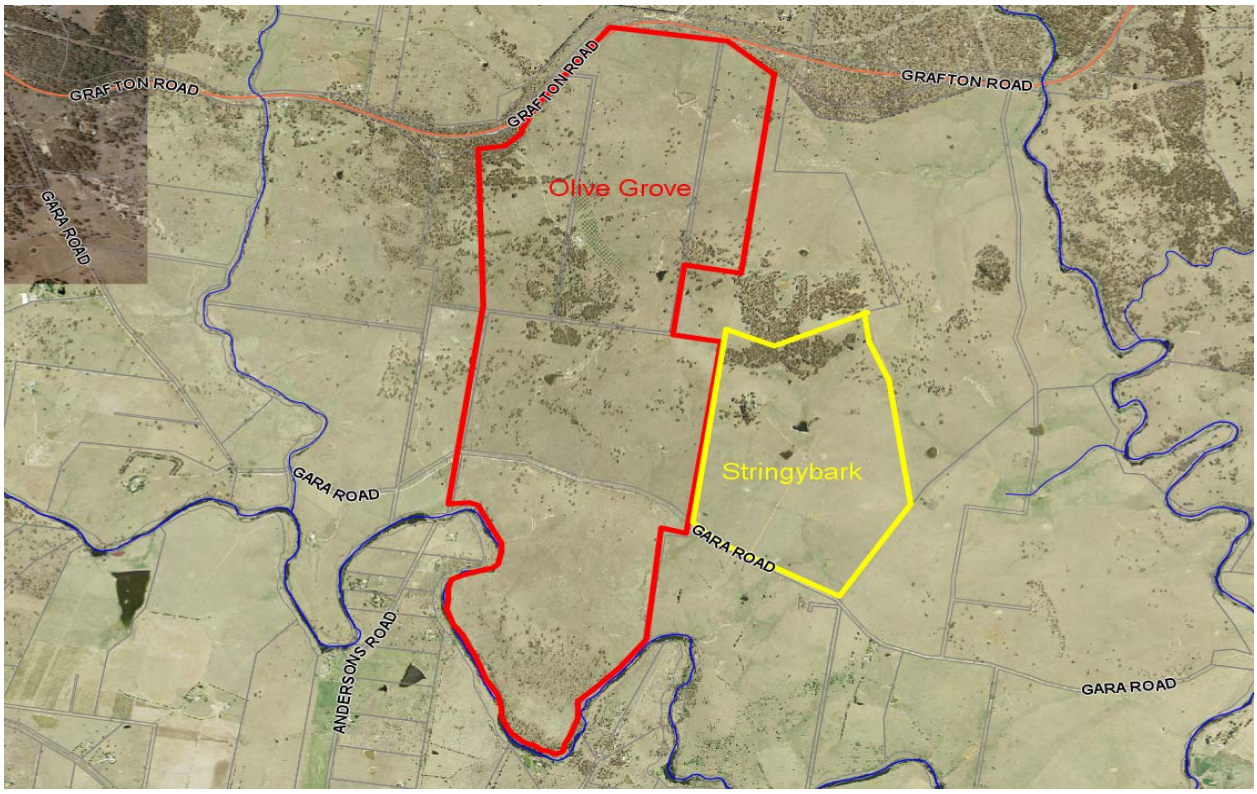

Figure 7 – Proposed Olive Grove Solar Farm site also showing location of recently approved Stringybark Solar Farm at 597 Gara Road – (Approved by NRPP 12 December 2019)

Proposed development

The proposed development is for the construction and operation of a utility-scale photovoltaic (PV) solar farm and associated infrastructure, with a capacity of no more than 29.9 megawatts (MW) located approximately 12km east of Armidale NSW. Once fully operational the facility will have the capacity to generate approximately 65 GWh of clean electricity annually over a 30 year lifespan, which is enough energy to power the equivalent of 15,500 average NSW households each year.

Additionally, the electricity generated by the proposal would result in significant carbon savings. Based on current NSW emission figures it is estimated that approximately 54,000 tonnes of CO_2 would be displaced by the proposal annually.

The proposal will generate electricity through the conversion of solar radiation to electricity using PV panels, laid out across the proposed site in a series of modules, mounted on a single axis tracking system with piled supports.

Key components of the proposal include:

- PV panels to be located within the Array Area mounted on a single axis tracking system with a maximum height of 4m above natural ground level at maximum tilt;
- Approximately 12 inverters (up to 3m high) located within the Array Area at least 50m from Grafton Road;
- On or below ground cabling connecting the PV panels to and between inverters;
- Operations compound (area 0.65ha), including buildings with a maximum height of 5m and car parking for up to eight (8) vehicles;
- A fire track 4m wide, located within a 10m defendable fire break area around the perimeter of the development Envelope;
- A dedicated water tank for firefighting (4m high);
- A perimeter security fence up to 2.5m high;
- Four (4) gated emergency access points and a main gated access point into the Development Envelope accessed via the new entrance at Grafton Road;
- A vegetation screen (7.5 m wide x 402 m long, maintained to be at least 4 m high), to be planted in front of the security fencing either side of the Site entrance at Grafton Road; and
- Internal access tracks within the Array Area (4m wide).

It is estimated that there will be approximately 115,000 individual PV panels, with typical dimensions of approximately 2m x 1m. The panels will be fitted to a single axis tracking system that will allow the PV panels to track the sun as it moves from east to west throughout the day.

The Tracking system will be installed in rows orientated in a north south direction. The tracking system tracks the panels from 60 degrees towards the east in the morning, to face straight upwards at midday (0 degrees) and finally to face 60 degrees towards the west in the afternoon.

The minimum spacing between each of the rows will be 5.5m allowing enough area for vehicles to access for maintenance/management purposes. The tracking system will be supported by piles either mechanically driven or screwed into the ground.

Initially the proposal included the installation of a new substation on the subject property to connect the Olive Grove Solar Farm to the national electricity network, refer Figure 13 below.

In this regard, additional information was received from the Applicant on 9 April 2020, which involved minor changes to the proposed development. These changes to the proposal came about following discussions with Essential Energy after the lodgement of the Application to Council, in which the Electricity Authority advised of their preference for one single connection to the distribution network via the approved Stringybark substation rather than having two separate connections in the same locality.

These revised changes to the development include:

The changes to the development layout for the proposed Olive Grove Solar Farm DA seek to link the proposed Olive Grove Solar Farm to the approved Stringybark Solar Farm via an underground cable, so that electricity can be exported through a single connection to the distribution network (Essential Energy 66 kV line) via the Stringybark substation.

This would involve the following changes to the submitted Olive Grove DA:

- *The extension of the underground cable from the Olive Grove DA to the Stringybark substation to allow the transmission of energy from the Olive Grove Solar Farm through the consented Stringybark development.*
- *The deletion of the proposed Olive Grove substation and the associated portion of the substation access track.*
- *The deletion of the proposed overhead transmission line connecting the Olive Grove substation location area to the Essential Energy 66kV line.*
- *The extension of the proposed Olive Grove substation access track to connect to the consented Stringybark substation access track.*

The changes have been brought about following discussions with Essential Energy, with the efficiency of the connection to the 66 kV distribution line being improved by utilising a single connection point, enabling a minor reduction in project footprint and reduced above ground environmental impacts associated with the Proposal. Refer Figures 14 and 15 below showing these proposed changes to the development.

Following discussions with Council and the Northern Regional Planning Panel, it was agreed that the proposed changes were relatively minor and with a reduction in the project footprint with the removal of the separate substation for the Olive Grove Solar Farm, it was considered that any impacts from the development would be further reduced.

Furthermore, it was also agreed that the proposal was still considered to be a single stand alone facility that relied upon a common connection point via the Stringybark substation approved by the NRPP on 12 December 2019. Given the reduced footprint and that no submissions had been received during the initial notification period, further notification was not considered to be necessary in this instance.

In addition to the key components outlined above, there will be a temporary construction compound required to facilitate the construction and decommissioning phases of the Proposal. The construction compound would include:

- Temporary construction offices (up to 5 m high);
- Car and bus parking areas for construction vehicles;
- Staff amenity block including portable toilets, showers and a kitchen, designed for peak staff numbers during the construction period; and
- Laydown areas.

Once the development is operational, the construction compound will be decommissioned and the area restored to its current condition.

It should also be noted that the exact location of the individual solar panel rows, the inverters, associated cabling and the internal access tracks within the Array Area will not be finalised until a post-consent detailed design and tendering process has been conducted. This allows the Proponent to ensure that the most suitable technology can be utilised at the Site.

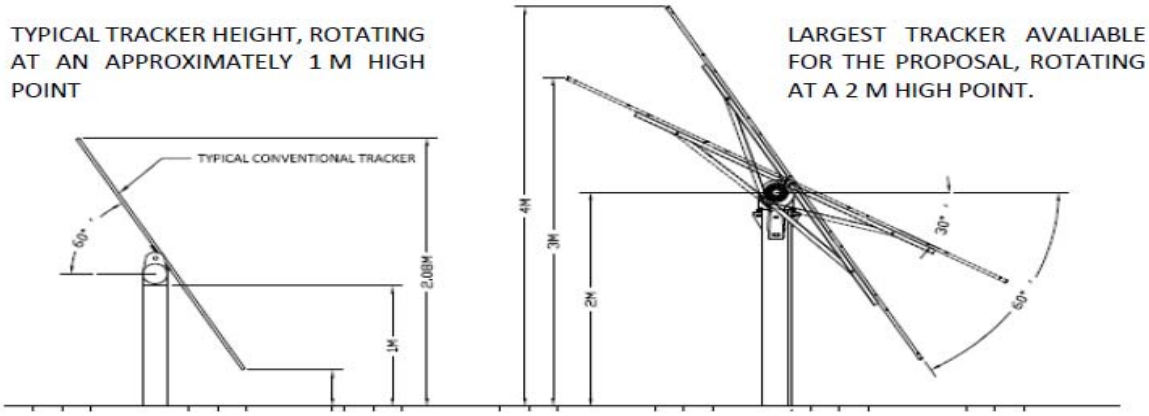

Figure 8 - Tracking systems illustrating range of tracker movements and size between systems

Figure 9 – Example of Piles for a solar farm in place

Figure 10 – Example of fully assembled tracking array

Figure 11 – Example of single inverter container

Figure 12 – Example of double inverter container

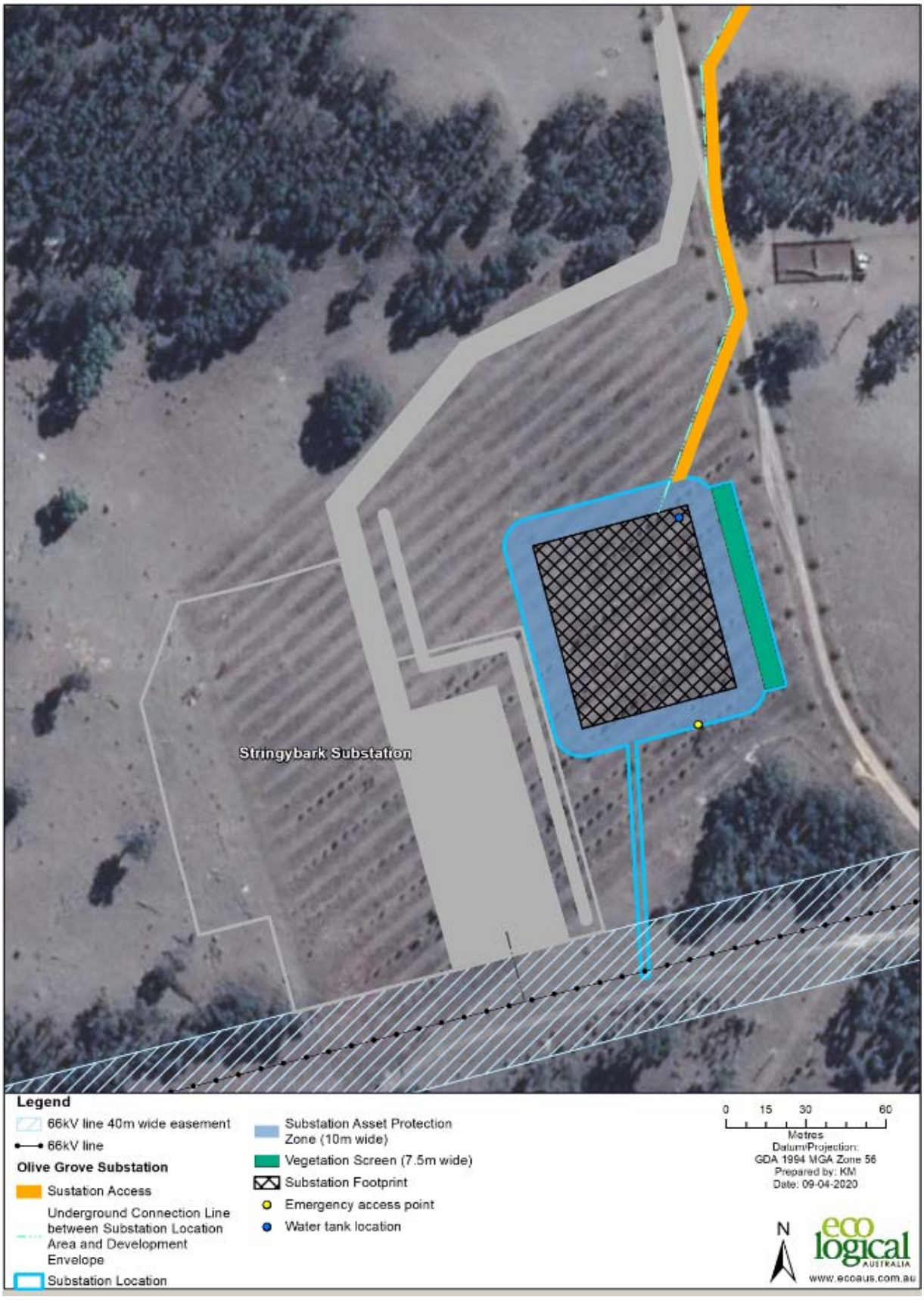

Figure 13 – Original Olive Grove Solar Farm proposal indicating separate substation location

Figure 14 – Revised Olive Grove Plan indicating new underground connection cable to approved Stringybark Substation

