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Environmental & Social Consultants

ARK ENERGY

Richmond Valley Solar Farm

Response to Submissions Report

Final

June 2025

Richmond Valley Solar Farm

Response to Submissions Report

Final

Prepared by Umwelt (Australia) Pty Ltd
on behalf of Richmond Valley Solar Farm and
BESS Pty Ltd

Project Director:	Malinda Facey
Project Manager:	Jessica Henderson-Wilson
Report No.:	23252/R21
Date:	June 2025

This report was prepared using Umwelt's
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Acknowledgement of Country

Umwelt would like to acknowledge the traditional custodians of the country on which we work and pay respect to their cultural heritage, beliefs, and continuing relationship with the land. We pay our respect to the Elders – past, present, and future.

Disclaimer

Document Status

Rev No.	Reviewer Name	Reviewer Date	Approved for Issue Name	Approved for Issue Date
Final	J. Henderson-Wilson	3 June 2025	M. Facey	3 June 2025

Executive Summary

Richmond Valley Solar & BESS Pty Ltd plans to establish the Richmond Valley Solar Farm (the Project) in the Northern Rivers region of New South Wales, situated seven (7) kilometres east of Rappville in the Richmond Valley Local Government Area. The Project aims to generate up to 500 megawatts (MW) of DC solar power and includes a Battery Energy Storage System with a capacity of approximately 2,200 megawatt-hours. Additionally, the Project will feature necessary infrastructure such as inverters to convert DC to AC electricity, a substation, a switching substation, and transmission lines connecting to the nearby Transgrid network.

Umwelt was engaged to prepare an Environmental Impact Statement to assess the environmental and social impacts of the project as part of a State Significant Development Application to the NSW Department of Planning, Housing and Infrastructure.

The Environmental Impact Statement was publicly exhibited between 24 July 2024 and 21 August 2024, receiving 48 public submissions, including a number from organisations. The total count of public submissions (48) does not include a submission made by Richmond Valley Council and advice from 11 government agencies. Of the 48 public submissions, 44 were objections, two (2) were supportive and two (2) submissions commented on the EIS Project. Twelve (12) submissions were within five (5) km of the Project Area, seven (7) were between five (5) km and 100 km of the Project Area and 29 were beyond 100 km of the Project Area. Of the 12 submissions within five (5) km of the Project Area, two (2) were supportive.

This Response to Submissions report summarises the actions taken since the exhibition, details the comments received during the public submission phase, analyses these submissions, and provides a detailed response to key themes.

Richmond Valley Solar & BESS Pty Ltd have continued engagement with landholders and stakeholders since submission and exhibition of the EIS. Additionally, amendments are proposed and an Amendment Report prepared to assess the proposed amendments and identify additional management and mitigation measures. This report should also be read alongside the Richmond Valley Solar Farm Amendment Report (Umwelt, 2025).

The Project as outlined in the EIS (Umwelt, 2024) will be referred to as the EIS Project, while the revised version will be known as the Amended Project.

The Project is part of the energy transition, directly contributing to the NSW and Commonwealth Governments' commitments to renewable electricity generation in NSW. It will help address the energy shortfall by delivering up to 500 MW of renewable energy to the National Electricity Market, reducing the need to keep coal-fired power stations like Eraring Power Station operational beyond their planned retirement dates. The Project also supports renewable energy storage in NSW through the development of a BESS with a capacity of 2,200 MWh.

Furthermore, the Project will bring significant capital investment to the Richmond Valley region, creating jobs during both construction and operation phases. It is likely to provide indirect benefits to local services throughout the Project's lifespan, such as employment in transportation, trade supplies, services, accommodation, catering, and retail. It will generate income for host and associated landowners and benefit the local community through the proposed Community Benefit Fund and planning agreement with local council. The EIS also sought to minimise associated impacts such as increased pressure on accommodation and social services.

This Response to Submissions report addresses the key themes identified from the submissions, including but not limited to bushfire risks, hazards, ecological impacts, traffic, and the use of agricultural land. Feedback from agencies has been addressed and used to inform design refinements and additional mitigation and management measures. Each response from the public submissions has been categorised and addressed within this report.

Abbreviations

Term/Abbreviation	Definition
AC	Alternating Current
AEMO	Australian Energy Market Operator
AES	Accommodation and Employment Strategy
AHIMS	Aboriginal Heritage Information Management System
APZ	Asset Protection Zone
BAL	Basic Left
BC Act	*Biodiversity Conservation Act 2016* (NSW)
BCS	Biodiversity, Conservation and Science
BDAR	Biodiversity Development Assessment Report
BESS	Battery Energy Storage System
CBF	Community Benefit Fund
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CSWMP	Construction Soil and Water Management Plan
CPHR	Conservation Programs, Heritage & Regulation
DA	Development Application
DC	Direct Current
DPE	NSW Department of Planning and Environment
DPHI	Department of Planning, Housing and Infrastructure
DPI	Department of Primary Industries
DPIE	Department of Planning and Environment
EIS	Environmental Impact Statement
EMF	Electromagnetic Fields
EP	Emergency Plan
EPA	Environmental Protection Agency
ERP	Emergency Response Plan
ESCP	Erosion and Sediment Control Plan
ESIP	Emergency Services Information Package
FGS	Fine Grained Silicious
FIA	A Flood Impact Assessment
FRNSW	Fire & Rescue NSW
FSS	Fire Safety Study
FTE	Full Time Equivalent
GDE	Groundwater Dependent Ecosystems
Ha	Hectares
HIPAP	Hazardous Industry Planning Advisory Paper

Term/Abbreviation	Definition
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IFSR	Initial Fire Safety Report
IPC	Independent Planning Commission
km	Kilometres
kV	Kilovolt
LGA	Local Government Area
LIBs	Lithium-ion batteries
LPG	liquefied petroleum gas
Ark Energy	Richmond Valley Solar & BESS Pty Ltd
m	Metres
MLRA	Multi-level Risk Assessment
MW	Megawatt (unit of power equivalent to 1 million watts)
MWh	MW hours
NEM	National Electricity Market
NHVR	National Heavy Vehicle Regulator
NSW	New South Wales
NVIA	Noise and Vibration Impact Assessment
O&M	Operations and Maintenance
OEMP	Operational Environmental Management Plan
PHA	Preliminary Hazard Analysis
PV	Photovoltaic
RAP	Registered Aboriginal Party
REZ	Renewable Energy Zone
RtS	Response to Submissions
SIA	Social Impact Assessment
SSD	State Significant Development
TBDC	Threatened Biodiversity Data Collection
TCP	Traffic Control Plan
TEC	Threatened Ecological Community
TGS	Traffic Guidance Scheme
TfNSW	Transport for NSW
VMP	Vegetation Management Plan
WAL	Water Access License
WMP	Waste Management Plan
WSP	Water Sharing Plan

Project-specific Glossary of Terms

Project-specific Term	Description
Amended Project	The Amended Project includes all elements of the Project as described in the EIS as well as the following amendments since submission of the EIS: • Update the Candidate BESS model from Energy Vault DC blocks BV2.0/2.1 to CATL ENERX BATTERIES, 5.64 MWh, 1040~1500 VDC. • Increase to the size of the BESS footprint from 5 ha to 9 ha. • Increase the BESS power output from up to 275 MW to 475 MW. • Increase to the number of inverters within the BESS compound from 106 to 186. • Increase the transmission line cut in area from 7 ha to 13 ha. • Reduce the distance of the perimeter fence from 32 km to 27 km. • Include vegetation clearing required for sight distance road upgrades within the Development Footprint. • Increase to the Development Footprint from 814 ha to 789 ha due to realignment of the fence line and transmission line cut in area, BESS upgrade and fence realignment and the identification of *Rotala Tripartita* and *Maundia Triglochinoides*. • Reduce the freeboard solar panel height above the 1% AEP from 300 mm to 100 mm. • Additional transport routes from Melbourne to Project Area. No additional areas of impact associated with additional routes. • Location of switching station
Battery Energy Storage System (BESS)	The entire battery system comprising of a centralised power conversion system (battery storage units and inverters). The BESS is housed in a series of outdoor containers. Note: the Amended Project details the amendments to the proposed BESS to include an increase in the number of inverters from 106 to 186.
Development Footprint	The maximum extent of ground disturbance associated with construction and operation of the Richmond Valley Solar Farm as presented in the EIS and subsequently the Amendment Report. Note: the Amended Project has an amended Development Footprint.
Project Area	The Project Area encompasses all land within and including the Project Boundary.
Proponent	Richmond Valley Solar & BESS Pty Ltd
The EIS Project	The proposed Richmond Valley Solar Farm. The Project includes up to 500 megawatts (MW) of DC solar electricity generation with a Battery Energy Storage System (BESS) of approximately 2,200 MW hours (MWh) capacity. The Project will also include supporting infrastructure, inverters to convert DC to AC electricity, a substation, switching substation and transmission lines to the nearby Transgrid transmission network.
Site	The properties in which the Project Area is located.
Subject Land	The Subject Land includes the Development Footprint, and areas where indirect and prescribed impacts may occur. The Subject Land was the study area used for all survey completed by Biosis during surveys. This includes a buffer of 100 m surrounding the solar farm Development Footprint and 20 m buffer surrounding the road upgrade Development Footprint, clipped to the Project Area.
Transmission line	The existing 330 kV Transgrid powerlines within the north-western extent of the Project Area, allowing connection to the national electricity market. A new two km overhead 330 kilovolt (kV) transmission line is proposed to connect the Project to the 330 kV transmission line located north-west of the proposed switching substation.

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1.0 Introduction

Richmond Valley Solar & BESS Pty Ltd (Ark Energy) proposes to develop the Richmond Valley Solar Farm (the Project) in the Northern Rivers region of New South Wales (NSW), approximately seven (7) kilometres (km) to the east of the town of Rappville in the Richmond Valley Local Government Area (LGA). The Project contributes to the state and Commonwealth commitments regarding renewable electricity generation in NSW.

The Project as presented in the Environmental Impact Statement (EIS) includes up to 500 megawatts (MW) of DC solar electricity generation with a Battery Energy Storage System (BESS) of approximately 2,200 MW hours (MWh) capacity. The Project will also include supporting infrastructure, inverters to convert DC to AC electricity, a substation, switching substation and transmission lines to the nearby Transgrid transmission network. The Project's location and regional context is shown in **Figure 1.1**.

The Project Area comprises two freehold properties that span across ten cadastral lots, covering an area of approximately 1,475 hectares (ha). As presented in the EIS the Development Footprint comprises approximately 789 ha for the solar farm and associated infrastructure and road upgrades occupying approximately 12 ha, refer to **Figure 1.2**.

The Project is approximately 95 km north-east of the New England Renewable Energy Zone (REZ) however it is not related to the REZ, nor is it dependent on the REZ infrastructure. This Project benefits from utilising the existing 330 kV Transgrid powerlines within the north-western extent of the Project Area, allowing connection to the national electricity market (NEM).

The Project is a State Significant Development (SSD) under the State Environmental Planning Policy (Planning Systems) 2021, being a development for the purposes of electricity generating works and with a capital investment value of over $30 million. An EIS for the Project was submitted to the Department of Planning, Housing and Infrastructure (DPHI) in June 2024. The public exhibition of the EIS took place between 24 July 2024 and 21 August 2024, receiving 48 public submissions, including seven (7) from organisations. The total count of public submissions (48) does not include a submission made by Richmond Valley Council or advice from 11 government agencies. Of the 48 public submissions, 44 were objections to the Project.

In correspondence dated 23 August 2024, DPHI requested that Ark Energy formally respond to issues raised in the submissions. This Response to Submissions (RtS) report provides a summary of actions since exhibition, details the submissions and advice provided following the public exhibition phase of the EIS, analysis of the submissions and agency advice and offers a detailed response to each (in **Section 4.0** and **Section 5.0**) in accordance with the State significant development guidelines – preparing a Submissions Report (the Guidelines)(DPHI, 2022).

Following receipt of the Submissions Report and Amendment Report, DPHI will complete its assessment of the Project and prepare an assessment report, taking into consideration the EIS, the submissions made on the EIS, this Submissions Report, proposed Project amendments and the Amendment Report including the associated updated assessments. DPHI will then make a determination on the Project as the consent authority.

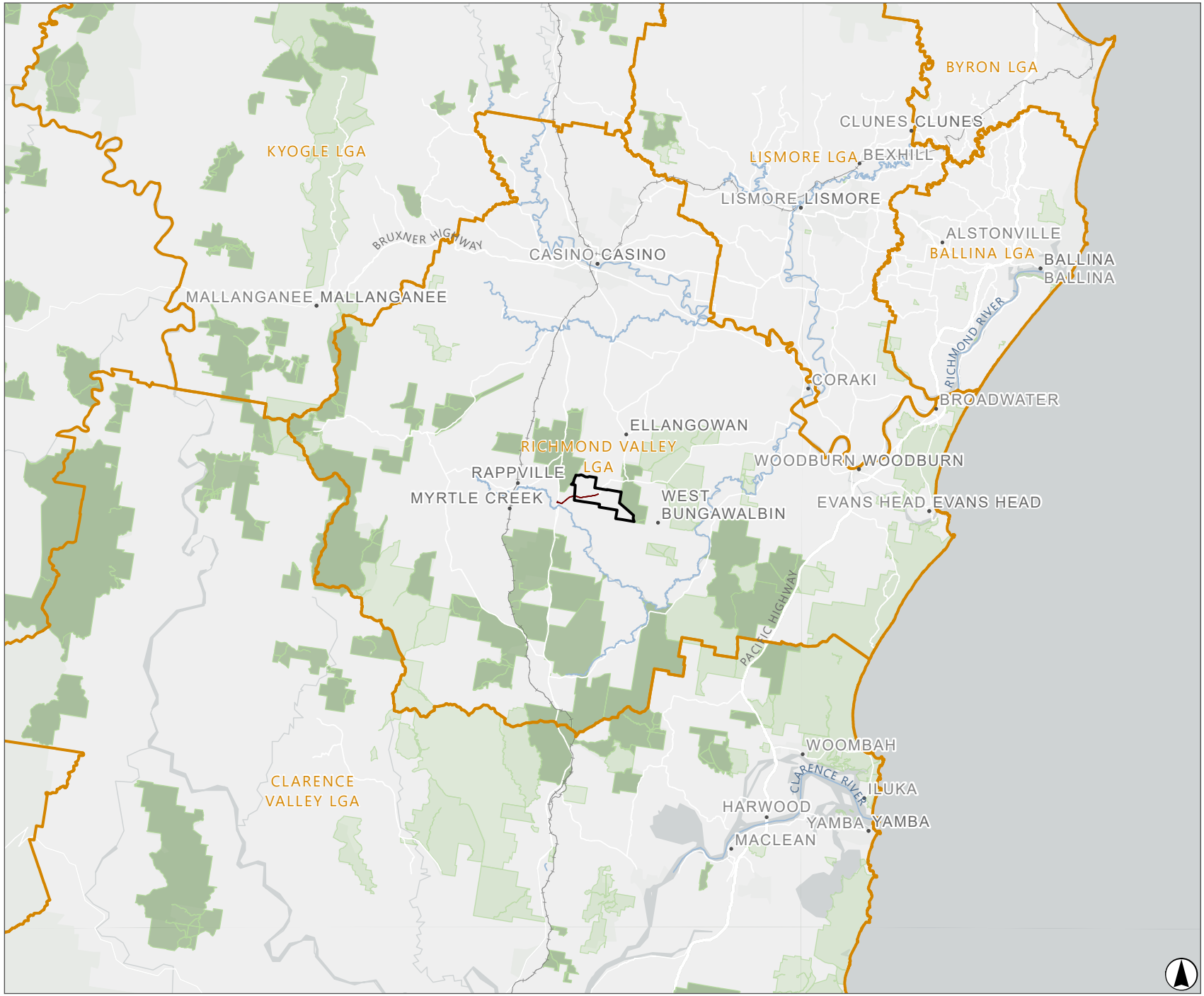


FIGURE 1.1

Regional Context

Legend

- Project Area
- Road Upgrade Area
- Local Government Area
- NPWS Reserve
- State Forest
- Watercourse
- Railway
- Towns

0 10 20

Kilometers

Scale 1:600,000 at A4
GDA 1994 MGA Zone 56

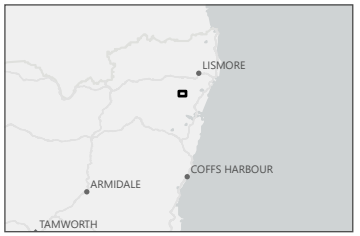
Image Source: ESRI Basemap (2023) | **Data Source:** NSW DFSI (2023)

FIGURE 1.2

EIS Project

Legend

- Project Area
- Development Footprint
- Road Upgrade Area
- Transmission Poles
- Access Points
- Watercourse Crossings
- Transmission Lines
- Access Tracks
- Security Fence
- Substation
- Switching Subsation
- BESS
- Inverters
- Solar Array Blocks
- NPWS Reserve
- State Forest
- Roads
- Watercourse



0 1 2

Kilometers

Scale 1:45,000 at A4
GDA 1994 MGA Zone 56

Image Source: ESRI Basemap (2023) | **Data Source:** NSW DFSI (2023)

1.1 Proposed Design Changes

Ark Energy has continued to progress detailed design of the Project leading to several proposed amendments as described in **Section 1.2.2** and **Section 3.1** of this RtS report. These changes are further detailed in an Amendment Report (Umwelt, 2025) which provides assessment of potential environmental and social impacts as a result of these changes and identifies additional mitigation and management measures. This RtS report should be read in conjunction with the Amendment Report (Umwelt, 2025).

The Project, as defined in the EIS (Umwelt, 2024) will henceforth be referred to as the EIS Project and the Project encompassing the proposed changes will be referred to as the Amended Project.

1.2 Project Overview

1.2.1 The EIS Project

The EIS Project (Umwelt, 2024), included the construction, operation and decommissioning of up to 500 MW of DC solar generation, a BESS with a power capacity of 275 MW and an energy storage capacity of up to 2,200 MWh over eight (8) hours and a transmission line to connect the EIS Project from the substation to the NEM. The EIS Project included various associated infrastructure including inverters to convert DC to AC electricity, a substation and switching substation, temporary construction facilities, operations and maintenance (O&M) facility, internal roads, civil works and other required electrical infrastructure.

The key components of the EIS Project are shown in **Figure 1.2**.

1.2.2 The Amended Project

The Amended Project is described in detail within the Amendment Report (Umwelt, 2025) and in accordance with the Guidelines is also summarised in **Section 3.1** of this Report. A summary of key changes between the EIS Project and Amended Project is provided in **Table 3.2**.

1.3 Report Structure

The structure of this RtS report is presented in **Table 1.1**, in accordance with the DPHI Guideline (2024).

Table 1.1 Structure of the RtS

Section	Heading	Description
Section 1.0	Introduction	Brief summary of the Approved Project and the EIS Project to provide context for the submissions.
Section 2.0	Analysis of Submissions	Analysis of the issues and themes raised in the submissions.
Section 3.0	Actions taken since exhibition	Summarises the actions taken since the exhibition, including a summary of the Amended Project.
Section 4.0	Response to submissions – Government agency	Detailed response to the issues raised in the government submissions.
Section 5.0	Response to submissions – Community	Detailed response to the issues raised in the community submissions.

Section	Heading	Description
Section 6.0	Justification for Project	Updated justification and evaluation of the Project.
Section 7.0	References	References.
Appendix A	Submissions register	A register of all the submissions received during public exhibition and where issues have been addressed in the Submissions Report.
Appendix B	Updated mitigation measures	Updated mitigation measures table.
Appendix C	Photographs of Physics Creek tributaries	A map detailing the location of water crossings alongside photographs of mapped waterways.
Appendix D	Additional consultation documentation	Evidence that the draft ACHAR was provided to all Registered Aboriginal Parties.

