Submissions Report

Burroway Solar Farm

25003672

14 May 2025

KLEINFELDER
Bright People. Right Solutions.

Suite 3, 240-244 Pacific Highway,
Charlestown, NSW 2290

Phone: +61 2 4949 5200

Submissions Report

Burroway Solar Farm

Kleinfelder Project: 25003672

Kleinfelder Document: **NCA25R177858**

Prepared for:
Edify Energy

PO Box 786, Manly, NSW 1655

Prepared by:
Kleinfelder Australia Pty Ltd

Suite 3, 240-244 Pacific Highway, Charlestown, NSW 2290
Phone: +61 2 4949 5200
ABN: 23 146 082 500

Document Control:

Version	Description	Date
3.0	Updated for DPHI comments	14 May 2025
2.0	Issued for DPHI review	17 April 2025
1.0	First Draft for Client Review	9 April 2025
Prepared	Reviewed	Endorsed
Alyx Vandermast	Mark Trudgett	Rob Townsend

EXECUTIVE SUMMARY

BACKGROUND

Edify Energy Pty Limited (Edify) proposes to develop the Burroway Solar Farm, a large-scale solar photovoltaic (PV) generation facility and battery energy storage system (BESS), supported by associated infrastructure (the project). The project is on the traditional lands of the Wiradjuri people, in the locality of Burroway approximately 18 kilometres (km) northeast of Narromine. The regional context of the project is within the Narromine Shire Council local government area (LGA) in New South Wales (NSW).

The main objective of the project is to generate and dispatch renewable energy, consistent with NSW Government policy for renewable energy generation and storage. The project will have a generation capacity of up to approximately 100 megawatts (MW), equivalent to the demand of more than 40,000 NSW households, along with a storage capacity of 100MW/400 MWh.

The project is a State Significant Development (SSD) pursuant to schedule 1 of State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP). Accordingly, a development application (DA) and environmental impact statement (EIS) were submitted to the NSW Department of Planning, Housing and Infrastructure (DPHI) for the project under Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The EIS for the project was publicly exhibited from October 11, 2024, to November 7, 2024.

During the public exhibition of the EIS, a total of 82 submissions were received by DPHI from the public and organisations. Additionally, 13 regulatory agencies provided advice on the project. This submissions report has been prepared to address the matters raised in these submissions, in accordance with Section 59 (2) of the NSW Environmental Planning and Assessment Regulation 2021 (EP&A Regulation) and Appendix C of the SSD guidelines- preparing a submissions report.

The project received a not a controlled action decision for the *Environment Protection and Biodiversity Conservation Act 1999* referral (EPBC 2025/10120) on 16 April 2025.

SUBMISSIONS RECEIVED

During the public exhibition of the EIS, 82 public submissions were received by DPHI for the project. Of the 82 submissions received, 77 were from individuals and 5 were from organisations. Of these, no public submissions were made from within the local area (0 to 5 km from the project) and 7% of submissions were from the regional area (i.e. less than 100 km from the project). The remaining 93% of submissions were from areas more than 100 km from the project. In addition, 13 regulatory agencies provided advice on the project.

The most commonly raised matters from public submissions included the following:

- General impacts to biodiversity
- Reliability of electricity generation
- Impacts and loss of agricultural land
- Contamination from project infrastructure
- Health and safety impacts on the community and neighbouring properties
- Impacts to community lifestyle
- Construction and decommissioning waste management
- Fire risk from project infrastructure
- Impacts on landscape and visual amenity
- Impacts on local economy and businesses

Submissions from the regional area also raised concerns about the project's impact on traffic and the overall reliability of electricity generation.

ACTIONS SINCE EIS EXHIBITION

Engagement

Stakeholder engagement for the project commenced in 2022 and has been comprehensive to date. A summary of engagement carried out during the preparation of the EIS is provided in Chapter 6 of the EIS. Community and stakeholder engagement will be ongoing throughout the project phases in line with the Community Consultation and Engagement Plan developed for the EIS (Appendix D of the EIS).

Since the lodgement of the EIS, Edify has continued to engage with the associated landholder and various stakeholders as follows:

- Discussions with the associated landholder on the Inland Rail Narromine to Narrabri project which runs adjacent Eumungerie Road.
- Providing a project update to the Registered Aboriginal Parties involved in the Aboriginal Cultural Heritage Assessment Report (ACHAR) and field surveys, including details on the additional minor surveys conducted in the Eumungerie Road corridor where the project will install turn treatments for the two proposed site accesses,
- Engagement with DPHI during and after the public exhibition on the EIS,
- Discussions on the project and a voluntary planning agreement with Narromine Shire Council,
- Providing project updates to Sunrise Metals who have an exploration lease over the land, and
- Liaison with Narromine Local Aboriginal Land Council for project updates and potential project training and employment opportunities.

Project refinements

Following receipt of the public and agency submissions, a number of minor project refinements have been made to address and more thoroughly assess the topics of the submissions.

The project footprint was reviewed against the draft Native Vegetation Regulatory mapping, which was finalised on December 24, 2024, to ensure the development footprint avoids impacts to regulated land. The development footprint was refined to completely excise the mapped single patch of category 2 sensitive regulated land including a 10m buffer for the Asset Protection Zone (APZ). This area was already excluded from development however the development footprint was further defined in line with the updated mapping. The project development footprint currently avoids several paddock trees and an area of planted vegetation in the centre of the subject lot which are mapped as category 2 regulated land. Various other scattered trees shown on the aerial are mapped across the subject lot as category 2 regulated land, which have not been excluded from the development footprint, as most of these were found to no longer exist and the few extant examples have been avoided.

The assessment and provision of two oversize and overmass (OSOM) vehicle routes for the project construction phase, including Port Botany and Port of Newcastle, has also been undertaken as part of this response to submissions phase.

The footprint was also minorly amended to clearly illustrate access, asset protection zones and asset locations, including location of four 45,000L water tanks, for the purposes of firefighting.

In addition to these refinements, clarification has also been included in the project figures to show the entire project development footprint, including the basic-right turn (BAR) treatments proposed in the Eumungerie Road corridor to facilitate suitable access to the project. The footprints for the two proposed BAR's into the site had previously been discussed and assessed within the EIS and the supporting technical assessments (except the Aboriginal Cultural Heritage Assessment), however they had not been adequately reflected in the final project infrastructure layout on submission of the EIS.

Further assessment of impacts

The following technical assessments have been updated or undertaken in response to matters raised by government agencies:

- Biodiversity development assessment report (BDAR) – the BDAR has been updated in response to comments from NSW Department of Climate Change, Energy, the Environment and Water – Biodiversity, Conservation and Science Group (BCS). The updated BDAR is appended to this submissions report under **Appendix D**.
- Aboriginal cultural heritage assessment report – the ACHAR has been updated in response to comments from Heritage NSW and also to include assessment (April 2025) of the Eumungerie Road corridor, outside of the subject lot, where the two site access turn treatments are proposed to be installed. Whilst these site access works were described in the EIS project description, the assessment of these areas had not been undertaken in the ACHAR included in the EIS. No additional sites or constraints were identified during the surveys, and the RAP representative attending the survey did not raise any concerns with the proposed footprints. The updated ACHAR is appended to this submissions report under **Appendix E**.
- Traffic impact assessment (TIA) – the TIA has been updated to in response to comments from Transport for NSW (TfNSW) and Narromine Shire Council. The updated TIA is appended to this submissions report under **Appendix F**. The bridge and culvert assessment required by TfNSW has been submitted with the relevant department.
- Water resources assessment – further information has been provided on the project water use and supply in response to comments from Narromine Shire Council and NSW DCCEEW- Water. This information has been detailed throughout **Section 4**.
- Bush fire assessment report (BFAR) – further information on infrastructure layout and firefighting resources has been provided in the amended BFAR in response to comments from the NSW RFS. The updated BFAR is appended to this submissions report under **Appendix G**.
- Waste generation and disposal – further information has been provided on project waste generation and disposal facilities available to accept project waste, in response to Narromine Shire Council comments. This information has been detailed throughout **Section 4**.

EVALUATION AND CONCLUSION

In response to submissions received on the project, some supporting technical assessments have been updated to include further details and analysis addressing key matters raised from the EIS exhibition and minor project refinements have been made.

