



STATEMENT OF ENVIRONMENTAL EFFECTS

Establishment of Solar PV Power Generation Plant

211 Vine Lane, Boggabri NSW 2382

PREPARED FOR PROVIDENCE ASSET GROUP | DECEMBER 2020



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As of October 2nd 2020, **KDC has joined the SLR Consulting team**. To learn more about SLR, and the additional expertise that we can now provide our clients, [take a read here >](#)

1 INTRODUCTION

This Statement of Environmental Effects (SEE) is submitted to Narrabri Shire Council (Council) in support of a Development Application (DA) for a solar photovoltaic (PV) power generation plant at 211 Vine Lane, Boggabri NSW 2382 (the site).

Specifically, the proposed development includes:

- + Establishment of a grid-connected solar photovoltaic (PV) plant including associated electrical generation, supplying no greater than 5 megawatts (MW);
- + New 3-5.5m wide access road at the eastern boundary of the site;
- + High chain link security fencing 2.3m high; and
- + Other associated site improvements as shown on the Plans at Appendix A.

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

1.1 PROVIDENCE ASSET GROUP

Providence Asset Group (PAG) is an Australian innovation led investment and asset management firm focusing on ethical investment within an environmental, social and corporate governance framework. Through collaborative partnerships, PAG supports and invests in projects aligned to new forms of renewable and clean energy.

PAG have now secured over 30 solar farm sites in regional NSW and Victoria, including a partnership with Manilla Community Renewable Energy Inc. to develop Australia's first community owned solar farm. Once constructed the 5MW Manilla project will be able to power the community of Manilla during daylight hours. The project is also a recipient of a NSW Government grant to develop PAG's a world first energy storage technology which will enable PAG's solar projects to provide stable energy well into the early morning and evening peak electricity consumption periods.

1.2 CONSULTATION WITH COUNCIL

Pre-development advice was provided by Narrabri Shire Council representative Erika Dawson via email on 23 November 2020. Overall, the feedback was positive. Table 1 summarises the matters raised by Council within the pre-lodgement advice email and provides comments on each of the matters raised.

Table 1 – Consultation with Narrabri Shire Council

Matters Raised	Comments
DA Plans The following plans are to be submitted with the DA: <ul style="list-style-type: none"> + An existing site plan; + A proposed site plan; + A floor plan (of any buildings and structures); + Elevation Plans (of any buildings and structures). 	The appropriate plans have been included with this report, see Appendix A.
Statement of Environmental Effects	This Statement of Environmental Effects provides a detailed description of the proposal during both the

Matters Raised	Comments
<p>A SEE is to be provided with the DA that:</p> <ul style="list-style-type: none"> + Provides a clear and detailed description of the entire development proposed, and is to include: + Details of all construction related works employee numbers, traffic generated, water requirements; + Details of all operations, including details on maintenance requirements, vegetation management, employee numbers, traffic generated, water requirements; + Any road or other infrastructure upgrade requirements; + Details of remediation of the site post use as a solar farm. + An outline of the grid connection + Consideration of the applicable Environmental Planning Instruments, DCPs and other applicable legislation. In partial: <ul style="list-style-type: none"> - SEPP 55; - Koala Habitat Protection SEPP; - Infrastructure SEPP; - Narrabri LEP, including Earthworks (Clause 6.1), and Essential Services (clause 6.5) + Identification of the environmental impacts + Measures taken to protect the environment or to lessen the expected harm. 	<p>construction and operational stages. All required legislation is identified within this report. All identified environmental impacts have been addressed.</p>
<p>Traffic</p> <p>A Traffic Impact Assessment should be included with the DA, prepared by a suitably qualified consultant in accordance with Austroads Guide to Traffic Management Part 12 Integrated Transport Assessments for Developments. The assessment is to:</p> <ul style="list-style-type: none"> + Provide an assessment of the existing conditions of the local traffic networks to be affected by both construction and operation of the development; + Outline the traffic generated by the development including for both construction and operation. This will include transport routes for deliveries, peak hour traffic generated, the size of vehicles required to access the site. + Consideration of transport impacts to the development including: <ul style="list-style-type: none"> - Impact of development traffic on capacity of local road network and functioning of utilised intersections; 	<p>A Traffic Impact Assessment (TIA) has been prepared for the proposal and is located at Appendix D. Within the TIA is an assessment of pre-existing conditions of the roads, traffic generation, vehicle access points, manoeuvring and identification of any road upgrade work required.</p>

Matters Raised	Comments
<ul style="list-style-type: none"> - Demonstration, via provision of swept paths, that the largest vehicle to enter the site will be able to manoeuvre through all intersections - Identification of any road upgrade works required to facilitate the development. 	
<p>Biodiversity Impact</p> <p>Advice is to be provided by an ecologist to demonstrate:</p> <ul style="list-style-type: none"> - Whether the development is likely to significantly affect threatened species or ecological communities, or their habitats, according to the test in section 7.3 of the biodiversity Conservation Act 2016; - Whether the development exceeds the biodiversity offsets scheme threshold; - A Biodiversity Development Assessment Report (BDAR) is to provided if any of the above responses is affirmative. 	<p>A Flora and Fauna Assessment Report has been prepared for this application, which identifies and assesses the potential impacts of the development and outlines mitigation measures. The Flora and Fauna report is located at Appendix H.</p>
<p>Koala SEPP 2019</p> <p>Information is to be prepared by a suitably qualified and experienced ecologist in accordance with the Guideline, to demonstrate that the land subject of the development application:</p> <ul style="list-style-type: none"> - Does not include any trees belonging to the koala use trees species listed in Schedule 2 for the relevant koala management area, or - Is not core koala habitat <p>Information, prepared in accordance with the Guideline to demonstrate the land:</p> <ul style="list-style-type: none"> - Does not include any trees with a diameter at breast height over bark of more than 10cm or - Includes only horticultural or agricultural plantations. 	<p>Consideration has been made of the requirements of the Koala SEPP 2019. Refer to Section 4.9 of the SEE which address the proposal against the Koala SEPP 2019 and the Flora and Fauna Assessment at Appendix H.</p>
<p>Glare</p> <p>A Glare Analysis prepared by a suitably experiences consultant to consider potential glare impacts from the development on residential receptors and other potentially affected receptors</p>	<p>A Reflectivity Report has also been conducted for the application and is located at Appendix E.</p>
<p>Visual Impact</p> <p>A Visual Impact Assessment prepared by a suitably qualified consultant to consider potential visual impacts from the development on residential receptors and other potentially affected receptors.</p>	<p>A Visual Impact Assessment has been prepared for the proposal and is located at Appendix E.</p>
<p>Watercourse</p>	<p>There are no mapped waterways within 40m of the site. This is discussed further in Section 4.3 Water Management Act.</p>

Matters Raised	Comments
<p>The site contains a number of watercourses. It was discussed that it they be clearly shown on the site plans. Any works within 40m on the top of the bank of the watercourse (i.e. waterfront land) will require a referral to the Natural Resources Access Regulator, as integrated development. Full details of any works within waterfront land will be required as part of the DA.</p>	
<p>Staff Amenities</p> <p>If any staff amenities are proposed as part of the development, a waste water treatment report will be required to be submitted with the DA, along with details on the site plan of the location of the effluent management system and land application area.</p>	<p>Temporary construction staff amenities will be provided on site. No permanent staff amenities are proposed given the nature of the ongoing operation.</p>

2 THE SITE AND SURROUNDS

2.1 SITE DESCRIPTION

The land is legally known as part Lot 151 DP755475 and is generally referred to as 211 Vine Lane, Boggabri, NSW 2382 (refer to Figure 1). The land is currently used for agricultural purposes including livestock grazing with historical improved pastures and cultivation. In terms of topography, the site is relatively flat with a gradual slope from northwest to southeast.

The site area is primarily flat agricultural lands with scattered vegetation. The eastern border of the entire site area includes the Werris Creek-Mungindi Railway Reserve and extends to approximately 56.88 hectares. Running east-west through the proposed development site is an unnamed waterway, which is examined further in Sections 4.3.

The proposed development site is a 7-sided polygon shape which is generally flat and comprises approximately 13.5 hectares. The development site is located in the northern section of Lot 151 DP755475, holding a frontage of approximately 400 metres to Vine Lane. Access to the site is via Vine Lane, which is a dirt road that connects the site to the Boggabri township to the south and the state classified road Kamilaroi Highway.

