

Javier Canon  
Senior Policy Officer  
Department of Planning, Industry & Environment  
4 Parramatta Square, 12 Darcy Street  
PARRAMATTA NSW 2150

16 April 2020

**Reference: 0470861**



Dear Javier Canon

**Subject: Bonshaw Solar Farm (SSD 9438) – Clarification Letter**

## **1. INTRODUCTION**

GAIA Australia Pty Ltd (GAIA) are seeking approval to develop a large scale photovoltaic (PV) generation facility with a capacity of 200 megawatts (MW) and associated infrastructure, including a Lithium-ion Energy Storage System (ESS/Li-ion). The proposed development of the Bonshaw Solar Farm (the 'Project') is located at Bonshaw, within the Inverell Local Government Area in New South Wales (NSW) (refer to **Figure 1-1**). The Project is located approximately 66 km north of Inverell, with site access fronting Bruxner Highway.

### **1.1 Project Progress**

The Project's Environmental Impact Statement (EIS) was exhibited over a 29 day period, from 6 November 2019 to 4 December 2019. There were 13 submissions received from government agencies and two public submissions during this period. A Response To Submissions (RTS) was submitted to the Department of Planning, Industry and Environment (DPIE) to address these comments.

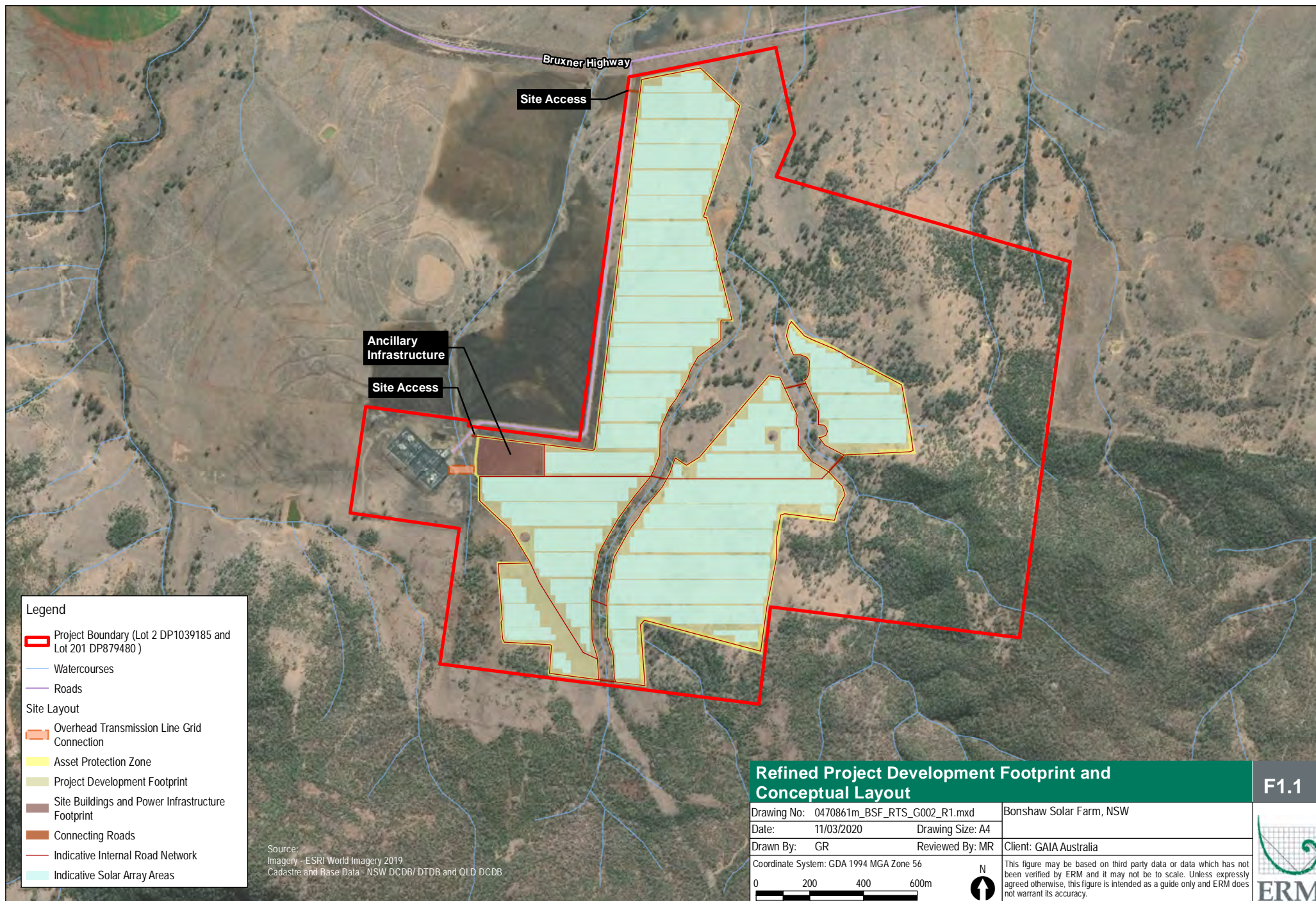
TransGrid made comment of the proposed method for obtaining approval for grid connection separately, noting that all works associated with the Project are to be included in the development approval for the Bonshaw Solar Farm. Consequently, an Amendment Report (AR) was prepared to provide details of the overhead connection.