The project layout has not been amended as it had been designed in a way that minimises as many environmental impacts as possible, such as avoiding placement of permanent infrastructure on higher quality soil and micro-siting of infrastructure so that plant communities and paddock trees will not be impacted. However, the project footprint has been minorly updated to:

- Entirely excise the mapped patch of category 2 sensitive regulated land, noting this mapping has not been verified on the ground. This adjustment has not impacted the investigations conducted for the BDAR to date including the offset obligation, nor does it affect findings and conclusions of the other supporting technical reports compiled for the EIS.
- Consolidate and confirm the total project footprint through inclusion of the two BAR footprints in the Eumungerie Road corridor to facilitate access to the project.

The project is considered to be in the public interest because of the following justifications:

- It will contribute to energy security and reliability in NSW by diversifying the State's energy mix, especially with its location within the Central- West Orana Renewable Energy Zone (CWO REZ),
- It will contribute to reducing GHG emissions from electricity generation, reducing the impacts of climate change and the community and the environment,
- It is aligned with Commonwealth and NSW Government electricity policies and strategies and regional plans,
- It will provide ongoing economic benefits for both the local economy within the Narromine Shire LGA and more broadly, the regional economy,
- It will provide significant employment and business opportunities during construction, and
- The impacts of the project have been thoroughly assessed throughout the EIS and submissions report process and can be adequately managed through the proposed design, mitigation and management measures proposed to be implemented during construction and operation.

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

ACRONYMS AND ABBRIEVATIONS

Term	Meaning
AC	Alternating current
ACHAR	Aboriginal Cultural Heritage Assessment Report
AEMO	Australian Energy Market Operator
BC Act	NSW *Biodiversity Conservation Act 2016*
BCS	NSW DCCEEW- Biodiversity, Conservation and Science Group
BDAR	Biodiversity Development Assessment Report
BESS	Battery Energy Storage System
BSAL	Biophysical Strategic Agricultural Land
CWO	Central-West Orana
DA	Development Application
Development footprint	Area of subject land to be developed for project.
DPHI	Department of Planning, Housing and Infrastructure
DPIRD	Department of Primary Industries and Resource Development (Agriculture Group and Fisheries Group)
Edify	Edify Energy Pty Ltd
EIS	Environmental Impact Statement
EP&A Act	NSW *Environmental Planning and Assessment Act 1979*
EP&A Regulation	NSW *Environmental Planning and Assessment Regulation 2021*
EPBC Act	Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*
FRNSW	Fire and Rescue NSW
GHG	Greenhouse Gases
GW	gigawatt
ha	hectare
Kleinfelder	Kleinfelder Australia Pty Ltd
km	kilometres
kV	kilovolt
LGA	Local Government Area
LSC	Land and soil capability
LCVIA	Landscape character and visual impact assessment
MW	Megawatts
MWh	Megawatt hours

Term	Meaning
NSW DCCEEW	NSW Department of Climate Change, Energy, the Environment and Water
NSW RFS	NSW Rural Fire Service
NSW	New South Wales
O&M	Operations and maintenance
OSOM	Oversize and Overmass
PCT	Plant community type
Planning Systems SEPP	State Environmental Planning Policy (Planning Systems) 2021
The project	Burroway Solar Farm located 1955 Eumungerie Road, Burroway
PV	photovoltaic
REZ	Renewable Energy Zone
SEARs	Secretary's Environmental Assessment Requirements
SSD	State significant development
Subject Lot	Project land parcel (Lot 70 of DP1251856)
TEC	Threatened ecological communities
TfNSW	Transport for NSW
TIA	Traffic impact assessment

1 INTRODUCTION

1.1 BACKGROUND

Edify Energy Pty Ltd (Edify) proposes to develop a large-scale solar photovoltaic (PV) generation facility and battery energy storage system (BESS) in the township of Burroway, New South Wales, to be known as the Burroway Solar Farm (the project). The project is within the Narromine Shire Council (NSC) local government area (LGA) and in the Central-West Orana (CWO) Renewable Energy Zone (REZ) (**Figure 1**). The project is located adjacent to Eumungerie Road, approximately 18 kilometres (km) northeast of Narromine and 2 km east of Burroway, New South Wales (NSW) (**Figure 2**). The project proposes to connect to the 132 kilovolt (kV) distribution line owned and operated by Essential Energy that runs from Dubbo to Nevertire.

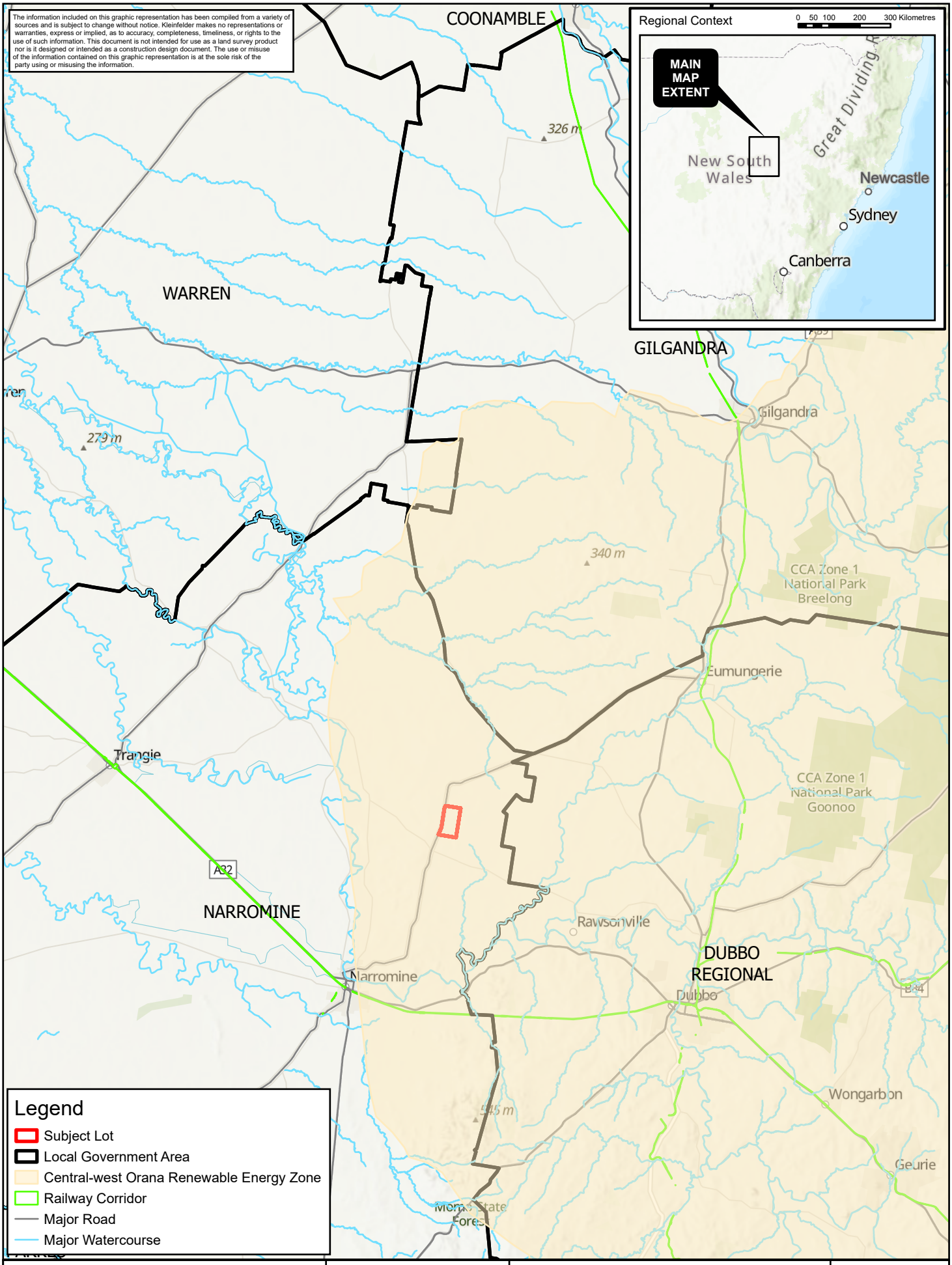
The main objective of the project is to generate and dispatch electricity from renewable sources, consistent with NSW Government policy for renewable electricity generation and storage. The project will have a generation capacity of up to approximately 100 megawatts (MW) (AC), equivalent to the demand of more than 40,000 NSW households. The project is being constructed within the CWO REZ and therefore will contribute to the government's 4.5-gigawatt (GW) generation target for the CWO REZ by the late 2020's. It will assist in meeting NSW and Australian Government emissions reduction targets and have the capacity to abate approximately 195,800 tonnes of greenhouse gases (GHG) annually.