As noted within the provided Certificate of Title for Lot 151 DP755475, there are no easements and restrictions which are applicable to the site. An investigation of the obtained Deposited Plan (DP) for Lot 151 DP755475 shows no specific easement located within the nominated development area. Based on the above, the location of the solar PV farm is clear of registered easements and/or restrictions on the land.

Figure 1 – Locality Plan (Source: Six Maps)

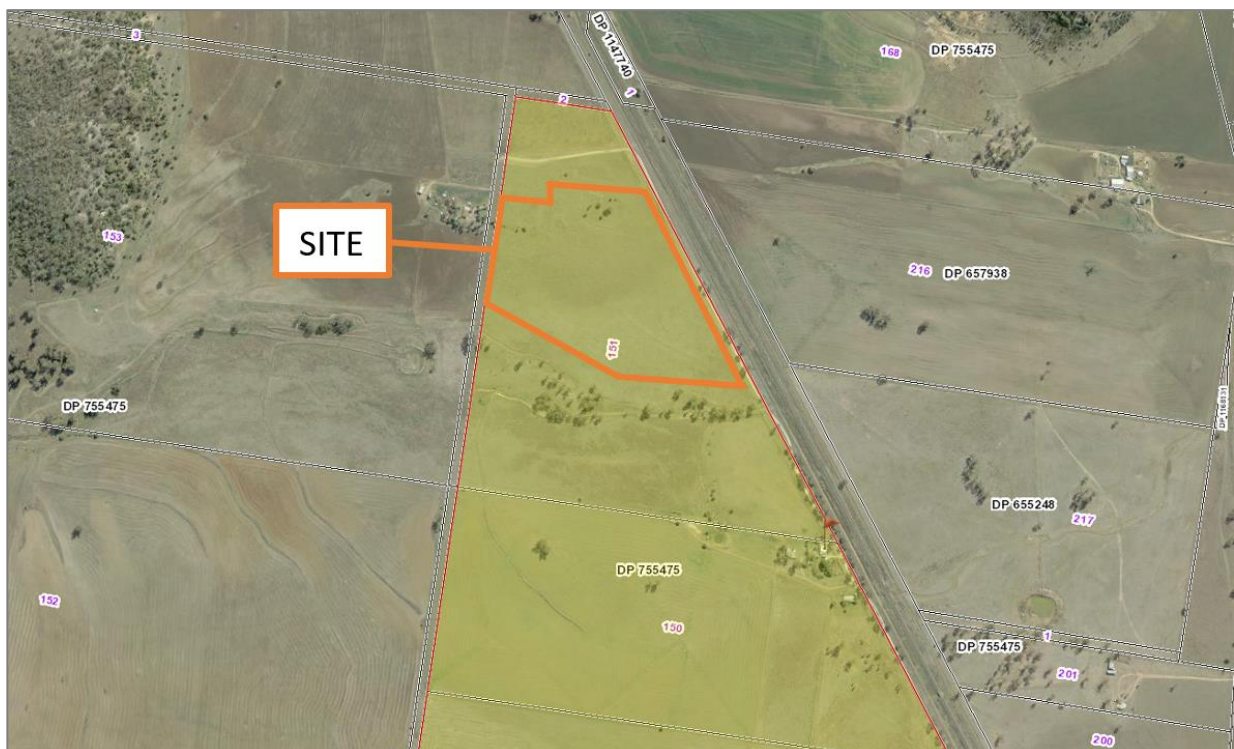
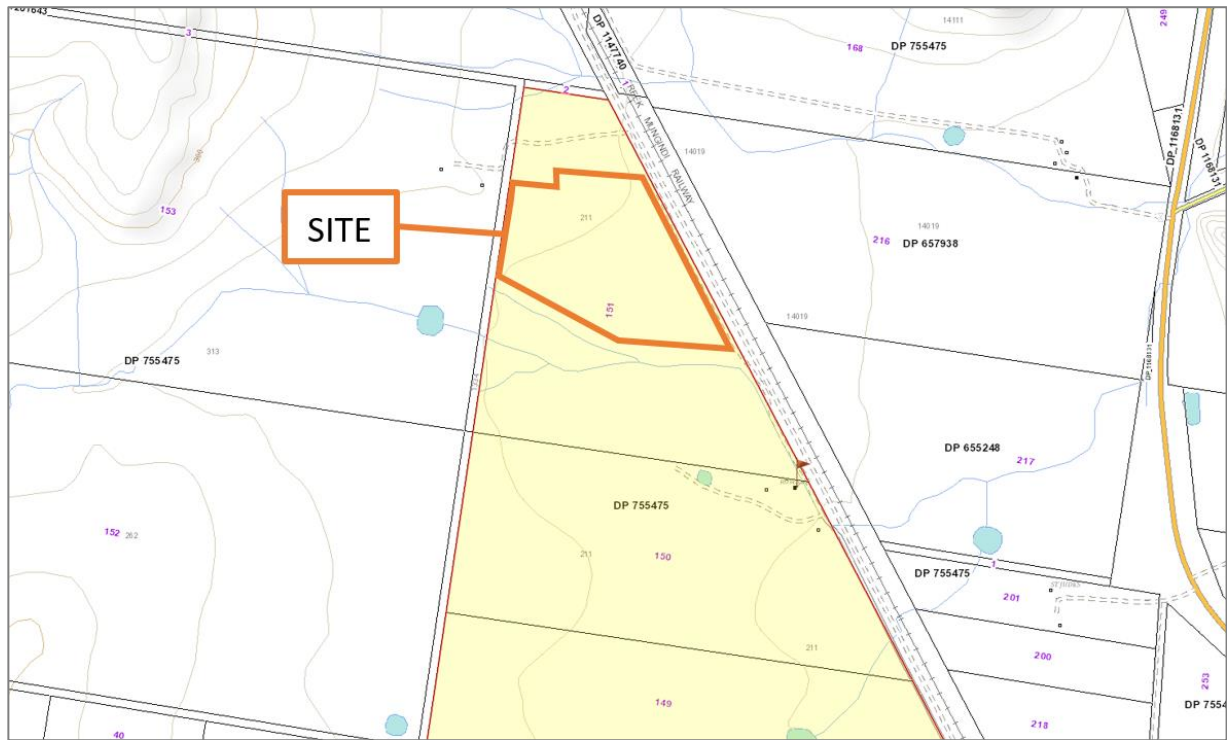


Figure 2 – Cadastral Plan (Source: Six Maps)



2.2 SITE LOCATION AND CONTEXT

The site is located approximately 3.2km north of the Boggabri town centre within the Narrabri Shire Council Local Government Area (LGA). Vine Lane is a single lane, unsealed road, which commences at the north of the Boggabri township and has no kerb or guttering on either side.

Surrounding lands are similar to the proposed site area consisting of agricultural land with rural dwellings, sheds, dams, and scattered remnant vegetation. There is an unnamed watercourse running through the site east to west, immediately south of the development area. The closest residential dwellings to the proposed development site are to the south of the site on Lot 150 DP755475 and west on Lot 153 DP755475.

3 PROJECT DESCRIPTION

The Boggabri Solar Farm project is one of PAG's solar initiatives to be rolled out across regional Australia, with multiple benefits for rural and regional communities.

The proposal includes a no larger than 5MW grid-connected solar PV installation. The solar farm will be connected to Essential Energy's network via an 11 kV distribution line running adjacent to the eastern boundary of the site. It is noted that a separate application process is being undertaken with Essential Energy for this connection.

The proposed development aims to erect an estimated 11,648 solar PV panels with a nameplate rating of 540W. Other electrical generation infrastructure is proposed on the site including a skid-mounted MV Power Station consisting of inverters, transformer and switchgear. Due to the capacity of the inverter system, the proposed development will produce less than 5MW. Most of the infrastructure would be pre-fabricated off-site, delivered and assembled on-site.

The PV arrangement will consist of 153 ground mounted single axis trackers. The PV arrays will have a clearance above the existing ground surface and extend to approximately 2.6m at maximum tilt. The PV mounting structure would comprise steel posts driven to approximately 1.5m below ground using a small pile driver. Additional support structures will be attached to the piles, which would then support the PV panels.

The proposed development will not require the entire removal of vegetation within the development area, it is noted that the site has already been cleared for agricultural purposes in the past. The proposal will not involve clearing of native vegetation that exceeds the Biodiversity Offset Scheme (BOS) threshold for the site. The proposal will result in the removal of 0.54 hectares of native groundcover however, most of the grasslands will be retained.