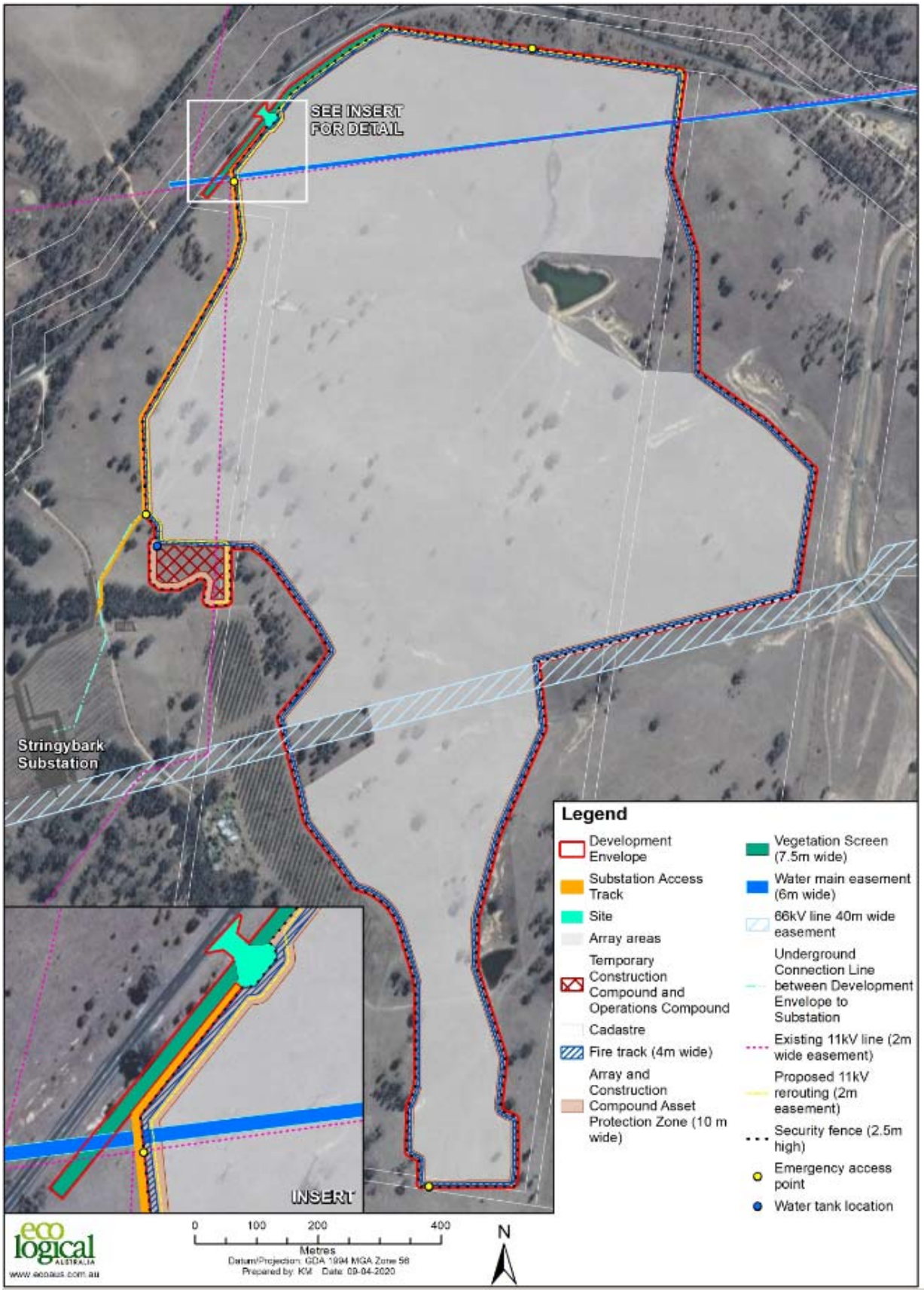

Figure 15 – Revised Site Plan for Olive Grove Solar Farm

Submitted Documents and Plans

Project documentation has been coordinated on behalf of the Applicant by Eco Logical Australia and a range of other specialist consultants. Specific documents and plans relied upon for this assessment, are as follows:

- Statement of Environmental Effects Project Number 19ARM-13082, Version V1, dated 12 February 2020 by Eco Logical Australia, including the following appendices:

  A. *Olive Grove Solar Farm Bushfire Risk Analysis – Eco Logical Australia, Project Number 19ARM_15025, Version 2, dated 11 February 2020;*

  B. *Olive Grove Solar Farm Biodiversity Development Assessment report (BDAR) – Eco Logical Australia, Project Number 12328, Version V3, dated 11 February 2020;*

  C. *Olive Grove Solar Farm Preliminary Site Investigation (PSI) – Eco Logical Australia, Project Number 19ARM-13082, Version 0h, dated 10 February 2020;*

  D. *Aboriginal Heritage Due Diligence Assessment – Olive Grove Solar Farm - Eco Logical Australia, Project Number 19SYD-12937, Version 5, dated 11 February 2020;*

  E. *Local Residents Consultation Letter to neighbours, dated 10 May 2019;*

  F. *Consultation Slides – Olive Grove Solar Farm;*

  G. *Public Information Session Advertisement;*

  H. *Landscape and Visual Impact Assessment (Including Glare Assessment) - Jacobs Group (Australia) Pty Ltd, Project Number IS293400, Final Revision 5.0, dated11 February 2020;*

  I. *Olive Grove Solar Farm – Agronomy Report – "Strathaven", - Matt Foster Agronomist Grazag Australia, dated 27 January 2020;*

  J. *Olive Grove Solar Farm Hydrology Assessment – Eco Logical Australia, Project Number 14822, Version 6, dated 10 February 2020;*

  K. *Olive Grove Solar Farm Traffic and Transport Assessment (TTA) –Constructive Solutions Pty Ltd, Project Number: 201948, Issue 4, Revision 0, dated 14 January 2020;*

  L. *Acoustic Assessment – Olive Grove Solar Farm - TTM Consulting, Report Reference:19SYA0045 R01_2, dated 23 January 2020;*

  Revised documents and plans submitted by Applicant 9 April 2020 including:

  - *Addendum to Olive Grove SEE dated 9 April 2020;*
  - *Letter from Applicant dated 9 April 2020 detailing proposed revisions to Olive Grove Solar Farm Development;*
  - *Revised Plans 1-3 showing proposed changes to development with the removal of the Olive Grove substation;*

Referrals undertaken and other approvals required

Referral Agency:	Response Date:	Summary of Advice / Issues:
Natural Resource Access Regulator (NRAR)	No response received	In this regard, if required the Applicant will need to seek separate approval from NRAR under section 91 of the *Water Management Act 2000.*
Transport for NSW (TfNSW) - Roads and Maritime Services (RMS)	17 June 2020 (Initial referral through the Planning Portal was not received by RMS. Further referral forwarded to RMS 12 June 2020)	The following comments were received from RMS in response to Council's notification of the application: *TfNSW has reviewed the referred information and provides the following comments to assist the Consent Authority in informing a determination:* *1. The TIA proposes a new direct access to the classified road, including a rural property access treatment for articulated vehicles, an Austroads basic right-turn (BAR) treatment and complimentary advanced warning signage. The proposed access treatments are justified on the basis of the hourly flows and are considered appropriate for the identified hourly turn movements.* *TfNSW recommends the Consent Authority that the maximum daily flows be identified in any conditions of development consent and that any movements exceeding the maximum hourly flows must be appropriately managed under appropriate temporary traffic control measures identified in an approved Traffic Management Plan (TMP).* *TfNSW further recommends that the rural property access be designed to facilitate two-way traffic movements and emphasises that the strategic drawing included in Appendix 2 of the TIA are indicative only. Detailed design acceptance and relevant TfNSW approvals under the Roads Act 1993 for road works, access works and related works or structures will be subject to the terms of a Works Authorisation Deed (WAD).* 2. *The TIA further proposes that transport-related impacts generated by the construction and operational and phases of the proposed development will be addressed by a Traffic Management Plan (TMP) and an Operational Management Plan.* *TfNSW recommends that the Consent Authority include a requirement for a TMP in any conditions of consent and that the TMP should address impacts over the life of the development. Any TMP should be developed by a suitably qualified person in consultation with the relevant Roads Authorities and approved by the Consent Authority prior to the commencement of on-site construction activities.* *Any TMP could include, but not necessarily be limited to, the following;*

Referral Agency:	Response Date:	Summary of Advice / Issues:
Roads and Maritime Services (RMS) – (Cont.)		• *Consideration for construction, operational and decommissioning phases.* • *A weekly vehicle movement schedule identifying expected trip generation.* • *Details of the site access location and an relevant road safety considerations,* • *An induction process for on-site staff and visitors with regular toolbox meetings.* • *A complaint resolution and disciplinary procedure.* • *Any community consultation measures proposed for peak periods.* • *Details of any TCP arrangements for deliveries by over mass over dimension vehicles.* *Any Traffic Control Plan/s (TCPs) to manage peak periods or events during the construction and decommission phases of the development. Any TCPs are to be certified and implemented by suitably qualified persons in accordance with the current Traffic Control at Worksites Manual.* *TCPs will need to take into consideration the existing speed environment, safety of turning and peak hour traffic. A Road Occupancy Licence (ROL) must be obtained from TfNSW prior to the implementation of any traffic control on the classified road. Further details can be obtained from TfNSW OPLINC website*. *3. The TIA proposes that the TMP will be used to prohibit left-turns into the site over the life of the development. The development application provides limited detail of how the TMP will enforce the proposed arrangement and any procedure proposed to redistribute trips approaching the site from the east.* *Where vehicles approaching from the East are required to turn around at an alternate location to approach the site from the West, then the Consent Authority should be satisfied that suitable treatments are available to safely facilitate such manoeuvres at the proposed turnaround location and to mitigate any potential impacts on the safety and efficiency of the classified road.* *TfNSW recommends that the Consent Authority confirm that no further roadworks are required at the alternate location prior to determination of the development application. The scope of any required works should be identified and included in any conditions of consent.* *The developer will be required to enter into a Works Authorisation Deed (WAD) with TfNSW for any roadwork deemed necessary on the classified (State) road.*
Essential Energy	6 March 2020	*Refer comments below under Clause 45 of ISEPP 2007.*

This proposal will also require separate approvals under the Roads Act 1993, for any work in Council's road reserves, connected with the proposal.

Political Donations

At the time of lodging the Development Application the Applicant indicated, pursuant to Section 10.4(4) of the *Environmental Planning and Assessment Act 1979*, that no reportable political donation or gift had been made by the Applicant or any person with a financial interest in this Application to a local Councillor or employee of Armidale Regional Council.

Assessment - Matters for Consideration

The assessment of this Development Application has been undertaken in accordance with Section 4.15 (1) of the *Environmental Planning and Assessment Act 1979*, as amended. In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development application:

Section 4.15(1)(a) the provisions of the following that apply to the land to which the development application relates*:*

(i) the provisions of any environmental planning instrument

State Environmental Planning Policies (SEPPs):

The following SEPPs have been considered in connection with this development:

SEPP No 44 – Koala Habitat Protection:

This Policy aims to encourage the proper conservation and management of areas of natural vegetation that provide habitat for Koalas, to ensure a permanent free-living population are maintained over their present range and reverse the current trend of Koala population decline.

Clause	Subject	Comments
6	Land to which this Part applies	SEPP 44 applies to this DA as per cl. 6, as the site for the proposed development has an area of more than 1 ha.
7	Is the land potential koala habitat?	Under the SEPP, potential Koala habitat is defined as areas of native vegetation where the trees of the types listed in Schedule 2 of the SEPP constitute at least 15% of the total number of trees in the upper or lower strata of the tree component. The Applicant has submitted a Biodiversity Development Assessment Report (BDAR) to support the application which has assessed among other matters, the existing habitat on the site and whether this would constitute potential koala habitat. The BDAR identified there were several feed species for Koala present onsite, although field investigations did not identify any evidence of Koalas on the Site, let alone a breeding population.
8	Is the land core koala habitat?	The Site does not contain core koala habitat as defined by SEPP 44.

SEPP No 55 – Remediation of Land:

SEPP 55 aims to promote remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment.

Clause	Subject	Comments
7	Contamination and remediation to be considered in determining development application	(*1) A consent authority must not consent to the carrying out of any development on land unless:* *(a) it has considered whether the land is contaminated, and* *(b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and* *(c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.* In regard to the potential for any site contamination from past/present activities on the land, it is noted under Table 1 of the Planning Guidelines for Managing Land Contamination, that agricultural/horticultural activities have been identified as an activity that may potentially cause contamination. As such, the Applicant's consultant has undertaken a Preliminary Site Investigation (PSI) which comprised a desktop site assessment, preliminary contamination assessment, including examination of current and historical land use, and multiple site inspections. The consultant has also advised that: *'A review of the NSW Environmental Protection Agency (EPA) Contaminated Land Record under section 58 of the Contaminated Land Management Act 1997 (CLM Act) and the List of NSW contaminated sites notified to the EPA under section 60 of CLM Act did not reveal any registered contaminated land sites within or surrounding the Site.* *A review of premises currently regulated by an Environmental Protection Licence (EPL) under the Protection of the Environment Operations Act 1997 (POEO Act) and premises that are no longer required to be licensed under the POEO Act did not reveal any premises within or surrounding the Site.* *Pursuant to clause 7 of SEPP 55, based on the findings of the PSI, there is no apparent reason to consider that land to be utilised by the Proposal would be contaminated.* The consultant has further advised that the Proposal has been strategically located in the most disturbed part of the wider landholding to minimise impacts to native vegetation. Historically cleared for grazing livestock, the area in which the Development Envelope (Site) is located is relatively featureless. No infrastructure such as farm buildings, sheep or cattle yards or chemical storage sites have been located within the Proposal Site to the knowledge of the landowner.

Clause	Subject	Comments
7 (Cont.)	Contamination and remediation to be considered in determining development application	From the information available, the primary land-use of previous landholders throughout the title history of this site has been for extensive agricultural grazing purposes. This continuous history implies low potential for contaminating uses or intensive industries. During a site inspection undertaken by the consultant, no evidence was observed that indicated previous site contamination, or that suggested previous major land-use changes. Specifically, the following were NOT observed: • *Sheep dips or intensive animal handling facilities;* • *Portions of unusually bare or discoloured soils;* • *Scums or discoloured waterbodies;* • *Operational, or disused, sheds or other built structures;* • *Chemical storage facilities;* • *Evidence of land-based waste disposal or dumping; and* • *Evidence of land disturbance, filling or excavation.* In conclusion the consultant advised that, *based on a review of the Site history data and contemporary investigations, the following observations are made:* • *The Site has been historically cleared and used for agricultural purposes; it comprises open grassland, with scattered trees;* • *No evidence of other historical land uses (such as commercial/industrial), which have the potential to cause contamination, have occurred within the Site;* • *Database searches, land title searches, aerial imagery and landholder interviews provide no indication of potential contamination within the Site; and* • *A site inspection did not identify evidence to suspect potential contamination within the Site area.* In this regard, Council advises the following: - The subject site is not identified as being potentially contaminated on Council's information system. - A review of Council's electronic and hard copy files for the property has not identified any past land uses that would be likely to result in site contamination. - A site inspection did not reveal any apparent signs of contamination. - The proposed development does not constitute a sensitive land use. On the basis of the above, the undertaking of a further Detailed Site Investigation was not considered necessary in this instance and the subject site is considered as suitable for the proposed development.

SEPP (Infrastructure) 2007:

The aim of this Policy is to facilitate the effective delivery of infrastructure across the State.

Part 3 - Development Controls:

Division 4 - Electricity generating works or solar energy systems:

Clause	Subject	Comments
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.*** The application submitted for consideration, is for the construction and operation of a utility-scale photovoltaic (PV) electricity generating system. The subject land is currently zoned RU1 under ADLEP 2012, which is identified as being a prescribed rural zone under the ISEPP. As such, the proposal is permissible with consent under Clause 34(1)(b) of the ISEPP. Additionally Clause 34(7) states: *(7) **Solar energy systems** Except as provided by subclause (8), development for the purpose of a solar energy system may be carried out by any person with consent on any land.* *solar energy system means any of the following systems—* *(a) a photovoltaic electricity generating system,* *(b) a solar hot water system,* *(c) a solar air heating system.* As such, the proposal is also considered to be permissible with consent under Clause 34(7) of the ISEPP.