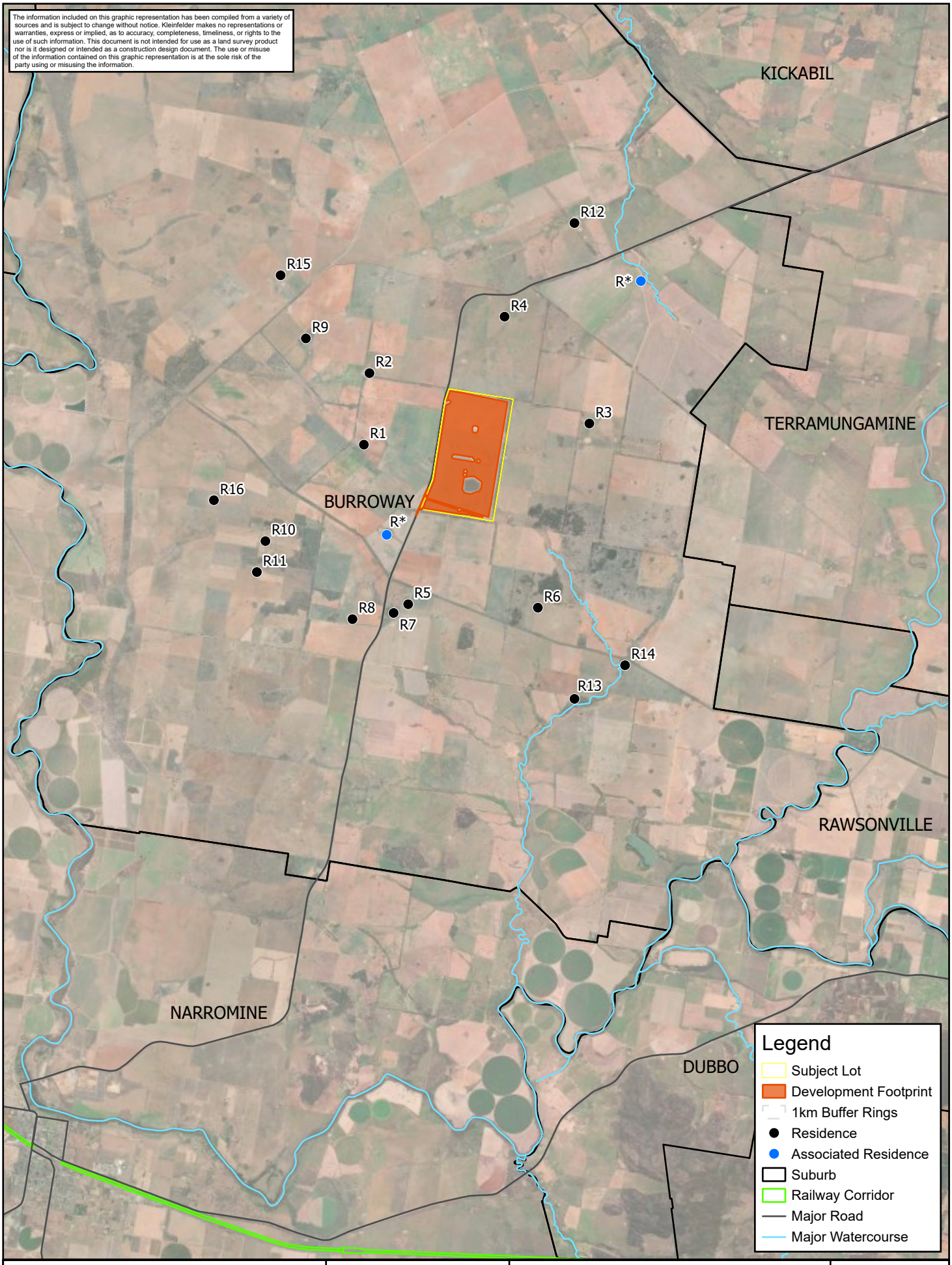
The project is a State significant development (SSD) pursuant to schedule 1 of State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP). Accordingly, a development application (DA) and environmental impact statement (EIS) was submitted to the Department of Planning, Housing and Infrastructure (DPHI) for the project under Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The EIS for the project was publicly exhibited from October 11, 2024, to November 7, 2024.

During the public exhibition of the EIS, a total of 80 submissions objecting to the project and two submissions in favour of the project were received by DPHI from the public (including 77 individuals and 5 organisations). Additionally, 13 regulatory agencies provided advice on the project. This submissions report has been prepared to address the matters raised in these submissions, in accordance with Section 59 (2) of the Environmental Planning and Assessment Regulation 2021 (EP&A Regulation).

Following the exhibition of the EIS, review and amendments of key supporting technical assessments has been completed in response to the submissions and to support the project DA.

The project also received a not a controlled action decision for the *Environment Protection and Biodiversity Conservation Act 1999* referral (EPBC 2025/10120) on 16 April 2025.


The information included on this graphic representation has been compiled from a variety of sources and is subject to change without notice. Kleinfelder makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. This document is not intended for use as a land survey product nor is it designed or intended as a construction design document. The use or misuse of the information contained on this graphic representation is at the sole risk of the party using or misusing the information.
Regional Context
0 50 100 200 300 Kilometres
MAIN MAP EXTENT
New South Wales
Great Dividing R
Newcastle
Sydney
Canberra
COONAMBLE
326 m
WARREN
GILGANDRA
Gilgandra
279 m
340 m
CCA Zone 1 National Park Breelong
Eumungerie
Trangie
CCA Zone 1 National Park Goonoo
A32
NARROMINE
Rawsonville
Narromine
DUBBO REGIONAL
Dubbo
B44
Wongarbon
545 m
Geurie
Legend
Subject Lot
Local Government Area
Central-west Orana Renewable Energy Zone
Railway Corridor
Major Road
Major Watercourse
0 2.5 5 10 15 20 25
Scale @ A4 1:500,000 Kilometres
N
GDA 1994 MGA Zone 55
KLEINFELDER
Bright People. Right Solutions.
www.kleinfelder.com
PROJECT REFERENCE: 25003672
DATE DRAWN: 24/03/2025 Version 1
DRAWN BY: RHourigan
DATA SOURCE:
Esri - 2025
NSW Spatial Services - 2024
REGIONAL CONTEXT
EDIFY ENERGY PTY LTD
BURROWAY SOLAR FARM,
SUBMISSIONS REPORT
BURROWAY, NSW 2821
FIGURE:
1
Path: J:\00 CLIENT FILES\137540_EdifyEnergyPtytd\25003672_BurrowaySolar_RTS\250303_BurrowaySolar_RTS.aprx (1)



0 0.5 1 2 3 4 5

Scale @ A4 1:120,000 Kilometres

GDA 1994 MGA Zone 55

N

KLEINFELDER
Bright People. Right Solutions.
www.kleinfelder.com

PROJECT REFERENCE:	25003672
DATE DRAWN: 13/05/2025	Version 1
DRAWN BY:	RHourigan
DATA SOURCE: Esri - 2025 NSW Spatial Services - 2024	

LOCAL CONTEXT

EDIFY ENERGY PTY LTD
BURROWAY SOLAR FARM,
SUBMISSIONS REPORT
BURROWAY, NSW 2821

FIGURE:

2

Path: J:\00 CLIENT FILES\137540_EdifyEnergyPtytd\25003672_BurrowaySolar_RTS\250512_BurrowaySolar_RTS.aprx (2)