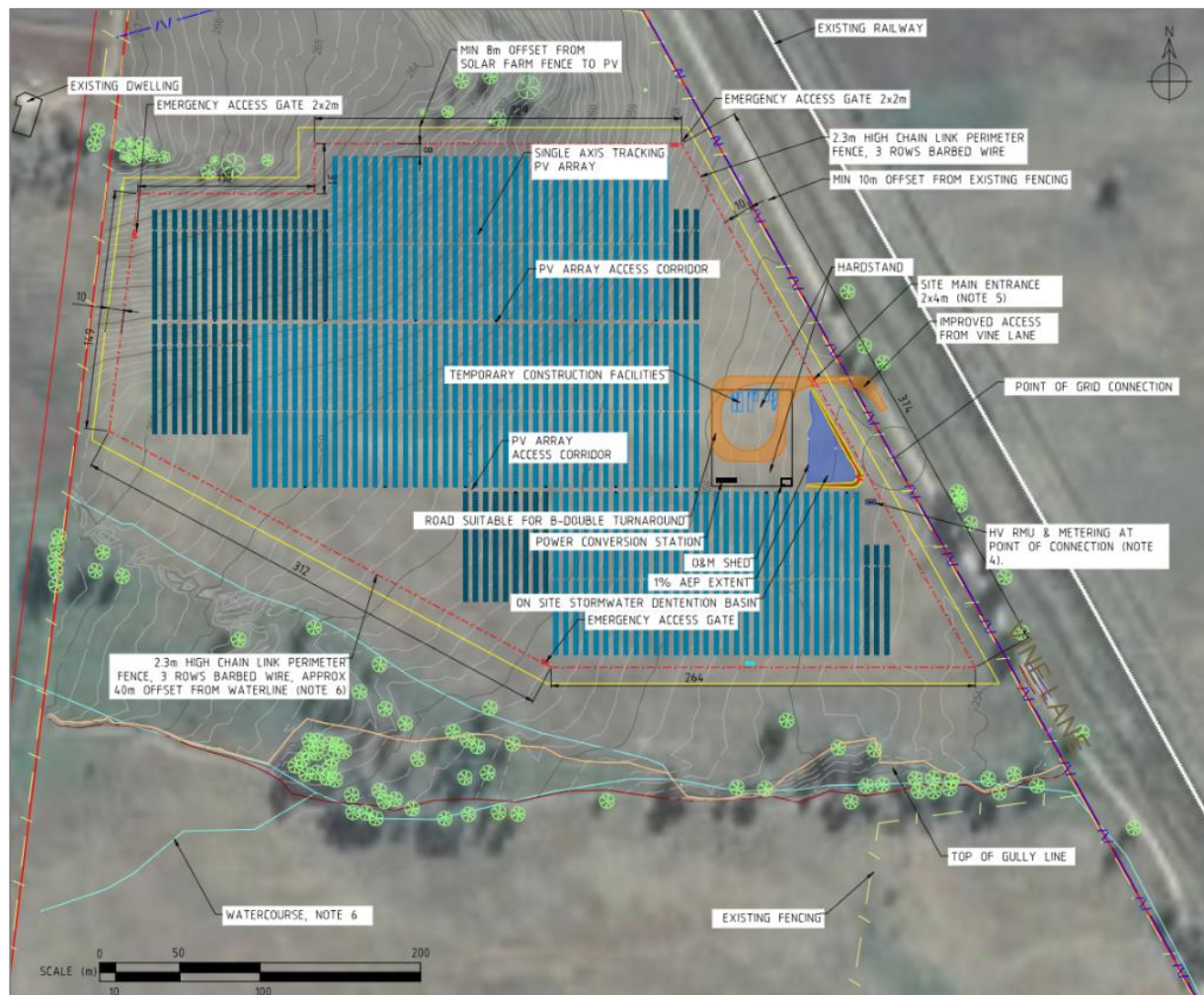
A 5m wide access road is proposed connecting the solar farm off Vine Lane at the south eastern corner of the lot. The solar farm will be fully fenced with a 2.3m security fencing including barbed wire at the top. Gate access is provided on the eastern border of the site. A car park area, off load area and temporary construction office are indicatively shown on the General Arrangement Plan (refer to Figure 3). Motion activated security lighting may be installed at the site.

A stormwater management system is proposed including an onsite detention basin holding a total volume of 150m³ supported with a low flow outlet. Refer to the Stormwater Management Plans at Appendix B. Earthworks for the project are generally limited to the establishment of the access road, drainage swales and batters, laydown area, and detention basin.

The solar PV farm would operate 24 hours a day, 7 days a week, with no permanent staff on site. Maintenance inspections will be undertaken daily or on an as needs basis.

During the construction period there is estimated to be up to 30 personnel on site for up to 6 months.

Figure 3 – Proposed Development Layout



4 RELEVANT LEGISLATION AND PLANNING CONTROLS

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

- + Environment Protection and Biodiversity Conservation Act 1999;
- + Environmental Planning and Assessment Act 1979;
- + Water Management Act 2000;
- + National Parks and Wildlife Act 1974;
- + Biodiversity Conservation Act 2016;
- + State Environmental Planning Policy (Infrastructure) 2007;
- + State Environmental Planning Policy (Koala Habitat Protection) 2019;
- + State Environmental Planning Policy (State and Regional Development) 2011;
- + State Environmental Planning Policy 55 – Remediation of Land;
- + Narrabri Local Environmental Plan 2012;
- + Narrabri Development Control Plan 1993;
- + New England North West Regional Plan 2036;
- + New England North West Strategic Land Use Plan 2012; and
- + Local Land Services Act 2013.

4.1 ENVIRONMENTAL PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999

Consideration of the EPBC Act 1999 revealed that impacts on Matters of National Environmental Significance (MNES) are unlikely to occur. No EPBC listed species, ecological communities, migratory species or important habitat for such entities was identified within the subject site. The assessment determined that impacts to Matters of National Environmental Significance (MNES) are unlikely; therefore, an EPBC referral to the Commonwealth Minister for the Environment is not recommended.

Full details are included in the Flora and Fauna Assessment Report at Appendix H.

4.2 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

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

4.3 WATER MANAGEMENT ACT 2000

Under this Act, waterfront land includes the bed and bank of any river, lake or estuary and all land within 40m of the highest bank of the river, lake or estuary (NRAR, 2018). Mapped waterways pass through the southern portion of the

study area in an eastern direction. The proposed site layout has been designed to avoid the mapped waterways, which are between 46m and 67m from the southern edge of the development footprint.

4.4 NATIONAL PARK AND WILDLIFE ACT 1974

The National Parks and Wildlife Act 1974 includes provisions for the protection and recording of Aboriginal objects in NSW.

An Aboriginal site investigation has been undertaken in accordance with the provisions of the National Parks and Wildlife Regulations 2009 and the accompanying Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (OEH 2010). See Appendix F for a copy of the Due Diligence Report for the proposal prepared by Virtus Heritage.

4.5 BIODIVERSITY CONSERVATION ACT

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

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

No threatened ecological communities or any listed flora or fauna were identified on site with the proposed development unlikely to cause any significant impact to any threatened species, populations or communities listed within the BC Act. Entry into the NSW BOS is not triggered by the proposed development. Further details are provided in Section 5.4 of this Report.

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

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

5 Private infrastructure and community facilities over \$5 million

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

*(a) air transport facilities, **electricity generating works**, port facilities, rail infrastructure facilities, road infrastructure facilities, sewerage systems, telecommunications facilities, waste or resource management facilities, water supply systems, or wharf or boating facilities,*

(b) affordable housing, child care centres, community facilities, correctional centres, educational establishments, group homes, health services facilities or places of public worship.

The proposed electricity generating works is considered to be private infrastructure with a CIV greater than \$5 million and as a result the development is deemed to be regionally significant development and the application will be referred to the Regional Planning Panel (RPP) for determination.

4.7 STATE ENVIRONMENTAL PLANNING POLICY (INFRASTRUCTURE) 2007

Division 4 Electricity generating works or solar energy systems

One of the aims of SEPP (Infrastructure) 2007 is to provide greater flexibility in the location of infrastructure and service facilities. This SEPP identifies certain electricity generating works that are permitted with consent, without consent, as exempt development, as complying development and works that are prohibited.

In this Division—

electricity generating works has the same meaning as it has in the Standard Instrument.

Note—

The term electricity generating works is defined by the Standard Instrument as follows—

electricity generating works means a building or place used for the purpose of—

- (a) making or generating electricity, or
- (b) electricity storage.