Through the RTS and AR preparations, amendments to the Project footprint were made. The Project Area was extended from exclusively being Lot 2 DP 1039185, to include Lot 201 DP 879480 (Dumaresq Substation). The Development Footprint was also refined, being reduced from 167 hectares (ha) to 149.24 ha. The Project Area and Development Footprint, as updated, are shown in **Figure 1-1**.

### **1.2 Purpose of Letter**

Following the recent submission of the RTS and AR, on 8 April 2020 DPIE have requested further information on five (5) matters relating to the Project updates. These matters are outlined in **Table 2-1** below.

The purpose of this letter is to provide details on the five (5) items raised, to assist with the Department's assessment and determination of the Project. Details addressing these items raised is provided in **Section 2** below.



**Legend**

- Project Boundary (Lot 2 DP1039185 and Lot 201 DP879480)
- Watercourses
- Roads

**Site Layout**

- Overhead Transmission Line Grid Connection
- Asset Protection Zone
- Project Development Footprint
- Site Buildings and Power Infrastructure Footprint
- Connecting Roads
- Indicative Internal Road Network
- Indicative Solar Array Areas

Source:  
 Imagery - ESRI World Imagery 2019  
 Cadastre and Base Data - NSW DCDB/ DTDB and OLD DCDB

Refined Project Development Footprint and Conceptual Layout			F1.1
Drawing No: 0470861m_BSF_RTS_G002_R1.mxd		Bonshaw Solar Farm, NSW	
Date: 11/03/2020	Drawing Size: A4		
Drawn By: GR	Reviewed By: MR	Client: GAIA Australia	
Coordinate System: GDA 1994 MGA Zone 56		<div style="display: flex; align-items: center;"> <div style="flex: 1;"> <p>0 200 400 600m</p> </div> <div style="flex: 0.5; text-align: center;"> <p>N</p> </div> </div> <p>This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.</p>	

## 2. PROVISION OF ADDITIONAL INFORMATION

Each of the five items raised by DPIE have been outlined in **Table 2-1** below, with details provided in the left column as a response to the request for information. Supporting details are provided in **Section 2.1** through to **Section 2.3**.