SEPP (Infrastructure) 2007 (Cont.):

Part 3 - Development Controls:

Division 5 - Electricity transmission or distribution:

Clause	Subject	Comments
45	Determination of development applications—other development	*(1) This clause applies to a development application (or an application for modification of a consent) for development comprising or involving any of the following—* *(a) the penetration of ground within 2m of an underground electricity power line or an electricity distribution pole or within 10m of any part of an electricity tower,* *(b) development carried out—* *(i) within or immediately adjacent to an easement for electricity purposes (whether or not the electricity infrastructure exists), or* *(ii) immediately adjacent to an electricity substation, or* *(iii) within 5m of an exposed overhead electricity power line,* *(c) N/A* *(d) development involving or requiring the placement of power lines underground, unless an agreement with respect to the placement underground of power lines is in force between the electricity supply authority and the council for the land concerned.* *(2) Before determining a development application (or an application for modification of a consent) for development to which this clause applies, the consent authority must—* *(a) give written notice to the electricity supply authority for the area in which the development is to be carried out, inviting comments about potential safety risks, and* *(b) take into consideration any response to the notice that is received within 21 days after the notice is given.* A number of existing transmission lines traverse the site, as can be seen in Figure 6 above. As such a referral was forwarded to Essential Energy for comment. In response Essential Energy advised the following: *Strictly based on the documents submitted, Essential Energy has no comments to make as to potential safety risks arising from the proposed development.* *Essential Energy makes the following general comments:* 1. *If the proposed development changes, there may be potential safety risks and it is recommended that Essential Energy is consulted for further comment.* 2. *Any existing encumbrances in favour of Essential Energy (or its predecessors) noted on the title of the above properties should be complied with.*

SEPP (Infrastructure) 2007 (Cont.):

Part 3 - Development Controls:

Division 5 - Electricity transmission or distribution:

Clause	Subject	Comments
45 (Cont.)	Determination of development applications—other development	3. *Satisfactory arrangements must be made with Essential Energy with respect to the proposed solar farm, which will form part of the development. It is the Applicant's responsibility to enter into the required Connections Agreement/s and any other requirements with Essential Energy for the development, which may include the payment of fees and contributions. Refer Essential Energy's Network Connections team for requirements via email networkconnections@essentialenergy.com.au.* 4. *No solar farm infrastructure is to be located in Essential Energy's easements, that is:* a. *40 metres for the 66kV overhead powerline, 20 metres either side of the powerline; and* b. *20 metres for the 11kV overhead powerline, 10 metres either side of the powerline.* 5. *If any proposed roads or any other proposed works change the ground levels within Essential Energy's easement areas, the Applicant must provide confirmation to Essential Energy that ground clearances are maintained as per Essential Energy's design manual.* 6. *If part of the 11kV overhead powerline is to be re-located to underground, then no works can occur in this area until the existing overhead powerline has been disconnected and removed. Refer Essential Energy's Contestable Works team for requirements via email contestableworks@essentialenegy.com.au. If this undergrounding is installed, then an easement area 2 metres wide needs to be maintained. Also, nothing can be installed or constructed over the top of the underground easement.* 7. *Essential Energy will require 24 hour access to the site. The Applicant will need to provide gate/s, at the location/s specified by Essential Energy. Such gate/s will have an Essential Energy lock attached to each gate/s. Note that depending on the ability to access its existing assets, Essential Energy may require multiple access points.* 8. *In addition, Essential Energy's records indicate there is electricity infrastructure located within the properties and within close proximity to the properties. Any activities within these locations must be undertaken in accordance with the latest industry guideline currently known as ISSC 20 Guideline for the Management of Activities within Electricity Easements and Close to Infrastructure. Approval may be required from Essential Energy should activities within the property encroach on the electricity infrastructure.*

SEPP (Infrastructure) 2007 (Cont.):

Part 3 - Development Controls:

Division 5 - Electricity transmission or distribution:

Clause	Subject	Comments
45 (Cont.)	Determination of development applications—other development	9. *Prior to carrying out any works, a "Dial Before You Dig" enquiry should be undertaken in accordance with the requirements of Part 5E (Protection of Underground Electricity Power Lines) of the Electricity Supply Act 1995 (NSW).* 10. *Given there is electricity infrastructure in the area, it is the responsibility of the person/s completing any works around powerlines to understand their safety responsibilities. SafeWork NSW (www.safework.nsw.gov.au) has publications that provide guidance when working close to electricity infrastructure. These include the Code of Practice – Work near Overhead Power Lines and Code of Practice – Work near Underground Assets.* *Our records also indicate that there is electrical infrastructure located on the properties owned by TransGrid. Please also contact TransGrid in relation to this proposal.* Given the above, it is recommended that any consent by conditioned advising of the above comments by Essential Energy.

SEPP (Infrastructure) 2007:

Part 3 - Development Controls:

Division 17 - Roads and traffic

Subdivision 2 - Development in or adjacent to road corridors and road reservations:

Clause	Subject	Comments
101	Development with frontage to classified road	*(1) The objectives of this clause are—* *(a) to ensure that new development does not compromise the effective and ongoing operation and function of classified roads, and* The proposed site is 1060 Grafton Road, which is located on a classified road. It is proposed that the Development Site will be accessed directly from Grafton Road via a new access point so as to separate the development and associated traffic from the existing residence on the property. Given the location of the Development site on the northern section of the property there is no other practical alternative access available other than off the classified road. As such, any new access directly onto Grafton Road will need to be constructed in accordance with Austroads, RMS and Council requirements. Please refer to comments above regarding RMS assessment. Following the satisfactory completion of the access in accordance with the WAD, it is considered that the new development would not compromise the effective and ongoing operation and function of the classified road.

SEPP (Infrastructure) 2007 (Cont.):

Part 3 - Development Controls:

Division 17 - Roads and traffic:

Subdivision 2 - Development in or adjacent to road corridors and road reservations:

Clause	Subject	Comments
101 (Cont.)	Development with frontage to classified road	*(b) to prevent or reduce the potential impact of traffic noise and vehicle emission on development adjacent to classified roads.* The proposed development is not of a type that would be adversely impacted by traffic noise and vehicle emissions. *(2) The consent authority must not grant consent to development on land that has a frontage to a classified road unless it is satisfied that—* *(a) where practicable and safe, vehicular access to the land is provided by a road other than the classified road, and* There is no other practical alternative access available to the Development Envelope. *(b) the safety, efficiency and ongoing operation of the classified road will not be adversely affected by the development as a result of—* *(i) the design of the vehicular access to the land, or* Access to 1060 Grafton Road will be required to be designed as per RMS recommendations. Following satisfactory completion of the access in accordance with RMS/Council requirements and WAD, it is considered that the safety, efficiency and ongoing operation of the classified road will not be adversely affected by the development. *(ii) the emission of smoke or dust from the development, or* The development is not of a type that would emit excessive smoke or dust which could impact on the classified road. *(iii) the nature, volume or frequency of vehicles using the classified road to gain access to the land, and* Access off the classified road to the site is not anticipated to significantly impact on the nature, volume or frequency of vehicles using the roadway to gain access to the land. Apart from during the construction (estimated to be approximately 9 months) and commissioning phase of the development, it is anticipated that there will be only minor traffic access to the site during the operational phase of the development. *(c) the development is of a type that is not sensitive to traffic noise or vehicle emissions, or is appropriately located and designed, or includes measures, to ameliorate potential traffic noise or vehicle emissions within the site of the development arising from the adjacent classified road.* The development is not of a type that is sensitive to traffic noise or vehicle emissions.
104	Traffic-generating development	The development is not considered to be traffic generating under Schedule 3 of the ISEPP.

SEPP (Infrastructure) 2007:

Part 3 - Development Controls:

Division 12A - Pipelines and pipeline corridors

Subdivision 2 - Development adjacent to pipeline corridors

Clause	Subject	Comments
66C(1)	Determination of development applications	*Before determining a development application for development adjacent to land in a pipeline corridor, the consent authority must—* *(a) be satisfied that the potential safety risks or risks to the integrity of the pipeline that are associated with the development to which the application relates have been identified, and* *(b) take those risks into consideration, and* *(c) give written notice of the application to the pipeline operator concerned within 7 days after the application is made, and* *(d) take into consideration any response to the notice that is received from the pipeline operator within 21 days after the notice is given.* During the assessment of this application it has been identified that the existing Gara water main (250Ø) traverses the northern section of the site in an east-west direction, refer Figure 16 below. From the information available to Council and following a review of the relevant Title documents for the land it does not appear that the main is protected by an easement. As such, it is recommended that any consent be conditioned to have the Gara Water main located in a suitably sized easement (6m), to ensure its future protection for the life of the infrastructure. In this regard, Council's Development Engineer has advised that: The array piles/posts will be required to be installed outside of any easement. The panels can however hang over the easement (which can be tilted to allow maintenance to be undertaken). Cabling can also run through the easement provided that cable clearances are met as per Council's engineering codes. Security fences can traverse the easement providing that fence poles are installed outside the main's zones of influence; and Vehicular tracks can traverse the easement providing adequate cover and/or protective measures are incorporated into the track to ensure no additional loading is placed on the main.

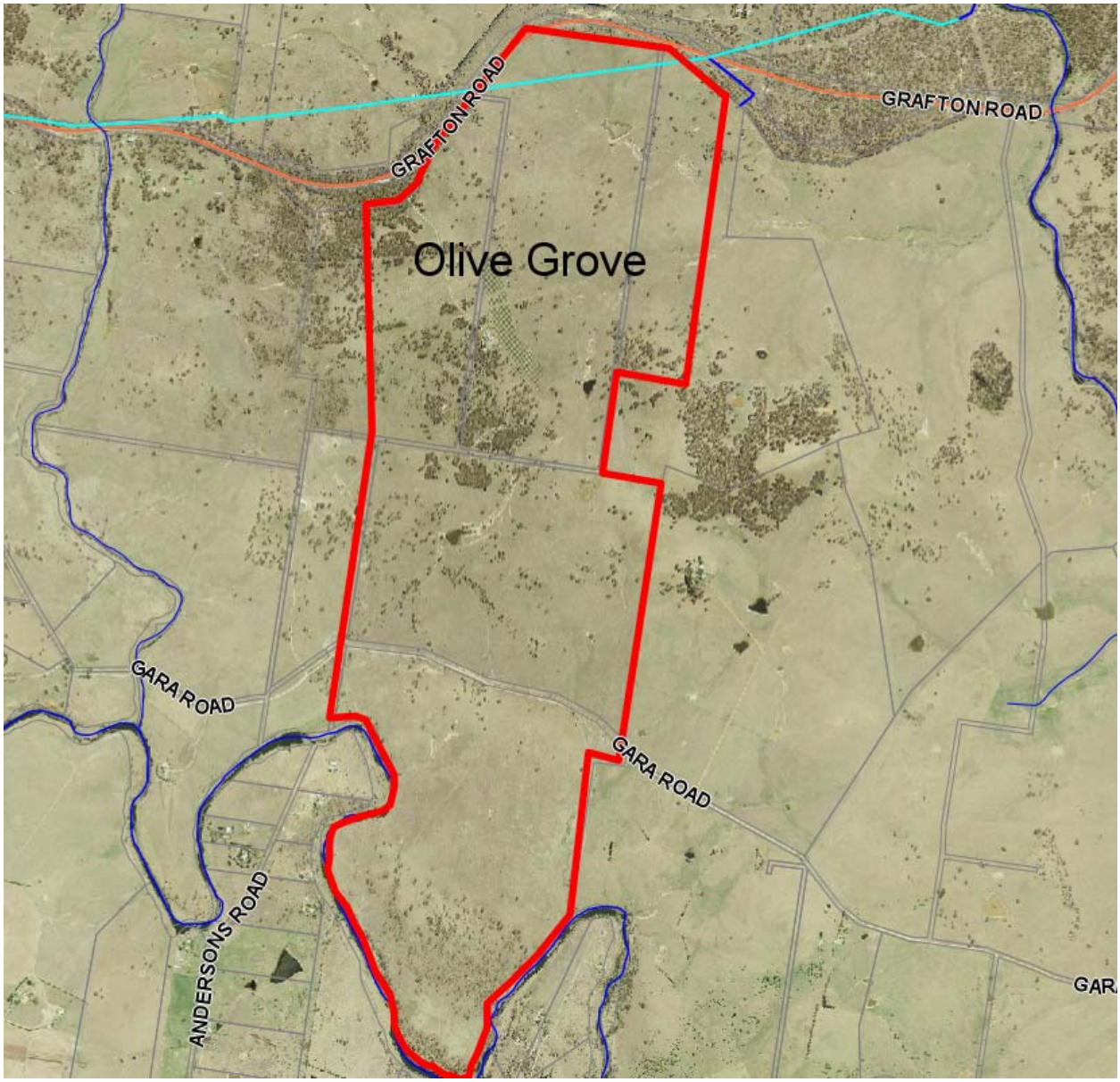

Figure 16 – Subject Site showing location of Gara Water main in blue traversing the northern section of the lot

SEPP (Primary Production and Rural Development) 2019:

Clause	Subject	Comments
3	Aims of Policy	*The aims of this Policy are as follows—* *(a) to facilitate the orderly economic use and development of lands for primary production,* The assessment of this application has been undertaken having regard to the aims of this Policy. The proposal is for a type of development other than for the purposes of primary production. Whilst the proposal will utilise agricultural land for the purposes of a photovoltaic electricity generating system, the applicant has advised that the site within and surrounding the Development Envelope can still be used for the grazing of sheep and as such, can still be productive agricultural land. *(b) to reduce land use conflict and sterilisation of rural land by balancing primary production, residential development and the protection of native vegetation, biodiversity and water resources,* Given the temporary nature and the relatively light footprint of the development, it is not expected that the proposal will result in any land use conflicts or sterilise the land for future primary production purposes. Following any future decommissioning of the development, it is anticipated that the land would again be suitable for primary production purposes without any adverse impacts on its capacity. The development area on the site has been largely cleared of significant areas of native vegetation and has been extensively used for grazing purposes in the past. During the site analysis for the development to identify any particular constraints /impediments to the development, any areas of higher significant biodiversity were avoided to minimise any impacts on these areas of the site. Apart from some minimal clearing required for road upgrades on Grafton Road required by RMS, the development area itself has been chosen on the most cleared and degraded areas on the site. As such, and as detailed in the BDAR, there will be minimal impacts on native vegetation and biodiversity. *(c) to identify State significant agricultural land for the purpose of ensuring the ongoing viability of agriculture on that land, having regard to social, economic and environmental considerations,* The subject site is not identified as state significant agricultural land. *(d) to simplify the regulatory process for smaller-scale low risk artificial waterbodies, and routine maintenance of artificial water supply or drainage, in irrigation areas and districts, and for routine and emergency work in irrigation areas and districts,* Not applicable to this proposal. *(e) to encourage sustainable agriculture, including sustainable aquaculture,* The application is not for the purposes of agriculture.

SEPP (Primary Production and Rural Development) 2019 (Cont.):

Clause	Subject	Comments
3 (Cont.)	Aims of Policy	*(f) to require consideration of the effects of all proposed development in the State on oyster aquaculture,* Not applicable to this proposal. *(g) to identify aquaculture that is to be treated as designated development using a well-defined and concise development assessment regime based on environment risks associated with site and operational factors.* Not applicable to this proposal.

SEPP (State and Regional Development) 2011:

Clause	Subject	Comments
3	Aims of Policy	*The aims of this Policy are as follows—* *(a) to identify development that is State significant development,* *(b) to identify development that is State significant infrastructure and critical State significant infrastructure,* *(c) to identify development that is regionally significant development.* The assessment of this application has been undertaken having regard to the aims of this Policy.
20	Declaration of regionally significant development	*(1) Development specified in Schedule 7 is declared to be regionally significant development for the purposes of the Act.* The proposed development is identified as being Regionally Significant Development (RSD) under Clause 5(a) of Schedule 7 of the SEPP, being for the purposes of: - Private infrastructure works over $5 million for the purposes of electricity generating works that has a capital investment value of more than $5 million. In this regard, the Applicant has advised that the development has a CIV of $29.7 million.

Local Environmental Plans (LEPs):

The ***Armidale Dumaresq Local Environmental Plan 2012*** has been considered in connection with this development:

Clause	Subject	Comments
1.2	Aims of Plan	*The particular aims of this Plan are as follows—* *(a) to encourage the orderly management, development and conservation of resources by protecting, enhancing and conserving—* *(i) land of significance for agricultural production, and* *(ii) timber, minerals, soils, water and other natural resources, and* *(iii) areas of high scenic or recreational value, and* *(iv) native plants and animals, including threatened species, populations and ecological communities, and their habitats, and* *(v) places and buildings of heritage significance,* *(b) to provide a choice of living opportunities and types of settlements,* *(c) to facilitate development for a range of business enterprises and employment opportunities,* *(d) to ensure that development is sensitive to both the economic and social needs of the community, including the provision of community facilities and land for public purposes,* *(e) to ensure that development has regard to the principles of ecologically sustainable development and to areas subject to environmental hazards and development constraints,* *(f) to provide for flexibility in applying certain development standards, where compliance with such standards may be unreasonable or unnecessary in the circumstances of a particular development, and there is sufficient justification for varying the standards on environmental planning grounds.* The assessment of this application has been undertaken having regard to the aims of this Policy.
2.1	Land use zones	The land is currently zoned RU1 Primary Production under ADLEP 2012.
2.3	Zone objectives and Land Use Table	*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.*

Armidale Dumaresq Local Environmental Plan 2012- (Cont.)