1.2 PROJECT OVERVIEW

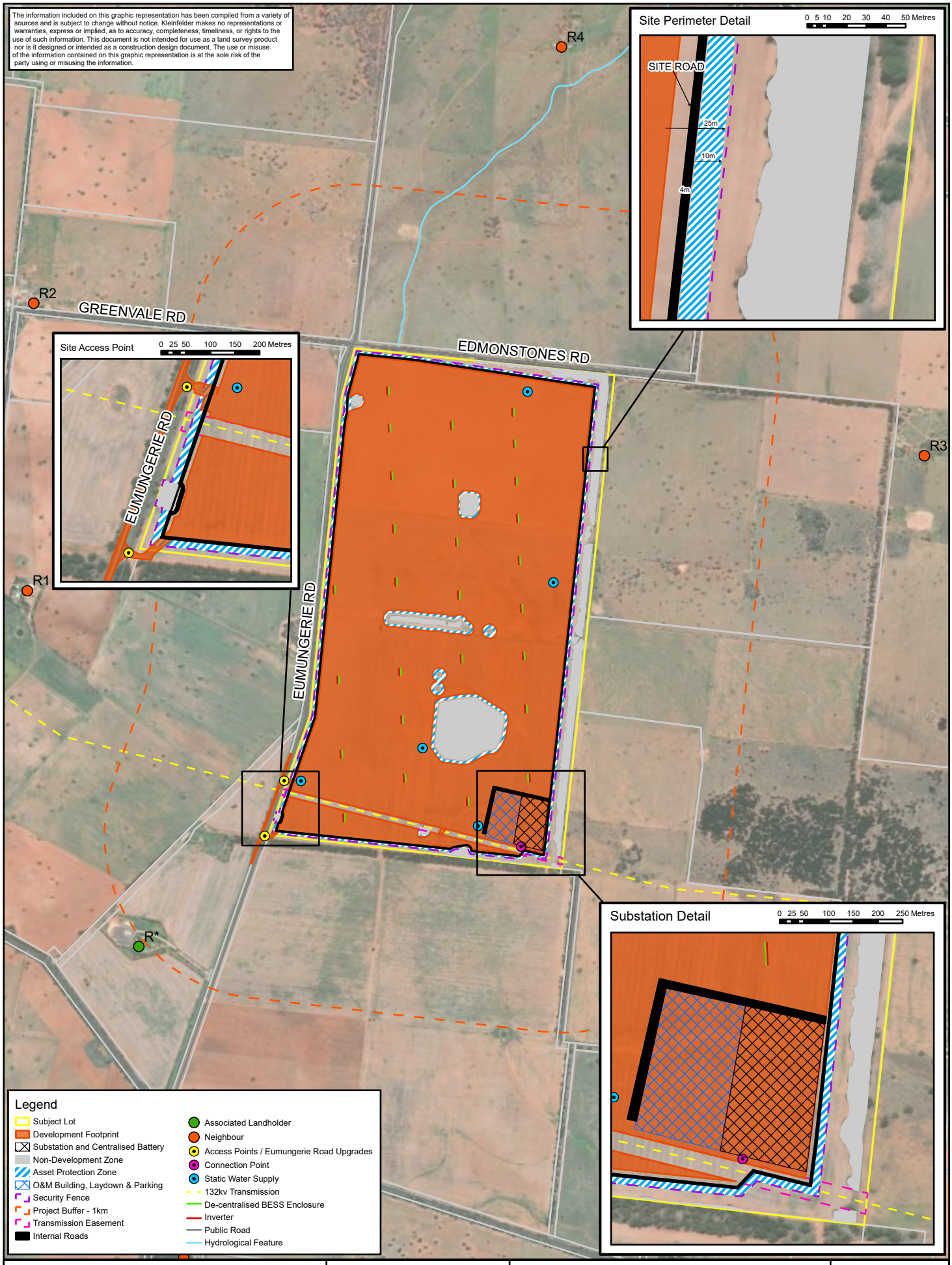
An overview of the project is shown in **Figure 3**. The project area encompasses 495 hectares (ha), with the development footprint currently encompassing approximately 396 ha, which extends partially outside of the subject lot for the minor access road connections to Eumungerie Road. The project will comprise the following key components:

- Approximately 200,000 PV solar panels interconnected to form solar arrays
- Inverters and integrated transformers combined in prefabricated enclosures (one inverter and transformer for each array)
- Solar substation and electricity line infrastructure connecting the substation to the 132 kV distribution line.
- Tracking system
- Metal mounting structures and piles foundations
- Above ground DC cabling
- Internal access tracks
- Site accesses from Eumungerie Road
- Underground medium voltage network
- Firefighting assets such as water tanks and designated accesses
- Ancillary infrastructure such as security fencing and parking, and site office buildings (both temporary and permanent for the duration of project operation)
- Battery energy storage system units comprising sealed lithium- ion batteries housed in enclosures (approx. 3m in height), with a capacity 100 MW / 400 megawatt hours (MWh)

1.3 PURPOSE OF THIS REPORT

Edify received correspondence from DPHI on November 8, 2024, requiring responses to the matters raised in the submissions to the EIS. Accordingly, this submissions report has been prepared by Kleinfelder Australia Pty Ltd (Kleinfelder) in accordance with the *State significant development guidelines – preparing a submissions report* (DPHI 2024a) (Submissions Report Guidelines). The purpose of this report is to consider and respond to submissions made by agencies, organisations and the general public during the public exhibition of the EIS.

Following lodgement of this submissions report, DPHI will prepare its assessment report, considering the submissions received, and the project's response to these submissions.



0 150 300 600 900 1,200 1,500

Scale @ A4 1:30,000 Metres

GDA 1994 MGA Zone 56

N

KLEINFELDER
Bright People. Right Solutions.
www.kleinfelder.com

PROJECT REFERENCE:	24001591
DATE DRAWN:	13/05/2025 Version 1
DRAWN BY:	RHourigan
DATA SOURCE:	Esri - 2023

PROJECT INFRASTRUCTURE LAYOUT AND CONSTRAINTS

EDIFY ENERGY PTY LTD
BURROWAY SOLAR FARM,
SUBMISSIONS REPORT
BURROWAY, NSW 2821

FIGURE:

3

Path: J:\00 CLIENT FILES\137540_EdifyEnergyPtytd\25003672_BurrowaySolar_RTS\250512_BurrowaySolar_RTS.aprx (3)

2 ANALYSIS OF SUBMISSIONS

2.1 SUMMARY OF SUBMISSIONS

During the public exhibition of the EIS, 82 public submissions were received by DPHI. Of the 82 submissions received, 77 were from individuals and 5 were from organisations.

In addition, 13 regulatory agencies provided advice on the project, including Narromine Shire Council, the relevant local government authority.

A submissions register is provided in **Appendix A** of this report, which lists all submissions received. A summary of submissions, including the total number of submissions who oppose, support or commented on the project, is provided in **Table 2-1**.

Table 2-1: Summary of Submissions Received

Source	Objection	Support	Advice	Total
Public- Individual	75	2	-	77
Public- Organisation	5	-	-	5
Sub-total	**80**	**2**	**-**	**82**
Government/Referral Agency	-	-	13	13
Total	**80**	**2**	**13**	**96**

The following government agencies and other stakeholders relevant to the project provided advice on the project:

- NSW DCCEEW – Biodiversity, Conservation and Science Group (BCS)
- Airservices Australia
- Narromine Shire Council
- Crown Lands
- Department of Primary Industries and Regional Development (DPIRD) – Fisheries
- Department of Primary Industries and Regional Development – Agriculture
- Department of Primary Industries and Regional Development – Resources
- Fire and Rescue NSW
- NSW DCCEEW – Heritage NSW
- NSW DCCEEW – Water Group
- NSW Rural Fire Service
- Transport for NSW

All government agency submissions provided advice on the project, with no objections received. Five agencies acknowledged the project and did not provide further comment (Airservices Australia, Crown Lands, DPIRD Fisheries, DPIRD Resources and WaterNSW).

The following five organisations provided submissions objecting to the project:

- Rainforest Reserves Australia
- Save Our Surroundings (Moulamein region)
- Save Our Surroundings (Murrumbidgee region)
- Save Our Surroundings (Riverina region)
- Save Our Surroundings (Romsey region)

2.2 RESPONSE APPROACH

All submissions received were collated and categorised based on who they were from, in accordance with the following categories:

- Government or other agencies
- Public submissions from individuals and organisations

The submissions were reviewed, and the key matters raised in each submission identified.

2.3 CATEGORISATION OF SUBMISSION MATTERS

Matters raised in the submissions have been classified as one of the following five broad categories in accordance with the Submissions Report Guidelines (DPHI 2024):

- The project (e.g. the site, the location, the physical layout and design, key uses and activities, timing)
- Procedural matters (e.g. the level of quality of engagement, compliance with the Secretary's Environmental Assessment Requirements (SEARs), identification of relevant statutory requirements)
- The environmental, social or economic impacts of the project (e.g. amenity, air quality, biodiversity, heritage)
- The justification and evaluation of the project as a whole (e.g. consistency of project with Government plans, policies or guidelines)
- Issues that are beyond the scope of the project assessment (e.g. broader policy issues) or not relevant to the project

Each of these categories have been divided into sub-categories (such as biodiversity, air quality, land, noise impacts) and then key matters raised have been correlated with these sub-categories as outlined below in **Table 2-2**.