2.0 Analysis of Submissions

2.1 Breakdown of Submissions

The EIS was placed on public exhibition from 24 July 2024 to 21 August 2024. During public exhibition, the EIS received 48 public submissions (including non-government organisations). Of the 48 public submission, the EIS received:

- 44 objecting submissions across a range of issues as detailed in **Section 2.2**
- two (2) supporting submissions as detailed in **Section 2.1.3**
- two (2) submissions providing comment as detailed in **Section 2.1.4**.

One council submission – which provided comment and 11 government agencies which provided advice was also received.

It is important to note when submissions are lodged the submitter is requested to categorise it as either an objection, support or providing comment. Whilst the submissions have been broken down into these categories, Ark Energy acknowledge that community sentiment is complex and stakeholders can often 'support' a project whilst having concerns about impacts of a project, or conversely, 'object' to a project whilst still acknowledging the opportunities it may create.

The Amended Project will be determined by DPHI as none of the triggers for determination by the Independent Planning Commission were met as per 'Applicant guide to the Independent Planning Commission process' (IPC, 2023).

Table 2.1 provides a breakdown of the submissions received.

Table 2.1 Submissions Breakdown

Category	Submission group	No. Submissions
Government	State agencies or public authorities	11
Government	Richmond Valley Council	1
Public	Organisations	7
Public	Community	41

A Submissions Register is provided in **Appendix A**.

2.1.1 Government Agency Submissions

As outlined in **Table 2.1**, advice was received from 11 NSW Government agencies, including:

- Conservation Programs, Heritage & Regulation (CPHR)
- Department of Primary Industries and Regional Development (DPIRD) Fisheries
- Department of Climate Change, Environment, Energy and Water (DCCEEW) Water

- Transport for NSW (TfNSW)
- NSW Rural Fire Service (RFS)
- Fire and Rescue NSW (FRNSW)
- DPIRD Agriculture
- Heritage NSW
- Environmental Protection Agency (EPA)
- Crown Lands
- NSW Resources.

Advice from government agencies did not identify opposition or support for the EIS Project and instead offered commentary on a range of matters including biodiversity, water sourcing, waterways and heritage. The content of government submissions is further detailed and addressed in **Section 4.0**.

A single submission was also received from Richmond Valley Council (refer to **Table 2.1**). Richmond Valley Council did not identify opposition or support for the EIS Project but provided comment only on matters including visual impacts, waste and sewage management, road upgrades and road numbering and community benefit funding.

2.1.2 Public Submissions

During the exhibition period, a total of 48 unique public submissions were received from community members and non-government organisations comprising 41 (~85%) from community members and seven (7) (~15%) from non-government organisations. The non-government organisations included:

- North East Forest Alliance (NEFA). A community led volunteer organisation active in protecting rainforest, old growth forests, wilderness and threatened species in north-east NSW.
- Save Our Surroundings Riverina. A campaign and organisation that advocates for the protection of the environment with a focus on the Riverina Region and its surroundings.
- Save Our Surroundings Murrumbidgee. A campaign and organisation that advocates for the protection of the environment with a focus on the Murrumbidgee River and its surroundings.
- Save Our Surroundings. A campaign and organisation that advocates for the protection of the environment in Central West New South Wales.
- Henribark Pty Ltd. A business providing environmental management of threatened species in NSW through the stewardship site program.
- BG & JL Jarratt PL. Limited information about the purpose and activities of this organisation are available in the public domain.
- North Coast Environment Council Inc. A volunteer led organisation aiming to protect the environment in northern New South Wales by educating people, studying the environment, restoring habitats, and advocating for better policies.

Of the 48 community member and non-government organisation submissions:

- 44 were objections comprising 38 (79.16%) from individuals and six (12.5%) from non-government organisations
- two (4.2%) provided comment, one from an individual and one from a non-government organisation
- two (4.2%) were in support, one from an individual and one from a non-government organisation.

This is illustrated on **Figure 2.1**.

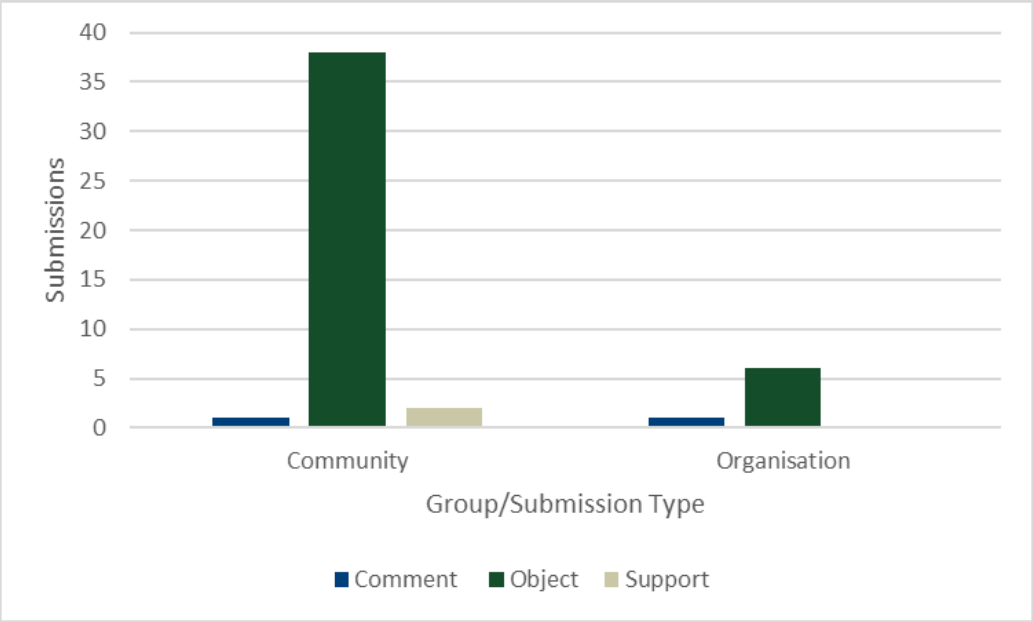


Figure 2.1 Public Submissions Classification

Submissions were analysed based on proximity to the EIS Project to assess the issues of those most affected by the project and to understand the distributive equity of project benefits and impacts across the following three categories, in accordance with the Guideline (DPHI, 2024):

- local (within approximately 5 km from the Project Area)
- regional (between 5 km and 100 km from the Project Area)
- broader community (more than 100 km from the Project Area).

Of the community member and non-government organisation submissions received (including objections, comments and supports) 12 (25.0%) were received from the local area (within 5 km), seven (14.6%) from the regional area (between 5 km and 100 km) and 29 (60.4%) from the broader community (greater than 100 km) as shown in **Figure 2.2.** It is noted that more than 60% of submissions were received from the broader community (>100 km from the Project Area).

The suburbs that are within a 5 km radius of the Project, but also extend beyond this range, include Myrtle Creek, Ellangowan, Rappville and West Bungawalbin.

It is noted that this analysis was based on the postcode listed for each individual or stakeholder group making a submission. Based on the limitations of the data, this analysis is therefore an approximation only.

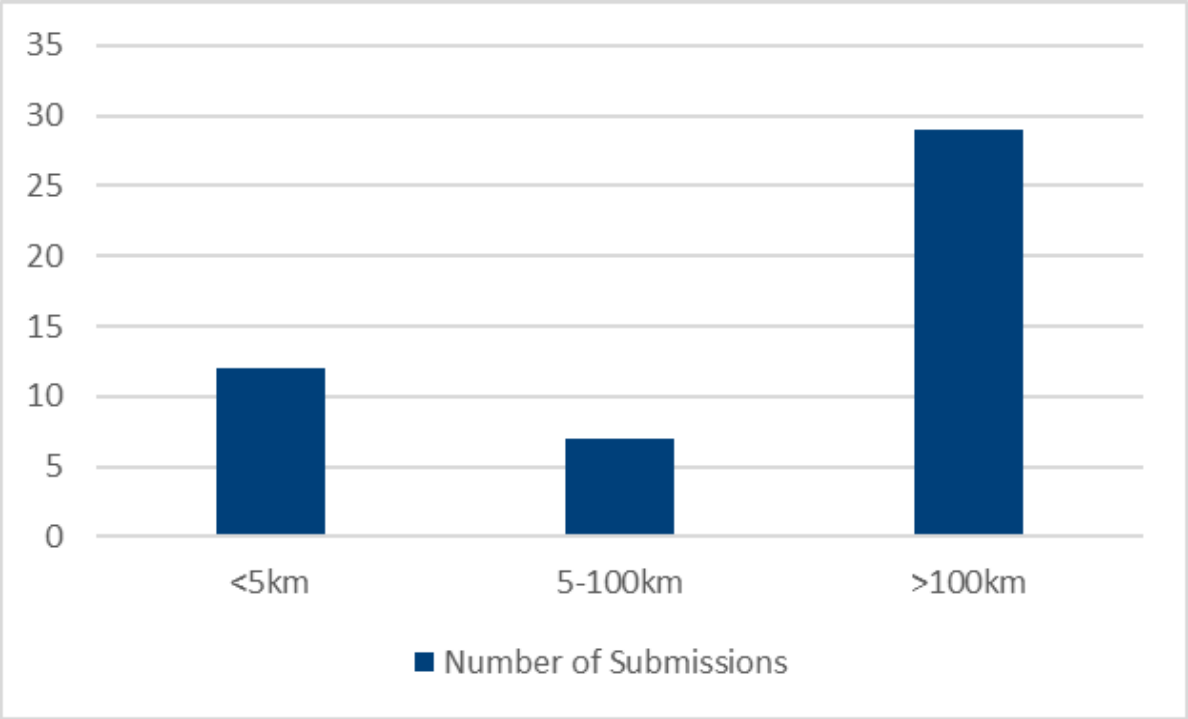


Figure 2.2 Submissions by Distance from Site

2.1.3 Supporting Submissions

Two (2) submissions were received that support the EIS Project, one (1) from an individual from the broader community (greater than 100 km) and one (1) from a non-government organisation from the regional area (between 5 km and 100 km). There were no supporting submissions from the local area (within 5 km) from individuals or non-government organisations. Supporting submissions acknowledge the Project as a renewable source of energy which aligns with the strategic direction of NSW and provides economic stimulus and jobs to the region.

2.1.4 Comment Submissions

Two (2) submissions were received with comments on the EIS Project, one (1) from an individual more than 20 km from the Project Area and one (1) from a non-government organisation from the regional area (between 5 km and 100 km). No comments were received from the local area (within 5 km) from individuals or non-government organisations. Submissions which provided comment on the EIS Project noted the opportunities for environmental management and jobs within the region while expressing concern regarding potential impacts to threatened ecological communities.

2.1.5 Objecting Submissions

As outlined above, a total of 44 submissions were categorised by the submitters as objections, including 38 individuals and six (6) non-government organisations. Based on analysis of these submissions, 12 (27% of total objections) were received from the local area (within 5 km), 6 (13.5% of total objections) from the regional area (between 5 km and 100 km) and 26 (59% of total objections) from the broader community (greater than 100 km).

Local area submissions centred around concerns regarding impacts upon social amenity, bushfire, ecology, hazards and flooding. Submissions from the broader community included similar concerns as well as objections to renewable energy technology and the value of solar energy for the Australian economy.

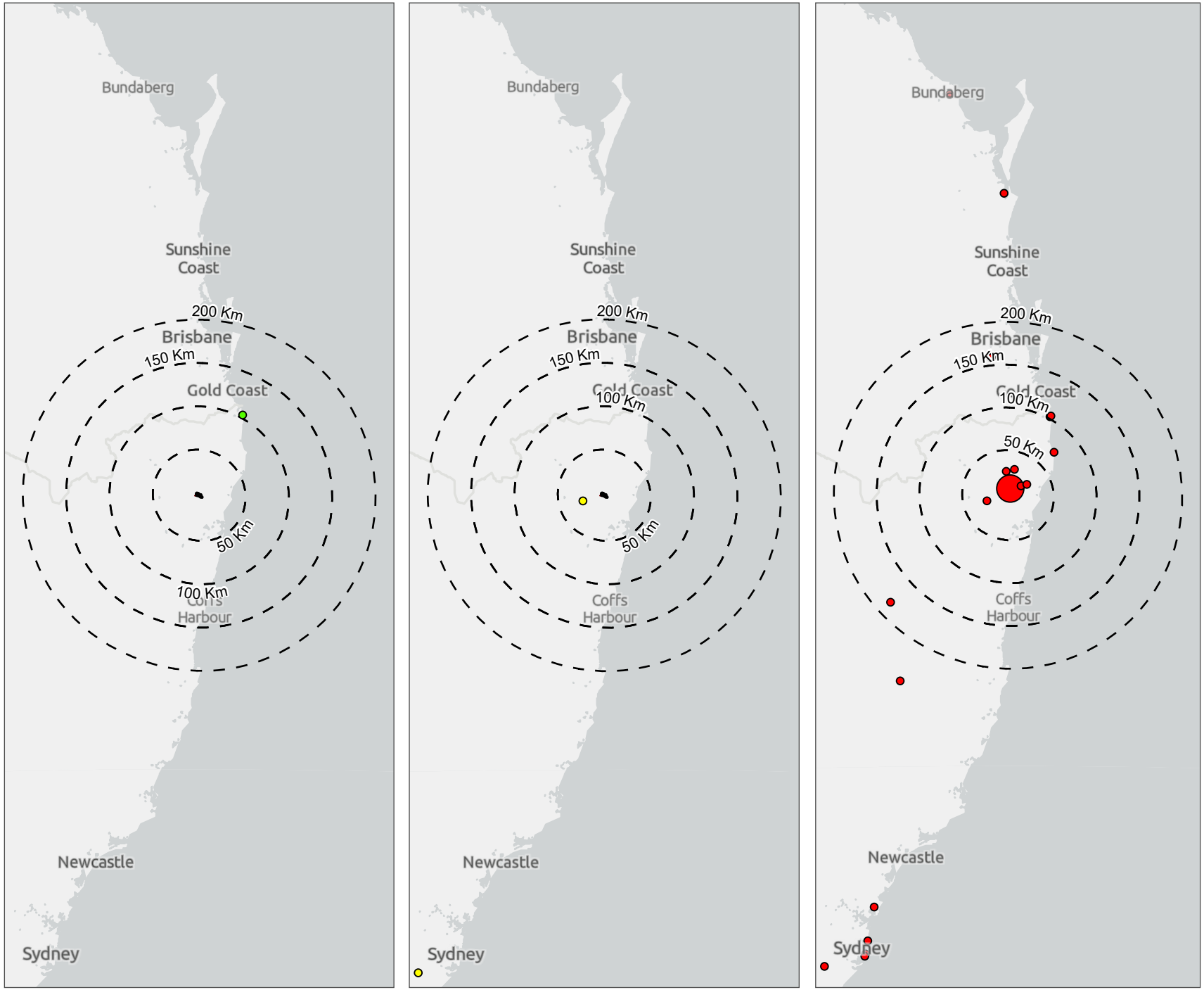


FIGURE 2.3

Submission Locations

Legend

- Project Area
- Road Upgrade Area
- Buffer Rings - 50 Km Interval

Support

- 1

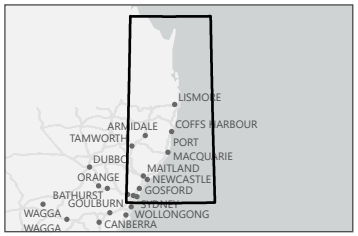
Comment

- 1

Reject

- 1 - 4
- 5 - 9
- 10 - 19

Please note, submissions mapped are only those within a 200km boundary of the project site. Submissions from locations outside this boundary are listed below.
- **NSW** - 16 Objections, 1 Supporting, 1 Commenting
- **QLD** - 3 Objections



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Kilometers

Scale 1:6,135,845 at A4
GDA 1994 MGA Zone 56

Image Source: ESRI Basemap (2023) | **Data Source:** NSW DFSI (2023)

2.2 Categorising Issues

Analysis was undertaken on all community submissions to gain an understanding of the key issues and to categorise the issues raised in accordance with the key categories identified within the Guideline (DPHI, 2024). Issues raised in each submission are often interrelated and in recognition of this the categorisation has focussed on best fit. It is noted that the issues are generally complex across a number of social and environmental aspects. Categorisation includes:

- the Project (e.g. the site, the Project Area, the physical layout and design, key uses and activities, timing)
- procedural matters (e.g. level or quality of engagement, compliance with DPHI requirements, identification of relevant statutory requirements)
- economic, environmental and social impacts of the Project (e.g. amenity, traffic, biodiversity, heritage, etc.)
- justification and evaluation of the Project (e.g. consistency with Government plans, policies or guidelines)
- issues that are beyond the scope of the Project (e.g. broader policy issues), or not relevant to the Project (e.g. solar farms in general).

Further details of the categorisation of issues are provided in the following sections.

The economic, environmental and social impacts of the EIS Project were the most frequently raised category of issues within objecting submissions (refer to **Figure 2.4**). As a result, these issues were divided into themes and a further breakdown of these submissions is provided in **Section 2.2**. Issues beyond the scope of the EIS Project were the second most frequently raised category, followed by justification/evaluation issues and procedural matters.

It should be noted that many submissions included multiple issues categories and multiple themes, resulting in a larger count of issues when compared to the total number of unique submissions.

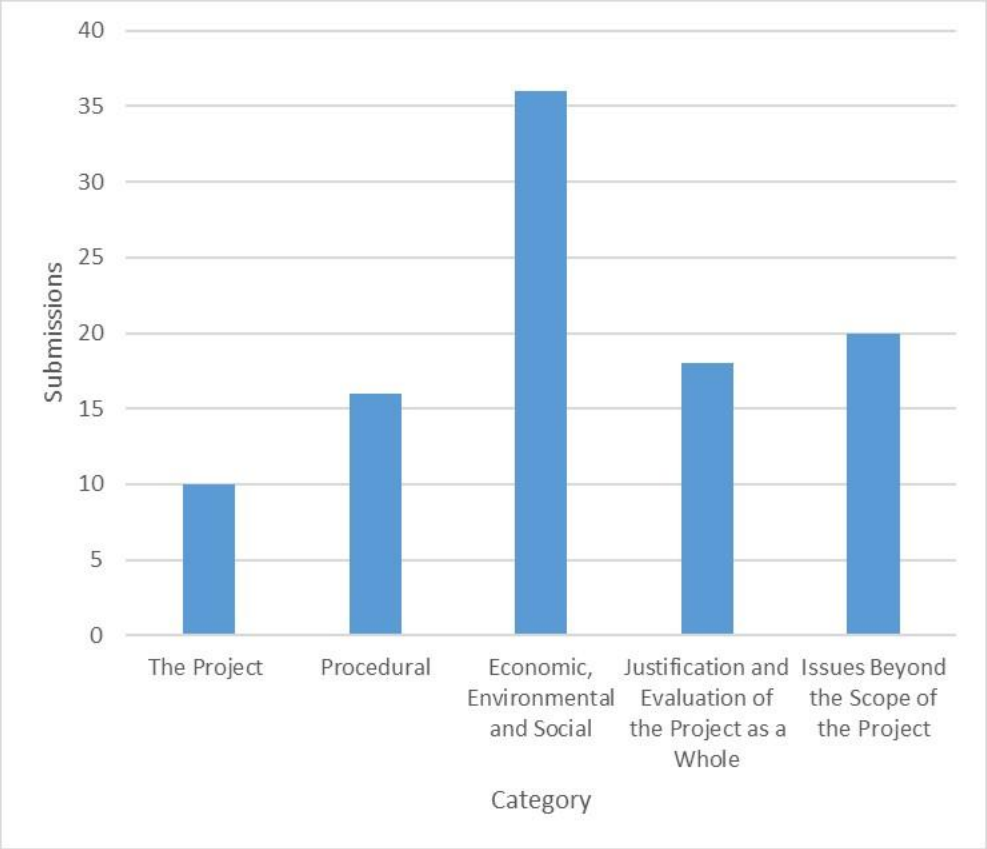

Figure 2.4 Categorisation of All Submissions

2.2.1 Supporting Submissions and Comments

As outlined in **Section 2.1.3**, two (2) community submissions received were comments and two (2) were in support. Comments and supporting submissions were analysed separately to objections as the themes within the submissions were distinct.