Clause	Subject	Comments
2.3 (Cont.)	Zone objectives and Land Use Table	• *To allow for non-agricultural land uses that will not restrict the use of other land in the locality for agricultural purposes.* The proposed development is not considered to be contrary to the zone objectives. The use of the land for a solar farm will not conflict with adjoining agricultural land use. It is further noted that should the solar farm by decommissioned, it is possible to restore the site back to agricultural purposes. As identified above, under Clause 34(1)(b) and 34(7) of the ISEPP, the development is permitted with consent within the RU1 zone. Furthermore, as per Clause 8 of the ISEPP, it states *if there is an inconsistency between this Policy and any other environmental planning instrument, whether made before or after the commencement of this Policy, this Policy prevails to the extent of the inconsistency.* As such the development is permissible with consent under the ISEPP.
5.10	Heritage conservation	The subject site is not identified as being of European heritage significance.
6.1	Earthworks	Minimal earthworks will be required for the bulk of the development as the tracking system will be supported by piles either mechanically driven or screwed into the ground. Minor earthworks required for internal access tracks, fencing etc.

(ii) the provisions of any draft environmental planning instrument

There are not considered to be any draft instruments which would have any bearing upon this application.

Draft koala habitat protection SEPP

It is noted that *SEPP (Koala Habitat Protection) 2019* came into effect on 1 March 2020, after the application was lodged with Council.

Under Clause 9 of the Policy, it is advised that part of the subject site is identified on the *Koala Development Application Map,* the land has a site area greater than 1ha and there is no approved koala plan of management applying to the land.

Given that the assessment of the site for the purposes of the BDAR did not identify it as being potential koala habitat, let alone core koala habitat, it is considered that these amendments to the Policy would have little bearing on this application.

(iii) the provisions of any development control plan

The ***Armidale Dumaresq Development Control Plan (DCP) 2012*** applies to the land.

The following Table outlines the relevant Chapters / provisions of the DCP that have been considered in connection with this assessment.

Chapter	Comment
1.1 – Introduction and Public Notification	The application was notified extensively in accordance with this Chapter of the DCP, to all properties within an approximate 2km radius from the Development Envelope for the solar arrays. The Application was also advertised in the local paper during the 28 day notification period. At the conclusion of the notification period nil public submissions had been received by Council.
2.1 - Site Analysis	An extensive site analysis process was undertaken by the Applicant to identify the most suitable location for the proposal. The Applicant has advised that, *initial investigations, including consultation with network operators were undertaken. The capacity to export electricity from a development to the National Energy Market is a key factor in selecting a site for large-scale generation in NSW. As such, potential capacity in the transmission and distribution lines in NSW was used as a starting point to identify a suitable site for the Proposal.* *The following site selection criteria were considered in the identification of suitable development sites for the Proposal:* - *Solar radiation;* - *Access to the existing road network;* - *Access to the electricity grid;* - *Capacity of the local transmission/distribution lines;* - *Topography and key landscape features;* - *Minimal environmental constraints/impact;* - *Existing land uses;* - *Access to suppliers and materials;* - *Proximity to residential settlement; and* - *Landowner support.* Following a review of sites both locally and within NSW the proponent determined that the subject site presented a feasible location for the development due to it largely satisfying the above selection criteria. The concept design process for the development went through a number of reiterations to look at maximising potential benefits while minimising environmental impacts where possible.

Armidale Dumaresq Development Control Plan (DCP) 2012 – (Cont.)

Chapter	Comment
2.1 - Site Analysis – (Cont.)	Additionally, the proposed site was selected due to its suitability for the development, its topography and limited visual impacts from any nearby sensitive receptors and its limited environmental constraints as encouraged under the *Biodiversity Conservation Act 2016,* which aims to minimise impacts on significant areas of native vegetation by adopting the following philosophy: • ***Avoid*** *– in the first instance, all efforts have been made to avoid potential environmental impacts;* • ***Minimise*** *– where potential impacts cannot be avoided, design principles seek to minimise environmental impacts, as far as feasibly possible;* • ***Mitigate*** *– mitigation strategies will be identified and implemented to manage the extent and severity of remaining environmental impacts; and* • ***Offset*** *– environmental offsets shall be used only as applicable, following all efforts to first avoid, minimise and mitigate environmental impacts.* Following the initial scoping for the proposal, a much larger 100MW solar farm was initially considered which would have been spread across the majority of two adjoining landholdings, being 597 Gara Road and 1060 Grafton Road. However, following additional detailed environmental studies and feedback received from the two community information/consultation sessions undertaken, and adopting the above design criteria to avoid and minimise impacts where possible, it was identified that the sites were not suitable for a development of this larger scale, due to initial topographic, environmental and visual assessments, which indicated that the site was better suited to two separate smaller scale developments.
2.3 – European Heritage	The subject site itself is not identified as being of European heritage significance. The Applicant has undertaken a search of the locality for the purposes of the SEE and has identified that there are a number of heritage items/landscapes within the vicinity of the site, with the closest being approximately 2.7km to the west of the property. Given the distance between the subject site and these heritage /landscapes Items, it is considered that the proposal would be unlikely to have any adverse impacts on these items.
2.4 – Aboriginal Heritage	The applicant has undertaken a due diligence assessment in accordance with the OEH *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW,* to identify the presence of specific landscape features for the likelihood that Aboriginal sites and /or artefacts may be present on the site. In this regard, the Applicant has advised the following: *Heritage Database Searches:* *Searches of the Australian Heritage Database, the State Heritage Inventory and Armidale LEP were conducted to determine if any places of Aboriginal significance are located within proximity to the Site.*

Armidale Dumaresq Development Control Plan (DCP) 2012 – (Cont.)

Chapter	Comment
2.4 – Aboriginal Heritage – (Cont.)	These searches found no places of Aboriginal heritage significance within the Development Site. *The Applicant has advised that two items of Aboriginal cultural heritage, TH/JA 3 and GL ISO2 (registered AHIMS sites 21-4-0026 and 21-4-0095), have been previously recorded within 200 m of the Development Site (refer Figure 16 below), though these are not located in a high-potential archaeological landscape and will not be impacted by the development.* *Another isolated artefact, GL ISO1 (AHIMS registered site 21-4-0096), has been previously recorded on a ridgeline. Part of this ridgeline, where vegetation persists and disturbance is minimal, may have PADs present as indicated by the isolated finds and the prominence of this landscape feature in the local area. The Proposal avoids this part of the ridgeline.* The above is consistent with Council's search of the Aboriginal Heritage Information Management System (AHIMS), in which it was identified that there were two Aboriginal sites recorded in or near the lot. A search of Council's GIS has identified one site being located on Lot 3 DP 786950, but outside the Development Site itself. The inventory sheet for this particular site describes it as being *a knapping site and possible camp site containing 24 artefacts in an area of 20 x 20m on a flat topped spur beneath transmission lines. Estimates up to 500 artefacts present in site.* As part of the Due Diligence assessment for this proposal, a site inspection of the Development Site was undertaken by the Applicants consultant. The Consultant advised, that *no archaeological items or landscapes of significance were found within the Development Site, or the new Site access area adjacent to Waterfall Way. One artefact was discovered during the field surveys, OG ISO1, approximately 325 m from the Development Site on the northern aspect of a ridgeline within the landholding, however the Proposal avoids this part of the ridgeline (refer Figure 17).* *Following an analysis of the desktop assessment and observations made during the archaeological field survey, the Site was considered to represent an area of low archaeological potential as a result of physical impacts caused by pastoral activities including vegetation clearing, ploughing, vehicle movement and dam/fence construction.* *The Due Diligence process has identified no Aboriginal cultural items that will be affected by the Proposal and therefore, neither an AHIP nor an ACHA are required to continue development.* *No recorded Aboriginal objects or sites are located within the Site or were discovered within the Site during the detailed site survey, in a highly disturbed local setting. It has been concluded that the Proposal will not have any direct or indirect impacts on known heritage items and that the area of proposed works exhibits low archaeological potential, does not contain indigenous archaeological materials and it is unlikely that an intact subsurface archaeological deposit will be present within the Site.*

Figure 17 – Subject Site showing Development (Solar Array) area and location of Aboriginal Sites in proximity to the development

Armidale Dumaresq Development Control Plan (DCP) 2012 – (Cont.)

Chapter	Comment
2.4 – Aboriginal Heritage – (Cont.)	Given the presence of an identified Aboriginal site on the lot and the potential for other sites to potentially be present but not known, it is recommended that any consent should also include a condition requiring further consultation be undertaken with key Aboriginal Stakeholders and OEH prior to commencement of works. If required relevant approvals are to be sought from OEH for any identified impacts on any sites and/or relics. Furthermore, it is recommended that an advising be placed on any consent in the event that archaeological relics are discovered during excavation, work must cease in the affected area pending investigation and assessment of its heritage value. Aboriginal relics are to be referred to the National Parks and Wildlife Service (NPWS) and objects of non-Aboriginal settlement are to be bought to the attention of the Heritage Council.
2.5 – Contaminated Land	Refer comments above under SEPP 55.
2.6 - Earthworks	Large scale excavation of the site will not be required for the proposed development. Some areas of the site may require some cut and fill once final designs are established and some ground disturbance will occur for the trenching for the cable installation but overall soil disturbance should be largely limited to the piles being driven or screwed into the ground to secure and support the panels.
2.7 – Floodplain protection and Stormwater Drainage	According to Council's GIS program Enlighten and the Armidale Flood Study 2015, the proposed works at this site are situated above the 1%AEP (+500mm freeboard) and are therefore <u>not</u> considered to be flood prone/liable. The proposal is not expected to markedly change drainage patterns nor have any adverse impacts on the hydrology of the locality. A hydrological report was completed and submitted with the development application. The report modelled a worst case scenario for all events from the 63.2%AEP to the 1%AEP storms. Council's Development Engineer provided the following comments in regards to stormwater management: *The development will result in a minor increase in impervious and semi-pervious areas (vehicluar tracks and inverters) of less than 3% of the total footprint area. These areas will have negligable impact on post-development flows. The report even indicates that the tracks will have the potential to decrease peak discharge rates at some areas of the site due to flow attanuation the tracks will create.* *The large farm dam currently existing onsite will remain thus minimising the potential for any significant change in discharge stormwater flows. The inclusion of the dam within the development will not alter post-development discharge rates when compared to pre-development rates.*

Armidale Dumaresq Development Control Plan (DCP) 2012 – (Cont.)

Chapter	Comment
2.7 – Floodplain protection and Stormwater Drainage –(Cont.)	*Some trees are proposed to be cleared as part of the developement however these clearances will have no significant effect on local stormwater flows due to the small disturbance area when comparing it to the overall catchment area.* *The report reasons that the solar arrays will not increase stormwater runoff and will infact help dissipate rainfall energy and further disperse rainfall across a larger footprint due to the tracking nature of the panels. The result is a vegetated surface area below each panel and between rows that will absorb rainfall and minimise erosion potential.* *Overall the combined effect of the development shows a minimal impact on flow depths (maximum depth increase of 10cm for the 1%AEP) and a negligable increase in velocities of no more than 3% for the 1%AEP (It is to be noted that this slight increase is within the error margins of the model and so may be due to model's limitations). Further the report concluded that an increase in volume runoff at Gara River (downstream of the site and the sites final conveyance receptor) will be less than 1% demonstrating that the sloar farm is not increasing runoff and will have no significant hydrological impacts downstream.* *The report recommends implementation of soil erosion mitigation measures (as per the Managing Urban Storwmater: Soils and Construction (the Blue Book) for both construction and operational stages to limit any potential risks associated with erosion. Integration of the recommendations of the agronomy report will further help reduce stormwater velocities and limit erosion and sedimentation loss from the site.* *As such, it is recommended that any consent be conditioned so that a sediment and erosion control plan be implemented for both construction and operational phase which incorporates the recommendations of the agronomy and hydrological report to prevent erosion and improve site top soil stability*.
2.8 - Noise	Noise from the development is expected to be largely limited to the construction phase of the proposal, and given the relatively benign nature of the proposal, post construction noise from the site during the operational phase of the development would be considered to be low. The noise assessment undertaken for the development identified five non-involved residential dwellings within 1000 metres of the Development Envelope, which are considered to be noise sensitive receivers for the purposes of the noise assessment, (refer Figure 18 below). Based on criteria set out in the Assessment, it found that no NSRs are predicted to be highly impacted by noise during the construction phase. However NSR1, NSR2 and NSR3 which are located within 550m of the site, will have minimal exceedances of noise levels for short periods during the construction phase only, with exceedances predicted to be up to 5dB. Whilst the construction noise is anticipated to be noticeable it is considered to be similar to any other construction related noise. With adequate measures limiting hours of work it is considered that impacts on these NSR's can be controlled. As such, impacts that could result in sleep disturbance will be mitigated via restrictions on hours of operation.

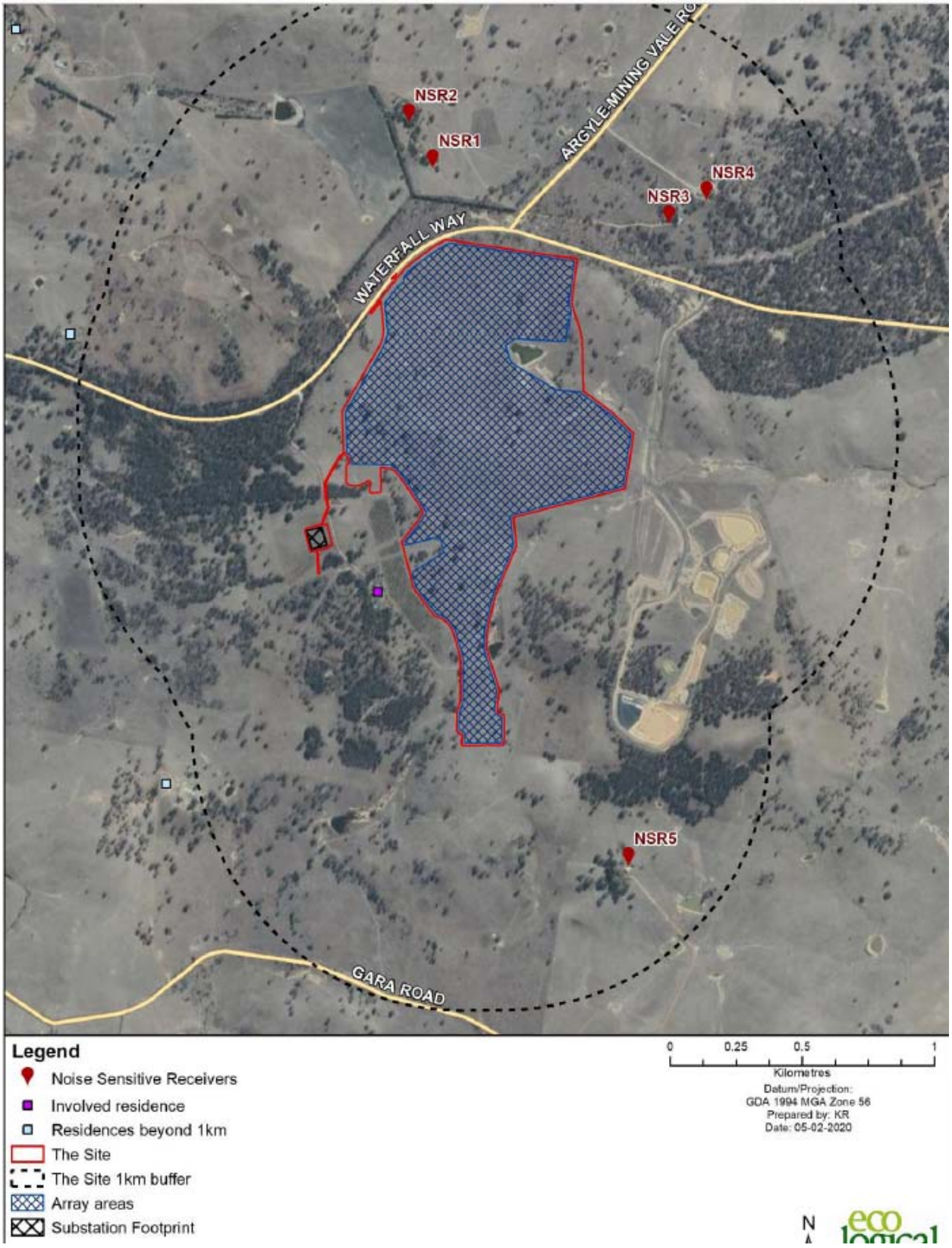

Figure 18 – Noise sensitive receivers

Armidale Dumaresq Development Control Plan (DCP) 2012 – (Cont.)