2.4 PUBLIC SUBMISSIONS

2.4.1 Origin of public submissions

The number of public submissions were analysed by their locality and distance from the project. Public submissions came from 43 different localities. Of these 43 localities:

- 0% are from the local area (i.e. less than 5 kilometres (km) from the project),
- 7% are from the regional area (i.e. 5 –100 km from the project), and
- 93% comprise broader community interest (i.e. greater than 100 km from the project).

Of the 93%, comprising 77 submissions from broader community interest, 18 submissions were made from Victoria (VIC) and five made from Queensland (QLD) localities. The origin of public submissions is shown in **Figure 5**.

2.4.2 Summary of matters raised in public submissions

A list of the matters raised within the public submissions and where they have been addressed in this report is provided in **Table 2-2**. A graphical representation of the number of submissions received in relation to each sub-categories is provided in **Figure 4**. The common key matters raised in the 80 public objection submissions are as follows:

- Impacts on and loss of agricultural land (46% of objection submissions)
- General impacts to biodiversity (37% of objection submissions)
- Contamination from project infrastructure (33% of objection submissions)
- Project justification and evaluation (28% of objection submissions)
- Justification on the location of renewable projects (25% of objection submissions)
- Construction and decommissioning waste management (20% of objection submissions)
- Impacts on landscape and visual amenity (19% of objection submissions)
- Fire risk from project infrastructure (17% of objection submissions)
- Mental Health and wellbeing (16% of objection submissions)

Table 2-2: List of Matters Raised in Public Submissions

Key Matter	Sub-category	Number of Submissions	Percentage of Submissions	Relevant Section where Submission is Addressed
The Project				
Site suitability	Site suitability	5	6%	Section 5.1.1
Project infrastructure layout	Infrastructure layout	1	1%	Section 5.1.2
Procedural matters				
Assessment process and guidelines	Assessment process	1	1%	Section 5.2.1
Inadequate engagement	Engagement	2	2%	Section 5.2.2
The environmental, social or economic impacts of the project				
General environmental and local flora/fauna impacts	Biodiversity	30	37%	Section 5.3.1
Impacts on birds	Biodiversity	6	7%	Section 5.3.1
Offsetting biodiversity impacts	Biodiversity	1	1%	Section 5.3.1
Impact on and loss of agricultural land	Land and Soils	37	46%	Section 5.3.2
Air quality	Air	1	1%	Section 5.3.3
Landscape and visual amenity	Landscape and visual	15	19%	Section 5.3.4
Cultural heritage	Cultural Heritage	2	2%	Section 5.3.5
Noise	Noise	4	5%	Section 5.3.6
Traffic	Traffic	4	5%	Section 5.3.7
Water	Water	3	4%	Section 5.3.8
Contamination	Contamination	27	33%	Section 5.3.9
Waste	Waste	16	20%	Section 5.3.10
Aviation	Hazards	2	2%	Section 5.3.11
Fire Risk	Hazards	14	17%	Section 5.3.11
Firefighting resources	Hazards	2	2%	Section 5.3.11
Electro-magnetic fields	Hazards	1	1%	Section 5.3.11
Radiant heat	Hazards	1	1%	Section 5.3.11
Livestock welfare	Social/Other	3	4%	Section 5.3.12
Mental health	Social	13	16%	Section 5.3.12

Key Matter	Sub-category	Number of Submissions	Percentage of Submissions	Relevant Section where Submission is Addressed
Local workforce	Social	1	1%	Section 5.3.12
Community and lifestyle	Social	8	10%	Section 5.3.12
Property values	Economic	1	1%	Section 5.3.13
Local economy and business	Economic	12	15%	Section 5.3.13
Insurance cost	Economic	4	5%	Section 5.3.13
Greenhouse gas emissions	Greenhouse gas	3	4%	Section 5.3.14
Justification and evaluation of the project				
Justification and evaluation	Other matters	22	28%	Section 5.4
Issues that are beyond the scope of the project				
Justification for renewable energy	Beyond scope	7	8%	Section 5.5.1
Supply of project Infrastructure	Beyond scope	1	1%	Section 5.5.2
Decommissioning bank guarantee	Beyond scope	5	6%	Section 5.5.3
Location of renewable projects	Beyond scope	20	25%	Section 5.5.4
Electricity costs	Beyond scope	2	2%	Section 5.5.5

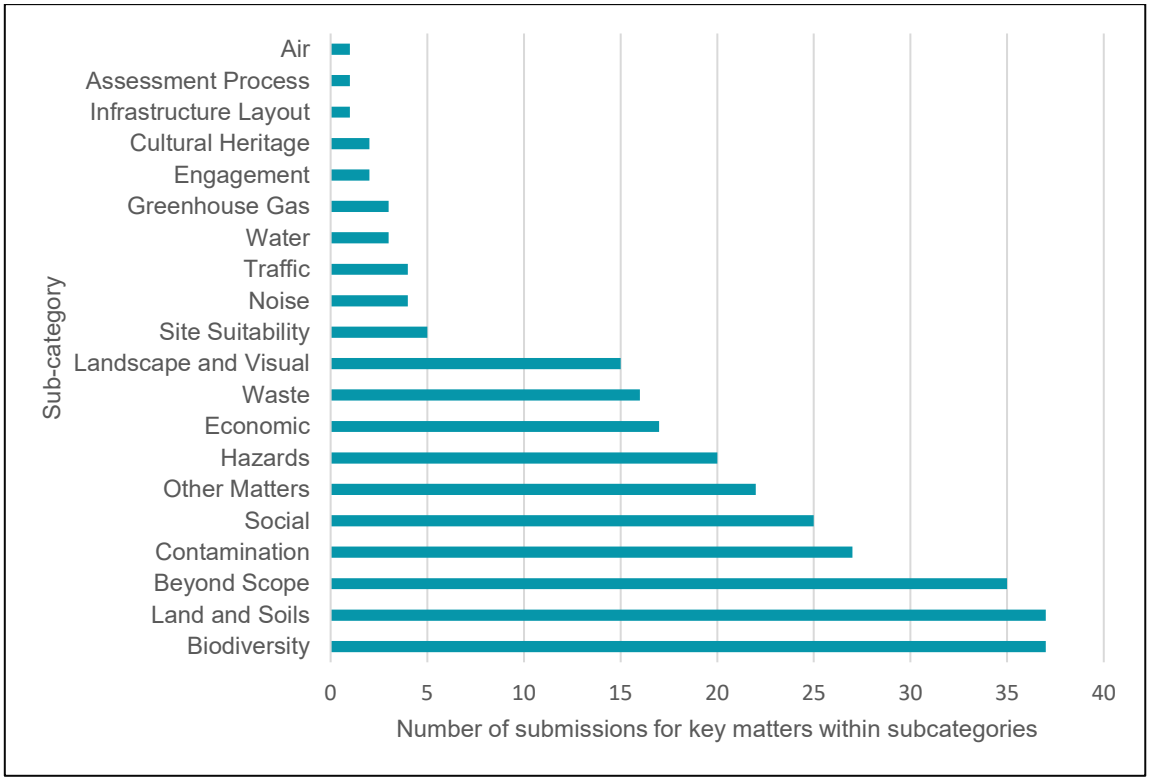
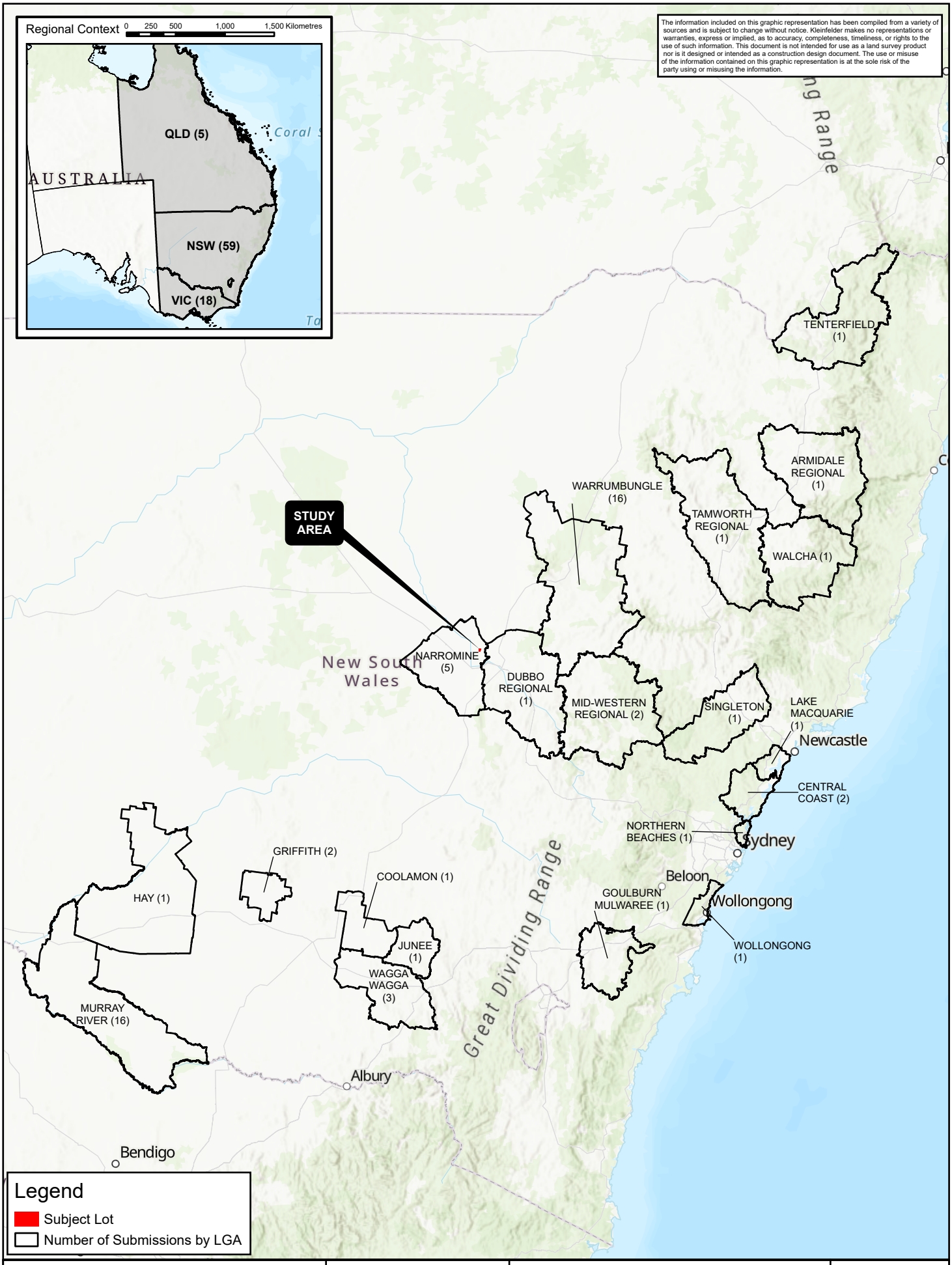