Clause 34 Development permitted with consent

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

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

Definition:

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

- (a) RU1 Primary Production,
- (b) RU2 Rural Landscape,
- (c) RU3 Forestry,
- (d) RU4 Primary Production Small Lots,
- (e) IN1 General Industrial,
- (f) IN2 Light Industrial,
- (g) IN3 Heavy Industrial,
- (h) IN4 Working Waterfront,
- (i) SP1 Special Activities,
- (j) SP2 Infrastructure.

The Development Area is zoned RU1 Primary Production, the proposed solar PV project is therefore permitted with consent under Clause 34 of SEPP (Infrastructure) 2007.

Clause 45 Determination of development applications—other development

The proposed development will require works to connect to the overhead electricity power lines and as a result constitutes works within 5m of powerlines. Due to the location and nature of the proposed development referral to the electricity supply authority, Essential Energy, will be required during the assessment period.

Clause 104 - Traffic-generating development

The proposed development will not generate greater than 50 vehicle movements per hour and as such does not trigger traffic generating development under the SEPP. Referral under this clause to Transport for NSW is therefore not required.

4.8 STATE ENVIRONMENTAL PLANNING POLICY NO 55 REMEDiation OF LAND

This SEPP requires the consent authority to consider the potential contamination status of the land prior to approving a development.

A search of the NSW EPA's '*List of NSW contaminated sites notified to the EPA*' and '*POEO Public Register*' has been undertaken which revealed no contaminated sites listed on or in the vicinity of the site. A total of 9 licences have been issued under the Protection of the Environment Operations Act in Boggabri, however, none are noted within proximity to the site. Environmental protection licences issued within Boggabri include:

- + Licence 12407 – Boggabri Coal Operations Pty Ltd – 386 Leard Forest Road, Boggabri – Operational;
- + Licence 20404 – Boggabri Coal Operations Pty Ltd – Goonbri Road, Boggabri– Surrendered;
- + License 5112 – Coal & Allied Industries Limited – Maules Creek Coal Lease No. 375, Boggabri – Surrendered;
- + Licence 21116 – HMS Australia Operations Pty Ltd – 1216 Braymont Road, Boggabri – Operational;
- + Licence 20221 – Maules Creek Coal Pty Ltd – Therribri Road, Boggabri – Operational;
- + License 10852 – Namoi Cotton Limited – Blairmore Road, Boggabri – Operational;
- + License 12365 – Tarrawonga Coal Pty Ltd – 469 Goonbri Road, Boggabri – Operational
- + License 21283 – Vickery Coal Pty Ltd – Blue Vale Road, Boggabri – Operational
- + License 10094 – Whitehaven Coal mining Limited – Hoad Lane, Boggabri – Surrendered

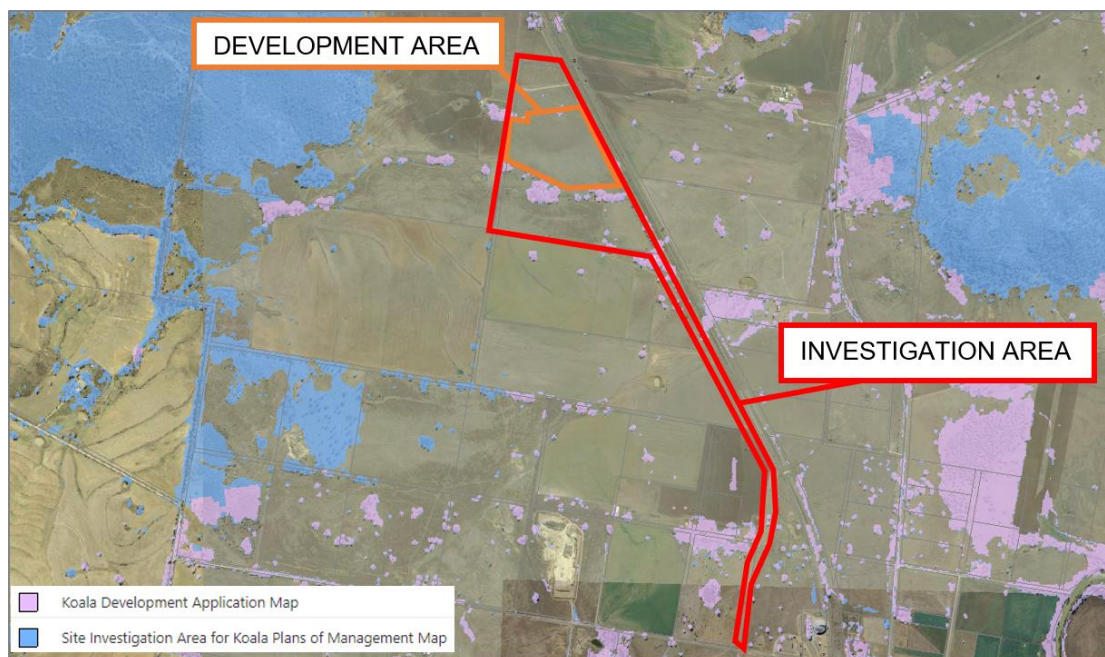
The proposed development is not considered to be sensitive in nature and as a result is considered to be appropriate for the site in its current state in accordance with SEPP55.

4.9 STATE ENVIRONMENTAL PLANNING POLICY (KOALA HABITAT PROTECTION) 2019

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

The Development Area is partly identified as a Koala Development Application Map area and a site investigation area for Koala Plans of Management, refer to Figure 4. The Flora and Fauna Assessment (located at Appendix H) found no resident population of koalas in the area and no koala feed trees within the subject site. Further discussion can be found in the Flora and Fauna Assessment Report located at Appendix H.

Figure 4 – Koala Habitat Mapping (Source: <https://webmap.environment.nsw.gov.au>)



4.10 NARRABRI LOCAL ENVIRONMENTAL PLAN 2012

The Development Area is zoned RU1 Primary Production under the Narrabri Local Environmental Plan 2012 (LEP 2012), see Figure 5.

Figure 5 – Land Zone Extract Narrabri LEP 2012 (LZN_004)



Zone RU1 Primary Production

1 Objectives of zone

- + *To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.*
- + *To encourage diversity in primary industry enterprises and systems appropriate for the area.*
- + *To minimise the fragmentation and alienation of resource lands.*
- + *To minimise conflict between land uses within this zone and land uses within adjoining zones.*
- + *To allow for non-agricultural land uses that will not restrict the use of other land for agricultural purposes.*

2 Permitted without consent

Building identification signs; Environmental protection works; Extensive agriculture; Farm buildings; Forestry; Home occupations; Intensive plant agriculture; Roads

3 Permitted with consent

Air transport facilities; Airstrips; Animal boarding or training establishments; Aquaculture; Bed and breakfast accommodation; Boat launching ramps; Boat sheds; Camping grounds; Cellar door premises; Cemeteries; Community facilities; Depots; Dual occupancies; Dwelling houses; Environmental facilities; Extractive industries; Farm stay accommodation; Flood mitigation works; Freight transport facilities; Helipads; Home businesses; Home industries; Information and education facilities; Intensive livestock agriculture; Landscaping material supplies; Open cut mining; Plant nurseries; Recreation areas; Recreation facilities (major); Recreation facilities (outdoor); Research stations; Roadside stalls; Rural industries; Rural workers' dwellings; Signage; Turf farming; Water recreation structures; Water supply systems

4 Prohibited

Any development not specified in item 2 or 3

The proposed land use, defined as *electricity generating works* (see below), is not permitted on the site with consent under the Narrabri LEP2012 the RU1 zone as *any other development not specified in item 2 or 3*. Notwithstanding, the proposal is permissible under Clause 34 of SEPP (Infrastructure) as discussed in Section 4.7.

LEP 2012 Definition:

electricity generating works means a building or place used for the purpose of—

- (a) *making or generating electricity, or*
- (b) *electricity storage.*

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

Clause 4.1 Minimum Subdivision Lot Size

The minimum lot size for subdivision across the investigation area is 100 hectares. No subdivision is proposed as part of this application.

Clause 4.3 Height of Buildings

This clause has not been adopted under LEP 2012.

Clause 4.4 Floor Space Ratio

This clause has not been adopted under LEP 2012.

Clause 5.10 Heritage Conservation

The investigation area does not contain a listed heritage item nor are any listed heritage items located in proximity to the area. The area is not mapped as a heritage conservation area under the LEP 2012.