The themes raised in comments related to the importance of environmental stewardship, the need to prioritise local involvement, and the potential positive and negative impacts of the solar farm project on the community and ecosystem.

The themes raised in supporting submissions generally related to the sub-themes of local benefits and local workforce participation that will be supported through the EIS Project as well as the contributions of the EIS Project to decarbonisation. Example quotes from supporting submissions are included below.

Supporting and commenting submissions are acknowledged and are addressed in **Section 5.1.4.3**.

> *"This development appears to be an opportunity that could benefit the local community and environment if managed correctly." S-75006711*

> *"This will be a great asset moving towards a renewable future." S-74611214.*

2.2.2 Objecting Submissions

2.2.2.1 The Project

Ten submissions raised issues with the Project as a whole including its location in the Richmond Valley Region. These objections were on the basis of the community's prioritisation of key species, the perception that cloud cover would make the Project unfeasible, the biodiversity of the region and the cumulative impacts of the Project in relation to other projects.

Responses to objections raised in relation to the EIS Project are addressed in **Section 5.1.1**.

2.2.2.2 Procedural Matters

Procedural matters were raised within 16 submissions and mainly related to commentary regarding the procedural processes behind consultation and adequacy of legislation and/or the lack of legislative compliance of the EIS and specialist reports including ecology, bushfire, soil and agriculture, visual, hydrology and hazards.

Responses to objections raised in relation to procedural matters are addressed in **Section 5.1.2**.

2.2.2.3 Economic, Environmental and Social Impacts of the Project

Economic, environmental and social impacts of the EIS Project were raised in 36 objecting submissions. These were subsequently broken down into 12 key themes as outlined in **Figure 2.5**. The most common concern related to change in land use with a preference for ongoing agricultural land use rather than renewable energy. A large number of submissions also raised concerns with perceived increase in bushfire risk and impacts to or reduction of biodiversity.

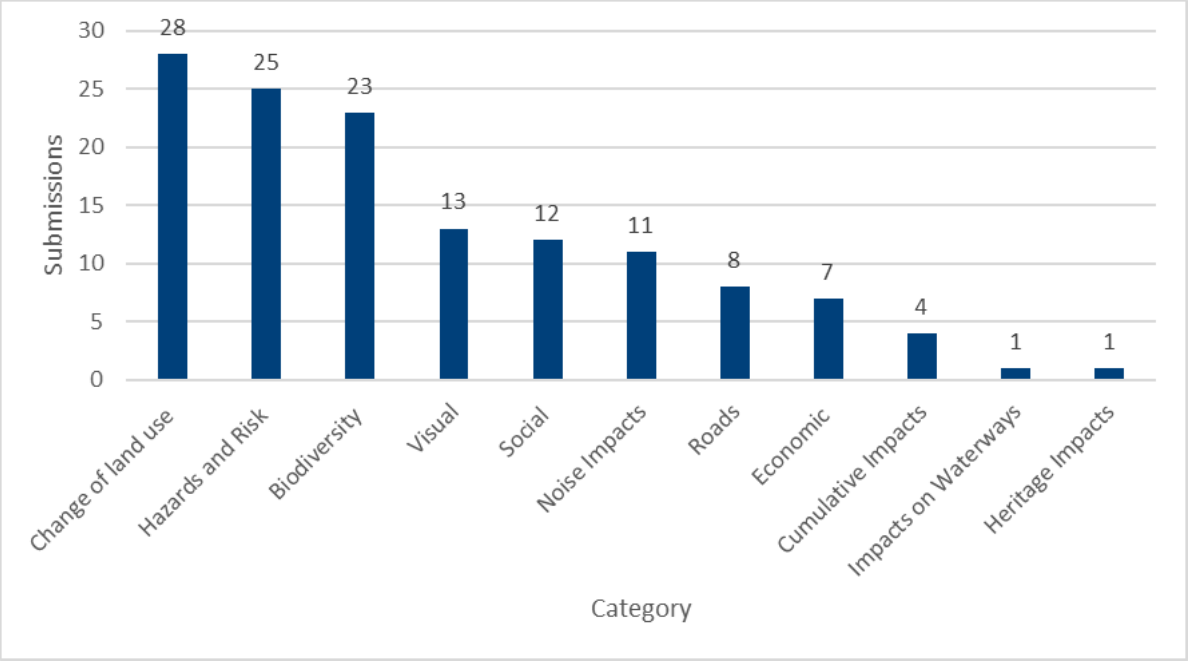

Figure 2.5 Categorisation of Economic, Environmental and Social Impacts

Responses to issues raised in relation to economic, environmental and social impacts are provided in **Section 5.1.3**.

2.2.2.4 Justification and Evaluation of the EIS Project

Issues regarding the justification and evaluation of the EIS Project were raised within 28 submissions. Issues raised were generally related to the perceived reliability and inefficiency of solar energy and its role in the State's transition to renewable energy.

Responses to issues raised in relation to the justification and evaluation of the EIS Project are addressed in **Section 5.1.4**. Supportive submissions also included issues associated with justification and evaluation and are addressed in **Section 5.1.4**.

2.2.2.5 Issues Beyond the Scope of the EIS Project

Issues that were beyond the scope of the EIS Project were raised in 23 objecting submissions. These were generally related to trust in the government and government systems, trust in renewable energy companies, foreign investment and modern slavery.

Responses to objections raised in relation to issues beyond the scope of the EIS Project are addressed in **Section 5.1.5**.

3.0 Actions Taken Since Exhibition

Since the exhibition of the Project (Umwelt, 2024), a number of actions have been taken including:

- Further consultation with relevant agencies, stakeholders, landholders and the broader community (refer to **Section 3.1** and the Amendment Report (Umwelt, 2025)).
- Assessment of proposed Project amendments and issues raised in submissions (refer to **Section 3.3** and the Amendment Report (Umwelt, 2025)).

3.1 Ongoing Consultation

A summary of the consultation undertaken since exhibition of the EIS, including regarding the proposed amendments to the Project is provided in **Table 3.1** and is also detailed within the Amendment Report (Umwelt, 2025).

Table 3.1 Summary of Ongoing Consultation

Agency Consulted With	Date of Consultation	Summary of Consultation
Nearby Landholders	August to December 2024	Ongoing direct consultation with nearby landholders regarding progression of the Project and outcomes of the EIS. Three (3) benefit sharing agreements reached with neighbours. One (1) land purchase agreement reached.
Local Community	14 August 2024	A community information session was held to provide an update on the progression of the Project through the assessment phase and information about the next phase of the planning and assessment process. Outcomes of the EIS were also discussed.
CPHR (Formally BCS)	22 October 2024	Met with CPHR following public exhibition and discussed approach to addressing comments in the RtS report and Amendment Report. Agreement reached on staged approach to updating the BDAR.
Richmond Valley Council	30 October 2024	Meeting to discuss the Community Benefit Fund. The objective was to further define the contributions structure from Ark Energy.
Richmond Valley Council	9 October 2024	Phone calls to discuss the Accommodation and Employment Strategy particularly regarding availability of accommodation during construction of the Project.
Richmond Valley Council	15 October 2024	Received a letter of support from Council on willingness to continue to work with Ark Energy on the coordination of accommodation during construction of the Project.
Richmond Valley Council	3 February 2025	Email to update Council on approach to wastewater management.
Richmond Valley Council	May 2025	Emails with council to discuss Community Benefits.
Crown Lands	14 August 2024	Crown Lands provided landowners consent via email.

Agency Consulted With	Date of Consultation	Summary of Consultation
Crown Lands	6 September 2024	Email requesting a meeting from Ark to Crownlands to discuss the required approach to acquire the Crown Roads on site to facilitate the construction and operation of the Project.
Crown Lands	10 October 2024	Email to clarify the approach required to acquire the Crown Roads on site to facilitate the construction and operation of the Project.
TfNSW	1 November 2024	TfNSW provided clarification on what needs to be addressed in the RtS report via email.
TfNSW	13 November 2024	Ark Energy contacted TfNSW via email to request assistance in assessing the suitability of the proposed OSOM load over the bridges/culverts on the state road network along the Project transport route.
TfNSW	November 2024	Ark Energy contacted TfNSW via email to clarify details for bridge assessments which has been addressed within the Amendment Report (Umwelt, 2025). Email exchanges between TfNSW and Ark Energy on 15,22 and 27 November 2024.
TFNSW	December 2024 to May 2025	Engaged TFNSW to complete bridge assessments on required routes. Email exchanges with TfNSW December 2024–May 2025.
DPHI	19 October 2024	Meeting with DPHI to discuss approach to the preparation of the RtS report and Amendment Report.
CPHR/DPHI	15 January 2025	Meeting with DPHI to discuss the finalisation of the RtS report and Amendment Report.
CPHR/DPHI	4 February 2025	Met with CPHR/DPHI to discuss approach to addressing results of January biodiversity surveys.
CPHR/DPHI	21 March 2025	Met with DPHI/CPHR to discuss proposed mitigation measures to accommodation the species polygon within the APZ and Development Footprint. Further actions included addition investigation by CPHR to confirm the appropriate measures based on the species characteristics.

3.2 Project Amendments

3.2.1 Amendment Report

Design amendments have been made to the Project during progression of the detailed design.
A comparison of the proposed Amended Project with the EIS Project are summarised in **Table 3.2** and shown in **Figure 3.1**. Further details and assessment of the Amended Project including additional mitigation and management measures are provided in the Amendment Report (Umwelt, 2025).

3.2.2 Updated Mitigation and Management Measures

Ark Energy has updated the mitigation and management measures previously provided in the EIS in response to issues outlined in the RtS report. An updated table of mitigation measures is provided in **Appendix B**.

Key updates include:

- Adjustments to the procedures and consultation required for the Fire Safety Study as well as an information package to inform FRNSW of tactical fire measures unique to the Project.
- Upgrades to the permanent washdown facility.
- Ark commits to submit an A S68 application and have it approved by RV Council for both the vehicle washdown and the on-site sewage management system prior to commencement of work.
- Decrease of the freeboard space on solar panels so that the lowest edge will be 100 mm instead of 300 mm above the maximum 1% AEP flood level.
- A commitment to ensure all required access permits are obtained from the National Heavy Vehicle Regulator and provided to council prior to construction.
- Ark Energy implement a Grazing Management Plan if agrisolar is to be undertaken alongside the Project.
- Ark Energy will target a minimum groundcover beneath the solar arrays of 70% across the Amended Development Footprint once operational.
- Include the prominent display of the Rural Road number at the property entrance prior to operations commencing. Ark Energy will comply and consult Richmond Valley Council to ensure the signage is suitable for the purposes of Emergency Services.
- The Construction Traffic Management Plan will detail how traffic will be managed along Main Camp Road and Avenue Road during the construction phase and during OSOM movements. It will include the positioning of signs, cones, barriers, and other traffic control devices to alert and guide motorists, cyclists, pedestrians, and other road users through or around the work area.
- Topsoil removed for construction of the access track and the cable trench area would be stored during construction and re-spread over the cable trench area and other suitable disturbed areas.

Table 3.2 Summary of Proposed Amendments to the EIS Project

Project Component	Project Stage	EIS Project	Amended Project	Difference
BESS size and model	Footprint	5 ha	9 ha	Increase by 4 ha.
BESS size and model	Battery Containers	716	558	Decrease by 158.
BESS Inverters	Number of inverters	106 inverters.	186 inverters.	Increase by 80 inverters.
BESS Inverters	Power Capacity	Up to 275 MW	Up to 475 MW	Increased installed power capacity by 200 MW to improve interaction with the solar farm.
Perimeter fence	Length	31.9 km	27.0 km	Decrease by 4.9 km
Perimeter fence	Position	Aligned largely to the Development Footprint.	Aligned to Lot/DP boundaries and existing fence lines in some locations.	Changes to position of the fence line in some locations. (Refer **Figure 3.1**).
Transmission line cut in area	Cut in area	7 ha	13 ha	Increase by 6 ha.
Switching Station	Area	1.3 ha	1.3 ha	No Change.
Switching Station	Location	Adjacent to the BESS – north-western portion within the Development Footprint.	Western boundary within the Development Footprint.	800 m west but remaining within the Development Footprint.
Solar Panels	Solar panel vertical arrangement.	Solar panels will be designed to provide a minimum of 300 mm freeboard for the lowest edge above the maximum 1% AEP flood level.	Solar panels will be designed to provide a minimum of 100 mm freeboard for the lowest edge above the maximum 1% AEP flood level.	200 mm less freeboard for the lowest panel edge above the maximum 1% AEP flood level.
Development Footprint	Solar Farm - adjustments to the fence line, transmission connection point and in response to the identification of *Rotala Tripartita* and *Maundia Triglochinoides.*	803 ha	789 ha	Decrease by 14 ha.

Project Component	Project Stage	EIS Project	Amended Project	Difference
Development Footprint	Road upgrade - Increased safe intersection sight distance	No vegetation removal included in Development Footprint.	0.52 ha of vegetation removal on the southern corner of Main Camp Road and Summerland Way.	0.52 ha
Transport Route	Transport Route for OSOM vehicles	OSOM vehicles will travel on a defined route from Port of Brisbane to the Project Area.	OSOM vehicles will travel on one of three defined routes from Brisbane or Melbourne to the Project Area.	Additional transport routes from Melbourne to Project Area. No additional areas of impact associated with additional routes.

A more detailed description of the proposed Amended Project is provided in the Amendment Report (Umwelt, 2025), submitted alongside this RtS report.

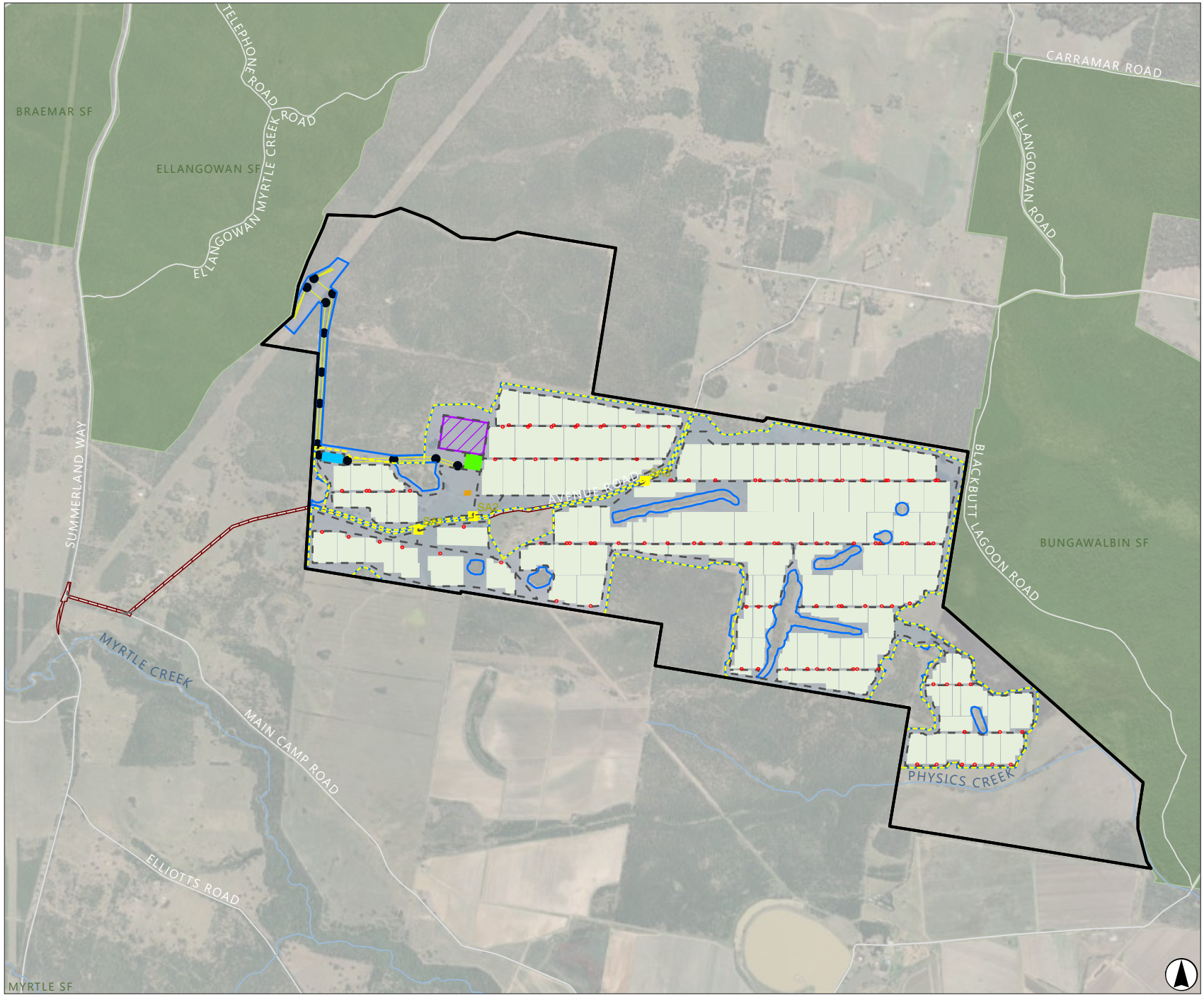

FIGURE 3.1

Amended Project

Legend

- Project Area
- Development Footprint
- Fence Line
- BESS Footprint
- Road Upgrade Area
- Transmission Poles
- Access Points
- Transmission Lines
- Access Tracks
- Substation
- Switching Subsation
- O&M Facility
- Solar Array Blocks
- Solar Farm Inverters
- State Forest
- Roads
- Watercourse

0 0.75 1.5

Kilometers

Scale 1:42,500 at A4
GDA 1994 MGA Zone 56

Image Source: ESRI Basemap (2023) | **Data Source:** NSW DFSI (2023)

3.3 Further Assessment

As a result of the proposed project amendments, further assessment has been completed including updated or addendum specialist assessments to assess the Amended Project and identify additional mitigation and management measures.

These documents are referenced throughout this RtS report and are included as appendices to the Amendment Report (Umwelt, 2025). Detailed summaries of assessment findings are provided in the Amendment Report (Umwelt, 2025) and are referenced where appropriate in the responses to advice and submissions in **Section 4.0** and **Section 5.0**, respectively. The following additional specialist assessments were undertaken:

- Noise and Vibration Impact Assessment (NVIA) Addendum.
- Aboriginal Cultural Heritage Assessment (ACHA) Addendum.
- Preliminary Hazard Analysis (PHA) Addendum.
- Bushfire Threat Assessment Addendum.
- Traffic and Transport Impact Assessment (TTIA) Addendum.
- Amended Biodiversity Development Assessment Report (BDAR).

Section 4.0 and **Section 5.0** below provide an overview of the response to government, agency, council, organisation and community submissions. For reference, quotes provided in *italics* are direct quotes from the submission, while quotes provided in ***italics and bold*** are direct quotes from either the EIS or a specialist report.

3.3.1 Further Ecology Surveys

To address feedback from CPHR additional ecology surveys were undertaken in early 2025 (January–March) which included targeted flora and fauna surveys and vegetation mapping alongside surveys to identify potential stewardship sites in accordance with the BAM. During these investigations *Maundia triglochnoides*, and *Rotala tripartita* were recorded within the EIS Development Footprint. As outlined in **Table 3.1**, additional consultation has been undertaken with DPHI and CPHR to determine the most appropriate measures to minimise impacts to these species.

Significant avoidance and minimisation measures have been implemented to limit impacts to *Rotala tripartita*, a listed Serious and Irreversible Impact (SAII) entity, and all identified species of *Maundia triglochnoides* have been avoided in the Amended Development Footprint as detailed in Section 3.0 and Section 6.5 of the Amendment Report.

4.0 Response to Government Submissions

4.1 Agency Advice

Government agencies make submissions in the form of advice relating to their areas of responsibility and technical matters for consideration by the consent authority or to be addressed by conditions should development consent be granted.