Figure 4: Sub-categorisation of Public Submissions



PROJECT REFERENCE:	25003672
DATE DRAWN:	24/03/2025 Version 1
DRAWN BY:	RHourigan
DATA SOURCE:	Esri - 2025 NSW Spatial Services - 2024

ORIGIN OF PUBLIC SUBMISSIONS

EDIFY ENERGY PTY LTD
BURROWAY SOLAR FARM,
SUBMISSIONS REPORT
BURROWAY, NSW 2821

FIGURE:

5

KLEINFELDER
Bright People. Right Solutions.
www.kleinfelder.com

Path: J:\00 CLIENT FILES\137540_EdifyEnergyPtytd\25003672_BurrowaySolar_RTS\250303_BurrowaySolar_RTS.aprx (4)

3 ACTIONS TAKEN SINCE EIS EXHIBITION

3.1 PROJECT REFINEMENTS

Following receipt of the public and agency submissions, a number of minor project refinements have been made to address and more thoroughly assess the topics of the submissions. These are detailed below.

3.1.1 Development footprint

In response to the submission by BCS, the project footprint was reviewed against the draft Native Vegetation Regulatory mapping, which was published for the project location on December 24, 2024, to ensure the development footprint avoids impacts to regulated land. The development footprint was minorly refined to completely excise the single patch of mapped category 2 sensitive regulated land including a 10m buffer between the vegetation and infrastructure known as the Asset Protection Zone (APZ). This patch of vegetation was verified as plant community type 202 in October 2022 and as such was already excluded from the development footprint. The recently released draft Native Vegetation Regulatory mapping overlays this patch with a larger polygon, that has not been ground verified and minorly intersects the development footprint boundary. As such, the development footprint boundary was updated to avoid this intersection including provision of a 30 m buffer between the mapped sensitive regulated land extent and the development footprint.

The project already avoids several paddock trees and rectangle area of vegetation, verified as planted trees, which are mapped as category 2 regulated land. Various other scattered trees shown on the aerial are mapped across the subject lot as category 2 regulated land, which have not been excluded from the development footprint, as most of these were found to no longer exist and the few extant examples have been avoided as stated above.

This adjustment to mapping to avoid the category 2 sensitive regulated land has not impacted the investigations conducted for the BDAR to date including the offset obligation, nor does it affect findings and conclusions of the other supporting technical reports compiled for the EIS.

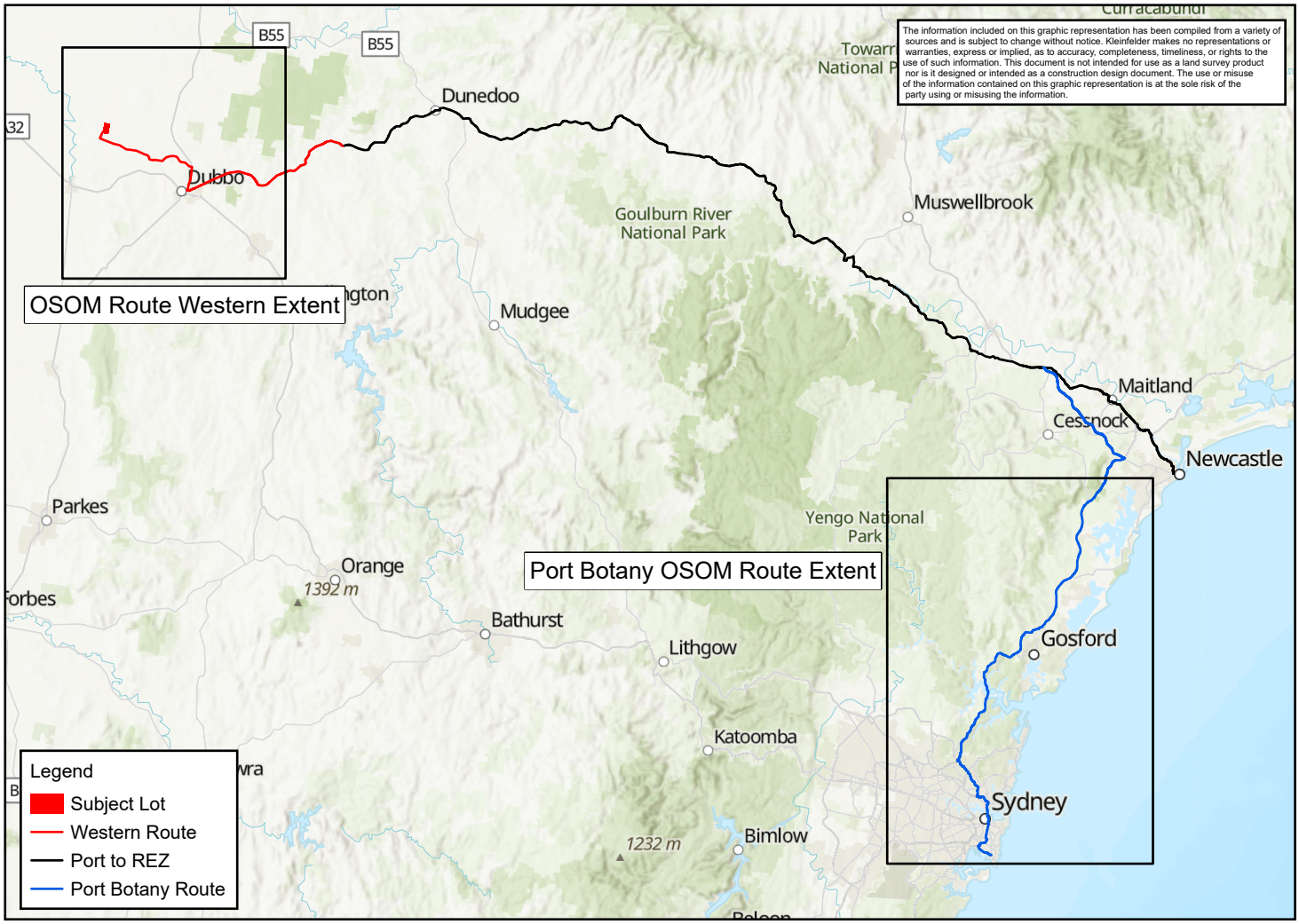
Separately, the Traffic Impact Assessment (TIA) undertaken as part of the EIS assessment, identified the requirement for upgrades to Eumungerie Road at the two proposed site access locations to facilitate safe access by project heavy vehicles and light vehicles, and allow for safe sight distances of traffic entering and exiting the project site. The recommended upgrades are a basic-right turn (BAR) installation and requires minor pavement widening on both sides of the existing pavement, at the two access locations. The overall project development footprint has been consolidated to include the BAR treatment footprints proposed in the Eumungerie Road corridor. The footprints for the two proposed BAR's into the site had previously been discussed and assessed within the EIS and the supporting technical assessments, however they had not been adequately reflected in the final project infrastructure layout on submission of the EIS.