Clause 6.1 Earthworks

The objectives of this clause are:

(1) The objective of this clause is to ensure that earthworks for which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land.

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

Clause 6.2 Flood Planning

The investigation area is not mapped within a flood prone land area under the LEP 2012. The Planning Certificate for the site does not identify the site as being flood prone.

Clause 6.3 Airspace Operation

The objective of this clause is to provide for the effective and ongoing operation of the Narrabri Airport and to protect the community for undue risk from that operation. Narrabri Airport is approximately 45km north-west of the proposed development site. The Planning Certificate confirms that the site has not been identified as being within the Narrabri Airport Obstacle Limitation Surfaces.

Clause 6.5 Essential Services

Provision of services, including stormwater drainage, and vehicular access suitable for the proposed development will be satisfactory provided for the site.

In summary, the proposal is compliant with the relevant clauses and controls contained within NLEP 2012 with the exception of permissibility, which is overridden by SEPP Infrastructure.

4.11 NARRABRI DEVELOPMENT CONTROL PLAN 1993

The Narrabri Development Control Plan (DCP) 1993 applies to all land within the Narrabri Local Government Area (LGA), including the subject site. The project has been assessed against the *Industrial Development Code* and the *Parking Code* of the DCP 1993.

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

4.12 NEW ENGLAND NORTH WEST REGIONAL PLAN 2036

The New England North West Regional Plan 2036 (the Regional Plan) provides an overall strategic plan to manage development in the New England region.

The Regional Plan distinctly highlights the role of renewable energy in the growth of the New England region with the plan's visions outlining the need for the area to harness the solar and wind potential. *Goal 1 – A strong and dynamic regional economy* identifies renewable energy as a priority growth sector. Direction 5 the Plan further calls for the promotion and growth of the renewable energy sector, specifically the solar sector through supporting and facilitating smaller-scale renewable solar projects.

Furthermore, the Plan outlines the future economic narrative for Narrabri Shire LGA. The Plan states that a priority for the Narrabri LGA is to improve electricity infrastructure to cater for the forecasted population growth. Direction 2.3 of the Regional Plan seeks to increase opportunities for renewable energy generations such as solar, with the Plan identifying 2 solar farms (120MW & 300MW) that were already being developed in Narrabri.

The proposed development on the subject site will align with the goals of the Regional Plan as it will provide an appropriately sized renewable energy project in a location with ready access to the electrical network which will support the regional development of Boggabri and the larger Narrabri LGA and New England Region.

4.13 NEW ENGLAND NORTH WEST STRATEGIC LAND USE PLAN 2012

The New England North West Land Use Strategy aims to guide future development and land use within the New England region for the next 20 years. The preparation of the strategy provides the basis for future planning decisions and provide certainty to the community whilst encouraging favourable development and the protection of the environment.

The New England region has been identified as one of six renewable energy precincts across NSW. Additionally, the Narrabri LGA has been marked to have excellent conditions for solar power farms due to high solar irradiation levels and a suitable average temperature range for photovoltaic systems.

4.14 LOCAL LAND SERVICES ACT 2013

60H Category 1-exempt land mapping

(1) Land is to be designated as category 1-exempt land if the Environment Agency Head reasonably believes that—

(a) the land was cleared of native vegetation as at 1 January 1990, or

(b) the land was lawfully cleared of native vegetation between 1 January 1990 and the commencement of this Part.

(2) Land is to be designated as category 1-exempt land if the Environment Agency Head reasonably believes that—

(a) the land contains low conservation value grasslands, or

(b) the land contains native vegetation that was identified as regrowth in a property vegetation plan referred to in section 9 (2) (b) of the Native Vegetation Act 2003, or

(c) the land is of a kind prescribed by the regulations as category 1-exempt land.

(3) Land is to be designated as category 1-exempt land if the land is biodiversity certified under Part 8 of the Biodiversity Conservation Act 2016 or under any Act repealed by that Act.

(4) However—

(a) land described in subsection (1) or (2) is not to be designated as category 1-exempt land if section 60I (2) requires the land to be designated as category 2-regulated land, and

(b) land described in subsection (1) (a) is not to be designated as category 1-exempt land if the land was unlawfully cleared of native vegetation after 1 January 1990, and

(c) land described in subsection (2) (a) is not to be designated as category 1-exempt land if the land was unlawfully cleared of native vegetation after 1 January 1990.

(5) The regulations may make provision for the purposes of determining whether grasslands are low conservation value grasslands for the purposes of this Division.

The proposed development area in the subject site of Lot 151 of DP755475 has been under regular cropping, grazing and pasture improvement since prior to 1990. Therefore, in accordance with the Local Land Services Act 2013, the full project development area can be considered as category 1-exempt land.

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5 ASSESSMENT OF PLANNING ISSUES

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

5.1 COMPLIANCE WITH PLANNING INSTRUMENTS AND CONTROLS

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

- + The proposed development is permissible under SEPP Infrastructure in the RU1 Primary Production zone;
- + The proposed Solar PV Farm is consistent with the relevant objectives of the RU1 zone, including that it will provide a sustainable rural land use whilst maintaining and enhancing the existing natural resource base;
- + The proposed Solar Farm will have minimal impact on any potential listed flora or fauna under the BC Act 2016;
- + The development is classified as Regional Development under SEPP State and Regional Development and will therefore be determined by the RPP;
- + The proposal complies with the requirements of SEPP Infrastructure and referral to the road authority will not be required as the proposal is not classified as traffic generating development; and
- + The proposal is generally consistent with the objectives and relevant controls within Narrabri DCP 1993. A detailed assessment of the proposed development against the relevant provisions of the DCP is provided in the table at Appendix C.

5.2 TRAFFIC, ACCESS AND PARKING

Traffic

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

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

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

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

The TIA notes the existing condition of the surrounding road network in particular the two-way unsealed Vine Lane with a 6-metre carriageway. At the time of assessment, Vine Lane was found to be in fair condition and is considered suitable

to cater for the short-term heavy vehicle increase as required during the construction phase. It is considered the local and state road network would be suitable to cater for the expected construction traffic associated with the development.

The TIA found nearby roads including Caloola Road, Boston Street and Kamilaroi Highway all in good condition and suitable for the heavy vehicle traffic during construction.

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

Access and Internal Circulation

During the construction phase of the development there will be a construction access point off Vine Lane at the eastern boundary of the site. Access to the site will be via a new access road with turnaround area off Vine Lane, approximately 400 metres north of the existing rural access to the existing dwelling on the site. The proposed width at the combined entry/ exit access is 3-5.5m wide, however the proposed entrance width will be a minimum of 12.5m wide. This access point off Vine Lane, while established for the purposes of construction and operation of the Solar Farm, is anticipated to also be used for access to the existing agricultural land present on site. The proposed driveway will provide for the turning movements of cars and service vehicles, in accordance with Council controls and the Australian Standard for Parking Facilities (Part 1: Off-street car parking and Part 2: Off-street commercial vehicle facilities), AS 2890.1:2004 and AS 2890.2 –2002. Furthermore, sight distance at the proposed access point was observed to be in excess of 250 metres in each direction and therefore complies with the relevant Australian Standards.

Parking

The Narrabri Shire DCP 1993 sets out the relevant on-site car parking rates for land uses within the Boggabri area. No specific car park rate is provided for solar projects. No gross floor area is proposed as part of the development.

Adopting the factory rates for this project, the relevant on-site car parking provision during the operation of the Solar Farm is 1 space per 100m² GFA.

With no buildings on the site and only 1 employee engaged in the day to day operation of the Solar Farm, the development is not required to provide any on-site parking space under the DCP requirements. However, with a single maintenance vehicle visiting the site between 1 to 5 times per fortnight, at least one vehicle car park within the development would be satisfactory.

Consideration of construction parking demand has also been considered with potential for up to 30 employees projected. A total of 10 car parks are proposed with additional space afforded for potential onsite overflow if required. The car parking area would comply with the requirements of Australian Standard AS2890.1-2004 Parking Facilities – Part 1 Off-street car parking with parking bay sizes 2.4 m x 5.4 m and aisle widths of 5.8 metres. Therefore, the on-site car parking is considered suitable for the development ensuring all vehicle movements to and from the site off Vine Lane will be undertaken in a forward direction.

5.3 STORMWATER, SOIL AND EROSION CONTROL

The proposed stormwater management system has been designed to reduce post-development flows to align with the pre-development conditions on the site. To achieve this, a detention basin is proposed at the south-western corner of the development area. This basin provides a holding volume of 150m³ and is supported with a low flow pipe and overflow weir. The stormwater management system proposed has been designed in accordance with Council requirements and with the proposed mitigation measures achieves compliance with the pre-development stormwater flows.