As noted in **Section 2.1.1**, 11 government agencies provided advice and these have been responded to in **Section 4.0**.

Many of the Agency Advice received contained similar issues or consistent themes. Where this is the case, the issue or theme has been provided with some examples of specific quotes from the submissions provided in indented italic type to assist the reader.

4.1.1 Conservation Programs, Heritage & Regulation (CPHR)

CPHR raised the following matters in their advice on the EIS.

4.1.1.1 Flora Survey Effort

> *"Further targeted flora survey effort is required to cover all areas of suitable habitat for candidate species."*

As outlined in Section 4.3.1 of the BDAR (Biosis, 2024) the parallel field traverse method was used to survey for threatened flora species at 10 m apart in areas of open vegetation and 5 m apart in areas of dense vegetation which are the maximum distances between parallel field traverses for herbs and forbs in accordance with the surveying threatened plants and their habitats survey guide (DPIE 2020).
Further information regarding targeted threatened flora survey effort is presented in Table 1.1 of the Amended BDAR (Biosis, 2025) appended to the Amendment Report including.

4.1.1.2 Field Traverse Width

> *"Some of the parallel field traverses shown on Figure 12.1 appear to be wider than 10m apart"*

Additional survey effort, which was requested by CPHR to further comply with the DPIE (2020) survey guide on threatened plants and their habitats, was completed in Q1 2025 to meet seasonal survey requirements.

As a result of these surveys and design amendments an amended BDAR has been prepared and is appended to the Amendment Report.

4.1.1.3 Excluded Candidate Species

The BDAR (Section 4.3) details candidate species credit species predicted to occur within the subject land. 40 of these species have been excluded from occurring within the subject land based on geographic constraints, degradation of existing potential habitat, lack of microhabitat features, or the absence of mapped important habitat.

"CPHR considers some of the candidate species the assessor has excluded based on the habitat on the subject land being too degraded have been inappropriately excluded. Habitat constraints for these species occur on the subject land, and while we acknowledge the relatively low or moderate condition of the habitat on the subject land may reduce the likelihood of their occurrence, we do not consider this sufficient justification to preclude targeted surveys for these species".

We consider the following species have been inappropriately excluded from the candidate species list:

- *water nutgrass (Cyperus aquatilis)*
- *noah's false chickweed (Lindernia alsinoides)*
- *Maundia triglochnoides*
- *southern swamp orchid (Phaius australis)*
- *swamp foxglove (Centranthera cochinensis)*
- *square-stemmed spike-rush (Eleocharis tetraquetra)*
- *ripple-leaf muttonwood (Myrsine richmondensis)*
- *pale-headed snake (Hoplocephalus bitorquatus)".*

Additional survey effort, which was requested by CPHR to further comply with the DPIE (2020) survey guide on threatened plants and their habitats, was completed in January 2025 to meet seasonal requirements.

4.1.1.4 Owl Species Survey

"For the masked owl (Tyto novaehollandiae), barking owl (Ninox connivens), and powerful owl (Ninox strenua), the Threatened Biodiversity Data Collection (TBDC) specifies call playback and spotlighting must be undertaken at each survey station with up to 15 minutes of broadcast calls and listening sequences for at least six nights. However, the BDAR describes four nights of call playback and spotlighting for these species, and states that additional habitat survey was undertaken to compensate for the reduced survey effort. This survey methodology does not accord with the survey requirements specified in the TBDC."

Ark Energy have commissioned further survey for the masked owl *(Tyto novaehollandiae),* barking owl *(Ninox connivens),* and powerful owl *(Ninox strenua)*. Additional surveys undertaken in accordance the Threatened Biodiversity Data Collection (TBDC) methodology took place in Q1 2025.

An Amended BDAR assuming presence for species identified by CPHR has been appended to the Amendment Report (Umwelt, 2025). Ark Energy commits to further updating the amended BDAR following completion of seasonal surveys in 2025 to revise the impact upon threatened species with the survey outcomes.

4.1.1.5 White-crowned snake Survey

"For the white-crowned snake (Cacophis harriettae) the BDAR lists nocturnal spotlighting as the survey method used to survey this species. However, the NSW Threatened Reptiles Biodiversity Assessment Method survey guide specifies surveys for the species must be undertaken during daylight hours when the species is likely to be sheltering under or near cover and more easily targeted."

Ark Energy commits to further survey for *the white-crowned snake (Cacophis harriettae)*. Additional surveys were undertaken in accordance with the NSW Threatened Reptiles Biodiversity Assessment Method survey guide in Q1 2025. An Amended BDAR assuming presence for species identified by CPHR has been appended to the Amendment Report (Umwelt, 2025). The amended BDAR has been updated following seasonal surveys in 2025.

4.1.2 DPIRD Fisheries

DPIRD Fisheries raised the following matters in their advice on the EIS.

4.1.2.1 Southern Purple Spotted Gudgeon Habitat (SPSG)

> *"DPIRD Fisheries mapping indicates that part of the aforementioned fourth order waterway is mapped as known or indicative habitat for the threatened fish species Southern Purple Spotted Gudgeon (SPSG). Accordingly, the DPIRD Fisheries P&G indicates that waterway crossings located on this portion of the creek are recommended to be bridge structures rather than box culverts."*
>
> *"Despite the EIS indicating that the DPIRD Fisheries mapped known or indicative habitat for the threatened fish species SPSG is unlikely to provide habitat for this species, a complete test of significance is required under s220ZZ of the FM Act. The EIS should include a complete test of significance for potential impacts to SPSG, including consideration of impacts from the solar array and box culvert structure located within mapped SPSG habitat."*

4.1.2.2 Key Fish Habitat

> *"The EIS indicates that solar array blocks will be located within the footprint of mapped third and fourth order waterways within the project area including known or indicative habitat for SPSG. The impacts of this component of the development on key fish habitat have been inadequately identified."*

4.1.2.3 Waterway Crossings

> *"The EIS should acknowledge and provide justification for the most downstream box culvert waterway crossing on the fourth order tributary of Physics Creek, which is mapped as known or indicative habitat for SPSG and therefore classified as a Type 1 / Class 1 waterway, being inconsistent with the recommended waterway crossing type outlined within the DPIRD Fisheries P&G which is a bridge."*

As detailed in Section 3.6 of the Amendment Report, changes to the Development Footprint include removal of approximately 49 ha of solar panels and associated infrastructure from the south-eastern portion of the Project Area. This is in response to the identification of Rotala Tripartita within the EIS Development Footprint during additional ecology surveys in 2025, with a large number of individual species identified in the south-east. As such, the creek crossings described in the feedback from DPIRD Fisheries are no longer required.

Prior to the decision to remove the creek crossings from the Development Footprint, a Test of Significant Impact assessment was completed for the SPSG and determined that:

"It is important to note that many sections of the mapped waterway are no longer a defined watercourse due to historic disturbance. It is noted that one of the fourth order tributaries of Physics Creek running from the north-west of the subject land to Physics Creek in the south-east did not exhibit the features of a defined channel with bed and banks. This species would not occur in these areas." (Biosis, 2025)

Given the above, the Project Area is unlikely to provide habitat for threatened fish species including SPSG.

4.1.2.4 Impacts to Waterways

"Various sections of the EIS describe the likely impacts to waterways and key fish habitat. However, there is no clear link, such as dedicated maps, between key fish habitat waterway descriptions and major impacting structures or works footprints. It is recommended that the EIS is amended to include a dedicated map to link waterway descriptions and potential impacting structures and works footprints to areas of key fish habitat. This will provide an improved understanding of the direct impacts to key fish habitat within the project area."

As detailed above and in Section 3.6 of the Amendment Report, changes to the Development Footprint include removal of approximately 49 ha of solar panels and associated infrastructure from the south-eastern portion of the Project Area. This is in response to the identification of *Rotala Tripartita* within the EIS Development Footprint during additional ecology surveys in 2025, with a large number of individual species identified in the south-east. As such, the creek crossings described in the feedback from DPIRD Fisheries are no longer required.

A map detailing the location of water crossings alongside photographs of mapped waterways is provided in **Appendix C** which illustrates that the mapped waterways and tributaries lack a defined channel with bed and banks. Based on the design changes since the EIS and the investigation of the condition of water waterways, development in these locations will not impact on key fish habitat.

4.1.3 DCCEEW Water

DCCEEW Water raised the following matters in their advice on the EIS.

4.1.3.1 Water Supply

"The proponent should clarify their ability to obtain a secure water supply for the project, confirm agreements where required, and demonstrate sufficient water entitlements can be acquired where necessary. Where the water is to be sourced from a currently unauthorised source and/or where additional water take infrastructure is required e.g., a river pump, dam, and or a bore, an impact assessment of this infrastructure development and water take will be required."

Ark Energy has consulted with a number of local water suppliers who have indicated their capacity to supply the anticipated potable and non-potable water requirements of the Project during the construction phase. Consultation between local suppliers and Ark Energy confirming availability of water as well as water carts for transportation of the water to the Project Area will be provided upon request.

Additionally, it is noted that during the detailed design process, Ark Energy refined their calculations and determined that the volume of non-potable water required during construction is likely to be 50% less than the 256 ML as assessed in the EIS.

4.1.3.2 Groundwater

> *"If groundwater interception or take occurs, the proponent should ensure a water access licence (WAL) is obtained to account for the maximum predicted water take for construction and operation activities unless an exemption applies under the Water Management (General) Regulation 2018."*

As detailed in Section 2.3.7 of the EIS and confirmed above water would be sourced from commercial suppliers in the region (via water trucks). Farm dams within the Development Footprint will be removed and the water will be used for earthworks during the site preparation phase of construction. Currently Ark Energy do not propose to intercept or take groundwater for construction or operational activities.

Ark Energy acknowledges the request from DCCEEW Water and will ensure that in the event water extraction from groundwater occurs, the appropriate water access licence (WAL) is obtained unless an exemption applies under the Water Management (General) Regulation 2018.

4.1.3.3 Groundwater Dependent Ecosystems

> *"The proponent should review their assessments of Groundwater Dependent Ecosystems (GDEs) considering the High Priority GDEs that are mapped above Physics Creek in the Water Sharing Plan (WSP) for the Richmond River Area Unregulated, Regulated and Alluvial Water Sources 2023."*

The assessment of GDEs and the viability of Physics Creek and its tributaries as a viable habitat has been considered in the Amendment Report (Umwelt, 2025) and Amended BDAR (Biosis, 2025). The Amended BDAR (Appendix F) of the Amendment Report (Biosis, 2025) identifies that the Fisheries NSW portal rates the freshwater fish status of this creek as poor. The ephemeral waterways in this area are in low condition, experiencing moderate to high levels of degradation, erosion, and runoff due to surrounding land use, including grazing, trampling, historical plantation, and the use of fertilisers and herbicides. Additionally, as observed during field survey many dams and waterways contain a large population of Cane Toads. Given the degraded state of the waterway, it is unlikely to provide suitable habitat for threatened fish species and GDE's.

Additionally, Section 3.6 of the Amendment Report describes changes to the Development Footprint including removal of approximately 49 ha of solar panels and associated infrastructure from the south-eastern portion of the Project Area. This is in response to the identification of *Rotala Tripartita* within the EIS Development Footprint during additional ecology surveys in 2025, with a large number of individual species identified in the south-east. As a result no solar infrastructure is located south of Physics Creek or within 80 m of Physics Creek.

4.1.3.4 Waterways

> *"The proponent should provide further photographic evidence to demonstrate that all the unnamed tributaries of Physics Creek do not have a defined channel with bed and banks, and therefore do not meet the definition of waterfront land for the purposes of the Water Management Act 2000."*

Ark Energy has provided further photographic evidence of the unnamed tributaries of Physics Creek in **Appendix C**. These photographs have been taken at the mapped waterway locations across the Project Area as denoted in **Appendix C** confirm the absence of a defined channel with bed and banks.

4.1.3.5 Water Supply

"Further to recommendation 1.1, the proponent should provide additional information on the projects impact on town water supply. This information should:

- *Confirm how much potable water is to be sourced from town water supplies (either directly or by water carting), and from which town water supplies.*
- *Confirm if any non-potable water is to be sourced from water storages, which water storages and the amount to be extracted from each water storage.*
- *Demonstrate that the relevant Local Water Utilities are satisfied there is enough capacity within the relevant town water systems to accommodate any water demands without impacting existing services.*
- *Confirm water carting arrangements by providing detail that there are carting providers available to cart water for the construction phase of the project.*
- *Detail whether there will be any cumulative impacts to water and sewer supply, along with other projects in the region."*

As detailed in Section 2.3.7 of the EIS water would be sourced from commercial suppliers in the region (via water trucks). Ark Energy has consulted with a number of local commercial water suppliers in the Richmond Valley LGA who have indicated their capacity to supply the anticipated potable and non-potable water requirements for the Project.

Consultation between local suppliers and Ark Energy confirming availability of water as well as water carts for transportation of the water to the Project Area, confirmation of these relationships can be provided if required. Each supplier has a licenced access to town water supplies through private meters and pay for any usage.

Non-potable water will be obtained from dewatered dams across the site and will supplement any commercially provided water.

Since the EIS was exhibited, the proposed solar farm at Myrtle Creek, has updated their project status, indicating they are no longer exploring the site for a solar farm. It is understood the Proponent is seeking to construct a standalone battery at this location (Terrain Solar, 2024). Consequently, there are now four proposed renewable energy projects within 50 km of the Project, with only one within 20 km which will reduce the associated cumulative impacts for Projects in this region

As outlined above, the water supply will be acquired through a local supplier who has confirmed availability of water licenses and vehicles for delivery of the required water. It should also be noted that according to the Summerville Solar Farm RtS (Accent Environment, 2024), water licenses and non-potable construction water has also been acquired, with contracts in place. As such, cumulative impacts to water and sewer supply associated with the Project are considered low.

4.1.3.6 Sewage Management

"The proponent should:

- *Confirm demand for sewage management both during the construction and operational phases. Confirm with the relevant Local Water Utility which sewerage system will receive and manage the sewage load.*
- *Confirm that the type of waste to be discharged is appropriate for discharge into a sewage treatment plant.*
- *Provide additional information demonstrating that the chosen sewerage system can take the increase in demand.*
- *Confirm the method of disposal/transfer of sewage, effluent and/or septage, including availability of liquid waste contractors, during both the construction and operational phases.*

The proponent should be aware that tankered waste to the Casino STP will require Council approval and the department's concurrence."

Ark Energy will implement a temporary toilet block set up during the construction phase which will include a plastic pump out tank. The temporary system used during construction is anticipated to require fortnightly pump outs which will involve septic trucks and disposal at a licensed facility.

As noted in section 6.17.3 of the EIS Ark Energy has consulted with Richmond Valley Council regarding the waste streams and anticipated quantities. Richmond Valley Council noted in April 2024 that their facilities may have capacity to accept Project related sewage waste volumes. If this changes, council will assist in leveraging their relationships with alternate service providers in the region.

During operations there will be a permanent septic tank adjacent to the office building, this will be designed in accordance with Council's on-site sewage and Wastewater Management Strategy.

4.1.4 Transport for NSW

TfNSW raised the following matters in their advice on the EIS.

4.1.4.1 Route Assessment

"A route assessment from the Port to the site has not been provided. This is required to ensure the high-risk oversize and overmass vehicles needed to deliver from the port to the site identify any traffic mitigation measures and road upgrades required to undertake the high-risk OSOM movement for the project. This is to ensure compliance with Austroads and TfNSW requirements for high-risk OSOM vehicles. The actions to address this issue are detailed in points 1 in attachment 1."

The Traffic and Transport Impact Assessment appended to the EIS included an Oversized Overmass (OSOM) Route Analysis prepared by EMM (Access Traffic, 2024).

As part of detailed design and following further consultation with TfNSW and relevant local councils, the proposed OSOM Transport Route has been revised and a new OSOM Route Analysis report prepared. This has been appended to the Amendment Report (Umwelt, 2025) alongside the TTIA Addendum. Additionally, a bridge assessment has been completed for the Transformer vehicle configuration which concluded that the proposed OSOM vehicles are "permitted to travel over the requested route" (see Appendix J of the Amendment Report). Following consultation with TfNSW regarding bridge assessments it was advised that a Bridge assessment was not required for the Switchroom vehicle configuration.

The OSOM Route Analysis report provides two assessed routes for the Switchrooms from Brisbane to the Site, Melbourne to site, and one route assessed from Melbourne to site for the transformers including identification of traffic mitigation measures and road upgrades required to undertake the high-risk OSOM movements associated with the Project including ensuring compliance with Austroads and TfNSW requirements.

4.1.4.2 Intersection Upgrades

> *The scope of the intersection works for the Summerland Way/Main Camp Road to be adjusted to capture the vegetation clearing, widening for the high-risk OSOM movement, pavement adjustments and shoulder widening, to ensure the design complies with Part 3 and 4A Austroads and Austroads Design Vehicles and Turning Path Templates. The actions to address this issue are detailed in points 2–6 in attachment 1.*

The Concept Design for the proposed intersection works for Summerland Way/Main Camp Road has been adjusted to address TfNSW feedback and is appended to the Amendment Report (Umwelt, 2025) alongside the TTIA Addendum.

Assessment of this additional area is included within the Amendment Report including the Amended BDAR to assess the required vegetation clearing to maintain sight distance requirements at the intersection.

4.1.5 NSW Rural Fire Service (RFS)

The NSW RFS raised the following matters in their advice on the EIS.

4.1.5.1 Bushfire Protection Measures

> *"The EIS documentation includes a 'Bushfire Threat Assessment' prepared by Blackash Bushfire Consulting dated 30 April 2024. The bushfire protection measures/strategies nominated within the report should be included in any approval issued."*

Ark Energy acknowledges the advice provided by the NSW RFS. The bushfire protection measures and strategies nominated within the Bushfire Threat Assessment (Blackash, 2024) were included in the mitigation and management measures outlined within the EIS. No amendments to these measures are proposed as a result of the RtS or Amendment Report.

Ark Energy is committed to implementing these measures and all conditions of consent issued in any approval by the determining authority.

4.1.6 Fire & Rescue NSW (FRNSW)

FRNSW raised the following matters in their advice on the EIS.

4.1.6.1 Fire Safety Study

> *"That a Fire Safety Study (FSS) is developed in accordance with the requirements of Hazardous Industry Planning Advisory Paper (HIPAP) No.21 and submitted to FRNSW for review.*
>
> - *The FSS is to be developed to the satisfaction of FRNSW prior to any further submission being made to FRNSW; this includes: an Initial Fire Safety Report (IFSR) and / or Performance-Based Design Brief / Fire Engineering Brief Questionnaire (FEBQ).*
> - *The FSS should be prepared consistent with the FRNSW Fire Safety Guideline Technical Information – Large scale external lithium-ion battery energy storage systems – Fire safety study considerations."*

The EIS committed to developing a FSS prior to commencing construction of the Project. This measure has been amended to include the additional detail suggested by FRNSW above. This updated measure has been included in **Appendix B**.

4.1.6.2 Emergency Plan

> *"Prior to occupation or commissioning an Emergency Plan (EP) is developed for the site in accordance with HIPAP No.1."*

As noted in the EIS Table 6.11 and Appendix 5, prior to construction of the Project, an Emergency Response Plan (ERP) will be prepared consistent with HIPAP 1 in consultation with relevant emergency services organisations (i.e., FRNSW, NSW Rural Fire Service (RFS), NSW Ambulance and relevant local emergency management services). Ark Energy is committed to implementing this measure and all conditions of consent issued in any approval by the determining authority.

4.1.6.3 Emergency Services Information Package

> *"Prior to occupation or commissioning an Emergency Services Information Package (ESIP) be prepared in accordance with FRNSW fire safety guideline – Emergency services information package and tactical fire plans."*

Ark Energy acknowledges the advice from FRNSW and commits to developing an Emergency Services Information Package (ESIP) in accordance with FRNSW fire safety guideline – Emergency services information package and tactical fire plans prior to commissioning. A new mitigation measure has been included in **Appendix B**.