**Table 2-1 Request for Information Details**

Item	DPIE Comments	Details
1	The development footprint has been reduced from 167 ha (EIS) to 149.24 ha (Submissions Report and Amendment Report), which means the footprint area was reduced about 11%. Please clarify what is the updated approximate number of solar panels and confirm the capacity (MW) of the project, as a result of the footprint reduction. Also please confirm if figures such as the project construction time or estimated employment would change as a result of project footprint area reduction.	<p>The reduction of the Development Footprint has affected these other aspects of the Project in the following ways:</p> <ul style="list-style-type: none"> <li>■ Approximate number of solar panels has decreased from 630,000 to 580,000;</li> <li>■ Review of the anticipated construction time has concluded that construction is expected to take approximately 18 months; and</li> <li>■ Employment estimations have been updated from being 190 full-time equivalent (FTE) to 180 FTE during peak construction, whilst operational employment estimations remain unchanged at 10 FTE.</li> </ul> <p>The capacity if the Project is expected to remain unchanged. It is anticipated that the 200 MW capacity will be able to be achieved through use of panels with high efficiency.</p>
2	Confirm the capacity of the proposed battery storage (300 MW/XXX MW-hour).	The capacity of the Battery Energy Storage System (BESS) will remain unchanged, being 300 MW/MW-hour.
3	What is the distance between the proposed BESS and the existing TransGrid substation? The table 1-1 in the Preliminary Hazards Analysis (dated 20 March 2020) says N/A.	<p>The distance between the BESS and the Dumaresq Substation is approximately 200m.</p> <p>The implications of this is detailed in <b>Section 2-1</b> below.</p>
4	Clarify what is the area of mapped BSAL within the development footprint, as amended. Previous information provided stated 58.3 ha of BSAL.	<p>The amended Development Footprint has reduced the area of impacted BSAL to 54.43 ha.</p> <p>This is further detailed in <b>Section 2.2</b> below.</p>
5	The EIS (page 105) indicate that the project footprint would include Land and Soil Capability (LSC) classes 3 and 5 and includes a figure. Please provide the LSC classes locations for the amended footprint, and include percentages of proposed footprint areas for each LSC class.	<p>The amended Development Footprint will impact on LSC Classes 3, 5 and 7. The extent of impact has decreased.</p> <p>This is further detailed in <b>Section 2.3</b> below.</p>

## 2.1 Preliminary Hazard Analysis – Proximity to Neighbours

The Preliminary Hazard Analysis (PHA) prepared for the Project to identify environmental hazards and risk that could arise during the construction and operation of the Project. The PHA was provided to DPIE as part of the RTS submission.

The PHA recognises the relative proximity of neighbouring properties to consider the likely significance of impacts upon the neighbours of the Project. Given the rural setting of the area, neighbouring landowner dwellings are scattered over a vast area, with the closest dwelling being located just over 2 km from the BESS. The substantial distance, in regards to proximity, provides a sufficient buffer, rendering the potential for impacts insignificant.

**Table 2-2 Proximity of Neighbours to Battery Components**

Landowner	Direction from Site	Approximate Distance to Dwelling
Lot 200 DP 879480	West	3.2 km ( <i>Dwelling of property owner located in Lot 1 DP 77438</i> )
Lot 201 DP 879480	West	200 m – Dumaresq Substation ( <i>Forms part of Project Area</i> )
Lot 46 DP 750075	West, South & East	N/A – Unoccupied Land
Lot 29 DP 750075	East	3.7 km ( <i>Dwelling of property owner located in Lot 52 DP 750075</i> )
Lot 16 DP 750075	North	2.3 km ( <i>Dwelling of property owner located in Lot 18 DP 750075</i> )
Lot 1 DP 1039185	North	2.1 km
Lot 1 DP 777438	North-west	3.2 km

## 2.2 Biophysical Strategic Agricultural Land (BSAL)

Indicative BSAL maps identify the inherent land and water resources that are important on a national and state level for agriculture. The EIS identified approximately 86 ha of BSAL is mapped within the Project Site, with 58.3 ha of BSAL mapped within the Development Footprint.

Following the amendment of the Project through the RTS and AR process, the total area of BSAL within the Project Site and the Development Footprint has decreased to 54.43 ha (refer to **Figure 2-1**).

A total of 2.8 million ha of BSAL has been identified and mapped at a regional scale across NSW, including over 1.5 million ha within the New England North West Region, which encompasses a total of 12 Local Government Areas (LGA), including the Inverell Shire LGA.