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

- (i) All impervious runoff from the proposed Photovoltaic Arrays will discharge to the existing ground surface where the natural flow regime will be maintained.
- (ii) Runoff from the proposed gravel/hardstand area catchment will be conveyed via sheet flow to the proposed above ground onsite stormwater detention basin.
- (iii) Discharge from the above ground onsite stormwater detention basing will be limited to the pre-development flow rates

In accordance with the stormwater drainage philosophy proposed for the site, the Boggabri Solar Farm will limit the Post-Development peak flows to Pre-Development flow rates for the 1 EY, 10% AEP and 1% AEP events.

Detailed Stormwater Plans and Report including DRAINS modelling have been prepared DRB Consulting Engineers provided at Appendix B.

5.4 FLORA AND FAUNA

Kleinfelder have undertaken a Flora and Fauna Assessment of the proposed development (refer Appendix H). This assessment has been undertaken with reference to the EP&A Act 1979 as well as the BC Act 2016 and the EPBC Act 1999.

As noted within the Flora and Fauna Report, the site is mainly cleared of vegetation due to previous agricultural development. As such, removal of native vegetation within the site will be limited to the removal of 0.54 hectares of degraded native groundcover however, most of the grasslands will be retained. The proposed site is not within or in close proximity to any mapped Areas of Outstanding Biodiversity Value. Impacts on biodiversity values have been addressed through an iterative design process to avoid areas of higher biodiversity value within the site.

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

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

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

5.5 NOISE

A Noise Assessment (NA) undertaken by Muller Acoustic Consultants measured and modelled the potential noise generation for the operation (both during construction and once operational) including sleep disturbance noise emissions (refer to Appendix G).

Operational Noise

The results of the NA demonstrate that emissions from the project would satisfy the relevant Project Noise Trigger Levels (PNTL) at all assessed receivers for all assessment periods once the noise controls are implemented. Furthermore, sleep disturbance is not anticipated, as emissions from impact noise are predicted to remain below the EPA screening criterion for sleep disturbance and awakenings.

Based on the NA results, there are no noise related issues which would prevent the approval of the project. The results of the assessment shows compliance with the relevant operational and road noise criteria. Accordingly, no additional ameliorative measures will be required.

Construction Noise

Modelled noise emissions from all four project construction activities identify that relevant noise management levels may be exceeded at one receiver location across the site. Hence, noise management measures as provided in the enclosed Noise Assessment (refer to Appendix G) are to be implemented to reduce potential impacts on surrounding receivers during construction activities. Road noise emissions are predicted to satisfy the relevant Road Noise Policy (RNP) criteria at all receivers along the proposed transportation route. Vibration impacts from the proposed works are considered to be negligible.

Construction noise mitigation measures to be implemented include:

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

5.6 LANDSCAPE AND VISUAL IMPACT

Visual Impact

It is relevant to consider the visual impact of the proposal given the existing rural landscape character of the area and location of a number of neighbouring properties within 1km radius of the site. SLR Consulting has undertaken a Visual Impact Assessment (VIA) to assess the potential visual amenity changes which may occur as a result of the proposed development, see Appendix E.

Based on the appraisal and findings of the Visual Impact Assessment, it can be considered the proposed solar farm would have a 'minor' visual impact rating on the existing landscape character and values of the site and its local context. Although the subject site is a relatively short distance from Boggabri, views of the existing site from public viewpoints are very limited due to the presence of obstructions such as topographic features, vegetation and built elements.

The views of the site from public viewpoints were from Kamilaroi Highway, Caloola Road and Vine Lane. Due to the scale of the Solar Farm in relation to the overall landscape surrounding the site, the degree of change is considered to be relatively low.

Given the distance of the site from notable public vantage points, the visual impacts are relatively low.

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

Landscaping

In line with the recommendations of the VIA (Appendix E), SLR Consulting have prepared a Landscape Plan to compliment development at the site (refer Appendix E). The Landscape Plan aims to provide screening of the development from Vine Lane and Kamilaroi Highway and nearby residences through the provision of screening trees along the eastern boundary.

Given the height and nature of the proposed solar farm and the distance from public vantage points with a moderate level of users, mitigation measures are only required on the eastern side of the development. Further, the planting of trees directly adjoining the solar farm would not be encouraged due to potential overshadowing. The informal planting of native shrubs to compliment the existing rural landscape character along the Vine Lane (eastern) side of the lease area would assist in minimising any visual impacts.

5.7 GLARE ANALYSIS

A Reflective Glare Assessment (RGA) has been undertaken by SLR Consulting to assess the potential for reflected light induced impacts on aviation, road operations, rail operations, industrial and heavy machinery operations, and residential amenity (refer Appendix E).

The proposed solar PV panels include solar trackers which results in minimal potential for horizontal reflectivity to occur as light is generally reflected upwards. The RGA found no impact would be made in regard to Motorist 'Traffic Disability' Glare or Rail Traffic 'Disability' Glare. Reflections from the proposed Solar Farm may be visible from surrounding residences, although the impacts are calculated are minimal. It is recommended that if modules are required to be near horizontal for extended periods, then they should be positioned at a slightly eastwards tilt angle of at least 10°.

Due to the site's large distances from nearby airports, it is concluded the proposal will have no impact on airport operations however aerial spraying has been considered. A generic flight scenario has been quantitatively analysed using SGHAT model and found potential for aviation glare was negligible all year round due to the low incidence angle of reflected rays resulting from the tilting action of the tracking system.

Glare resulting from onsite lighting will be mitigated in accordance with AS4282-1997 *Control of the Obtrusive Effect of Outdoor Lighting* effectively controlling potential for light spill and glare generated by the proposed development.

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

5.8 HERITAGE

5.8.1 INDIGENOUS CULTURAL HERITAGE

Virtus Heritage undertook preliminary Aboriginal archaeological advice (Appendix F) for the proposed development area in accordance with the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (2010) and where

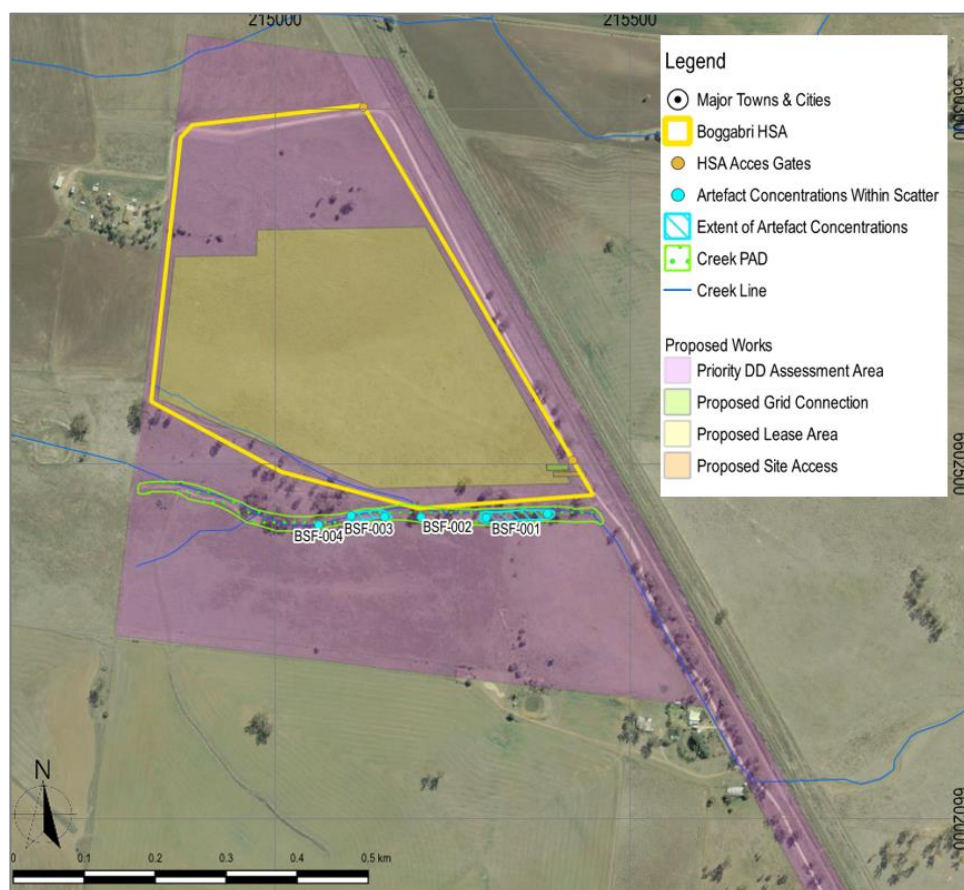
applicable, the requirements of the Code of Practice for Archaeological Investigation of Aboriginal Objects, NSW (2010). See Appendix F for further discussion.