4.1.7 DPIRD Agriculture

DPIRD Agriculture raised the following matters in their advice on the EIS.

4.1.7.1 Grazing Management

> *"If grazing of the site is undertaken, a Grazing Management Plan should be prepared to detail how management of livestock on the site will be undertaken. The design of the solar infrastructure will greatly influence the productivity potential of grazing operations and the ability to maintain land, water and soil resource health."*

Ark Energy acknowledges the requirement for a Grazing Management Plan if agrisolar is to be undertaken during operation of the Project. As stated in Section 6.14 of the EIS, it was determined that the local climate is not optimal for many sheep breeds including merino, which is the most common livestock used for agrisolar across NSW. Alternate options will be considered post approval under advice from government agencies (including DPIRD Agriculture) and landholders. Should any agrisolar activities be undertaken relevant management plans will be prepared.

4.1.7.2 Groundcover

> *"A minimum groundcover target of 70% should be committed to across the site (during operation) to support other long-term land and soil resource health and water management commitments. This target should be maintained in the case that grazing is implemented at the site."*

Ark Energy will target a minimum groundcover of 70% across the Amended Development Footprint once operational.

4.1.7.3 Decommissioning

> *"As stated in our previous advice, the proponent should commit to removal of all above and below ground (to a depth of 500 mm) infrastructure upon decommissioning, unless there is significant justification for retaining it. This is consistent with the key principles for decommissioning and rehabilitation from the Large-Scale Solar Energy Guideline 2022 (pg. 31)."*

Ark Energy acknowledges the advice from DPIRD and note that Section 3.6 of the EIS states that:

> *"All infrastructure will be removed during decommissioning except for the transmission lines and substation unless stated otherwise in the development consent conditions."* (Umwelt, 2024)

Ark Energy is committed to implementing this measure and all conditions of consent issued in any approval by the determining authority. Ark Energy commits to the key principles for decommissioning and rehabilitation from the Large-Scale Solar Energy Guideline 2022 (The Solar Guideline) (DPIE, 2022).

> *"The EIS should also include the decommissioning mitigation measure that stock fences, dams and access tracks are to be reinstated in consultation with the landholder to accommodate a post Project land use of grazing."*

Ark Energy will reinstate the land in line with the private agreements with individual landholders.
The decommissioning of the Project will consider the future land use and requests of landholders at the time of decommissioning as per the commitments made within the EIS.

4.1.8 Heritage NSW

Heritage NSW raise the following matters in their advice on the EIS.

4.1.8.1 AHIMS Search

> *"Heritage NSW notes that the Aboriginal Heritage Information Management System (AHIMS) search is greater than 12 months old at the time of submission. Heritage NSW requires, as per Requirement 1b of the Code of Practice, that AHIMS searchers are contemporaneous with the project. We consider that AHIMS searches of over 12 months old need to be updated. Please update the AHIMS search."*

A new AHIMs search has been conducted and included in an addendum to the Aboriginal Cultural Heritage Assessment Report (ACHAR) (Umwelt, 2024) appended to the Amendment Report (Umwelt, 2025).

4.1.8.2 Consultation Documentation

> *"We recommend that documentation of the consultation process is requested. Please provide evidence that the draft ACHA was provided to all Registered Aboriginal Parties (such as an email with all relevant email addresses shown)."*

Evidence that the draft ACHAR was provided to all Registered Aboriginal Parties (RAPs) has been provided in **Appendix D**.

4.1.9 Environmental Protection Agency (EPA)

The EPA raised the following matters in their advice on the EIS.

4.1.9.1 Waste Management

> *"The EPA understands that there are several other solar and/or battery energy storage facilities within the same region as the proposed development. To help manage waste appropriately, the EPA recommends that the Department of Planning, Housing and Infrastructure consider the conditions in Attachment A in their assessment."*

Ark Energy is committed to implementing all conditions of consent issued in any approval by the determining authority.

Ark Energy has committed to a comprehensive suite of management and mitigation measures for the Project to manage matters outlined in Attachment A, including:

- waste management
- soil and water management
- erosion and sediment control
- dust management.

To ensure compliance and establish performance monitoring of the mitigation and management strategies, the following management plans will be established:

- Construction Environmental Management Plan (CEMP).
- Operational Environmental Management Plan (OEMP).
- Decommissioning and Rehabilitation Environmental Management Plan (DREMP) Framework.
- Each of these management plans would incorporate other relevant sub-plans such as a Soil and Water Management Plan, Waste Management Plan and Erosion and Sediment Control Plan.

Additionally, Ark Energy acknowledge that an Environment Protection Licence is required to transport higher risk wastes (classification of waste batteries should be applied in accordance with EPA's waste classification guidelines) and waste tracking requirements also apply. Furthermore, Ark Energy acknowledge compliance with relevant dangerous goods transport legislation is required when transporting batteries considered as dangerous goods (as per the *Dangerous Goods (Road and Rail Transport) Act 2008*).

Ark Energy acknowledges the recommended conditions in Attachment A of EPA's advice and understands that DPHI will consider these in developing conditions of consent should the development be approved.

4.1.10 NSW DPHI – Crown Lands

Crown Lands raised the following matter in their advice on the EIS.

4.1.10.1 Conditions of Landowner's Consent

> *"The applicant has been advised of the following Conditions of Landowner's Consent:*
>
> *The Consent is given without prejudice so that consideration of the proposed development may proceed under the Environmental Planning and Assessment Act 1979 (NSW) and any other relevant legislation.*
>
> *The Consent does not imply the concurrence of the Minister for Lands and Property for the proposed development, to the sale of any Crown road impacted; or the issue of any necessary lease, licence or other required approval under the Crown Land Management Act 2016 (NSW) or Roads Act 1993 (NSW); and does not prevent DPHI - Crown Lands from making any submission commenting on.*
>
> *The Consent will expire after a period of 12-months from the date of this letter if not acted on within that time. Extensions of this Consent can be sought.*
>
> *The Minister reserves the right to issue Landowner's Consent for the lodgement of applications for any other development proposals on the subject land concurrent with this Landowner's Consent.*
>
> *Irrespective of any development Consent or any approval given by other public authorities, any work or occupation of Crown land cannot commence without a current tenure from DPHI - Crown Lands authorising such work or occupation.*
>
> *Deferred Commencement: Should the development receive Consent, a Consent Condition should be applied which activates the development only after road closure and purchase/authorisation under the Roads Act 1993 (NSW) / transfer of the subject Road/s to Richmond Valley Council.*

Richmond Valley Solar and BESS Pty Ltd and must familiarise itself with DPHI – Crown Lands' Administration of Roads Policy and Guidelines (links below):
Guideline - administration of Crown roads (PDF, 900 KB) east (nsw.gov.au)
Policy - Administration of Crown roads (PDF, 375 KB) east (nsw.gov.au)
FAQs - Crown roads - What you need to know (PDF, 108 KB) east (nsw.gov.au)

The Minister for Lands and Water reserves the right to issue Landowner's Consent for the lodgement of applications for any other development on the subject land concurrent with this Landowner's Consent. "

Ark Energy acknowledges the above Conditions of Landowner's Consent and will continue to consult with DPHI – Crown Lands for the duration of the Project.

4.1.11 NSW Resources

"NSW Resources has reviewed the information supplied in relation to the abovementioned Project and based on the review has no specific comments in relation to the Mining Act 1992 considerations and raises no issues regarding the Project at this stage."

Ark Energy Acknowledges the comment from NSW Resources and appreciates their review of the information provided. It is noted that no further comment or assessment is required in this report.

4.2 Richmond Valley Council Submission

4.2.1 Visual Amenity

"a. Council requests consideration be given to ensuring the visual character of the existing landscape is retained in this location, and landscape screening of these facilities is provided as necessary to ensure the facilities are not visible from the public roadways. The development should not result in the removal of any existing vegetation that provides a screening of the development from private properties or public spaces, including roadways. Any required roadworks along Avenue Road are to ensure roadside vegetation is not required to be removed to facilitate the development."

As detailed in Section 6.9.3.2 of the EIS, the existing screening along Avenue Road is limited between the impacted section of the road and the relevant solar arrays. Mitigation in the form of vegetation screen planting was considered to mitigate the yellow glare and visual impact from the arrays. However, as Avenue Road is located in a bushfire zone (see Figure 6.3 of the EIS), an alternative mitigation was preferred to minimise bushfire risk associated with additional vegetation along the access road.

The alternative mitigation of the impact of glare for passing traffic along Avenue Road is to utilise a single axis horizontal tracking system which can be configured to undertake 'backtracking' movements (refer to Section 6.9.2.3 of the EIS). This technique adjusts the angle of solar panels closest to Avenue Road when the sun is low in the morning or evening to prevent panels casting shadows on another panel and reduce glare to drivers along Avenue Road. While the panels may not be at the optimal angle for sunlight absorption during backtracking, this compromise is beneficial as it avoids glare impacts and avoids the loss that shading can cause.

The visual impact to private and public viewpoints post mitigation from the arrays was determined as low and as such no additional mitigation was identified as necessary.

> *"b. A landscaping plan and its implementation should be required by way of consent conditions."*

Ark Energy acknowledges the request from Richmond Valley Council to develop a landscape plan and is committed to implement all the conditions of consent issued in any approval by the determining authority.

4.2.2 Hazards

> *"a. Council is aware of emerging hazard and contamination issues associated with battery storage. It is requested consideration be given to the implications of fires in the battery storage area and the provision of measures such as bunding to ensure the spread of contamination from water running into the environment does not occur."*

As outlined in Section 6.7.1.4 of the EIS, there is no off-site risks anticipated in association with the BESS (battery storage area) and Ark Energy has committed to a Final Hazard Analysis and Fire Safety Study as part of the detailed design process to ensure separation distances and mitigation measures are appropriate for the BESS selected for the site. Mitigation measure H-03 states that:

> *"In accordance with the PHA BESS purchase, design, configuration, operation and maintenance activities will be in line required national and international guidelines."*

The Final Hazard Analysis and Fire Safety Study will be prepared in accordance with the requirements of HIPAP and in consultation with Fire and Rescue NSW and Richmond Valley Council.

> *"The Level 1 qualitative risk analysis determined that an explosion event at the BESS does not pose a significant off-site risk as such incidents are expected to be relatively near field (i.e. less than 100 m). Additionally, the potential offsite thermal radiation impacts were not considered credible due to the construction specifications of the BESS units and the distance to the nearest vegetation and offsite dwelling" (Umwelt, 2024).*

The Amendment Report (Umwelt, 2025) details changes to the BESS design as described in **Section 1.2.2**. As a result of these changes a PHA addendum has been prepared and is appended to the Amendment Report. No change to the risk profile was identified or additional mitigation and management measures recommended.

> *"b. The development should be designed and adjust operations including the provisions of mitigation measures, as best practice and any new guidelines are developed into the future."*

Ark Energy acknowledges the request from Richmond Valley Council to update mitigation provisions in line with best practice and new guidelines as they are released. Ark Energy is committed to implementing all the conditions of consent, as well as any updated conditions of consent, if these are adjusted following updates to best practice or new guidelines.

Ark Energy are committed to implementing an Environmental Management Strategy (EMS) framework including the preparation and implementation of CEMP, OEMP and DRMP during relevant phases of the Project. As part of this EMS framework regular reviews of management plans will be undertaken including consideration of changes to legislation, guidelines and best practice.

4.2.3 Waste

> *"a. Whilst Council supports the safe storage of oils, fuels and chemicals and collection by licenced waste collection contractors, On-site sewage management pump out style systems are generally not supported.*
>
> *b. Council's preference would be that all wastewater generated from ablution units, the washdown of vehicles and the cleaning of equipment is dealt with satisfactorily on-site through an approved on-site sewage management system, designed in accordance with Council's On-sewage and Wastewater Management Strategy."*

Wastewater generated during the operation phase of the Project will be managed by an on-site sewage management system, designed in accordance with Council's on-site sewage and Wastewater Management Strategy.

Ark Energy will implement a temporary toilet block set up during the construction phase which will include a plastic pump out tank. The temporary system used during construction will require pump out at regular intervals which will involve septic trucks and disposal at a licensed facility.

> *"c. Any proposed vehicle washdown facility should incorporate the design and pre-treatment requirements specified in section 5.3.3.1 of the NSW Liquid Trade Waste Management Guidelines – 2021."*

An updated mitigation measure has been added to the Amended Mitigation and Management measures table (**Appendix B**) to ensure that the washdown facilities comply with the requirements specified in Section 5.3.3.1 of the NSW Liquid Trade Waste Management Guidelines – 2021.

> *"d. A S68 application for both the vehicle washdown and the on-site sewage management system should be submitted to Council and approved prior to commencement of work"*

Ark Energy commits to submit a S68 application and have it approved by Richmond Valley Council for both the vehicle washdown and the on-site sewage management system prior to commencement of construction as outlined in the Amended Mitigation and Management measures table (**Appendix B**).

4.2.4 Biodiversity

> *"a. Offsets – Council requests consideration be given to the offsets being located/obtained within the Richmond Valley area."*

The NSW biodiversity assessment method is set by the NSW Government and is based around requiring biodiversity offsets for all residual biodiversity impacts that will occur as part of a project following measures to avoid and minimise impacts. Ark Energy is therefore required to provide offsets in accordance with this policy.

As outlined in Section 6.11.4.1 of the EIS (Umwelt, 2024), Ark Energy acknowledges the desire for offsets required for the Project to be located within the Richmond Valley Area and commits to prioritising offsets within the Richmond Valley region. Additionally, stewardship sites are under investigation adjacent the Project Area, further detail regarding the stewardship sites is provided in Section 10.1 of the Amended BDAR (Appendix G of the Amendment Report).

"b. Connectivity - Council requests the Department ensure fencing is to the minimum extent necessary so as to maximise opportunities for fauna movement and connectivity through the landscape."

Ark Energy acknowledges the need to enable connectivity across the Project Area which may be impeded by the proposed security fence and seeks to balance this with the need to secure the premises for both public safety and security purposes. As such, the security fence described in the EIS and Amendment Report is the minimum extent necessary and will be to the specifications described in Section 3.3.6.4 of the EIS.

"Project infrastructure would be enclosed by security fencing (no security fencing is proposed around the Project Area boundary), approximately 2.1 m high, subject to final design. The security fencing would involve casting concrete footings for posts and installing fencing mesh and barbed wire. Fencing will restrict public access to the Development Footprint and is required under Australian Standard (AS) 1725.2010 Parts 1–5." (Umwelt, 2024).

As outlined in the EIS, Ark Energy propose a biodiversity corridor along the northern boundary of the Development Footprint to improve habitat connectivity for potentially impacted species between existing areas of vegetation. Ark Energy is committed to implementing this measure in consultation with Richmond Valley Council and other relevant stakeholders to maximise connectivity.

4.2.5 Rehabilitation, Land Capability, Social and Economic

"a. The project is identified as being temporary in nature and accordingly the consent should be time limited to ensure the project commitments, impacts and objectives are satisfied. The proposal should be time limited consistent with the EIS indications excepting for rehabilitation works to continue post effective life and/or closure of the development. Regular reporting and monitoring of the rehabilitation works, including evaluation of their effectiveness is recommended."

Ark Energy has committed to decommissioning and rehabilitation at the cessation of the operating life of the Project and recognises the costs and process required to deliver on this commitment. Ark Energy expects that the decommissioning requirements will be addressed by the conditions of consent should the Project be approved. Ark Energy will comply with any time limitations including within the conditions of consent.

A conceptual DREMP was prepared as part of the EIS (refer to Appendix 14 of the EIS) (Umwelt, 2024) which outlines the current methodology that may be used to decommission all infrastructure associated with the amended Project and rehabilitate the land at the end of the amended Project's economic life. The DREMP will be developed in consultation with DPHI and key stakeholders, including Richmond Valley Council should the amended Project be approved.

"b. The EIS indicates the proponent is committed to rehabilitation of the site back to agricultural land use at the end of operations. Any rehabilitation strategy should ensure the land is fully decommissioned to ensure the full range of any future agricultural activities and any associated infrastructure is possible.

c. Consideration of future uses should not be limited to grazing and the development should not compromise future land use opportunities, rather it should ensure productivity of the land, enable diversity in primary production and emergence of new farming systems and enterprise. In this regard Council requests rehabilitation outcomes include the removal of the below ground infrastructure.

d. The rehabilitation strategy needs to consider actions required to ensure the land is decontaminated, in the event any contaminating activity or pollution event occurs during the construction, operation and decommissioning of the development."

Ark Energy is responsible for and committed to the decommissioning and rehabilitation of the Project in accordance with any conditions of consent and the proposed DREMP to ensure future land use activities. As outlined in the EIS, all infrastructure will be removed during the decommissioning phase except for the transmission lines and substation. It is understood that the details of decommissioning requirements will form a condition of consent for the Project and will be further defined by the conditions of the agreements with landholders.

"e. Council requests financial security of rehabilitation for example a rehabilitation bond be required as conditions of consent."

Currently, there is no statutory requirement or administrative process by which renewable energy developers can provide a rehabilitation bond. However, should the NSW Government implement such a requirement, Ark Energy will comply with any and all statutory obligations in this regard.

4.2.6 Contributions and Benefits Sharing

"a. Payments in accordance with Councils 7.12 contributions plan are applicable to the development. Should the development be approved Council requires a consent condition requiring the payment of levies in accordance with the Richmond Valley Council Section 7.12 Contributions Plan be included in any consent notice. "

As detailed in Section 2.7.4 of the EIS, Ark Energy is committed to working with Richmond Valley Council on the contribution to a Community Benefit Fund (CBF). Ark Energy is currently negotiating with Council on the structure and value of the contributions planand are seeking to be in accordance with the Benefit Sharing Guideline prepared by DPHI, November 2024.

"b. The following consent condition is required,

The applicant shall submit a Cost Summary Report, in accordance with Section 5 of the Richmond Valley Council Section 7.12 Contributions Plan, and shall include all private and proposed Council infrastructure, and include such items as: consultant fees; demolition works; excavation; site preparation; all buildings; power supply; telecommunications supply; water supply; sewerage pipelines/manholes; stormwater pipelines/pits; inter allotment drainage lines; stormwater treatment devices; driveways/roads; lighting; earthworks; retaining walls; preparing executing and registering plans of subdivision and covenants and easement; installations of equipment; etc..

Costs shall include GST (as per Section 208(4) of the Environmental Planning and Assessment Regulation 2021). Contributions required by this condition will be levied in accordance with Appendix 4 which will be based upon the cost of development provided within the Cost Summary Report for the development, or any applicable stage. Contributions will be index by CPI from the date of the Cost Summary Report to the time of payment(s). Any deferred contributions provided for within Appendix 4 will be paid annually and indexed annually by CPI. The recommended Appendix 4 detail is provided below. In accordance with condition A<insert condition number>, the following Section 7.12 Contributions are levied towards community benefits.

Richmond Valley Council Section 7.12 Contributions Plan	
Environmental Planning and Assessment Act 1979 Levy area – full Richmond Valley Council	*(Receipt Code) (S712DCPlan)*
Cost of Development: $ as per relevant Cost Summary Report for the development or relevant stage of the development (Cost of development must be adjusted by CPI from the time of submitting the Cost Summary Report for the development, or relevant stage of development, until payment is received)	*1% of total cost of development or relevant stage of*
As above	*Contribution*

Pursuant to clause 1.11 of the Richmond Valley Council 7.12 Contributions Plan, contributions are payable as follows-

Upfront payment of 7.12 Contributions equivalent to a minimum of 25% of the calculated contribution shall be paid prior to installation of solar equipment or batteries within the relevant stage of development.

Annual payments of 7.12 Contributions, for the remaining calculated contribution, shall be made over a maximum period of 20 years from the time the relevant upfront payment is received by Richmond Valley Council. These annual payments shall be indexed annually to CPI from the time of calculating the contribution to the time of the periodic payment."

Where the development is undertaken in stages, the contributions payable shall be levied based upon the Cost Summary Report for that stage.