The Development Footprint encompasses 54.43 ha of BSAL, approximately 0.00002% of the total land area mapped as BSAL within NSW. The use of the BSAL mapped area will have limited impacts as the current use of the land for grazing can continue concurrently with the operation of the solar farm.

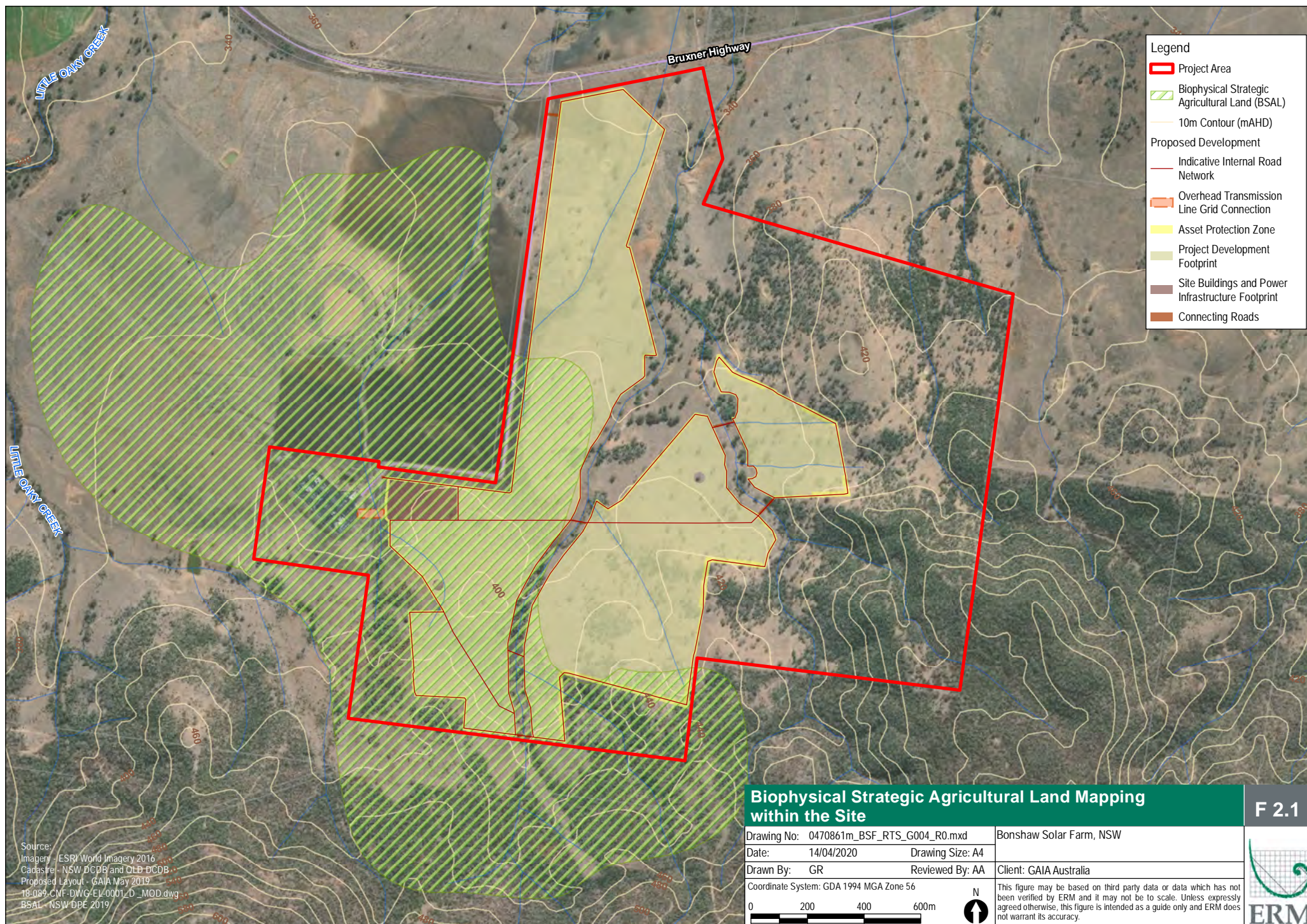
## 2.3 Land and Soil Capability (LSC)