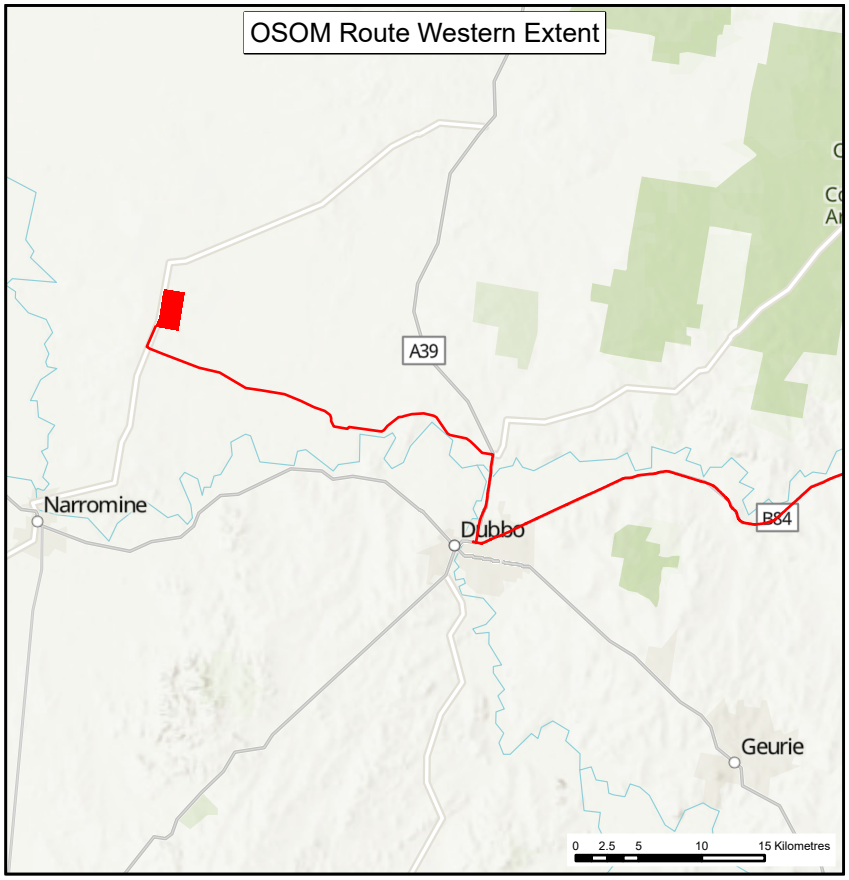
3.1.2 Fire risk mitigation

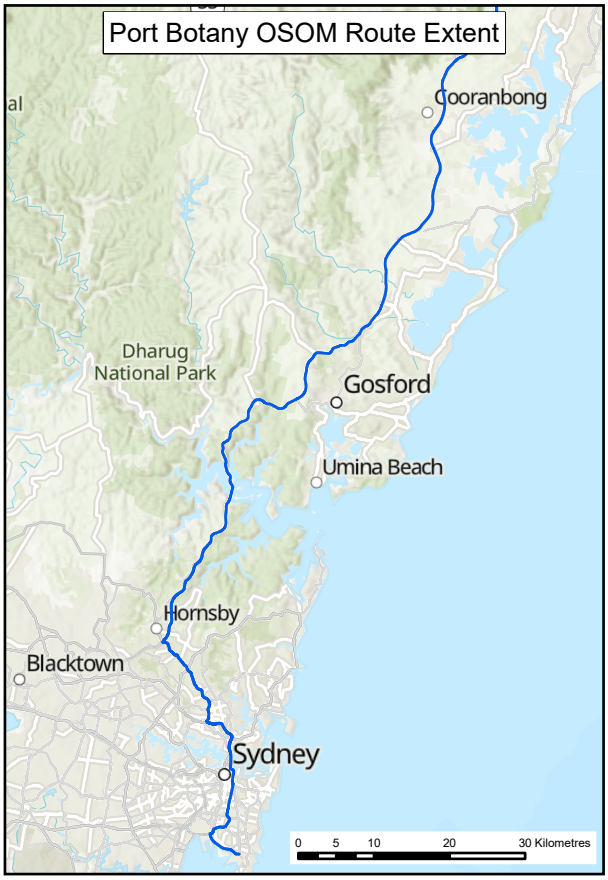
In response to the NSW RFS submission during the public exhibition, the project site layout figure was updated to clearly illustrate fire-fighting asset locations, including the location of five 45,000 litres (L) water tanks as shown in **Figure 3**. This update has not resulted in a change to the overall project footprint; however it is a refinement of the site layout and infrastructure for firefighting resources as the original BFAR only provisioned one 20,000 L static water supply for firefighting purposes to be available on site at all times.

3.1.3 Transport routes

A number of port to project transport routes for oversize and overmass (OSOM) vehicles were detailed in the EIS. In response to the TfNSW submission, further clarification and assessment of these routes has been undertaken as part of this submissions report. The two routes now proposed for OSOM vehicles for the project construction phase are confirmed to be from Port Botany and Port of Newcastle to the project site. These are shown in **Figure 6** and discussed in the response to the TfNSW submission in **Section 4.9**







0 10 20 40 60 80 100
Scale @ A4 1:2,000,000 Kilometres
GDA 1994 MGA Zone 55
N

KLEINFELDER
Bright People. Right Solutions.
www.kleinfelder.com

PROJECT REFERENCE:	25003672
DATE DRAWN: 24/03/2025	Version 1
DRAWN BY:	RHourigan
DATA SOURCE: Esri - 2025 NSW Spatial Services - 2024	

OSOM TRANSPORT ROUTES

EDIFY ENERGY PTY LTD
BURROWAY SOLAR FARM,
SUBMISSIONS REPORT
BURROWAY, NSW 2821

FIGURE:

6

Path: J:\00 CLIENT FILES\137540_EdifyEnergyPtytd\25003672_BurrowaySolar_RTS\250303_BurrowaySolar_RTS.aprx (5)

3.2 ENGAGEMENT

Stakeholder engagement for the project commenced in 2022 and has been comprehensive to date. A summary of engagement carried out during the preparation of the EIS is provided in Chapter 6 of the EIS.

Since the lodgement of the EIS, Edify has continued to engage with stakeholders as presented in **Table 3-1**.