Ark Energy is committed to working with Richmond Valley Council to contribute to a Community Benefit Fund in accordance with any conditions of consent and in accordance with the Benefit Sharing Guideline and the Overview of the Renewable Energy Planning Framework (DHPI, 2024).

4.2.7 Rural Road Numbering

"a. Rural road numbering should be assigned to enable identification and location by Emergency Services, staff/visitors at the site. Rural Road numbering will be determined by Richmond Valley Councils once the final location of the entrance is confirmed."

Ark Energy supports Richmond Valley Council implementing rural road numbering should this improve safety and enable identification and location by Emergency Services, staff/visitors at the Project entrance.

"b. Council requests a condition of consent providing that the proponent may make application to Council for allocation of a Rural Road number and that such numbering be displayed prominently at the property entrance prior to operations commencing."

Ark Energy acknowledges the request from Richmond Valley Council and is committed to implement all the conditions including the prominent display of the Rural Road number at the property entrance prior to operations commencing. Ark Energy will comply and consult Richmond Valley Council to ensure the signage is suitable for the purposes of Emergency Services per mitigation measure TR-12 in **Appendix B**.

4.2.8 Vegetation Management

The applicant shall prepare a vegetation management plan (may be incorporated into a Soil and Water Management Plan) that outlines how the applicant will manage ground cover vegetation (pasture management) for the duration of the development. This should include measures to maximising vegetation ground cover and reduce the use of herbicides.

As detailed in Section 6.11.3.3 of the EIS, Ark Energy will implement a Vegetation Management Plan (VMP) which will be developed prior to the commencement of construction.

"In the case of the Project, all indirect impacts will be mitigated through a Biodiversity Management Plan (BMP) and Vegetation Management Plan (VMP) via active management and improve and maintain principles (see Section 6.11.4)." (Umwelt, 2024).

The VMP will detail the management measures for all vegetation within the Development Footprint and provide an overview of the procedures for managing groundcover and minimising the use of herbicides. Potential road upgrade for the site

"a. Before any work commences, a Section 138 Roads Act application is to be submitted via ePlanning Portal and approval must be obtained from Richmond Valley Council for all activities within the road reserve of Summerland Way (a classified road that requires Transport for New South Wales concurrence under the Act).

b. Before any work commences, a Section 138 Roads Act application is to be submitted via ePlanning Portal and approval must be obtained from Richmond Valley Council for all activities within the local road reserve of Main Camp Road and Avenue Road."

Should the Project be approved, all relevant approvals will be sought. As acknowledged within Table 4.1 of the EIS, prior to any road works commencing, a Section 138 Roads Act application will be sought from TfNSW and Council as required.

"c. Before any work commences, access permits for all heavy construction vehicles shall be obtained from the National Heavy Vehicle Regulator (NHVR) and submitted to the Council."

Should the Project be approved, all relevant approvals will be sought. Ark Energy will ensure all required access permits are obtained from the National Heavy Vehicle Regulator and provided to Richmond Valley Council.

"d. A comprehensive traffic assessment report and Traffic Guidance Scheme (TGS) shall be prepared and submitted to the Council before upgrading the parts of Main Camp Road and Avenue Road, intersections, and entrance to the solar farm to accommodate heavy construction vehicle movements including B-Double trucks."

Ark Energy acknowledges the requirement from Richmond Valley Council to complete a comprehensive traffic assessment report and Traffic Guidance Scheme (TGS) which will be submitted to the Council prior to upgrading the sections of Main Camp Road and Avenue Road, including intersections and the entrance to the Project Area, to accommodate heavy construction vehicle movements, including B-Double trucks.

The TGS will detail how traffic will be managed along Main Camp Road and Avenue Road during the construction phase and during OSOM movements. It will include the positioning of signs, cones, barriers, and other traffic control devices to alert and guide motorists, cyclists, pedestrians, and other road users through or around the work area.

"e. As the nature of the major impact from the development is temporary (during construction) not sealing of the road would be considered. However, as both local roads are class B gravel roads, significant management of dust for such a major increase in traffic would be an expected minimum requirement. Sealing the road is recommended as dust from multi-axle heavy vehicles will be greater than single cars."

Ark Energy has considered the options available for road upgrades and concur with the overview provided by Richmond Valley Council. Road upgrades including the sealing of sections of Avenue Road from Main Camp Road to the northern most Project access point (SA3) will be undertaken. These upgrades will increase the durability of the road during construction of the Project, reduce dust associated with increased traffic movements and increase the safety of the road network for the local community.

As detailed in Table 2.1 of the EIS, sealing of sections of the road network were integrated into the Project in March 2024, three (3) months before the submission of the EIS.

5.0 Response to Community and Organisation Submissions

As outlined in **Section 2.0,** a total of 48 community member and non-government organisation submissions were received in relation to the Project. Responses to the key issues raised in the 44 objecting submissions is included in the following sections, grouped by category provided in **Section 2.2** and in accordance with the Guideline (DPHI, 2024) and subsequently theme where required.

Many of the community submissions received contained similar issues or consistent themes. Where this is the case, the issue or theme has been provided with some examples of specific quotes from the submissions provided in indented italic type to assist the reader. A Submissions Register is provided in **Appendix A** to provide a cross reference to each submission received and where they have been addressed within this RtS report.

5.1 Community Submissions by Category

5.1.1 The Project

The Project category, as defined by the Guidelines, relates to comments on the broader components of the Project (e.g. the site, the project area, the physical layout and design, key uses and activities, timing).

A review of all submissions indicates that ten submissions included issues related to the location of the Project. Key issues included the value assigned by the community to the natural biodiversity of the region, lived experience of the local climate leading them to believe the project is not viable, and general disagreement with the scale of the project.

> *"I object to the industrial solar project and BESS proposed at 255 & 420 Avenue Road, Myrtle Creek. The site is proposed on 4,314 acres (1,747 hectares) of prime farming land, with a footprint of 1,980 acres (803 hectares)." SE-74904957*

> *"It is evident that this land is not suitable for this kind of Large-Scale Solar Development." SE-74915962*

> *"This region is often blanketed by cloud, sometimes for a week or more, in which case battery storage of 2.2GWh will be insufficient to maintain supply." SE- 74658970*

Ark Energy acknowledge the value assigned to the natural landscape and the community's concerns regarding the Project and have sought to avoid and minimise the impact of the Project including during preliminary site selection. As outlined in Section 7.2 of the EIS, the Project Area was selected following a multicriteria analysis with a number of preferential factors including:

- Strategically located to connect to existing transmission infrastructure and in an area with high solar energy potential.
- Limited host landholders (two (2) minimising social amenity and land use change impacts.

- Land subject to previous disturbance and/or historically cleared for agricultural land use practices, primarily cattle grazing minimising potential impacts on the valued biodiversity of the area.
- Lower impacts on environmental aspects including aboriginal heritage, hydrogeology, biodiversity and bushfire threat than alternatives considered.

Ark Energy has undertaken extensive engagement with host landholders and has sought to ensure the Project Area aligns with their desired land use and have minimal impact on the long-term use of the land, should the landholders wish to return the Project Area to agricultural land use post decommissioning of the Project. Additionally, the Project design includes a biodiversity corridor, solar panel backtracking, increased Asset Protection Zones (APZ) and road upgrades were included in the Project design in response to community feedback.

Further details regarding land use change and impacts on biodiversity are provided in **Section 5.1.3.1** and **Section 5.1.3.3** respectively.

5.1.2 Procedural Matters

The procedural matters category, as defined by the Guidelines, relates to the engagement process and its depth and or quality, compliance with the SEARs and adherence to specific guidelines or policies.

A review of all submissions indicates that 16 submissions included issues relating to procedural matters with a particular focus on the engagement process.

5.1.2.1 Unsuitable Engagement

Six (6) submissions raised issues with the scale and depth of consultation conducted throughout the EIS process.

> *"Lies and deceit from the very beginning. How is anyone meant to believe a single thing about this project. Integrity? Full disclosure anyone? It all seems to be missing." SE-74904957*
>
> *"the developer has not been able to address the community concerns and have little interest in community consulting .they are only ticking boxes at each forum.and (sic) refused to listen to local knowledge." SE-74908239*
>
> *"Drop-in sessions avoided the opportunity for a public forum whereby the community can hear each other's questions and concerns. Greenwashed presentations, and persistent downplaying or omission of inherent impacts and risks, and unable to answer simple questions or concerns. An obvious box-ticking exercise, rather than genuine engagement." SE-75005711*

Ark Energy acknowledge the community's concerns regarding the engagement process and appreciate the time and effort the community put into participating in the engagement program to date. An extensive engagement planning exercise was undertaken in collaboration with Umwelt to design the engagement program in order to maximise the reach and effectiveness of the engagement undertaken as part of the EIS process.

Stakeholder and community engagement was designed in accordance with the requirements of NSW Government guidelines and assessment standards including, but not limited to, the Undertaking Engagement Guidelines for State Significant Projects (DPIE, 2022) (Engagement Guideline), and the SIA Guideline for State Significant Projects (DPIE, 2023) (SIA Guideline), while also addressing the requirements of the SEARs. The engagement program was designed in alignment with industry standards such as the International Association of Public Participation and the Clean Energy Council's Best Practice Charter for Renewable Energy Projects.

A stakeholder identification process was also undertaken for the Project to support the planning and delivery of community and stakeholder consultation and to inform the Social Impact Assessment (SIA) and the EIS and was revised on an ongoing basis throughout the engagement program as new stakeholders were identified.

Ark Energy undertook a program of community and stakeholder engagement designed to engage, listen to and involve community members and other local stakeholders throughout the Project's development and environmental assessment, and to ensure that local priorities and concerns were considered. Local knowledge was used scope the assessment of the impacts in particular for aspects such as flooding, economic, social and bushfire as well as to aid in the design of numerous aspects of the Project such as the extent of road upgrades, community benefit fund and biodiversity corridor. A detailed summary of previous community engagement was provided in Section 5.0 of the EIS (Umwelt, 2024). This outlined the range of different mechanisms used during consultation to provide multiple opportunities for community participation, including but not limited to:

- A Project website and Project email address.
- An online survey.
- Proactive, direct contact with host landholders followed by individual landholder briefings and ongoing contact.
- Formal briefings with key stakeholders including community, industry, and environmental groups or organisations, as well as traditional owners.
- Online and telephone surveys with local businesses and service providers.
- Consultation with interested Aboriginal Parties.
- Two drop-in sessions (September 2023 and February 2024) to provide feedback regarding the technical assessments of the Project, as well as articulate the proposed mitigation and enhancement measures under consideration to minimise negative and enhance positive impacts of the Project.
- One structured online information session in March 2023 to provide Project information and preliminary results of technical studies, and an opportunity for members of the community to pose questions to the Project team and provide feedback.

Engagement mechanisms were designed to gain feedback from the community in a respectful and collaborative manner that allowed two-way exchange of information, ensured all community members were comfortable expressing their opinions and asking questions, and gathered useful feedback on the project. Community feedback raised during the engagement process was recorded and heavily informed the SIA and environmental assessments undertaken as part of the EIS and the ongoing design and development of the Project.

Consultation with the community and stakeholders is ongoing, as outlined in **Section 1.0**, and will continue prior to and during construction of the Project. Ark Energy will continue to engage with the community on the project and provide further opportunities to provide feedback throughout the construction, operation and decommissioning phases. These efforts will also include updates on the proposed construction timeline. The Project website and email address will remain accessible before and during construction. Additionally, targeted consultation methods like newsletters, notifications, and face-to-face communications will continue to be utilised as outlined in the Community and Stakeholder Engagement Plan appended to the EIS (Umwelt, 2024).

5.1.3 Economic, Environmental and Social Impacts

This section addresses Project-specific economic, environmental and social impacts raised in public submissions. As outlined in **Section 2.2**, 36 of the 44 objections were categorised as relating to the economic, environmental and social impacts of the Project. The range of issues which formed the basis for these submissions are outlined below, as well as the response to these issues in **Sections 5.1.3.1** to **Section 5.1.3.11**.

Additional issues which were not specific to the Project, and related to solar farm developments generally, are addressed separately in **Section 5.1.4** and **Section 5.1.5**.

5.1.3.1 Change of Land Use

Issues relating to changing land use were raised in 28 submissions, in particular the reduction of agricultural land should the Project be approved.

> *"The destruction of beautiful farmland which at the moment is lush and green with feed for their grazing cattle to sustain good health, absolutely devastating." SE-74912216*

> *"Taking up valuable land that could be used to produce food, crops or plantation". SE-74915962*

Ark Energy acknowledges the sense of place relating to historical agricultural land uses in the area and has sought to minimise impacts on the agricultural productivity and valuable agricultural land in the region.

Impacts related to changing land use are addressed in Section 6.14.3 and Appendix 17 of the EIS (Umwelt, 2024). The assessment concluded that the temporary impact on agricultural productivity during the EIS Project's duration is estimated at $305,572 per year, with a permanent impact of up to $1,547 per year post-Project. This is considered negligible compared to the overall agricultural industry gross value in the area. The amended Project involves using less 789 ha of agricultural land for a solar farm, during which time the land will not be used for agricultural operations, as agreed with the host landholders. The slight change in Development Footprint from 803 ha to 789 ha does not change the outcome of the agricultural impact assessment from the EIS phase.

This change in land use will occur for the duration of the Project. At the end of the operational phase, it is likely to be returned to agricultural land use, in an equal to or an improved condition.

As outlined in Section 6.14.3.1 of the EIS (Umwelt, 2024), a permanent reduction of approximately 4 ha will occur due to the switching substation. This is anticipated to be a permanent land use change subject to the discretion of Transgrid. This reduction is considered to be insignificant in the context of the total agricultural land area in the Richmond Valley LGA.

The Project is not expected to affect agricultural productivity outside the Disturbance Footprint and therefore will not impact local agricultural support services.

Commitments to decommissioning and rehabilitation of the Project Area were included in the S-02 in Appendix 6 of the EIS noting that landholder agreements also include decommissioning obligations. If approval is granted, it is anticipated that decommissioning conditions will be included in the consent, helping to ensure that appropriate remediation is undertaken.

In a broader context, Section 6.14.3.8 of the EIS (Umwelt, 2024) notes that large-scale solar development in NSW poses a very low cumulative risk to agricultural land and productivity in the state, according to DPE (2022). To meet the 2050 decarbonisation goals, the Australian Energy Market Operator (AEMO) estimates that NSW will need around 20,000 MW of solar power. This would necessitate the use of about 40,000 ha, or 0.06%, of the state's rural land (DPE, 2022).

5.1.3.2 Hazards and Risk

Concern regarding hazards associated with the Project including dangerous chemical, electromagnetic frequencies and bushfire were raised as issues in 25 community submissions.

Ark Energy acknowledge the concerns relating to community health and safety as a result of perceived risks associated with the Project.

Impacts related to hazards and risks are addressed in Section 6.7 and Appendix 10 of the EIS.

The assessment process included an extensive review of these risks, as outlined in the following sections, in line with the relevant requirements and guidelines to ensure that any potential risks associated with the project are identified, understood and mitigated.

Dangerous Chemicals

> *"Why is there no comprehensive list of all flammable or soluble chemicals that will be used and or installed on site? Key stakeholders and neighbouring properties should be made aware of any carcinogenic chemicals that can be potentially made air/waterborne during fire/flooding events and normal operation." SE-75005957*

A comprehensive list of chemicals is provided in Section 6.7.1 of the EIS (Umwelt, 2024). These hazardous materials include Lithium-ion batteries (LIBs), electrical transformer insulating oil, LPG, petrol and diesel which will be stored appropriately within the Development Footprint.

A PHA was undertaken by Umwelt (2024) to assess the potential risks associated with hazardous materials and activities associated with the Project. The PHA was prepared in accordance with the requirements of the Project's SEARs as outlined Section 6.7.1 of the EIS.

It was also prepared in accordance with:

- The Solar Guideline.
- Hazardous Industry Planning Advisory Paper No 4 – Risk Criteria for Land Use Safety Planning.
- Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis (HIPAP 6) (DoP, 2011d).
- Multi-level Risk Assessment (MLRA) (DoP, 2011b).

Additional information regarding management of potentially harmful chemicals will be addressed within the management plans prepared for construction and operation of the Project in accordance with the conditions of consent and requirements of government agencies including the EPA and DPHI. Additionally, Ark Energy will provide a plain English explanation of the management of hazards and risks prior to the commencement of construction and operational phases of the Project.

Electromagnetic Fields (EMF)

> *"The unstudied, long-term EMF radiation at such a large scale and in such close proximity to residents, particularly children. Especially the cumulative effect of all three of the proposed large-scale solar farms and BESS of this magnitude situated in such close proximity to homes and workplaces." SE-75005711*

The International Commission on Non-Ionizing Radiation Protection (ICNIRP) guidelines are based on well-established science and have been the standard EMF guidelines for many years. This standard was the basis for the EMF assessment in Section 6.7.2 of the EIS. EMF-01 in Appendix 6 of the EIS notes that

> *"All EMF generating infrastructure will be buffered from the boundary of the Project Area beyond industry standards"* (Umwelt, 2024).

The assessment of EMF resulting from Project demonstrates that the transmission infrastructure complies with the ICNIRP guidelines and the Project will not pose a health risk due to EMF exposure.

Bushfire

> *"From a bushfire risk perspective, increasing the fuel load on bushfire prone land along our boundary line will also drastically increase the chances of fire propagation on to neighbouring land from the proposed development site, no matter the species selected for planting." SE-75005711*
>
> *"If there is any possibility that the frames can contribute to fire propagation or adverse thermal radiation during fire events, this must stated." SE-75005957*
>
> *"The site is also a known bush fire prone area yet we are proposing a substation and transmission lines?" SE-75010715*

Ark Energy acknowledges the community concerns and recent history of bushfires in the region. As outlined in Appendix 8 and Section 6.4.3 of the EIS (Umwelt, 2024), in recognition of community concerns Ark Energy proposed mitigation measures that exceed the requirements of Planning for Bushfire Protection 2019. This includes an APZ of varying width around the perimeter of all infrastructure to mitigate the risk of bushfire both from and to the Project. It is anticipated that should the Project be approved a condition of consent would be provided relating to the management of all land contained within the Project as an APZ.

Ark Energy is aware of the importance of maintaining defensible space around the Project and implementing vegetation management zones to minimise fire risk. As outlined in Section 6.4.3.2 of the EIS, more than 90% of infrastructure within the Development Footprint will be more than 100 m from vegetation. As a result, this infrastructure will be located outside of Bushfire Prone Land (BPL). Furthermore, the single axis tracking frame will be constructed with steel and be highly resistant to bushfire attack.

The construction of the substation will include gravel hardstand surrounding the perimeter which will act as a fire break in the event of a bushfire impacting the site. Furthermore, the substation and switching substation will adhere to industry-standard design, utilising established setback distances. The conservative design of the APZ has placed sensitive infrastructure such as the BESS, substation, switching substation, transmission line and O&M facility within moderate to low-risk bushfire threat zones.

As detailed in B-01 of Appendix 6 of the EIS, prior to commencing construction, a Fire Safety Study will be developed in consultation with FRNSW. The study will describe the final design of the BESS, include worst case scenarios of fire risk from the BESS and associated infrastructure and identify additional measures for the protection of the community and the Project.

An appropriate dedicated water supply for bushfire protection will be provided. Water supply for the Project would be sourced from commercial suppliers in the nearby region (via water trucks), rainwater collected from onsite rainwater tanks (at O&M facility) and farm dams within the Project Area (subject to availability). Efficient movement of fire trucks within the Project Area and water storage tanks will be facilitated and suitable connections for firefighting purposes will be provided as per mitigation measure B-07 of Appendix 6 of the EIS.

In addition, a bush fire emergency management and operations strategy will be delivered post approval, addressing fire prevention measures, equipment availability, and appropriate emergency planning.

Beyond the measures described above, and as outlined in the EIS, the Project may also facilitate further measures in consultation with community and Richmond Valley Council. This may include:

- First response firefighting capability including suitable vehicles, equipment and training for staff during all phases of the Project.
- Opportunities to develop the Project Area as an RFS “Neighbourhood Safer Place” for community refuge in case of a fire. The nearest alternative options are at Whiporie (23 km to the south) and Casino (26 km to the north).