Chapter	Comment
2.8 – Noise – (Cont.)	During the construction period of approximately 9 months, there will be approximately 13 Light Vehicles (including 4 mini buses), and an estimated 6 Heavy Vehicles required to service the Site daily. There is potential for peak hour movements at the beginning and end of the day as Site workers move on and off site. As all traffic movements associated with the Site are expected to occur during daytime hours, sleep disturbance is not expected. The solar infrastructure at the Site will operate during daylight hours, seven days a week, 365 days a year, for a period of approximately 28 years. The main infrastructure that has the potential to generate noise at the Site include: • Inverters; • Substation (Transformer); and • The motors which drive the tracking systems. Noise generation during the operational phase is predicted to be negligible. As the Acoustic Assessment predicted minimal exceedances of noise levels at NSR1, NSR2 and NSR3 for short periods of time during construction, it is recommended that a Construction Noise and Vibration Management Plan be required and incorporated in the CEMP and DMP to provide a framework for on-site construction noise management.
2.9 - Parking	Adequate area is available on site for the parking of all vehicles associated with the development.

(iiia) the provisions of any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4

Not applicable.

(iv) the provisions of the regulations

Relevant Clauses of the Regulations have been considered during the assessment of this proposal.

4.15(1)(b) the likely impacts of the development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality

This assessment has been undertaken having regard to various issues, as follows:

Biodiversity:

The proposed development has been assessed using the BAM under s6.7 of the *Biodiversity Conservation Act 2016,* which has established that a BDAR was required to be prepared in support of the application.

The BDAR is required in order to assess the impacts on biodiversity, propose mitigating and ameliorating options, as well as calculate offsets for unavoidable residual impacts.

The area of the landholding relevant to the Proposal (the Site), consists of approximately 104 ha. The area of the Site to be impacted by development for the purposes of this BDAR, (the Development Site) covers 97 ha and is situated on a beef and lamb agricultural enterprise, which contains limited native biodiversity. In addition to the landholding, potential impacts to an additional 0.14 ha associated with the new Site access area located within the adjacent Grafton Road (Waterfall Way) road have also been considered and assessed.

The Applicant has advised that:

The current Proposal has considered the biodiversity values known to occur within the Site, and has where possible avoided areas of native vegetation, threatened species, and their habitats. In particular, the Proposal has avoided (as far as practicable) areas of Threatened Ecological Communities (TECs) and known threatened species habitats.

The area of the Site has been reduced through each iteration of design to provide a final footprint that:

- *Co-locates the grid transmission network infrastructure;*
- *Locates panel arrays within areas of cultivation; and*
- *As far as practicable avoids drainage lines, good condition vegetation, and known threatened species records.*

The Site is located across one private property, which includes portions of Lot 3 DP786950 and Lot 13 DP822753. The Site is predominately cleared of vegetation with few remnant patches of native vegetation remaining.

It is acknowledged that the ongoing agricultural practice (including heavy grazing by cattle and sheep), evidence of ground disturbance (from ploughing), removal of logs, rocks and stumps, and seeding of introduced pasture species such as Dactylis glomerate (Cocksfoot), Paspalum dilatatum (Paspalum), Setaria pumila (Pale Pigeon Grass), and Plantago lanceolata (Lamb's Tongue) have resulted in a low condition paddock that provides very little ecological function.

Based on the field assessment by ELA ecologists, two Plant Community Types (PCTs) were observed within the Site, both woodland and grassland condition states of:

- *PCT 568 Broad-leaved Stringybark shrub/grass open forest of the New England Tableland Bioregion; and*

- *PCT 1331 Yellow Box - Broad-leaved Stringybark shrubby open forest of the New England Tableland Bioregion.*

Fauna habitats within the development site are typical of a predominately cleared grazing farmland, with the available habitat features considerably degraded. The following habitat features are present within the Site:

- *Grassland habitats consisting of low condition native and exotic pastures;*
- *Farm dams with no emergent vegetation; and*
- *Paddock trees.*

Based on the outcome of the assessment against the EPBC Act listing criteria, it has been determined that the Site generally does not conform to the minimum species diversity or regeneration requirements of the EPBC listing.

Following consideration of all the above aspects, the residual unavoidable impacts of the project have been calculated in accordance with the BAM by utilising the Biodiversity Assessment Method Credit Calculator (BAMC). This is based on the clearing of all vegetation within the Development Site, which is a conservative estimation given the likely outcomes of a solar farm development. The BAMC, which is precautionary in nature, calculated that 55 ecosystem credits are required to offset the unavoidable impacts to native vegetation present on the Development Site. Based on the assumed presence of the species credit species identified above, a total of 45 species credits would be required for impacts to threatened species habitat.

Based on the BDAR, the following impacts and credit requirements are presented in the tables below. These credits are to be retired in accordance with the recommended conditions of consent for the project. These credits can be retired via any method as specified in the Biodiversity Conservation Regulation.

The retirement of the above credits can be included as part of a condition on any consent.

PCT ID	PCT Name	Vegetation Formation	Direct impact (ha)	Credits required
568 Poor condition grassland	Broad-leaved Stringybark shrub/grass open forest of the New England Tableland Bioregion	Dry Sclerophyll Forests (Shrub/grass sub-formation)	0.52	9
568 Poor condition grassland	Broad-leaved Stringybark shrub/grass open forest of the New England Tableland Bioregion	Dry Sclerophyll Forests (Shrub/grass sub-formation)	22.88	0
1331 Poor condition grassland	Yellow Box - Broad-leaved Stringybark shrubby open forest of the New England Tableland Bioregion	Grassy Woodlands	4.72	45
1331 Poor condition grassland	Yellow Box - Broad-leaved Stringybark shrubby open forest of the New England Tableland Bioregion	Grassy Woodlands	69.23	0
1331 Road easement	Yellow Box - Broad-leaved Stringybark shrubby open forest of the New England Tableland Bioregion	Grassy Woodlands	0.14	1

Table 1 - Ecosystem credits required

Species	Common Name	Direct impact: number of individuals / habitat (ha)	Credits required
Petaurus norfolcensis	Squirrel Glider	3.96 ha	21
Myotis macropus	Southern Myotis	0.24 ha	2
Ninox connivens	Barking Owl	1.18 ha	11
Tyto noceahollandiae	Masked Owl	1.18 ha	11

Table 2 - Species credit summary

Traffic impacts:

A Traffic and Transport Assessment (TTA) that considers the traffic and transport related impacts of the Proposal on the surrounding road network has been submitted in support of the Application.

A location for a suitable access point from Grafton Road to service the Proposal for all phases of the development has been identified approximately 500 m to the east of the current landowner entrance at 1060 Waterfall Way. The Proposed access point is located on the southern side of Grafton Road with sight distances of approximately 270 m in both directions. The safe intersection sight distance (SISD) for a 100 km/h speed zone (Grafton Road) is generally within the range of 250 m to 300 m depending on a number of criteria as defined in *AUSTROADS Guide to Road Design.*

The construction phase for the Proposal is anticipated to be approximately 9 months with the vast majority of vehicles accessing the Site from the west. The Applicant has advised that the majority of the 60 workers required during construction will travel to the Site in 4 mini buses in order to minimise the impact of Proposal related traffic on the surrounding road network. In addition, It is estimated that there will be on average a further 13 light vehicles and 6 heavy vehicles (HV) entering the Site each day during construction.

It is anticipated that the operational phase of the development will be for a period of approximately 28 years with a workforce of between 3 to 6 staff. Operational staff are anticipated to use up to 6 light vehicles per day to access the Site, with deliveries accounting for an additional 1 or 2 light vehicles per day.

An assessment of any potential traffic impacts from the development has been undertaken by both the RMS, whose comments have been provided above, and Council's Development Engineer.

A new site access is proposed off Grafton Road. The access's location is proposed to meet adequate safe sight distances for the sign-posted 100km road. An RMS rural style crossover with a BAR treatment is proposed to be constructed and advanced warning signs are proposed to be erected.

Secondary access to the substation has already been approved in a previous application (see DA-112-2019).

As RMS is the consent authority for works within Grafton Road, RMS has provided a response on the proposed development. RMS are satisfied with the development providing additional detailed design approvals are sought with relation to the access as well as the completion of a detailed Traffic Management Plan (that details both a Construction Traffic Management Plan and an Operational Traffic Management Plan).

It is recommended that a suitable condition be included on any consent for the submission of a Traffic Management Plan prior to the issue of any construction certificate.

Potential Land Use conflicts

The Site is located within an undulating landscape, where elevation ranges between 960 m – 1,000 m Australian Height Datum (AHD). The Site has been historically cleared and grazed for sheep and cattle production and is typical of farmland in the region.

Surrounding land uses include:

- Agriculture;
- Transportation – Grafton Road is a major road connecting Armidale to the coast;
- Residential – There are five non-involved residences within 1 km of the Proposal (all located on land zoned RU1 – Primary Production);
- The new Armidale Regional Landfill is located on the adjoining block immediately to the east of the Development Envelope (Lot 1 DP 1206469).
- The Stringybark Solar Farm which received Development Approval on the 12th of December, 2019 and is expected to commence construction on land to the south east of the Site toward the end of 2020.

The approximate life span of the proposal is 30 years. Given the relatively small footprint of the proposal, approximately 104ha, across the broader landscape, it is considered that the development will not compromise or significantly diminish the availability of land for agricultural purposes within the region nor would it compromise the capability of any adjoining land uses. Furthermore, given the relatively passive nature of the proposed land use for the purposes of harvesting sunshine, it is considered that the proposal would be unlikely to adversely impact on any significant World Heritage Areas and/or National Parks and recreation areas in the locality.

The proposed development which will utilise approximately 104ha of agricultural land over a relatively short time frame before it can be readily returned for agricultural purposes, represents approximately only 0.01% of the total land area within the Armidale LGA and as such is unlikely to adversely impact in the overall productivity of the agricultural sector in the region. Additionally, once constructed, limited sheep grazing may continue within the Development Envelope as part of a management plan to control vegetation beneath the solar array.

Sunshine harvesting is a passive land use that can co-exist with agricultural activities and will not restrict the use of any surrounding lands for agricultural purposes. The Proposal will support the growth of the renewable energy market, as well as providing for diversification for on-farm income, and more broadly diversification of employment and economic opportunities within the Armidale Regional LGA.

Agronomy:

The Applicant has submitted an agronomy assessment to identify the current status of the site and any potential impacts from the development on the land.

The following issues were explored:

- *Nature of the soils occurring onsite and the potential for erosion;*
- *Existing Productivity of the Site*
- *Effects of removing the Site from agricultural production; and*
- *The ability to maintain ground cover across the Site to prevent soil erosion during the operation of a solar farm.*

The assessment likens the installation of the supporting structure for the solar panels, which will be a series of piles which will be either mechanical piled into the ground or screwed, to that for the installation of a trellis system for vineyards or orchard, and as such would not involve the complete removal of groundcover within the Development Envelope.

Agronomy – (cont.):

Given that the minimum distance between each of the rows of panels would be 5.5m, groundcover in this area would remain and provide potential feed for grazing if required. Additionally, as the panels will track the sun throughout the day it is expected that the groundcover will also remain and grow under the arrays themselves.

In addition to vegetation growing under the panels, there would also be significant swathes of vegetation between the rows. Due to the nature of the infrastructure proposed for the Site, it is not expected that there will be large scale soil disturbance in relation to the construction of a solar farm. As such, as far as possible, a pasture base would be maintained across the Site and a program of reinstatement could be implemented where disturbance does occur.

The agronomy assessment advises the following-

Soil types:

The proposed site for the solar farm is comprised predominantly of what is known locally as "Traprock" soils. Trap soils are a duplex soil type which are generally a fine-grained sedimentary loam overlaying a clay subsoil, or an impervious rock layer. The trap soils do vary widely in their physical properties, fertility, acidity and depth, making them a hard soil type to generalise. The loam topsoil can often set hard, which can be a physical constraint on the usage, and they are also of low to moderate fertility.

Depending on the depth of the loamy layer on top, they can be very pebbly or stony with protruding rock visible in ridges or parallel intervals. Trap soils have a lower potential to erode than the Granite soils of the region, but are not as low as the basalt based soils.

Average Production in current state:

The 104Ha area proposed to go under solar panels would have an overall carrying capacity of approximately 520 DSE. Should this area be taken out of agricultural production, the overall loss to the region would be 520DSE, which equates to 520 dry sheep, which is not a significant loss from the region. It should be noted, that it is possible that some grazing could be continued under the solar panels to maintain grass heights, as such there may not be a 100% loss to agricultural production at the Site.

Once the Site is under solar panels, there is no reason why there would be an increased risk of erosion potential if ground cover at the Site is well maintained. Water being shed off the panels may be more concentrated in heavy rainfall, but it would not be in the same area each time, as the panels will be at different angles depending on the time of the day and where they are tracking.

Species Composition:

The proposed species to establish into the disturbed areas would be Cocksfoot. Cocksfoot is a deep-rooted perennial species that would provide a permanent solution to the site. Cocksfoot is also a species that will tolerate shaded sites, so would provide a solution under the solar panels.

Given this, the proposed development will not adversely impact on any highly significant agricultural land, nor will it significantly impact on the overall agricultural production of the region.

Socioeconomic Impacts/Benefits:

The proposed development represents a further significant investment into the renewable energy sector within the Armidale region. Such development aligns with strategic documents for the New England North West and is generally consistent with community values, which broadly supports investment and growth in renewables to transition away from our current reliance on carbon intensive energy which has been linked to contributing to climate change.

The Armidale Regional LGA and the wider New England North West Region has been identified as one of the best locations in NSW for the generation of renewable energy from wind and solar resources in the New England North West Regional Plan 2036

The Applicant estimates that:

The Proposal would produce approximately 65 GWh of clean renewable energy to the local electricity transmission network (AMEC, 2018). This would provide enough energy to power up to 15,500 NSW homes each year, and in doing so would reduce approximately 54,000 tonnes of CO_2 per annum through the displacement of conventional electricity supply.

The proposed development is expected to bring with it social and economic benefits both during the construction phase with the creation of approximately 60 full time jobs over the anticipated 9 month construction phase, plus the multiplier flow on benefits for the local economy, and between 3-6 positions during the operational phase of the project. Some of the indirect benefits that can flow on to the local economy from the development include opportunities for road building/upgrades, transport and logistics, tree planting services, fencing, water supply, equipment hire, specialist consultants, trades and accommodation, to name a few.

In addition, the Applicant states that it is widely recognised that increasing the proportion of electricity generated from renewable energy will have the effect of reducing electricity prices for end users (AEMC, 2018). While it is not asserted that this project in isolation would reduce electricity prices, if constructed it would contribute to this end. Note, a reduction in electricity prices would not only benefit consumers within the Armidale Regional LGA but would have a positive effect on the economy as a whole.

Construction Impacts:

It is recommended that a detailed construction management plan (CMP) be included as a condition of any consent. This would need to address but not limited to, issues such as:

- Hours of building work (to be consistent with NSW State Guidelines);
- Parking and Traffic Management;
- Waste storage and management;
- Toilet facilities;
- Noise and dust management and control of other potential pollutants;
- Site hoardings and public/worker safety;
- Signage.

Potential for leaching from panels:

During the assessment of this application and previous applications for solar farms by Council's Environmental Officer, some concerns were raised in regards to potential leaching from the panels which could potentially lead to contamination of the surrounding land.