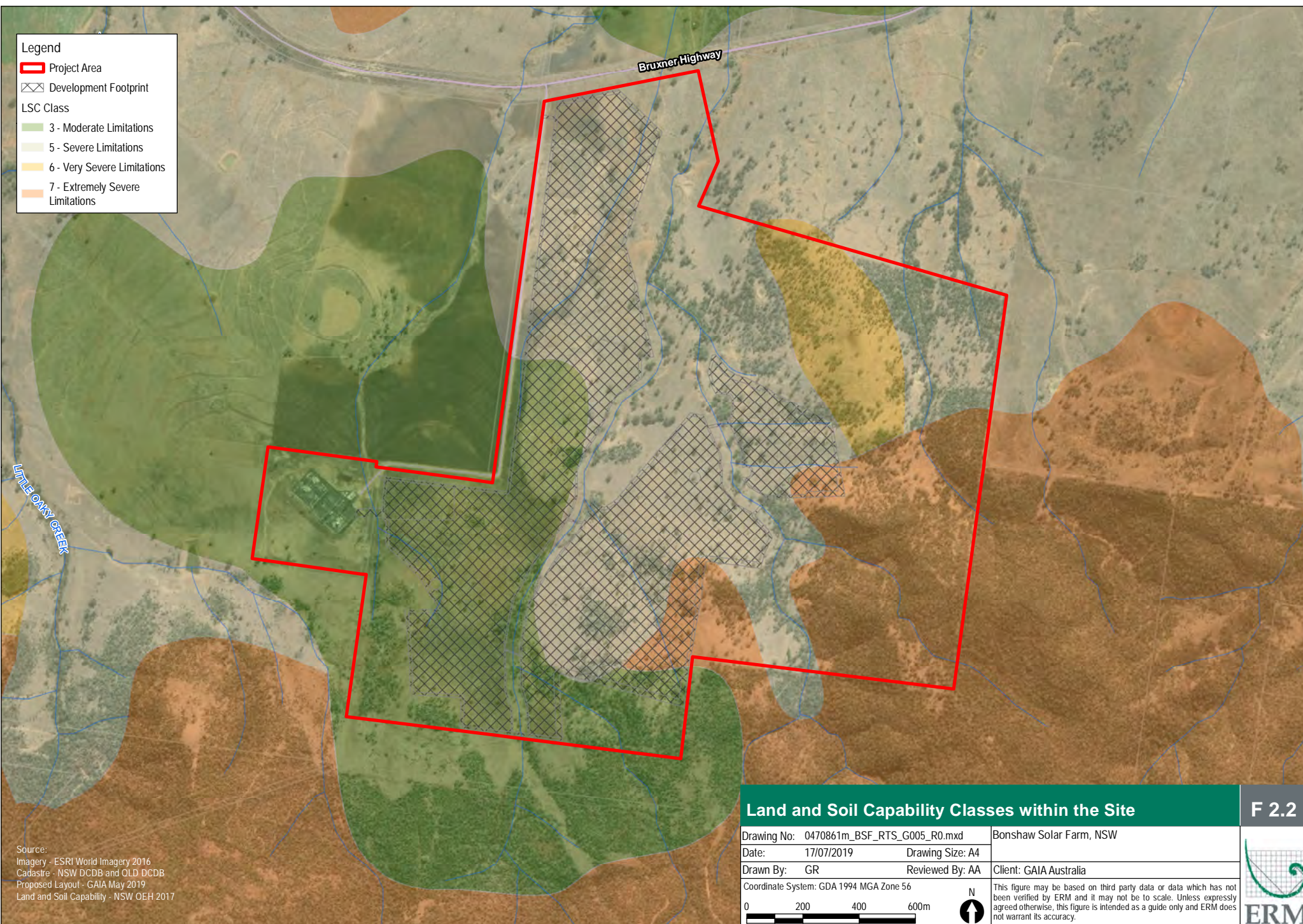
LSC mapping informs the inherent physical capacity of the land to sustain a range of land uses and management practices in the long term, without degradation to soil, land, air and water resources. The mapping is based on an eight class system with values ranging between 1 and 8 which represent a decreasing capability of the land to sustain productive agricultural land uses. Class 1 represents land capable of sustaining most land uses including those that have a high impact on the soil (e.g., regular cultivation), whilst class 8 represents land that can only sustain very low impact land uses (e.g., nature conservation). All LSC Classes are described in **Attachment A** below.