Contamination of Waterways

> *“What detection methods will be in place to identify local contamination? Will this include surrounding properties and downstream properties?.” SE-75005957*
>
> *“When we are not in drought, the other extreme is flood. The solar project is on flood prone land. The land runs to the Bungawalbyn water catchment. To keep weeds down and fire hazards to a minimum around the solar panels, will they use poison? Will this poison run into the catchment. There are dams in the area. We need the water tested now, and every year thereafter to ensure pollution of our waterways is detected early and stopped. Is there a requirement of Ark to do this? If not, why not? If so, what water source do they need to test?” SE-74904957*

Ark Energy acknowledges the local knowledge regarding flood conditions and the lived experience of the community due to recent flooding events in the region. These flooding events and local knowledge including historical photographs informed the EIS and associated studies.

A Flood Impact Assessment (FIA) (Arcadis Australia Pacific Pty Limited, 2024) (see Appendix 10 of the EIS) was undertaken which illustrated that it is unlikely that the Project would increase flood risk for the region.

As detailed in Section 3.6 of the Amendment Report, changes to the Development Footprint include removal of approximately 49 ha of solar panels and associated infrastructure from the south-eastern portion of the Project Area. This adjustment to the Development Footprint removes the two proposed creek crossings across the fourth order Strahler Stream (Physics Creek) reducing the interaction between the construction of the Project and the largest watercourse within the Project Area.

The EIS includes a list of mitigation measures to directly address the risk of contamination during construction and operation of the Project. Mitigation measure C-02 explains that a Spill and Contamination Response Plan (SCRP) will be developed as part of the overall Emergency Response Plan (ERP) to prevent contaminants affecting adjacent surrounding environments.

Further management measures and monitoring programs will be detailed within management plans for each phase of the Project and associated sub-plans including recording site conditions and integrity of mitigation measures following significant rainfall events, management of ground cover and maintenance schedules to ensure any damaged panels are repaired and/or removed as soon as identified.

It is anticipated that the preparation and implementation of the EMS framework including CEMP, OEMP and DRMP will be included as a condition of the development consent, ensuring the ongoing management of the Project and to ensure that adequate water testing of water leaving the Project Area is undertaken to reduce the risk of contamination of waterways to the surrounding environment.

Waste

> *"The Government must responsibly ensure that overseas investors do not contribute to the waste challenges we already have" SE- 75011221*

The management of waste was considered in Section 6.17 of the EIS and consultation with Richmond Valley Council has commenced and will continue prior to the construction and decommissioning of the Project. As outlined in W-01 of Appendix 6 of the EIS (Umwelt, 2024), a Waste Management Plan (WMP) will be prepared which will include a detailed breakdown of the waste types and quantities in accordance with relevant legislation and guidelines. Waste management tools and techniques, particularly with regards to recycling of solar components, is an evolving area of research. As part of the finalisation of the DREMP, industry best practice will be employed for all infrastructure including the solar arrays, the BESS and associated transmission infrastructure.

5.1.3.3 Biodiversity

The ecological impact of the Project was identified as an issue within 23 community submissions including a perception that the BDAR was inadequate and more specifically relating to individual species such as the greater glider, koala, Coastal Emu and yellow-bellied glider.

"Ecological consultancy Biosis incorrectly claimed no koalas & greater gliders & yellow-bellied gliders on *site. Reality: there are over 60 threatened species potentially on site. This is completely and utterly unacceptable." SE- 75006975*

"Of particular concern is the endangered Coastal Emu (of which it is estimated there are less than 50), with all surrounding residents having spotted evidence of the emus including tracks, scat, nests and the birds themselves. With such a localised area of habitation, this destruction of key habitat and installation of exclusion fencing will severely effect the number of Coastal Emus, the effect of which is unmitigable." SE-75005711

A Biodiversity Development Assessment Report (BDAR) (Biosis, 2024) (see Appendix 14 of the EIS) was undertaken to assess potential impacts of the Project on biodiversity. The BDAR was prepared in accordance with the requirements of the Project's SEARs and was prepared by an accredited assessor under the *Biodiversity Conservation Act 2016* (NSW) (BC Act).

Regarding the presence of Koalas and Coastal Emus, the BDAR identified that while no Koalas or Coastal Emuwere identified during surveys the species is known to have habitat within the area.

"Generally, although not detected during detailed surveys, it is known that habitat for species such as Koala and Coastal Emu do occur within the Subject Land and broader locality, and may occur on a transient basis or infrequently reside in or nearby the Subject Land. Neither of these species were recorded during targeted surveys, and the Subject Land is not considered to constitute optimal habitat, given land use history, previous clearing and disturbance from recent fires. As such, impacts to any potential habitat for Koala and Coastal Emu are addressed as ecosystem species only, with avoidance of the highest biodiversity value areas and mitigation measures implemented." (Biosis, 2025)**.**

Measures to mitigate the impact on Koalas and Emus due to the Subject Land being within potential Koala and Emu habitat is presented in Appendix 6 of the EIS (Umwelt, 2024) and include the avoidance of vegetation and habitat identified as Koala and Emu habitat.

Regarding the presence of greater gliders & yellow-bellied gliders, the BDAR notes:

"It is..... unlikely the Project would lead to a long-term decrease in the size of an important population of Yellow-bellied Glider. Mitigation measures to protect trees to be retained adjacent to the Development Footprint, and pre-clearance of hollow bearing trees will also be undertaken to ensure any further impacts to Yellow-bellied Glider are also minimised..... No Yellow-bellied Gliders were recorded during the targeted surveys undertaken to date" (Biosis, 2024)

"It is..... unlikely the Project would lead to a long-term decrease in the size of an important population of Greater Glider. Mitigation measures to protect trees to be retained adjacent to the Development Footprint will also be implemented, which will ensure any further impacts to Greater Glider are also minimised..... No individuals of Greater Glider were recorded within the Subject Land during targeted surveys." (Biosis, 2024)

The Project design was revised in response to findings of the environmental assessments to avoid and minimise impacts. An example of avoidance for the purpose of reducing ecological impact is using the Western Transmission Corridor as opposed to the Northern Transmission Corridor which was situated along the eastern and northern boundary of Lot 32 DP 755607, from the Development Footprint. By using the Western Corridor, the Project has avoided removal of 15.48 ha of a threatened ecological community (TEC).

> *"For this project to proceed its footprint needs to be reduced (or include additional cleared lands), vegetation clearance reduced and wide corridors established to both maintain and enhance fauna dispersal." SE-74849290*

Approximately 925 ha (86%) of the biodiversity assessment Subject Land is mapped as Category 1 land with no native over storey or mid storey cover and met the definition of non-native vegetation and Category 1 - exempt land. A total of 768 ha of Category 1 land will be impacted by the amended Project. To increase habitat connectivity, a 30-m biodiversity corridor is proposed along the northern boundary of the Project Area. This corridor was designed with input from the NSW CPHR, Forestry Corporation, and the community, taking into account biodiversity, bushfire risk, and visual impact. The corridor will improve wildlife movement between the remnant vegetation of Ellangowan State Forest and Bungawalbin State Forest, and it will also serve as a physical barrier between the Project and sensitive receivers to the north.

5.1.3.4 Visual

Issues relating to potential visual and glare impacts resulting from the Project were identified as issues in 13 objecting submissions received from the community.

> *"We want new photos of what we see with the naked eye submitted to the visual impact statement (not what they have submitted because they are very false)." - SE- 41020244*

> *"The interrupted visual would damage the innate beauty and simplicity that currently occurs in our prominently nature-based region. Contrary to the reports stating that the panels and infrastructure will have no visual impact I can assure you this is not the case, and the community will strongly disagree." – SE- 74915962*

> *"As witnessed in person by Ark Energy employees, the visual impact including glint and glare on our property is severe and unviable for any visual impact mitigation screening. This is due to our property's intrinsic northern position, immediate proximity, elevation and significant vista over the proposed solar farm site." – SE - 75005711*

It is acknowledged that visual amenity concerns are common in solar farm projects, and as such, an LVIA was undertaken in accordance with the Solar Guideline to assess these impacts. The assessment evaluated 12 public viewpoints within 2.5 km and 36 private receivers within 4 km, focusing on 27 private and seven public receptors for detailed analysis. It assessed the changes in landscape character, visual amenity from public and private viewpoints, glint and glare as well as night lighting. The LVIA acknowledges that the EIS Project would change the character of the landscape by introducing uncharacteristic dark, linear, built elements across cleared parts of the open, agricultural landscape. The landscape character assessment across the LVIA Study Area found all areas to have low landscape character impact ratings. Therefore, the overall visual impact rating of the Project was determined to be low in accordance with the Solar Guideline.

Photographs were taken at residential receivers and at key points along Avenue Road and used to prepare wireframes and photomontages. These informed subsequent consultation with neighbours and indicated that the highest visual impact at any residential receiver was 'moderate' prior to implementing mitigation measures. Upon implementation of a number of proposed mitigation measures, the highest receivers (D3-1, D3-2, D3-3, D3-4, D3 47, D3-5 and D3-8, see Figure 6.14 of the EIS) would be reclassified as 'low' visual impact. Each viewpoint was photographed in a capacity representative of the central field of vision of the human eye. These photographs and detailed analysis can be found in Appendix A of the LVIA.

With respect to glare-related impacts, a comprehensive Glint and Glare Assessment was prepared to support the EIS (refer to Appendix 12 of the EIS (Umwelt, 2024)), which assessed four receivers as having potential yellow glare. These four private receivers were each assessed as having a 'low' glare impact rating as they would experience under 10 hr/year of glare from Photovoltaic (PV) Array 10.

Avenue Road was assessed as having a 'high' glare impact rating as it would experience over 30 hr/year of glare. Therefore, mitigation measures were required in order to reduce impacts on users of Avenue Road as far as practicable. As outlined in the EIS (refer to Section 6.9.2.3 of the EIS) and detailed in **Section 4.2.1** above, a single axis horizontal tracking system which can be configured to undertake 'backtracking' movements is proposed. This technique adjusts the angle of solar panels closest to Avenue Road when the sun is low in the morning or evening to prevent panels casting shadows on one another and reduce glare to drivers along Avenue Road.

The visual assessment was based on a worst-case scenario and does not take into account weather conditions and intervening elements such as vegetation and built structures that may directly mitigate visual impacts. If intervening vegetation and built structures are taken into account, the potential experienced glare will likely be reduced further.

Mitigation measures to reduce the visual impact of the Project are outlined in Section 6.8.4 of the EIS and include infrastructure design and night lighting controls. Furthermore, the proposed biodiversity corridor on the northern boundary of the Project would also mitigate some visual impacts.

5.1.3.5 Social

Twelve (12) submissions raised issues regarding social and community impacts of a solar development within their community. The key concerns of these community members were the contributions that Ark Energy will make to the local region and the perception that the Project primarily benefits a few individuals financially rather than the broader community.

> *"I also have concerns about the Community Benefits Fund how and where this money will be spent. We that live here, and view and experience the effects of the development feel that we will probably not see a $ of that money spent in our area." - 'SE- 74772214*

> *"Taking thousands of hectares of prime agricultural land that feeds our country, to put money in the pockets of a few is not what Australia was built on." - SE-74873465*

The Project presents a number of economic benefits for the local community including through the employment of a local workforce, indirect spending through the workforce in the local community, the use of local suppliers for Project related infrastructure and the development of a Community Benefit Fund which will be administered by Richmond Valley Council. Ark Energy have sought to maximise the local benefit from the Project to address the distributional equity of neighbours experiencing a bigger proportion of the negative impacts from the Project. As detailed in Section 6.15.3 of the EIS and Appendix 18, the Project will benefit the local area, which includes the broader region by investing and contributing to an estimated $180 million to the local economy. Within the economic impact study area, it is anticipated that 30 full time jobs will be directly associated with the Project and 50 full time jobs will be indirectly created by the Project in ancillary services.

As detailed in Section 6.14.3.1 of the EIS, the impact on agricultural land is considered insignificant when compared to the overall agricultural industries gross value in the area. Additionally, the Project is not expected to affect agricultural productivity outside the Development Footprint and therefore will not impact local agricultural support services.

5.1.3.6 Noise Impacts

Issues relating to potential noise and vibration impacts resulting from the proposed Project were raised in 11 objecting submissions received from the community. The main issue outlined in these submissions related to construction traffic noise, as well as some concerns regarding construction vibration impacts.

> *"The construction, operation, and decommissioning phases of the project will result in increased noise levels, disrupting the peace and quiet of the local area." SE-74943520*

> *"The concerns for noise include cumulative noise and vibration, and the health effects of infrasound." SE-75005711*

As outlined in Section 6.16 of the EIS, an assessment of the predicted impact of noise and vibration relating to the construction of the Project and heavy vehicle movements on the community was undertaken (Umwelt, 2024). The assessment concluded that construction noise may impact some non-associated receivers however no receivers will be 'highly noise affected' (i.e. exposed to noise levels greater than 75 dB(A)).

Additionally, road traffic noise may impact two receivers along Avenue Road during the early morning period (6 am–7 am). As these impacts are associated with road upgrades, works would be transient in nature and impacts temporary. Where the predicted construction noise levels are above the Noise Management Levels, reasonable and feasible noise mitigation and management strategies are required (see Section 6.16.4 of the EIS), to reduce potential impacts on sensitive receivers including:

- Development and implementation of a Noise and Vibration Management Plan.
- Notification to receivers prior to commencement of works.
- Verification monitoring of noise and/or vibration levels.

As outlined in the Amendment Report (Umwelt, 2025), additional inverters will be placed within the BESS compound. These inverters have been assessed within the Amendment Report through an NVIA addendum and the results illustrate that the amendments are not expected to affect the noise or vibration assessment presented in the EIS.

As detailed in Section 6.16.3.4 of the EIS, due to large distances between the Development Footprint and sensitive receivers, vibration impacts from construction activities are anticipated to be negligible.

A Noise and Vibration Management Plan (NVMP) will be prepared prior to the commencement of construction activities, which will assist in the management of temporary construction related noise exceedances associated with the proposed road upgrades and construction impacts.

Ark Energy will continue to engage with community members on their experience of noise throughout the construction and operational periods and make necessary refinements to mitigation measures to address their lived experience of these impacts.

5.1.3.7 Roads

Road-related issues were a key theme raised in eight (8) objecting submissions. The key road-related issues included road use safety issues, increased risk of accidents, visibility and increased dust from vehicle movements and increased risk of wildlife strike on roads.

> *"There will be increased traffic around bus stops and the local area, posing safety risks, especially for children and the elderly" SE-74943520*

As detailed in the Traffic and Transport Impact Assessment appended to the EIS (Umwelt, 2024), upgrade works to sections of Main Camp Road, Avenue Road and widening works on the Summerland Way intersection (in each direction of travel) are proposed to improve safety of the local road network and the existing informal bus stop during construction and for the duration of the Project.

Further management measures were also recommended for the identification of specific traffic management measures within the CEMP to manage the potential interaction of Project traffic, in particular heavy vehicle movements, with both the school bus movements and any waiting children / parents. Such mitigation includes widening works on the Summerland Way departures to the intersection (in each direction of travel) to improve safety for bus movements and awaiting passengers.

> *"The roads are not up to standard to cater for the increased traffic that will come from the project. It needs to be upgraded." SE-74908207*

> *"Having approximately 327 workers travel this road is going to increase dust and impact the road" SE-74904957*

As detailed above, and in Section 6.10.6 of the EIS (Umwelt, 2024), road upgrades will take place at the intersection of Summerland Way/Main Camp Road as well as sealing of Avenue Road from the Main Camp Road intersection and continuing through Avenue Road to the northern most access point. These road upgrades will be built to the specifications outlined in Austroads Guide to Road Design to ensure they do not degrade under the load of the OSOM vehicles required for the construction and decommissioning phase of the Project.

As outlined in the SIA and mitigation measures detailed in **Appendix B**, Ark Energy will provide ongoing communication with host and proximal landholders to provide construction updates and information regarding periods of increased traffic movement. Additionally, the sealing of Avenue Road and Main Camp Road will significantly reduce the dust emissions potentially generated across all phases of the Project. Dust and air borne particles are a potential impact of traffic accessing the Project Area from Avenue Road and other construction activities. These will be mitigated through measures outlined in BD-05 of Appendix 6 of the EIS (Umwelt, 2024), including water sprays, water carts or other media on:

- Unpaved work areas subject to traffic or wind.
- Sand, spoil and aggregate stockpiles.
- During the loading and unloading of dust generating materials.

"The construction phase is likely to lead to increased incidences of wildlife road strikes, further endangering local fauna." SE-74943520

The proposed construction related traffic increases are temporary in nature and will be substantially reduced during the operations and maintenance phase of the Project. Nevertheless, appropriate mitigation measures will be implemented under the Construction Traffic Management Plan (CTMP) to maintain the safe operation of the road network for all users (See TR-10 of Appendix 6 of the EIS (Umwelt, 2024)). Driver awareness training will be conducted prior to the construction phase and for all OSOM drivers using the road network required for the Project to bring awareness of potential fauna strikes (Mitigation measure TR-14).

5.1.3.8 Economic

The economic impact of the Project was raised in seven (7) community submissions objecting to the Project. These submissions raised the concern that the Project will increase the insurance costs for proximal neighbours, decrease property value and that there is an unfair distribution of community benefits.

> *"I am concerned about the increased costs associated with Public Liability Insurance that will be necessary for neighbours as a result of this development." SE-74772214*
>
> *"They say they have no evidence of decreasing property values or increasing insurance premiums, but they have been unable to show us an area of comparison. We have requested that our properties be valued before and after the project. Ark has not done this." SE-74904957*
>
> *"No attempt has been provided to show the affect the project will have on our property values. I request a valuation done before the project starts, and compensation for the loss of value in my property if the project goes ahead." SE-74908207*
>
> *"I also have concerns about the Community Benefits Fund how and where this money will be spent. We that live here, and view and experience the effects of the development feel that we will probably not see a $ of that money spent in our area." SE-74772214*

Ark Energy has sought to maximise the local benefit from the Project to address the distributional equity of neighbours experiencing a bigger proportion of the negative impacts from the Project.

The Economic Impact Assessment prepared to support the EIS (refer to Appendix 18 of the EIS (Umwelt, 2024)) outlined that the Project will require approximately $1.2 billion in investment during the construction phase, of which approximately $180 million will be retained in the social locality and will support 150 direct and 240 indirect Full Time Equivalent (FTE) positions over the 24-month construction period. At the Project's peak, approximately 327 direct and 525 indirect FTE positions will be supported in the national economy (on average) over the six-month peak construction period. Once operational, 10–15 FTE direct jobs will be supported by the Project. (Ethos Urban, 2024). As outlined in the EIS, Ark Energy anticipate approximately 20% local employment although have established an ambitious target of 40% local employment to maximise local benefits.

Whilst Ark Energy acknowledge concerns relating to the Project potentially increasing the cost of living, the Insurance Council of Australia published a report in May 2024 stating that there are no instances where insurance has not been provided, or that insurance premiums have increased as a result of a solar farm (or a neighbouring property) hosting energy infrastructure (Insurance Council of Australia, 2024). There has been no significant research in Australia on the impact of utility-scale solar farms on property values of near residents. However, research undertaken overseas has found property prices are affected at a rate of between 1.5–2.3% decreases (Elmallah S. H., 2023).

Ark Energy will continue to seek feedback from the community on their lived experience of such impacts and keep abreast of new research relating to this impact throughout the life of the Project.

As detailed in Table 6.55 of the EIS (Umwelt, 2024), Ark Energy commits to developing a Community Shared Benefit Strategy with the objective of enhancing opportunities and benefits of the Project for the local community. The Strategy will be developed with Richmond Valley Council reflective of the community needs and aspirations and aligned to the Benefit Sharing Guideline.

5.1.3.9 Cumulative Impacts

The cumulative impact of multiple projects in the region was another common theme throughout the public submissions, and what this means for local climate conditions, ecological impacts and reduction in agricultural land.