Council comments:

Council has reviewed the environmental pollution components of the Olive Grove Solar Farm Statement of Environmental Effects and attempted to cross-reference findings and some concerns raised in public submissions with an array of scholarly scientific literature. While extant literature on solar modules' contamination of the environment is conflicting on a number of analytic metrics, and on spatiotemporal differences, there are some studies that appear to point toward rainwater-leaching and life-cycle toxicity of cadmium, copper, lead, silver, nickel, tin and zinc from solar modules. For example, silver and zinc were leached from operational intact and damaged solar modules observed for 6 months in Denmark (see Figure 1). Another study showed that copper (I) thiocyanate and lead (II) iodide can leach out quickly during PV use phase.

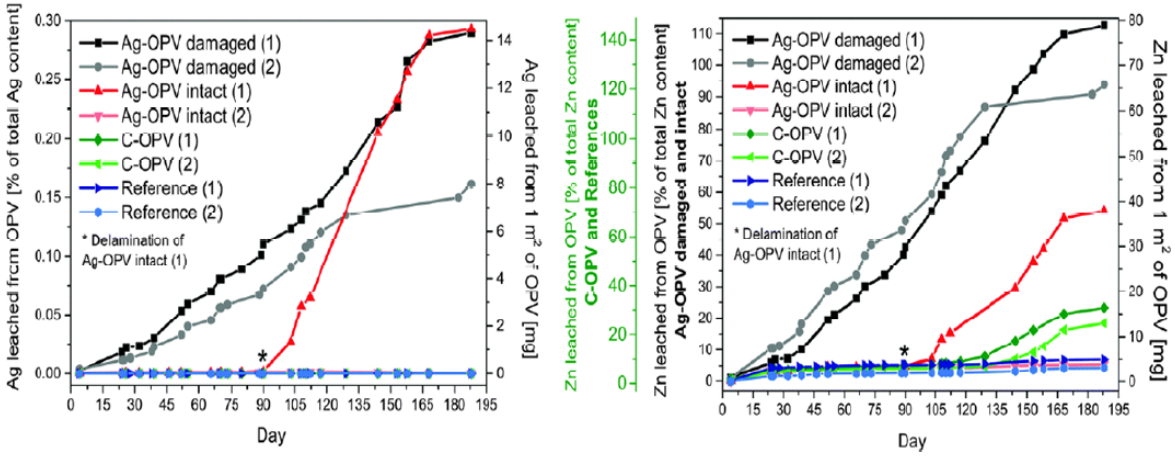

Figure: Cumulative silver (left) and zinc leaching from the samples in the rain run-off experiment conducted in duplicate. The amounts are expressed in mg per m2 of Organic photovoltaics (OPV) (right axis) and the corresponding share of leached material (left axis).

However, extensive search of databases and currently operational solar farms in Australia and elsewhere reveals inadequate issue-based and data-driven precedents that can support specific decisions – in cross-examinations and assessments of solar farm development proposals. Pervasive arguments thus far focus on comparing the toxic metal releases of the photovoltaic cells (PVs) to today's coal power plants, where it's seen that the metal emissions from PVs are expected to be several times less than the emissions from coal. So the cleaner energy race in the present energy mix is a selection of lesser devil, or alternative(s) with least polluting potential.

It is noted in a number of studies that encapsulation of some PV structural components reduces potential incidence of rainwater-induced leaching. Consequently, newer PVs have solder and other components produced without lead and toxic metals.

Potential for leaching from panels – (cont.):

Proponent response:

There is no clear evidence that the leaching of toxic elements from solar panels during the operational phase is an environmental issue in Australia or abroad. Although there are a number of materials used in the manufacture of Panels that are considered toxic, "for intact PV panels, leaching of these elements is unlikely to occur" because they are encased in a number of protective layers.

During the manufacturing process of a solar panel, the PV cells are typically encapsulated in a clear hardened resin with strengthened glass protecting the front side, as well as a back side made from a polymer such as Tedlar PVF material (Clean Energy Review, 2019). The completed panel is then further protected by an aluminium frame.

These features protect the panel from the environment including extremes in temperature, rainfall, hail and humidity (Clean Energy Review, 2019). A robust design, combined with a standard 25-year warranty (DNV-GL, 2017) ensures that the likelihood of cell material being exposed to the environment is very low. Indeed, discussions with manufacturers on this point support this view, with one Australian manufacturer stating that: "In a high-quality module, the encapsulant prevents the deterioration and emission of these elements from the module".

Nonetheless, the following procedures would be adopted to ensure that; firstly, panels are unlikely to become structurally compromised; and secondly, if panels do become compromised, potential environmental effects will be avoided:

1. Due Diligence Process:

As a minimum, panels should meet the Australian standard AS/NZS 5033 for photovoltaic modules and the international standard IEC 62804 (Clean Energy Council, 2018); panels should be backed by a 25 year warranty (DNVGL, 2017); and panels should be tested and checked for structural deficiencies (particularly after delivery to site and before installation).

2. Robust operational protocols governing procedures for ensuring panel integrity:

The Operation Environmental Management Plan (OMEP) would include clear provisions for routinely checking panels to ensure structural integrity and performance throughout the operational period. Any panel found to be defective would be assessed and dealt with in line with the requirements of the WARR (2001) and POEO (2014) Acts.

As such, it is recommended that a condition be included on any consent to address the above undertaking by the Applicant in regards to due diligence and operational protocols.

Visual Impacts:

The Applicant has submitted a Landscape and Visual Impact Assessment with the application which along with assessing the potential landscape and visual impacts of the proposal, it has also included an assessment of the potential for any solar glare. The assessment considers views from publicly accessible locations along the surrounding road network and from residential dwellings surrounding the Site.

The presence of renewable energy projects will change some perceptions of the landscape character of a locality. However, to assume that the introduction of a solar farm to a landscape will create irreversible damage to landscape values and negatively impact the amenity of the area is not substantiated in statistical data in community perception studies from Australia and overseas.

Previous studies have found that there was widespread support for large scale solar energy facilities in Australia, with 78% of respondents indicating their support. This is similar to the views expressed during community consultation for this Project.

The Olive Grove Solar farm is proposed to be located on land zoned RU1 Primary Production. Previous concerns raised in regards to large scale renewable developments, are that they will dominate the landscape, be visually intrusive and adversely impact on the rural character of the area.

In this regard, a persons perception on a developments potential to impact on views is particularly subjective. Whilst the benefits of solar energy are largely acknowledged and that as a nation we needed to embrace these new technologies and move away from our reliance on fossil fuels, common feedback from residents is that they do not want them located within view of a rural dwelling and suggested that they should be located out of site in isolated areas.

The site of the proposed Development Envelope and associated infrastructure, will be located on an already modified area of the property which is not considered as untouched or pristine land. As such, the proposed development area is on land that is not particularly rare, of significant scenic quality or of high biodiversity value.

Furthermore, whilst it is not argued that views are valued by some people they are not protected and preserved in perpetuity for ones own enjoyment, with the owner of the land having the right to undertake changes over time whether they may be permitted without consent within the zone or subject to consent. As such, changes to farming practices or the introduction of more intensive farming may change the landscape at any time.

The study area for the Olive Grove Solar Farm development included an area within a 5.6 km radius of the Project. The 5.6 km radius was identified as the distance at which the Proposal has the potential to be a visually noticeable element within views.

The assessment of publicly accessible locations within the defined viewshed determined that there is limited, to no, visibility of the Project beyond 1 km. The majority of views toward the Project are highly screened by a combination of topography and existing vegetation. Nearby views are limited to a short section of Grafton Road and at the Argyle Mining Vale Road intersection, which are located to the north of the Proposal.

The assessment included photomontages prepared for the proposal which the Applicant states, demonstrates that the proposed solar array would not be a dominant feature in the landscape.

Views from Grafton Road are available where breaks in roadside vegetation permit clear or filtered views to the site. However, the overall visual impact along this section of road will be low to negligible. This is largely due to the views of the project being oblique to the direction of travel and short in duration.

Visual Impacts – (cont.):

The greatest visual change brought about by the Project will be the proposed solar array and inverters. Although the proposed panels will have an overall height of 4.0 m above natural ground, the elevation change across the proposed panel area will be approximately 40 m from the western edge of the solar array (approximately 1001 m AHD) to the south-eastern edge near the waste transfer facility (approximately 961 m AHD).This overall change in level is due to the inverted, as opposed to the elevated, nature of the site. This inversion or topographical depressed area is established by the site's elevated boundaries particularly Grafton Road which is generally elevated to the north and the vegetated ridgeline to the south.

The presence of existing vegetation however will filter views to the panels and further, views are over a rural landscape that is considered to have a low sensitivity to visual change, it is not rare, it is not protected and it has been highly modified.

The residential assessment found that the majority of residential dwellings within the defined project viewshed (5.6 km) will have limited to no views of the Site, due to the topographical features of the area and the sensitive siting and design of the Proposal.

Potential for limited visibility was identified at four residential dwellings to the north of the Site, where up to 20% of the Proposal would be potentially visible. These dwellings are within 500 m of the Proposal, which is the distance within which, if the project were visible, the Proposal has the potential to be visually dominant in the landscape**.** However, the onsite assessment of the intervening landscape and visual features of the area determined that local topography, existing vegetation along Grafton Road and within private allotments, would screen views toward the project from these dwellings.

Based on the findings of the Landscape and Visual Impact Assessment, it was concluded that the Proposal would not be visible from any of these nearby residential dwellings.

The solar glare assessment conducted as part of the Landscape and Visual Impact Assessment, reviewed the potential for glare impacts at four sensitive receptor locations in the area where the Seen Area Analysis demonstrated theoretical visibility of the proposed solar array. There were no locations where solar glare of any magnitude was predicted as a consequence of the Proposal.

Given that there are some breaks in the existing road side vegetation which provides for some filtered views across the development site, a section of boundary along the northern edge of the Site has been identified where the establishment of landscape screening would be of benefit to further screen views from the surrounding area.

As such, it is recommended that a condition requiring a Landscape Plan to be submitted prior to the issue of a construction certificate be included on any consent, to establish the extent of the landscape area required to provide adequate screening of the site from nearby viewsheds and also indicate a range of local indigenous species suitable for the locality that will achieve the required screening effect.

Bushfire

The Site covers approximately 104 ha of rural land, the majority of which has been cleared and sown to improved pastures for grazing livestock with patches of retained and regenerated woodland. Grafton Road provides direct access to the Site from the north.

The subject site for the siting of the solar arrays and substation are not identified on Council's current Bushfire Prone Land Map as being potentially bushfire prone. However, some areas where the cabling will be located and an area directly adjoining the location for the substation are identified as being potentially bushfire prone.

While the connection cable easement will pass through a buffer to Vegetation Category 1 Bushfire Prone Land, the connection cable itself will be buried, therefore risks associated with this infrastructure in the buffer only apply to the construction phase. The Substation access track will also pass through this buffer, however its construction will reduce fuel load and provide improved access to emergency vehicles.

Given that the proposal is for the establishment and operation of a solar farm, it is not for a Special Fire Protection purposes and as such it does not require a Bush Fire Safety Authority from the Commissioner of the NSW Rural Fire Service (NSW RFS) under section 100B of the Rural Fires Act.

The site for the proposed development (array area) is largely devoid of tree coverage with largely only ground cover. What trees are existing within this area of the Development Envelope, will be removed during the construction phase.

With the removal of stock from the Development Envelope area on the site there is the potential for an increase in fuel loads which could lead to grassfires if not effectively managed through mitigation measures.

There is also the potential for ignition sources during the construction phase with the movement of machinery, use of welders and grinders and the like, storage of flammable liquids, electrical faults, lightning strikes and cigarette butts. Like any activity being undertaken in potentially bushfire prone areas these matters will need to be clearly identified and managed on site in the preparation of a Bushfire Management Plan in consultation with relevant fire authorities.

The flammability of the solar farm is considered to be relatively low as they are predominantly constructed of glass, silicon, steel and aluminium.

It is recommended that a condition be included on any consent for mitigation measures to be included in a Bushfire Emergency Management and Operations Plan to reduce and manage the risk of fire, and to reduce the impact of any fires within or surrounding the Proposal. Such measures could include:

- Firebreaks and other design features to be developed in consultation with relevant fire management agencies (including the NSW RFS);
- Fuel load reduction;
- Fire management and emergency response strategies included in an Emergency Response Plan (ERP) for each phase of the development and be prepared in consultation with and distributed to NSW RFS and NSW Fire and Rescue; and
- Safety protocols.

CUMULATIVE IMPACTS:

It is noted that there are currently a number of major / renewable projects in the locality of the subject site, both RSD and SSD, which are identified in the table and Figures 19 & 20 below.

Project	Approximate Distance and Direction from Site	Development Phase
Oxley Solar Farm (300 MW, with 30 MWh battery storage capacity)	Investigation area 170 m East	Secretary's Environmental Assessment Requirements (SEARs) issued for SSD
Armidale Regional Landfill	280 m East	Soon to be commissioned, with fulltime operational activities commencing in 2020
Stringybark Solar Farm	Substation 200 m West Array area 715 m South	Approved 12 December 2019
Metz Solar Farm (100 MW)	8 km NE	Under Construction
Armidale High School	12 km W	Under Construction
UNE Wright Block Student Housing & Hub Building	13 km NW	Responding to submissions on Environmental Impact Statement for SSD
New England Solar Farm (720 MW with energy storage)	18 km SW	Referred to the Independent Planning Commission for Determination
Sailsbury Solar Farm	19 km SW	SEARs issued for SSD
Tilbuster Solar Farm (300 MW)	19 km NW	SEARs issued for SSD
Petersons Solar Farm (5 MW)	9km W	Application lodged and under assessment with Council

Given the above projects, either approved and/ under construction or currently being assessed or scoped, there is the potential for cumulative impacts within Armidale and the locality if these developments coincide during construction and/or operation.

It is acknowledged that there is the potential for another two solar farm projects within the immediate vicinity of the site with the Oxley Solar Farm obtaining their SEARs for a development on land to the east of the subject site and the recently approved Stringybark Solar Farm located to the south east at 597 Gara Road.

Each of these projects either have been or will be assessed on their merits in regards to their potential impacts on the subject land, land use conflicts, heritage both European and Aboriginal, biodiversity, water, air, waste and bushfire etc and are not anticipated to have a cumulative impact on these matters that can not be satisfactorily addressed individually within each particular site to negate any cumulative affects.