A site inspection was undertaken on 27 October 2020 within the Red Chief Local Aboriginal Lands Council (LALC) area. The inspection was carried out by Senior Archaeologist Elaine Li accompanied by two site officers of the Red Chief LALC, Dave Horton and Cindy Foley.

Sites and landforms of high sensitivity within the property, including unnamed creek lines, were surveyed in full. Visibility within the paddocks were generally zero to very low due to overgrowth of pasture vegetation species. The rare areas with exposure were targeted for the survey. Primarily, the exposure areas were along eroded tracks, fence lines, and where vegetation was absent. No new sites were recorded in the few exposed areas surveyed within the development area.

One new Aboriginal site recording has been undertaken for the project area to archival standards. Four artefact scatter objects, including tool types and materials, found along the creek line and banks were consolidated into one single site to be managed. The highest artefact density was at the confluence between the two creek lines. The second creek line was too overgrown to be assessed. With the presence of the new site, it is expected that during works within the development area, unexpected findings are likely. Based on the site inspection findings and due diligence process, an ACHA/AHIP application will be undertaken in parallel with this development application.

Figure 6 – Indigenous Cultural Heritage Map (Source: Virtus Heritage)



5.8.2 EUROPEAN HERITAGE

The site does not contain any listed heritage items under Schedule 5 of LEP 2010, nor is it located within a heritage conservation area. No other heritage items are located in proximity to the site.

5.9 SOCIAL AND ECONOMIC IMPACTS

The proposed establishment of a solar farm on the site is anticipated to have an ongoing positive social and economic impact on the local Boggabri area and the broader community.

A review of existing renewable projects along with NSW State Government research reveals support for renewable energy projects is generally favourable within the North West Region (including the broader Boggabri region). This research revealed:

- + 94 per cent of respondents supported using renewables to generate electricity in NSW;
- + 81 per cent believed NSW should increase the use of renewables over the next five years; and
- + 95 per cent supported the use of solar farms in NSW, 92 per cent in their local region, and 84 per cent within 1–2 kilometres of where they lived.

The most common perceived advantages of renewables included environmental benefits and lower cost of electricity. The most common perceived disadvantages included higher cost and concerns about efficiency and reliability. In the North West, 74 per cent were prepared to use renewables 'provided I don't have to pay more for my electricity' and 22 per cent were prepared to pay more to support them.

The proposed solar farm is predicted to improve intergenerational equity through its beneficial contribution to Australia's Climate Change and greenhouse gas minimisation efforts, specifically:

- + Directly contribute to helping Australia in meeting the Renewable Energy Target;
- + Reduce greenhouse gas emissions required to meet Australia's international climate conditions; and
- + Assist in the transition towards cleaner electricity generation.

This is achieved by the potential to generate up to 5MW of electricity potentially powering 2,000 homes during daylight hours whilst reducing CO2 emissions by around 200,000 tonnes over the lifespan of the project.

Ongoing communication with the community has been highlighted as an imperative to maximise social benefits of the proposed development. Further recommendations include the following:

- + Liaison with local industry representatives to maximise the use of local contractors, manufacturing facilities, materials;
- + Establish visual screening early to minimise the visual impact on the solar farm. Visual screening should be done in consultation with closest property holders in accordance with Visual Impact Assessment and Landscaping Plan;
- + Establish good relations with people living in the vicinity of the proposal site at the beginning of the proposal and maintain; and
- + Implement a community consultation plan to manage impacts to community stakeholders, including but not limited to:
 - o mitigation measures to reduce potential construction impacts
 - o protocols to keep the community updated about the progress of the Proposal and proposal benefits
 - o protocols to inform relevant stakeholders of potential impacts (haulage, noise, air quality etc.)

- protocols to respond to any complaints received
- information on how potential customers can access the renewable energy source
- a process to monitor the predicted social impacts and amend mitigation and management measures as required.

In summary, the proposed establishment of a Solar PV Farm on the site is anticipated to have an ongoing positive social and economic impact on the local area and the broader Boggabri community. Overall, it is considered that the development:

- + Is consistent with the regulatory and business development framework, including state government legislation and the Narrabri Shire Council strategic plans;
- + Will have positive impacts intergenerational equity, with the provision of cleaner energy in the future;
- + Supports Commonwealth and NSW climate change commitments;
- + Will generate enough clean, renewable energy for about 2,000 homes;
- + Is an appropriate development in relation to the projected changes to population and demographics in the region;
- + Is unlikely to have significant negative social impacts to the locality and region; and
- + Would be a benefit contributing to the overall community sustainability of the Boggabri community.

6 CONCLUSION

The proposed solar PV electrical generation operation located at 211 Vines Lane Boggabri NSW 2382 will provide electrical power to support the needs of Boggabri and the surrounding agricultural operations, along with rural towns and villages. With the growth of the Boggabri area, the new electrical generator proposed under this DA will greatly assist in meeting the growing electrical demands required to support that growth.

The site has been chosen for its suitability in terms of land use zoning, relatively flat topography, limited trees and vegetation and access to high capacity transmission lines.

The proposed solar PV electrical generation plant is consistent with the objectives of the RU1 Primary Production zone as it will provide a compatible land use which minimises land use conflict in the area whilst contributing to the land use diversity of the area. The proposal will not increase demand for public services or facilities and will have minimal impact on native vegetation and wildlife corridors or on waterways, wetlands or riparian zones. The development is compliant with the relevant LEP clauses, presenting no variations to any development standard. The proposal is generally compliant with the requirements of Narrabri DCP 1993.

The design of the development incorporates appropriate stormwater management, respects the natural environment, and minimises potential amenity impacts on neighbouring properties.

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

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

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

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Appendix A – Architectural Plans

Balance, Power and Energy Pty Ltd

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Appendix B – Stormwater Management Plan

DRB Consulting Engineers Pty Ltd

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Appendix C – Compliance Tables

KDC Pty Ltd

Table 2 – Narrabri DCP 1993 – Industrial Development

Control	Requirement	Comment	Compliance
Industrial Development Code			
4.3 Open Storage and Work Areas	<p>(a) Where any work or storage of materials is proposed to be undertaken outside the confines of a building, full details of those parts of the site to be used, and of the materials to be stored, are to be provided with the application.</p> <p>(b) Approved open work and storage areas are to be located at the rear of industrial developments and screened from view by the use of landscaping and screen fencing. Such fencing is to be constructed of masonry materials or pre-coloured metal cladding, having a minimum height of 2.0 metres.</p>	<p>N/A, no open work or storage areas are proposed.</p> <p>N/A, no open work or storage areas are proposed.</p>	<p>N/A</p> <p>N/A</p>
4.4 Security Fencing	Security fencing should be visually unobtrusive and, wherever practicable, should be located behind the landscape setback area.	A 2.3m high security fence will be located around the site area. It will be visually unobtrusive in design.	Y
4.6.1 Setbacks	<p>A front building setback of eight (8) metres from the property boundary should be provided. This eight (8) metre front setback is to be intensively landscaped.</p> <p>Side and rear setbacks will be determined by the requirements of Ordinance 70 under the Local Government Act, 1919.</p>	<p>A 10m front setback area is proposed from the existing fence onsite to the proposed security fence.</p> <p>A 10m rear setback is proposed and appropriate side setbacks are proposed, with no development in proximity to the sides of the site.</p>	<p>Y</p> <p>Y</p>
4.7 Landscaped Treatment	<p>(a) To improve the visual quality and amenity of industrial development through the effective landscape treatment of industrial sites;</p> <p>(b) To provide a natural buffer between industrial development and adjoining or adjacent non-industrial land uses whilst enhancing the general streetscape and amenity of Narrabri's industrial areas.</p>	<p>The landscaping requirements have been achieved, refer to Appendix E for landscaping plans.</p> <p>A natural buffer has been provided with shrub planting proposed to screen views from the Highway.</p>	<p>Y</p> <p>Y</p>
4.7.1 Areas required to be landscaped	<p>(a) The front building setback;</p> <p>(b) Side and rear setbacks where visible from a public place or an adjoining residential area;</p> <p>(c) Areas adjacent to building entrances and pedestrian access points;</p> <p>(d) The perimeter of all approved open storage areas and staff/visitor parking</p>	The landscaping requirements have been achieved, refer to Appendix E for landscaping plans.	Y