> *"Heat Island Effect- this has not been covered in any assessment. The area around this project and cumulatively around projects in the area needs to be assessed further for the impacts of Heat Island Effect". SE-74915962*

> *"The cumulative impacts of such developments which whittle away and fragment all remaining habitats are of course never mentioned. This is yet another shortcoming of the report and reveal yet again that the ecological survey company writing the report is not objective." SE-75007709*

> *"Agricultural farming land will be wasted. This is just one of three projects proposed next to, or within close proximity, to each other. The actual amount of farming land wasted will be much, much more." - SE-74904957*

It is acknowledged that there are a number of other project developments in the area that may result in cumulative impacts, and that it is the responsibility of each project to consider these potential cumulative impacts. As such, SSD developments within 50 km of the Project were assessed for the potential for cumulative environmental, social, economic and other impacts detailed throughout Section 6 of the EIS. The assessment was conducted in accordance with the requirements outlined in the Project SEARs, the Large-scale Solar Energy Guideline (DPIE 2018) and the Cumulative Impact Assessment Guideline (DPIE, July 2021).

Ark Energy acknowledges the concerns of the community regarding the heat island effect and associated considerations for local climate conditions. Solar farms can absorb and re-radiate heat, the overall impact on local temperatures is relatively minor compared to urban heat islands. The heat generated by solar panels dissipates quickly and does not significantly affect the surrounding environment (Greg A. Barron-Gafford, 2016).

Studies have shown that the temperature increase around solar farms is minimal and localised. For instance, research indicates that temperatures around a solar power farms can be slightly warmer than nearby wildlands, but this added heat dissipates quickly and is not measurable beyond a short distance from the solar project (Greg A. Barron-Gafford, 2016). This suggests that the Heat Island Effect is not a significant concern for solar farms.

The cumulative impacts associated with ecological impacts are detailed in Section 6.11.3.10 of the EIS (Umwelt, 2024). It was determined that due to previous disturbance, the increased fragmentation of the Project Area and surrounding region will be low. Vegetation corridors, particularly the proposed corridor along the northern boundary of the Project Area will enable the movement of fauna between Ellangowan State Forest and Bungawalbin National Park. Several small, isolated patches of planted vegetation areas are present within the northern portion of the Project Area and will continue to enable the movement of animals across the Development Footprint.

It should also be noted that since the submission of the EIS, the nearest solar farm proposed to the south of the amended Project, Myrtle Creek is no longer considered in the assessment of cumulative impacts. The proponent of Myrtle Creek has issued a project update indicating that they are no longer investigating the site as a potential solar farm. Therefore, there are currently four proposed renewable energy projects within 50 km of the Project and one within 20 km of the Project.

The agricultural assessment included an assessment of the potential cumulative impacts from nearby projects. The cumulative risk to agricultural land and productivity across NSW due to projected extent of large-scale solar development is estimated to be very low (DPE, 2022). The Soil, Land Use and Agriculture Impact Assessment (SLAIA) notes that:

> *"Within the Myrtle Creek suburb boundary, there is 5,652 ha land mapped as SSAL with several solar projects within the region that are approved or undertaking approval. Of this land, 478 ha, or 8.5%, lies within the combined Development Footprints of the Project (279 ha or 5%), Summerville Solar Farm (69 ha or 1.2%) and Myrtle Creek Solar Farm (estimated at 130 ha, or 2.3%)."* (Umwelt, 2024)

The result of this reduction in State Significant Agricultural Land (SSAL) is not anticipated to impact the regional agricultural industry. The value of the agricultural enterprise within the Richmond Valley LGA is $71 million for 2020–2021 which is not anticipated to be reduced by a measurable amount. Additionally, the Myrtle Creek Solar Farm is no longer proposed and the cumulative impact associated with the impacts SSAL land will be reduced.

5.1.3.10 Water Supply

Impacts on water supply was raised in one (1) submission which requested that water sourced for the Project be sourced from Grafton and Casino.

> *"We request all water; potable and non-potable is to come from regions of Grafton and casino and not sourced within the locality" SE-74943518*

As noted in Section 6.5 of the EIS, water supply sources would be determined prior to the commencement of construction, in consultation with suppliers and landholders, subject to availability. As outlined in **Section 4.1.3** for Ark Energy have consulted commercial supplies who have confirmed capacity to meet the Project's water requirements. Groundwater is not proposed to be used to supply water to the amended Project. Each supplier has licensed access to town water supplies and pay for any town water use.

5.1.3.11 Cultural Heritage Impacts

One (1) submission was received relating to Aboriginal Cultural Heritage impacts associated with the EIS Project which has been addressed below.

> *"Larger buffers around site RVSF-UMW-01 where aboriginal artifact was found in the case more could be located" - SE-59923482*

Surveys to assess the cultural heritage values potentially impacted by the Project were undertaken by archaeologists alongside RAPs. As detailed in Section 6.12.3.3 of the EIS, a single artefact was identified within the Aboriginal Cultural Heritage Assessment (ACHA) study area: a Fine Grained Silicious (FGS) flake (see Photo 6.7 of the EIS). The artefact is considered to have low scientific significance due to relatively low representativeness, integrity or research potential. The two Site Officers (Registered Aboriginal Party (RAP) representatives) explained that they believed that the stone artefact (RVSF-UMW-01) found during the field survey was culturally significant as it acts as tangible confirmation of their ancestor's presence of moving through the Study Area. RVSF-UMW-01 will be collected by a qualified archaeologist(s) and RAP representatives prior to construction. As such, an exclusion zone will not be required around this artefact in line with the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010). An unexpected finds protocol will be established for both the construction and operation of the Project to minimise the potential impact to other potential Aboriginal artefacts within the Project Area.

5.1.4 Justification and Evaluation of the Project as a Whole

A review of all submissions indicates that 18 submissions raised issues regarding the justification and evaluation of the Project. The issues which formed the basis for objections are outlined below, as well as the response to these issues in **Section 5.1.4.1** and **Section 5.1.4.2**. The community submissions which support the Project were on the basis of the contribution to the NEM and contributions to the local workforce and are outlined in **Section 5.1.4.3**.

5.1.4.1 Does Not Provide Reliable Power

Doubts about the reliability of the electricity generated by the Project were raised throughout the submissions process by members of the community. Such comments noted that energy from renewable sources such as solar are restricted by their reliance on UV radiation to generate electricity and this caveat does not align with a need for a stable electricity grid.

> *"Nor will it be reliable as it is dependent on highly variable weather conditions." SE- 74920465*

> *"totally useless plan that is a complete waste of public money as it will never provide secure, reliable, affordable power." SE-75006741*

It is acknowledged that one of the attributes of renewables is the intermittency of electricity generation depending on weather conditions. Solar energy, for instance, relies on sunlight, which can be intermittent, leading to concerns about consistent power generation.

It is important to note that in isolation, renewable energy is intermittent and does not provide round the clock electricity generation, however a diversified energy network incorporating solar, wind, BESS, pumped hydro and dispatchable loads can deliver reliability. The Project aligns with Commonwealth and NSW government policy and strategic direction to transition to renewable energy. Regional investments are being made in renewable energy to bolster the overall energy grid through diversification of energy sources. The Richmond Valley Solar Farm represents one such investment in a growing portfolio of energy generation projects across the electricity grid. The Project will have a capacity to supply clean energy to power the equivalent of approximately 181,000 average NSW homes per annum.

Furthermore, incorporating advanced energy storage solutions into the NEM will play an important role in resolving issues related to energy stability. By implementing an array of energy storage solutions to grow and advance regional energy storage assets, the NEM will be supported by a robust and reliable energy grid in the future.

As part of this broader effort, the inclusion of a 2,200 MW hours BESS in this Project contributes to these efforts. Battery technology has seen significant technological improvements in recent years, offering a practical means of storing excess energy generated from renewable sources during periods of abundance and releasing it when demand is high. The integration of energy storage into the Project and the region offers more stable and consistent energy supply to the NEM.

5.1.4.2 Project Does Not Align with Community Interests or Relevant Legislation

Members of the community have submitted comments that the Richmond Valley Solar Farm does not align with community interests or government legislation. It's crucial to recognise that perspectives within communities can be diverse, and the goal of projects aimed at achieving positive social outcomes is to reduce harm within the community while advancing the strategic goals of both local and regional communities.

> *"against the best interests of Australia." SE-75006744*

> *"I can see no benefit for the local community the developer has not been able to address the community concerns and have little interest in community consulting" SE-74908239*

The Richmond Valley Solar Farm has been developed in line with the North Coast Regional Plan 2041, Northern Rivers Region – Renewable Energy Blueprint for the Northern Rivers, Richmond Valley Council's Local Strategic Planning Statement, the State Environmental Planning Policy (Planning Systems) 2021, *Environmental Planning and Assessment Act 1979* and Environmental Planning and Assessment Act Regulation 2021, as well as state and Commonwealth strategies and policies for renewable energy as outlined in Section 2.4 of the EIS (Umwelt, 2024).

Ark Energy has engaged in landholder and community engagement since 2022 to establish relationships and dialogue with impacted stakeholders. The stakeholder engagement process has afforded opportunities for Ark Energy to effectively assess and integrate social outcomes within the detailed project planning, design, and assessment phases. For example, a biodiversity corridor across the northern boundary and an increased APZ surrounding key infrastructure including the BESS and substation which are a direct response to community feedback. Should the Project be approved, stakeholder engagement will be ongoing for the life of the Project.

Additionally, the EIS outlines a number of community benefits that will be generated by the Project, including but not limited to:

- $180 million of investment is expected to be retained within the regional economy.
- A target of 20% local workforce will be in place during the construction phase of the Project.
- The Project has the potential to provide sufficient renewable energy to support the annual electricity needs of the equivalent of approximately 181,000 NSW households.
- The Project will generate employment in the region, creating a total of 390 FTE employment opportunities (150 FTE direct and 240 FTE indirect) during the construction phase with around 53 FTE employment opportunities (13 FTE direct and 40 FTE indirect) during the operational phase.

5.1.4.3 Renewable Energy Industry

Two (2) submissions from the community were in support of the Project as a renewable source of energy which aligns with the strategic direction of NSW and Australia as outlined in Section 2.0 of the EIS.

> *"The race to net zero by 2050 is on and it is renewable energy projects like this that are putting us on the right track." SE-73886458*

> *"This will be a great asset moving towards a renewable future." SE-74611214*

Support from the community is acknowledged by Ark Energy.

5.1.5 Issues Beyond the Scope of the Project

Twenty (20) public submissions raised concerns that were on the basis of issues beyond the scope of the Project. These issues do not relate to the merits of the Project however they raise broader concerns relating to the merits of renewable energy and solar farm development generally.

5.1.5.1 Trust in the Assessment Process

Trust in the assessment and planning process was a theme that emerged in a number of submissions made during public exhibition of the Project. Ark Energy acknowledge the lack of community trust regarding large scale developers and the assessment process although note that for a large portion of the feedback, such sentiment is generally beyond the scope of the Project. Below is a general summary of accountability and transparency measures which will be and are in place to increase trust in across the community.

> *"There are copious amounts of misinformation within the reports provided by the developers, which undermines the transparency and trust required for such a significant project." SE-74943520*

> *"We request a public hearing for further investigations into misinformation and inaccuracies within the reports being assessed." SE-74943518*

Ark Energy endeavoured to host a transparent and accessible engagement program, to provide an overview of the assessment process and how people can participate and seek inputs from the community which will inform the assessments and Project design.

Development applications (DA) for SSD in NSW are lodged with the Planning Secretary of the DPHI. The Minister for Planning and Public Spaces is the consent authority for SSD projects. Accountability for government departments in NSW, including DPHI, is primarily enforced through a combination of mechanisms and entities. The Minister for Planning and Public Spaces is responsible for overseeing DPHI. This minister is a member of the NSW government and is accountable to the Premier and the Parliament for the DPHI's performance and actions. If the community is concerned that the conduct of government officials needs further investigation, they can submit a complaint to the independent ombudsman for NSW.

The NSW Ombudsman is an independent officer of the Parliament responsible for investigating and addressing complaints about government agencies and their actions. There are various other independent commissions and tribunals in NSW responsible for reviewing specific decisions and actions of government agencies, including those related to planning and environment. For instance, the Land and Environment Court of NSW has jurisdiction over a wide range of planning and environmental matters and can review decisions made by DPHI.

Government departments in NSW are expected to engage with the community and stakeholders in a transparent manner. This includes providing access to information, seeking community input on policies and projects, and publishing reports and documents related to their activities. Decisions made with regard to SSD projects are designed to be a collaborative process that engages local communities and addresses concerns.

Overall, accountability of DPHI in NSW is a multifaceted process that involves oversight by elected officials, independent bodies, and the community.

5.1.5.2 Waste of Taxpayers' Money (Subsidies Received by Ark Energy)

Concerns around the use of taxpayer money or subsidies was raised.

> *"one would hope that the unbridled spread of these unreliable tax payer subsidised operations providing unreliable power would be limited." SE-75011962*

Ark Energy's Australian entities have not and will not receive taxpayer subsidies to fund the Project. Further assessment of this issue is considered beyond the scope of the Project and assessment of the Project as a whole.

5.1.5.3 Viability of Renewable Energy Generation

Stakeholders expressed a lack of belief that renewable energy was a viable option for generating the electricity that is required to service the Australian population. The submissions process identified that the community are sceptical of the investment in the renewable industry due to a belief that it will not ensure reliability and security in the NEM.

> *"Not renewable, not beneficial, not cheap, not safe, and certainly not honourable. AND definitely NOT helping the climate in any way!" SE-74873465*

> *"I object to the ridiculous notion that renewable energy is the future." SE-74893457*

The concerns regarding the viability of renewable energy stem from the significant obstacles faced by the energy industry during its shift from traditional energy sources like coal and gas to alternative sources of energy such as wind and solar. Renewable energy sources possess distinct physical characteristics compared to conventional sources, exhibit output variations depending on weather conditions and are often situated in remote parts of the electricity grid. However, as additional investments are made across NSW, the challenges related to remote power sources will gradually be surmounted. Moreover, by investing in a diverse range of renewable energy sources and energy storage solutions integrated into the NEM, the issues concerning energy stability will also be resolved. This Project responds to that investment in further sources of renewable energy that will contribute to the overall stability of the grid through the development of a large-scale BESS.

In addition to renewable energy, various energy storage systems have been hailed as potential solutions to enhance the performance and resilience of the electricity network. An assortment of targeted energy storage systems will be necessary to foster the growth and advancement of domestic energy storage assets and infrastructure in the future. The BESS that will form a component of this Project represents a step toward a more stable and consistent energy supply to the NEM.

Community feedback during the submissions phase of the assessment process illustrated that there is a lack of confidence about the capability for renewable energy to achieve the energy security and capacity that is required by the NEM.

This issue is beyond the scope of Ark Energy and the assessment of the Project as a whole.

5.1.5.4 Project Leads to Higher Power Prices for NSW Residents

Objecting submissions by members of the community noted concerns that the addition of renewable energy sources into the electricity grid will increase the cost of energy for homes throughout NSW. This concern is exacerbated by the increasing cost of living and rising electricity prices felt by many people across the state.

> *"This $1.2 billion dollar project will further drive-up energy prices" SE-74916289*

"This project will not lower retail electricity prices nor effect the climate. Nor will it be reliable as it is dependent on highly variable weather conditions." SE-74920465

The AEMO establishes wholesale energy rates in 5-minute intervals. Power producers submit offers specifying the quantity of energy they are prepared to supply to the market and their desired prices. The spot price is then determined by the point where supply and demand intersect. Increasing the overall supply of electricity across the energy grid will contribute to lower prices for Australian consumers by improving the capacity and security of the electricity grid and placing downward pressure on electricity prices. As outlined in Section 6.15.3.5 of the EIS, the Project will have a capacity to supply clean energy to power the equivalent of approximately 181,000 NSW homes per annum (on average).

A report by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and AEMO, 'The GenCost 2021–22' report affirms that in Australia, wind and solar power stand as the most cost-effective options for both electricity generation and storage (CSIRO, 2022). Furthermore, the report predicts that as the current period of inflationary pressures subsides, the costs associated with wind, solar, and battery technologies will further decline.

This issue is considered beyond the scope of the Project.

5.1.5.5 Foreign Investment and Infrastructure in Australia

Trust in foreign companies operating in Australia was raised, including questioning the sustainable procurement of solar panels and the topic of 'slave labour' to procure materials required to develop the Project.

"I object to this Electricity Generating Works proposal because I cannot support a project that relies on slave labour to provide its hundreds of thousands of cheap solar panels" SE- 74918719

Ark Energy is committed to creating an equitable business that creates a positive social impact for people, partners, and communities. Ark Energy respects human rights, acts ethically and with integrity in all business dealings and relationships (Korea Zinc Pty Ltd, 2021). Ark Energy implements and enforces effective systems and controls that reduce the risks of modern slavery occurring in its business or supply chain.

Ark Energy is committed to eliminating the risk to the extent possible of modern slavery occurring within its own business, in its supply chains or through any other business relationship. As part of its commitment to limiting the risk of modern slavery, Ark Energy will comply with all applicable Australian and International slavery legislation including the *Modern Slavery Act 2018* (Commonwealth) and any state-based legislation that may be applicable. Korea Zinc, the parent company of Ark Energy has a Policy against Modern Slavery which is available at:
https://www.koreazinc.co.kr/files/contents/download/KZ_Policy_against_Modern_Slavery.pdf

5.1.5.6 Lack of Trust in Government Decision Making

Trust in government organisations and the decision-making process was a theme throughout a number of comments made during the submissions process. While Ark Energy endeavour to operate within guidelines in a transparent and open way, there will always be a certain level of community mistrust with developers. This matter is considered beyond the scope of the Project.

"Why does the government rely on the friendly reports from the company standing to gain from the information they contain in order to make their decision" SE-75005711

The issue of trust in government decision-making is a broader issue identified by communities across NSW and is the responsibility of all government agencies and organisations. Ark Energy is primarily focused on assessing the environmental and social impact of the Project, ensuring compliance with regulations, and engaging with the community throughout this process. The process of assessing the environmental and social impact for this Project has been collaborative with the community and relevant agencies and has thoroughly assessed the impact of the Project on sensitive environmental receivers.

6.0 Updated Project Justification and Evaluation of Merits

This RtS report addresses concerns raised by government and community submissions during the public exhibition of the EIS. Amendments to the Project are proposed and have been assessed in the Amendment Report (Umwelt, 2025) and are outlined in **Table 3.2**.

The Project aligns with the NSW and Commonwealth Governments' commitments to transition to renewable electricity generation in NSW. The NEM must quickly shift to renewable energy to support the NSW Climate Change Policy Framework and the Commonwealth Government's commitments under the Paris Agreement. Currently, renewable energy capacity is being added to the NEM at a slower rate than required, as identified by the AEMO (Parkinson, 2023). The NSW government aims to streamline renewable energy development approvals to facilitate this transition under the Energy Roadmap (NSW Government, 2023).

The Project will help address this shortfall by adding renewable energy capacity to the NEM, reducing the need to keep coal-fired power stations like Eraring Power Station online beyond their planned retirement date (AFR, 2023). It will also support the firming and storage of renewable energy in NSW through the development of a BESS.

Additionally, the Project will bring significant capital investment to the Richmond Valley region, create jobs during construction and operation, and provide indirect benefits to local services throughout its lifespan. This includes indirect employment in local and regional economies, such as jobs in transportation, trade supplies, services, accommodation, catering, and retail services. It will also generate additional income for host and associated landowners and benefit the local community through the proposed CBF.

The Project is a crucial part of the energy transition, featuring a fully optimised and constructible design. The EIS confirms that while some impacts are unavoidable, avoidance, followed by minimisation have been key considerations in the design process. Once these strategies were exhausted, appropriate management, mitigation, and offset measures have been committed to address any residual impacts. Overall, the Project is expected to provide a net benefit to the local and regional NSW community.

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