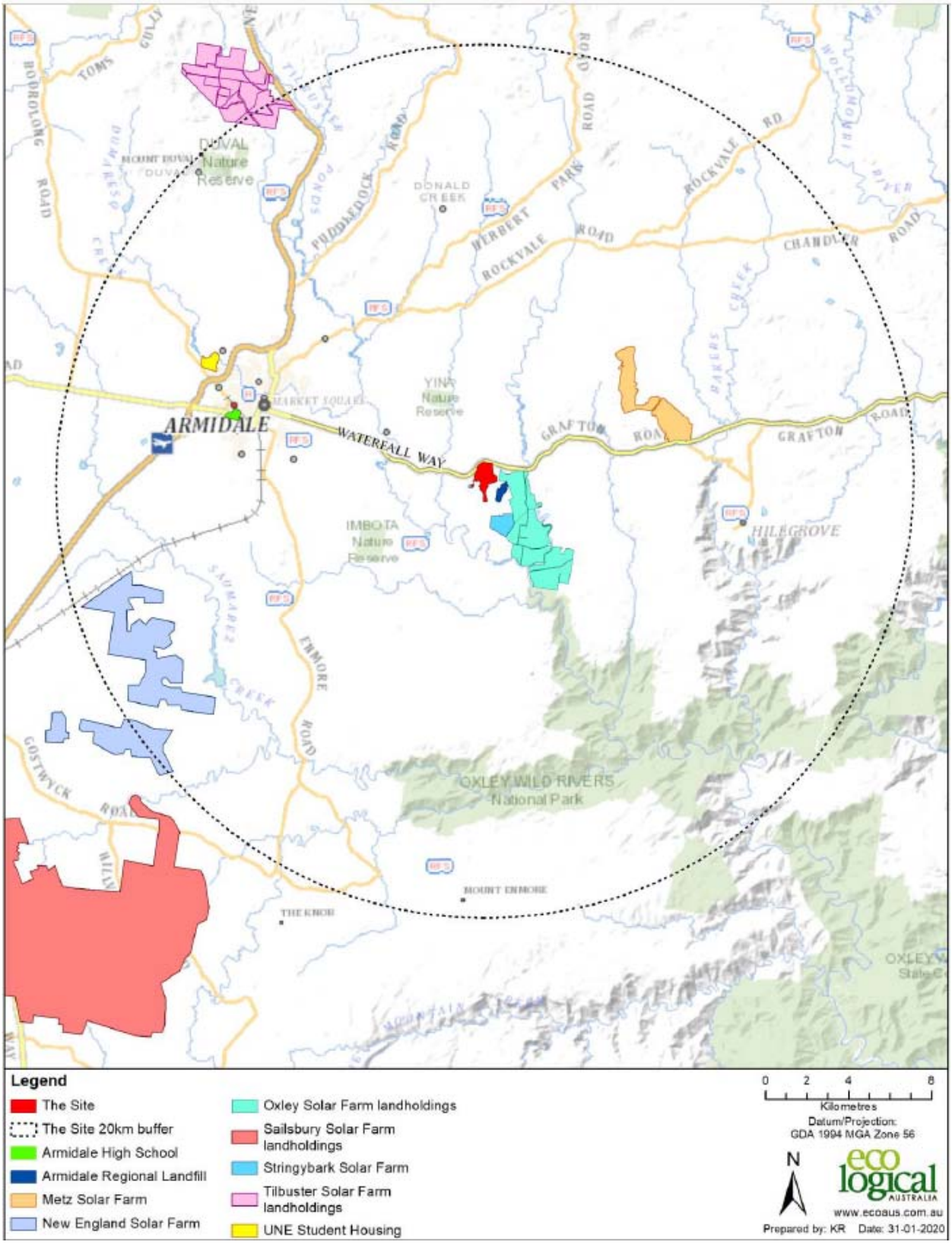

Figure 19 - Location of major and renewable energy projects within the immediate region

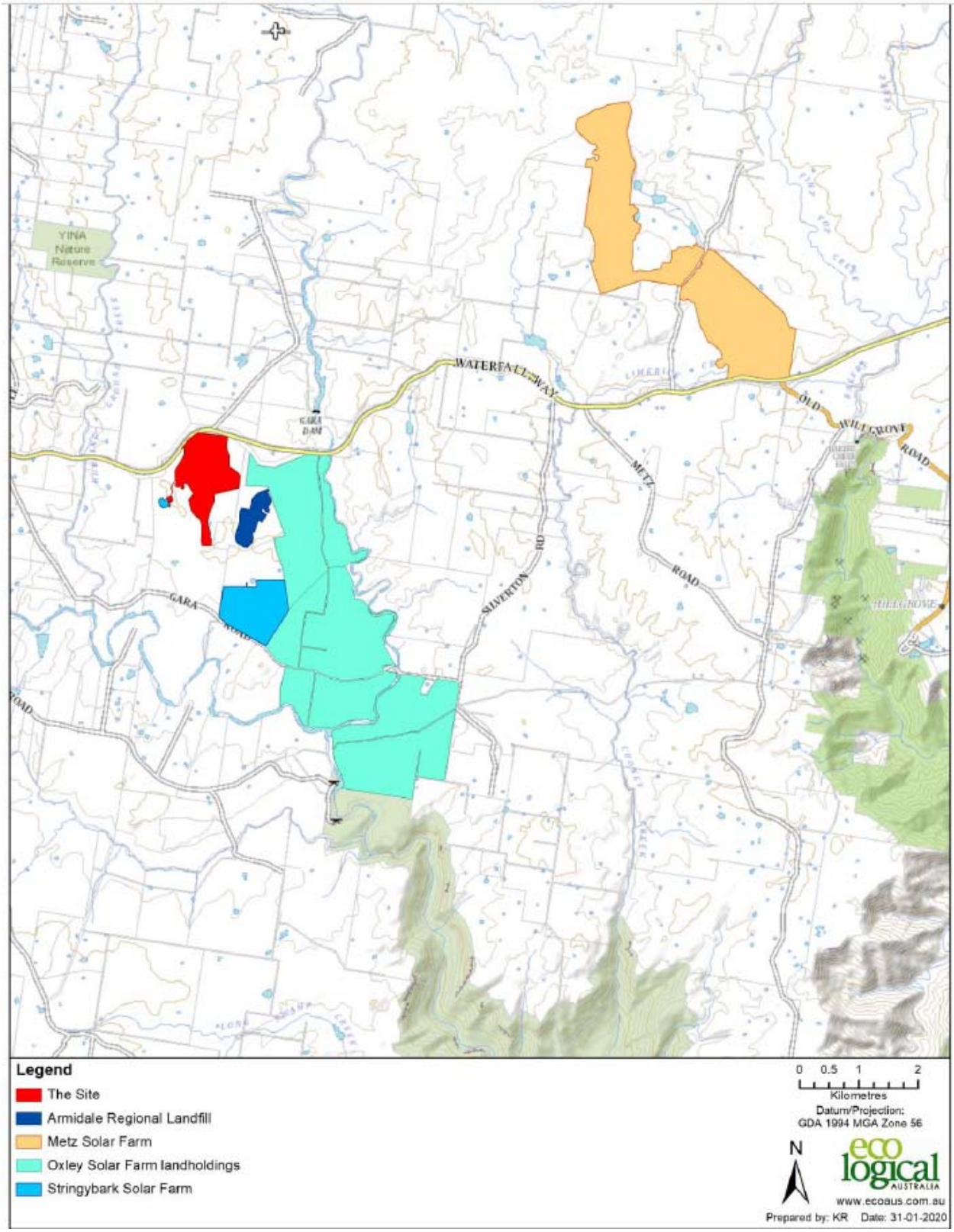

Figure 20 – Location of nearby projects within immediate locality and local road network

Potential Cumulative Traffic Impacts:

Whilst Stringybark and Oxley solar farms are located with the vicinity of the subject site, Olive Grove will be accessed directly off Grafton Road whereas the others will gain access from Gara Road, which intersects with Grafton Road to the west of the site.

Given that Oxley solar farm is still some time off from actually lodging an application with DPIE, it is unclear whether these projects would ever coincide and as such, impact further on traffic and local roads.

Metz solar farm has commenced construction with an estimated construction period of 12 months and would therefore be unlikely to coincide with any of the other solar farm developments in Figure 19, either lodged or proposed.

As Grafton Road is a classified state road it is considered that there would be adequate capacity on this roadway if construction of these solar farms coincided. Any access off Grafton Road for these developments would be subject to a separate assessment by Council and the RMS regarding any upgrades required.

Visual and Cumulative Impacts on views:

Apart from the potential cumulative impacts from traffic discussed above, there is also the potential for cumulative visual impacts within the viewshed.

The Metz Solar Farm and Stringybark Solar farms are approved solar farms in proximity to the Proposal. The Oxley Solar Farm is a proposed solar farm within the Proposal's viewshed.

Metz solar farm is approximately 8.4km away from this proposal and is considered to be sufficiently removed from these other sites, and as such unlikely to contribute to visual impacts in this particular locality.

The Stringybark solar farm will be located approximately 715m to the south east of the Development Envelope for the arrays and lies within an area that is not visible from the proposed Olive Grove Solar Farm and will therefore not contribute to simultaneous cumulative visual impacts. The substation is also screened from view and located a substantial distance from any receptors.

The proposed 300MW Oxley Solar Farm is located approximately 170m to the east of the Olive Grove solar farm and has received SEARs from the Department of Planning, Industry and Environment (DPIE). The siting of the development on the site though is still being developed and is unclear at this time.

As such, the potential for any cumulative visual impacts is not able to be accurately assessed because the proposed Oxley Solar Farm is at an early stage of development with limited information available. The greatest potential for cumulative visual impacts to be generated by the Proposal in conjunction with the Oxley Solar Farm is from areas within the viewshed of each project, where the Proposal has the potential to be a visually noticeable element in views.

The viewshed analysis defines this distance as being 500 m from the Proposal Site's boundary. Beyond this distance, the Proposal may still be a noticeable feature but will not dominate views and will dissipate as distance from the Site increases.

Visual and Cumulative Impacts on views – (cont.):

The potential for simultaneous visual impact to occur is limited to locations where both developments are visible from the same location. This would require each development to be within the same view cone or direction, or visible in different directions from the same location. The Landscape and Visual Impact Assessment and accompanying photomontages, demonstrates the overall visual impact of the Olive Grove Solar Farm would be low to negligible from most locations including areas of potential overlap.

Additionally, the visual assessment from nearby residential dwellings determined that the Proposal would also have a generally low level of visual impact, due in part to the screening afforded by topography and vegetation and the overall distance between the dwellings and the Proposal. As such, any potential for cumulative impacts from properties is considered to be limited and negligible.

DPIE has recently released a guideline, dated December 2018, for the assessment of large scale solar energy developments. Whilst it is noted that the guidelines have been developed for the assessment and determination of SSD, it is considered that the guidelines are useful in this instance when assessing the potential cumulative impacts of other nearby developments, one of which will be SSD and this proposal being just under the threshold.

The objectives of the guidelines are:

- *provide guidance to the community, applicants, industry and regulators on how the Department of Planning and Environment (the Department) assesses environmental, social and economic impacts of State significant solar energy projects*;
- *encourage industry to select suitable sites for projects to reduce the likelihood and extent of land use conflicts and environmental and social impacts;*
- *facilitate better on-ground outcomes by promoting early identification of potential impacts;*
- *promote meaningful, respectful and effective community and stakeholder engagement*;
- *support the development of a sustainable solar industry in NSW by providing a clear, consistent and responsive policy framework.*

The Guidelines state that:

Australia has the highest average solar radiation per square metre of any continent in the world. NSW has an abundance of excellent solar resources and established electricity infrastructure that, along with declining technology costs, makes it an attractive location for solar energy development.

It also acknowledges that a sustainable solar energy industry in NSW will help to reduce our reliance on fossil fuels whilst providing jobs and investment in regional NSW.

The Guideline advises of the importance of good site selection to avoid and minimise negative impacts from the outset. It further states:

The Department understands that there are many technical and commercial factors that applicants consider when selecting a site for a solar development. These include the proximity to the electricity network, available connection capacity or distance to towns, cities or other major energy users.

Visual and Cumulative Impacts on views – (cont.):

The key site constraints have been identified as being:

- ***Visibility and topography:***

  sites with high visibility, such as those on prominent or high ground positions, or sites which are located in a valley with elevated nearby residences with views toward the site. This is particularly important in the context of significant scenic, historic or cultural landscapes.

  In this regard, the Applicant has taken these matters into consideration during an extensive scoping assessment, which included public consultation, to identify particular site constraints to refine the proposal to minimise its impact on biodiversity, landscapes, archaeological concerns and views. The proposal has been reduced in area and location so as not to locate the development on ridge tops/high ground to reduce visual dominance in the landscape.

  In this regard, the Development Envelope itself has been moved so as to reduce its overall visibility from most locations in the immediate landscape and sensitive receptors and has ensured that it is placed well below any ridge tops, which will retain the existing vegetation.

  Additional landscaping is also proposed around the northern boundary of the array area adjoining Grafton Road to provide a further visual screen of the development.

- ***Biodiversity:***

  areas of native vegetation or habitat of threatened species or ecological communities within and adjacent to the site, including native forests, rainforests, woodlands, wetlands, heathlands, shrublands, grasslands and geological features.

  The Applicant has taken biodiversity constraints on the site into consideration during the scoping of the development which has identified the appropriate location in order to minimise impacts on any significant areas of native vegetation that may be present. From this scoping and site analysis, the Applicant has identified the least significant areas on the site to locate the proposed development.

- ***Residences:***

  residential zones or urbanised areas.

  Whilst there are non involved residential dwellings located within 2km of the Development Site, none are located in any residential zones or what could be described as urbanised areas. All non involved dwellings within 2km of the Development Site are located within the RU1 'Primary Production' zone.

- ***Natural hazards:***

  areas subject to natural hazards such as flooding and land instability.

  Apart from the potential for bushfire affecting part of the overall holding, which has been discussed above, there are no other known natural hazards affecting the Site.

- ***Water:***

  The Proposal is located at the headwaters of its catchment area and has been developed to minimise and contain potential impacts on water resources to an area within the Site. As the Proposal is unlikely to impact water resources downstream of the Site, no cumulative impacts to water resources as a result of the Proposal are anticipated.

- ***Agriculture:***

  important agricultural lands, including Biophysical Strategic Agricultural Land (BSAL), irrigated cropping land, and land and soil capability classes 1, 2 and 3 . Consideration should also be given to any significant fragmentation or displacement of existing agricultural industries and any cumulative impacts of multiple developments.

  As detailed above, the Site is not identified as being important agricultural land, Biophysical Strategic Agricultural Land, irrigated cropping land nor is it considered as land and soil capability class 1, 2 & 3.

  Given that the development represents a relatively small area of the overall landholding and the relatively benign nature of the development itself, it is considered that it is unlikely to result in significant fragmentation or displacement of any existing agricultural industries in the locality nor result in any adverse cumulative impacts.

- ***Resources:***

  prospective resource developments, including areas covered by exploration licences, and mining and petroleum production leases. Solar development applicants should seek advice from the Department of Planning, Division of Resources and Geoscience about the coverage of resources-related licences.

  The Applicant has advised that there are no such developments/licences/leases affecting the Site.

- ***Crown Lands:***

  if any part of the project or associated transmission or distribution infrastructure will cross Crown Lands, it may be subject to legislative requirements that restrict access to the land.

  The development, including, cabling, substation and transmission lines are all located on freehold land. No access to Crown land is required for this Proposal.

- ***Noise:***

  If other developments proceed together there is the potential for cumulative noise impacts on unrelated dwellings. The noise assessment undertaken for the Proposal identified the NSRs to the development and considered that noise from the development could be managed and mitigated to reduce any adverse impacts on these residences. Furthermore, it is considered that noise from the development would largely be limited to the construction phase only.

  As the location of the adjoining Oxley Solar Farm development is still largely unknown it is difficult to quantify the potential impact from both developments being constructed simultaneously. In this regard, any construction would be limited to the standard hours of construction being Monday to Friday 7am to 6pm and Saturday 8am to 1pm.

  Furthermore, given the timelines of these nearby developments, it is considered unlikely that the construction timelines between the Proposal and the other Solar Farms would overlap, and the landfill has largely been completed.

  Based on the conclusions of the acoustic assessment, it was concluded that none of the identified NSRs are predicted to be impacted during the operational phase of the Proposal. It is therefore concluded that the identified NSRs will not experience any cumulative noise impact as a result of the operational phase of the Proposal.