**Figure 2-2** demonstrates the LSC classes within the Project. The LSC classifications across the Project Site range from:

- LSC Class 3 land of 54.43 ha, or approximately 36.5% of the total Development Footprint.
- LSC Class 5 land of 87.08 ha, or approximately 58.3% of the total Development Footprint.
- LSC Class 7 land of 7.76 ha, or approximately 5.2% of the total Development Footprint.

The land classifications are not restrictive to the construction and operation of a solar farm. Grazing can still be undertaken concurrently with the solar farm operation. Grazing suits the land classification and will be undertaken concurrently with the solar farm by managed vegetation heights under the panels.





### 3. SUMMATION

This Letter has been prepared to address items raised in the Department's request for information, dated 8 April 2020. This Letter provides various updated details associated with the Bonshaw Project.

We trust the information provided is sufficient to address details requested by DPIE. Should you require any further details, please do not hesitate to contact the undersigned on (02) 4903 5535 or via email [Lachlan.Giles@erm.com](mailto:Lachlan.Giles@erm.com).

Yours sincerely,



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Lachlan Giles  
Environmental Planner



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Michael Rookwood  
Senior Planner

**ATTACHMENT A    LAND AND SOIL CAPABILITY SCHEME  
CLASSIFICATION**

**Table A – Land and Soil Capability Scheme Classification**

<b>LSC Class</b>	<b>General Definition</b>
<b>Land capable of a wide variety of land uses (cropping, grazing, horticulture, forestry, nature conservation).</b>	
1	<b>Extremely high capability land:</b> Land has no limitations. No special land management practices required. Land capable of all rural land uses and land management practices.
2	<b>Very high capability land:</b> Land has slight limitations. These can be managed by readily available, easily implemented management practices. Land is capable of most land uses and land management practices, including intensive cropping and cultivation.
3	<b>High capability land:</b> Land has moderate limitations and is capable of sustaining high-impact land uses, such as cropping with cultivation, using more intensive, readily available and widely accepted management practices. However, careful management of limitations is required for cropping and intensive grazing to avoid land and environmental degradation.
<b>Land capable of a variety of land uses (cropping with restricted cultivation, pasture cropping, grazing, some horticulture, forestry, nature conservation)</b>	
4	<b>Moderate capability land:</b> Land has moderate to high limitations for high-impact land uses. Will restrict land management options for regular high-impact land uses such as cropping, high-intensity grazing and horticulture. These limitations can only be managed by specialised management practices with a high level of knowledge, expertise, inputs, investment and technology.
5	<b>Moderate–low capability land:</b> Land has high limitations for high-impact land uses. Will largely restrict land use to grazing, some horticulture (orchards), forestry and nature conservation. The limitations need to be carefully managed to prevent long-term degradation.
<b>Land capable for a limited set of land uses (grazing, forestry and nature)</b>	
6	<b>Low capability land:</b> Land has very high limitations for high-impact land uses. Land use restricted to low-impact land uses such as grazing, forestry and nature conservation. Careful management of limitations is required to prevent severe land and environmental degradation
<b>Land generally incapable of agricultural land use (selective forestry and nature conservation)</b>	
7	<b>Very low capability land:</b> Land has severe limitations that restrict most land uses and generally cannot be overcome. On-site and off-site impacts of land management practices can be extremely severe if limitations not managed. There should be minimal disturbance of native vegetation.
8	<b>Extremely low capability land:</b> Limitations are so severe that the land is incapable of sustaining any land use apart from nature conservation. There should be no disturbance of native vegetation.