	areas. (See also Section 4.3 of this Code). Large car parking areas should be interspersed with internal planting bays to reduce the visual impact of large areas of paved surfaces		
4.7.2 Landscape Guidelines	(a) Landscaped areas are to be an integral part of the site, and may, due to the size and scale of development proposed, require the incorporation of mounding to add visual relief to the development.	Refer to Appendix E for landscaping plans.	Y
	(b) Landscaped areas should be planted and maintained with suitable trees, shrubs and ground cover in accordance with a landscape plan, which must be submitted for approval prior to the release of building plans.	Shrub planting is proposed along the eastern boundary of the site as shown on the Landscape Plans included in Appendix E.	Y
	(c) Landscaping should be completed in accordance with the approved landscape plan prior to the occupation of the development and shall be suitably maintained throughout the life of the development.	A Landscape Plan has been provided at Appendix E. All landscaping will be completed in accordance with this plan.	Y
	(d) Every effort should be made to preserve existing trees on proposed development sites. All existing trees should be shown on the plan submitted with the application, and those which are required to be removed should be clearly highlighted.	No trees are required to be removed for this proposal.	Y
	(e) Trees shall be planted on the Council footpath, 900mm in from the kerb, along the entire frontage of the property, at intervals of approximately 10 metres (making allowance for the location of the driveways). The tree types that can be used are included in Annexure 1, and shall be approved by the Shire Engineer.	No tree planting on Council footpath is proposed.	Y
F.4.8.1 Access, Parking and Off Street Loading/Unloading Facilities – General Requirements	(a) The design, layout and construction of access, parking and service areas for all industrial development shall be in accordance with the requirements of the Narrabri Shire Parking Code.	As above, due to the nature of the development, no prescribed parking rate is applicable. However, the DCP allows for merit-based assessment of parking needs. A Traffic Impact Assessment is provided at Appendix D detailing site access.	Y
	(b) Council is required to consult the NSW Traffic Authority to obtain advice on traffic and safety aspects for major traffic generating	The proposed development is not considered a traffic generating development.	Y

	<p>developments. This consultation is a statutory requirement prescribed by State Environmental Planning Policy No. 11. Additional information about the consultation procedure can be obtained by contacting Council's Environmental Services Section.</p> <p>c) Industrial development should be designed to ensure that all vehicles can enter and leave the site in a forward direction. Details of vehicle size and manoeuvring areas should be submitted with the development application to enable an adequate assessment of these aspects.</p> <p>(d) Individual parking bays should be clearly delineated and have minimum dimensions of 2.6 metres x 5.5 metres, except where it is adjacent to a solid obstruction when a 3.0 metre width should be provided.</p>	<p>The proposed access and turning circle proposed for the site will allow all vehicles to enter and exit the site in a forward direction.</p> <p>The proposed parking bay for the site will be constructed according to parking requirements.</p>	<p>Y</p> <p>Y</p>
4.8.2 Access and Road Construction Requirements	<p>(a) The following road works are generally required in conjunction with industrial development:</p> <ul style="list-style-type: none"> • Industrial type vehicular gutter crossings; • Construction of kerb, gutter and road shoulder between the lip of the gutter and the edge of the existing bitumen seal, footway formation and paving and associated road drainage for the full frontage of the site. <p>(b) Access drives to have a minimum width of six (6) metres; Note – major traffic generating developments may require a greater access width divided at the property line.</p> <p>(c) The location of access driveways at intersections shall be in accordance with the Traffic Authority of NSW 'Policy, Guidelines and Procedures for Traffic Generating Developments', however the minimum distance shall be 6.0 metres from the intersecting boundaries;</p> <p>(d) Access driveways across the footpath should hard sealed, consisting of either concrete, two coat bitumen seal, asphaltic concrete, paving blocks or other approved material.</p>	<p>Required road works are proposed with this development, including a vehicle access road via Vine Lane which is suitable for B-Double access and a turnaround around.</p> <p>The proposed access driveway width at the combined entry/ exit gate is proposed to be 5 metres wide. It is considered this is an adequate width for the proposed development type.</p> <p>The proposed development is not considered as 'traffic generating development.' A new access road is proposed off Vine Lane and Boston Street intersection approximately 400 metres north of the existing rural access.</p> <p>No access driveway proposed across a footpath.</p>	<p>Y</p> <p>Y</p> <p>Y</p>

	(e) All driveways, parking areas, loading bays and vehicular turning areas are to be constructed with a base course of adequate depth to suite design traffic, and are to be sealed with either bitumen asphaltic concrete, concrete or interlocking pavers. Full details should be indicated on the plans submitted with the Development Application.		Y
4.8.3 Parking Requirements	On-site car parking should be provided in accordance with Council's adopted Car Parking Code, copies of which are available from Council.	As above, due to the nature of the development, no prescribed parking rate is applicable. However, the DCP allows for merit-based assessment of parking needs.	Y
4.10 Services and Drainage	(a) To ensure that services provided are adequate for the scale of the development proposed. (b) To ensure adequate drainage facilities are provided within the site to collect and carry stormwater to external drainage systems; (c) To reduce the hazard of flooding and the diversion or concentration of water onto adjoining properties.	A Stormwater Management Plan has been provided at Appendix B detailing the stormwater drainage strategy during both pre-development and post-development.	Y
4.10.3 Trade Waste	A Trade Waste Application will be required where liquid wastes other than sewerage are to be discharged to Council's sewerage system. Council levies a charge for the disposal of the Trade Waste to the sewer based on the volume and strength of the discharge.	No liquid waste is expected to be produced. A Waste Management Plan is provided at Appendix I.	Y
4.10.4 Drainage	(a) Stormwater runoff from roofs and paved areas is to be collected and disposed of to the street drainage or direct to Council's underground system. (b) The Council will not permit the erection of buildings over drainage easements under its control. (c) A contribution towards Downstream Drainage may be required based on the increased run-off generated by the development.	A Stormwater Management Plan has been provided at Appendix B detailing the stormwater drainage strategy during both pre-development and post-development.	Y
Parking Code No. 1 1993			
Construction	1. All parking areas are to be paved, and the manoeuvring and parking spaces are to be clearly delineated. The parking area is to be drained to Council's stormwater network.	The provided parking and manoeuvring area will be paved. Further details are provided in the Traffic Impact assessment located at Appendix D.	Y

	2. Upon an application being lodged, the paving required may be waived, if the applicant can demonstrate that the parking turnover will not adversely effect the proposed pavement.		
Landscaping	It is suggested that carparking areas be landscaped, especially with shade trees.	Due to the nature of the development, and the lack of requirement for car parking spaces, the proposed car parking landscaping control is not considered necessary.	Y
Parking Requirements	<p>Parking Rates:</p> <p>Factories:</p> <ul style="list-style-type: none"> - 1.3 spaces per 100m² GFA 	<p>As above, due to the nature of the development, no prescribed parking rate is applicable. However, the DCP allows for merit-based assessment of parking needs.</p> <p>As there is no building proposed for the development, no on-site parking is required to be provided under DCP requirements. However, as indicated in the Traffic Impact Assessment located at Appendix D, sufficient on-site parking will be provided for construction staff during construction, and the one maintenance vehicle during operation.</p>	Y

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Appendix D – Traffic Impact Assessment

Intersect Traffic

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Appendix E – Visual Impact Assessment, Landscaping Plans and Glare Analysis

SLR Consulting

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Appendix F – Preliminary Aboriginal Archaeological Advice

Virtus Heritage

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Appendix G – Acoustic Assessment

Muller Acoustic Consulting

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Appendix H – Flora and Fauna Assessment

Kleinfelder

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Appendix I – Waste Management Plan

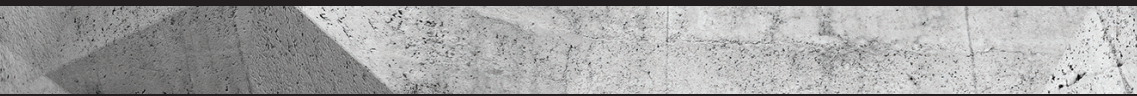
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Appendix J – Quantity Surveyors Report

RPS Group

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