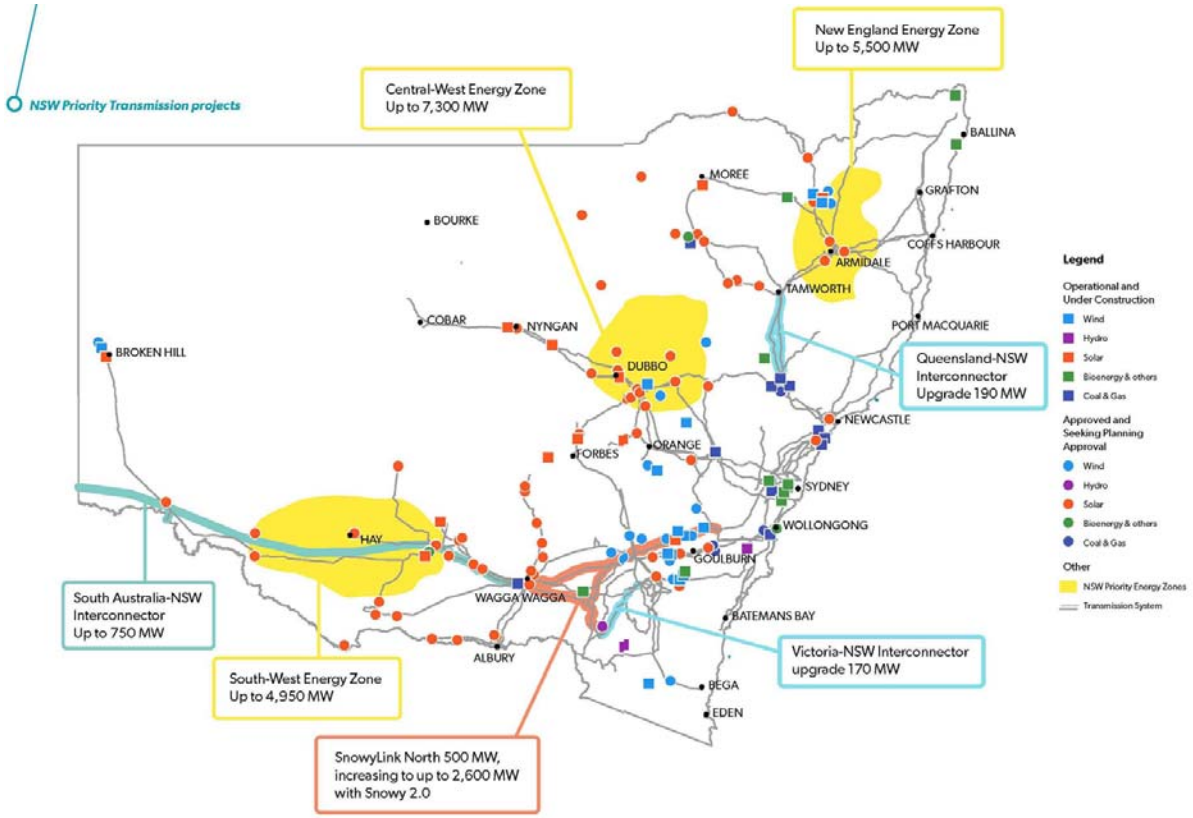

Figure 21 - Renewable Energy Resources Map (Extract from DPE Handout – Large Scale Solar Development)

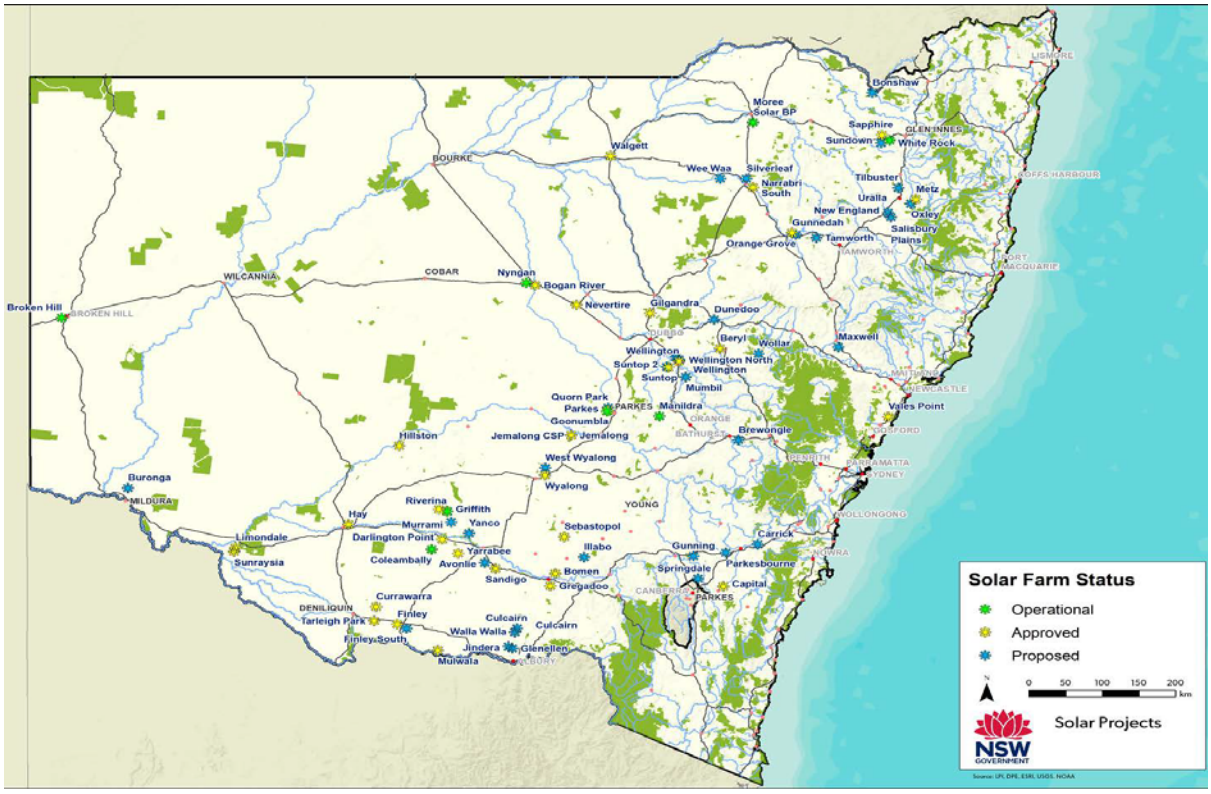

Figure 22 – Solar Farm Status - (Extract from DPE Handout – Large Scale Solar Development- NSW)

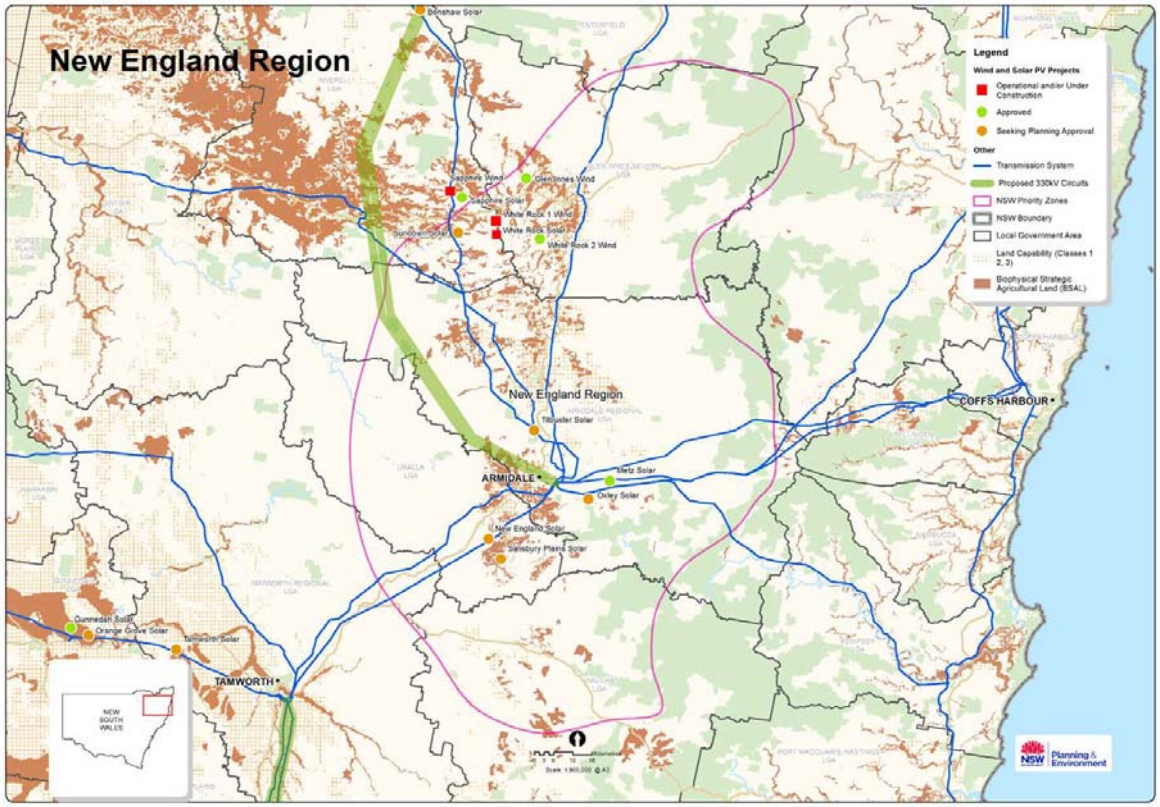

Figure 23 – Renewable Energy Status New England - (Extract from DPE Handout – Large Scale Solar Development)

4.15(1)(c) the suitability of the site for the development

The subject site is considered suitable for the proposed development for the following reasons:

- The land is zoned RU1 Primary Production with the proposed development being permissible under Clause 34 of the ISEPP.
- Given the relative passive nature of the development being for solar harvesting, the proposed development is not considered to be inconsistent with the zone objectives and would be unlikely to result in any land use conflicts or restrict the use of adjoining land.
- The site is not subject to any significant land constraints.
- The site would not impact on higher value agricultural land.
- The Development Site has been located to reduce impacts on native species, biodiversity and heritage.
- The site is located a satisfactory distance from non-related sensitive receivers and as such impacts from the development are expected to be adequately managed on-site with minimal impacts on adjoining properties.

Summary of Consultation Process Undertaken by Applicant:

The Applicant has advised that the following consultation process was undertaken prior to the Application being lodged with Council.

1. Summary of consultation undertaken:

The Statement of Environmental Effects (SEE, Section 6, pg 42-45) outlines steps taken to ensure the local community were informed about the Proposal and were given opportunities to ask questions or provide feedback that could be considered with respect to the design of the Proposal.
Consultation is summarised as follows:

- ***Adjoining neighbour consultation*** *- All properties that adjoin the Site were notified directly about the Proposal through a range of avenues, including letters, emails and telephone calls.*
- ***Local area consultation –*** *To initiate consultation within the local community a letter was sent to all residents within 2km of the Development Envelope in May 2019.*
- ***First Information Session, 23nd of May 2019 -*** *attendees were presented with a series of information boards about the Proposal and the project team were on hand to answer questions and listen to issues raised in relation to the Proposal.*
- ***Second Consultation Session, 9 January 2020 -*** *The consultation area for the second consultation session was extended beyond the initial 2 km to make sure interested local community members were offered the opportunity to participate in the consultation process. Again, the invitation to the consultation session invited residents to contact the Proponent if they wished to organise an alternative time to discuss the Proposal if the session time was not suitable or if they had any questions regarding the process. No one contacted the Proponent to organise an alternative consultation time or to raise any questions.*
- ***Third Consultation Session, held in the Armidale Mall, 30 January 2020***
  Invitations were hand delivered to residences in the vicinity of the Proposed Development. However, the consultation area was further extended in an effort to ensure that as many people as possible in the local area were informed about the Proposal. This included sending an email invitation to parties who had participated in the nearby Stringybark Solar Farm consultation process (who had previously provided their email details), regardless of their proximity to the Proposal. The consultation session was also advertised in the Armidale Express on the 22nd and the 24th of January, 2020 to ensure the wider Armidale community were given the opportunity to consider the Proposal. In addition, by holding the session in a busy public space passers-by were also able to comment on the Proposal.
- ***Local Government Consultation –*** *Pre DA meetings undertaken with Town Planning and Engineering representatives of Armidale Regional Council and the Proponent on 3 April 2019 and again on 9 January 2020.*

4.15(1)(d) any submissions made in accordance with the Act or the Regulations

Agency submissions

Refer comments from RMS and Essential Energy following their assessment of the proposal above.

Public submissions

The submitted DA was publicly exhibited in accordance with Council's DCP 2012.

The Application was notified for 28 days to property owners within a 2km radius of the subject site and was also advertised in the local newspaper from 26 February 2020 until 26 March 2020. At the conclusion of the notification period nil submissions had been received by Council.

4.15(1)(e) the public interest

The proposed development is considered to be in the public interest for the following reasons:

- It is not inconsistent with the aims of ADLEP 2012 and is permissible with consent within the zone;
- The application meets with broad objectives relating to sustainable development;
- The on-going development of renewables is considered to be of social and economic importance to the wider LGA and will provide benefits to the local economy during construction and on completion.
- The proposed development is considered to accord with Regional, State and National Plans and directions to increase investment in renewables.
- The development has been designed and reduced to minimise its environmental impacts.
- The proposal would not set an undesirable precedent.

State Plan 2010:

The proposed development is consistent with Goal 22 of the State Plan – Protecting our Natural Environment – Increase Renewable Energy.

NSW Climate Change Policy framework:

- Achieve net-zero emissions by 2050

New England North West Regional Plan 2036:

The proposed development is consistent with Goal 1, Direction 5: Grow New England North West, as the Renewables Energy Hub of NSW.

- A strategic and integrated approach to renewable energy projects will leverage new opportunities and help meet the NSW Government's aspirations of being carbon-neutral NSW by 2050.
- Identify and promote wind, solar and other renewable energy production opportunities.

Paris Agreement :– Commitment by Australia to reduce greenhouse gas emissions to 26-28% below 2005 levels by 2030.

Ecologically Sustainable Development

A relevant aim of the Council's LEP (clause 2(f)) is to ensure that development has regard to the principles of ecologically sustainable development (ESD). ESD is defined in NSW Legislation (for example the Dictionary to the Local Government Act 1993), and involves consideration of the following principles and programs:

(a) the precautionary principle - namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:

(i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and

(ii) an assessment of the risk-weighted consequences of various options,

(b) inter-generational equity - namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,

(c) conservation of biological diversity and ecological integrity - namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,

(d) improved valuation, pricing and incentive mechanisms - namely, that environmental factors should be included in the valuation of assets and services, such as:

(i) polluter pays - that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,

(ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,

(iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

In this case the proposed solar farm is considered to contribute and align to the broad objectives relating to ecologically sustainable development.

Assessment Conclusion - Key Issues

From the attached Assessment Report, key issues for this project can be summarised as follows:

- Roads and Maritime Services have reviewed the proposed development and provided their assessment of potential road impacts and recommendations regarding upgrades.
- The subject site has been assessed in accordance with *SEPP No 44 - Koala Habitat Protection* and found not to contain potential or core Koala habitat.
- The subject site has been assessed in accordance with Clause 7 of *SEPP No 55 – Remediation of Land* and is considered to be suitable for the proposed development.
- The proposed development has been assessed in accordance with *SEPP (Infrastructure) 2007* and is considered to be permissible under either Clause 34(1)(b) and/or Clause 34(7) of the SEPP.
- The proposed development has been assessed in accordance with *Clause 45 'Determination of development applications—other development', of SEPP (Infrastructure) 2007* and is considered to be satisfactory subject to conditions.
- The proposed development has been assessed in accordance with *Clause 101 'Development with frontage to classified road', of SEPP (Infrastructure) 2007* and is considered to be satisfactory subject to conditions.
- The proposal has been assessed in accordance with *SEPP (Primary Production and Rural Development) 2019* and is considered satisfactory have regard to the SEPP.
- The proposal is Regionally Significant Development (RSD) under Clause 5(a) of Schedule 7 of *SEPP (State and Regional Development) 2011.*
- The proposal is considered to be consistent with relevant provisions of Armidale Dumaresq Local Environmental Plan 2012.
- No draft environmental planning instruments apply to this proposal.
- The proposal has been assessed under the relevant Chapters of Armidale Dumaresq Development Control Plan 2012 and is considered to be satisfactory have regard to the relevant provisions and subject to conditions.
- There are no planning agreements for this proposal.
- Relevant Clauses of the Regulations have been considered during the assessment of this proposal.
- The likely impacts of the development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality have been assessed during the assessment of this proposal and are considered to be satisfactory in the circumstances of the case subject to recommended conditions as detailed throughout this report.
- The site has been assessed for its suitability for the proposed development and is considered to be suitable, subject to conditions.

- The Application was notified for 28 days to property owners within a 2km radius of the subject site and was also advertised in the local newspaper from 26 February 2020 until 26 March 2020. At the conclusion of the notification period nil submissions had been received by Council.
- Having regard to the matters considered throughout this report and the assessment of the Application against the relevant heads of consideration under S4.15(1) of the Act, the proposal is not considered to be detrimental to the public interest.

As a result of this assessment, the proposed development is recommended for conditional consent. **Appendix 1** to this report contains all relevant conditions identified throughout the assessment process and as discussed in the Council officer's report.

Recommendations

(a) That having regard to the assessment of the Application, DA-17-2020 (JRPP Ref PPSNTH-30) be granted conditional consent in the terms set out in Appendix 1 to this report.

(b) That any relevant integrated/concurrence authorities be notified of the determination in writing.