Table 3-1: Summary of Engagement post-EIS Submission

Stakeholder	Engagement Summary
Aboriginal Community	Edify Energy provided a letter via email to all Registered Aboriginal Parties (RAPs) (**Appendix B-1**) and other stakeholders involved in the Aboriginal Cultural Heritage Assessment Report (ACHAR) process on January 31, 2025. The letter summarised: • Findings of the ACHAR • Project key dates • Next steps • Location of key documents • Information about Edify Energy and projects in operation Edify also met with the Nguumambiny Indigenous Corporation in person on February 6, 2025, to discuss the project and potential training and employment opportunities. The RAPs involved in the Aboriginal cultural heritage site surveys as part of the ACHAR in 2023, were contacted by OzArk Environment and Heritage on 28 March 2025 to inform them of the surveys conducted in the Eumungerie Road corridor on April 2, 2025. The surveys were a brief inspection of the two site access footprints, which were not part of the original surveys, in which a RAP representative was present and did not identify additional constraints or issues. Edify have liaised with the Narromine LALC during both the EIS phase and post-exhibition phase, including an in-person meeting with the Narromine LALC CEO and Chairman on February 6, 2025, to discuss the project and potential training and employment opportunities. Meeting outcomes included Narromine LALC providing contact details for support for future project work.
DPHI	Edify continued to engage with DPHI during the public exhibition of the EIS and as part of the preparation of this submissions report. A meeting was held on November 28, 2024, to discuss the project response to submissions requirements and any concerns raised by DPHI for the project.
Narromine Shire Council	Edify and Narromine Shire Council regularly corresponded throughout 2024, with an email update sent identifying the upcoming Public Exhibition in October 2024 and a discussion held in November 2024 to discuss a Voluntary Planning Agreement (VPA). During this meeting, Edify stepped through the design, in particular the centralised vs distributed BESS configuration to provide clarity on land impacts. NSC have since provided a letter of support (**Appendix B-2**) on February 12, 2025. Edify continues to liaise with Narromine Shire Council and provide regular updates on the project, as well as initiate discussions on project water sourcing and disposal of waste (**Appendix B-3)**.
Sunrise Metals	Edify liaised with Sunrise Metals throughout 2024 and in January 2025 to communicate project updates and provide key project documents and spatial files as requested by Sunrise Metals.

3.3 FURTHER ASSESSMENT OF IMPACTS

The Aboriginal cultural heritage assessment report has been updated in response to comments from Heritage NSW as well as findings of the additional survey effort conducted in the Eumungerie Road corridor. The footprints for the two proposed BAR's into the site had previously been discussed and assessed within the EIS and the supporting technical assessments, however they were not surveyed as part of the Aboriginal cultural heritage assessment, which had only conducted site surveys within the subject lot boundary. Prior to the additional field surveys of the two BAR footprints conducted on April 2, 2025, RAPs were notified of the proposed additional survey and subsequent upgrade of the ACHAR. No additional sites or constraints were identified during the surveys, and the RAP representative attending the survey did not raise any concerns with the proposed footprints. The updated ACHAR is appended to this submissions report under **Appendix E**.

The following technical assessments have also been updated or undertaken in response to matters raised by government agencies:

- Biodiversity development assessment report (BDAR) – the BDAR has been updated in response to comments from NSW Department of Climate Change, Energy, the Environment and Water – Biodiversity, Conservation and Science Group (BCS). The updated BDAR is appended to this submissions report under **Appendix D**.
- Traffic impact assessment (TIA) – the TIA has been updated to in response to comments from Transport for NSW and Narromine Shire Council. The updated TIA is appended to this submissions report under **Appendix F**.
- Water resources assessment – further information has been provided on the project water use and supply in response to comments from Narromine Shire Council and NSW DCCEEW- Water. This information has been detailed throughout **Section 4**.
- Bush fire assessment report (BFAR) – further information on infrastructure layout and firefighting resources has been provided in the amended BFAR in response to comments from the NSW RFS. The updated BFAR is appended to this submissions report under **Appendix G**.
- Waste generation and disposal – further information has been provided on project waste generation and disposal facilities available to accept project waste, in response to Narromine Shire Council comments. This information has been detailed throughout **Section 4**.

4 RESPONSE TO AGENCY SUBMISSIONS

4.1 INTRODUCTION

A submissions register is provided in **Appendix A**, which lists all submissions received from government agencies and council.

As noted in **Section 2.1**, 13 agencies provided advice on the project. Each of the matters raised by government agencies and council are provided in blue boxes in the sub-sections below, followed by a response to the comment or advice. The submissions received from these agencies and council that required no further consideration are outlined in **Table 4-1**.

Table 4-1: No Further Response Required

Agency	Submission	Response
Airservices Australia	Australia does not have any set regulations for solar panel installations, so defer to FAA guidelines. As such, those guidelines only require assessment regarding potential glare directed to Airservices/RAAF air traffic control (ATC) towers – of which none are in the immediate vicinity. However, a further consideration for Airservices is potential impacts/interference to any of our ground-based communications, navigation and surveillance (CNS) facilities. Noting that the proposed solar farm is approximately 17 km from Narromine aerodrome and 24 km from Dubbo, it is beyond the extent of any building restricted areas associated with any CNS facilities at these locations. Therefore, considering this solar farm under the current FAA guidelines, Airservices have no concerns.	CASA's submission did not contain matters requiring further consideration in this report.
Crown Lands	As no Crown land, roads or waterways in the vicinity of the proposal and are not affected by the proposal, Crown Lands has no comments at this time.	Crown Land's submission did not contain matters requiring further consideration in this report.
Department of Primary Industries and Regional Development-Fisheries	The footprint of the development does not contain any Key Fish Habitat. Our department does not have any comment.	DPIRD Fisheries' submission did not contain matters requiring further consideration in this report.
Department of Primary Industries and Regional Development-NSW Resources	NSW Resources has reviewed the information supplied in relation to the project, we note the ongoing commitment to consultation with the title holders of Exploration Licence (EL) 8961 and raise no issues regarding the project at this stage.	NSW Resources' submission did not contain matters requiring further consideration in this report.
WaterNSW	WaterNSW has reviewed the EIS and found that the proposal is not located near any WaterNSW land, assets or infrastructure. Therefore, we have no comments or requirements regarding the proposal. If required, the applicant will need to apply for a Water Access Licence (WAL) from WaterNSW for the extraction from existing or new groundwater bores. Requests will be assessed at the time of application.	WaterNSW's submission did not contain matters requiring further consideration in this report.

4.2 BIODIVERSITY, CONSERVATION AND SCIENCE

BCS provided recommendations and detailed comments on the BDAR to be addressed as part of the submissions report process. A BDAR was compiled and attached as Appendix G of the EIS and has since been updated in response to the BCS submission and provided in **Appendix D**.

1.1 Certify the BDAR in accordance with section 6.15(1) of the *Biodiversity Conservation Act 2016* and ensure it is submitted within 14 days of the certification date.

Certification of the BDAR has been provided on Page ii of the amended BDAR (**Appendix D**) and will be submitted within 14 days of the certification date.

2.1 Review the inconsistencies between native vegetation cover percentage in the BAM-C and spatial data, and ensure the correct native vegetation cover class has been entered into the BAM-C.

An outdated version of the native vegetation cover layer was provided with the BOAMS submission. This version related to a larger assessment area and showed 252.93 ha of vegetation cover. The correct area should be 222.73 ha or approximately 9% of the 2,481.88 ha study area. The revised cover layer has been provided with the updated BOAMS submission. The cover values included in the BDAR and BAM-C are correct and have not been changed.

2.2 Assess any additional candidate threatened species generated in the BAM-C if the native vegetation cover class increases, in accordance with section 5.2 of the BAM.

As the value for vegetation cover in the BAM-C was correct, no change in cover class was required and no additional species were generated.

3.1 Provide justification for PCT selection by systematically excluding other PCT options.

A more extensive justification for the selection of PCT 55 has been provided in Table 4-1 of the amended BDAR (**Appendix D**). This includes consideration of alternative PCTs and provides reasons for the ultimate selection of PCT 55.

4.1 Ensure that that areas of sensitive regulated land that are to be excluded are completely excised from the development footprint.

As detailed in Section 3.1.1 of this submissions report, the footprint has been updated to completely excise the mapped area of category 2 sensitive regulated land. Consequently, all figures within the amended BDAR (**Appendix D**) have been updated to reflect the refined footprint. This change does not affect the offset obligation.

Figure 3 of this submission report illustrates this minor refinement to completely excise the mapped category 2 sensitive regulated land in the central southern extent of the subject lot, including application of a 10 m APZ within a 30 m buffer.

4.3 NARROMINE SHIRE COUNCIL

NSC queried various aspects of the EIS and the DA process.

Concept Waste Management

The concept waste management plan commits to the preparation of a Detailed Waste Management Plan and a Construction Waste Management Plan to be approved by Narromine Shire Council prior to construction commencing. Clarification is sought if this references the same document.

Narromine Shire Council waste facility was not identified as a location for waste disposal or recycling. Evidence of consultation with the proposed receival facilities and the traffic associated with waste disposal leaving the Shire is requested to be documented and assessed.

It is unclear whether site preparation works involve any waste volumes e.g.: removal of any farm fencing and infrastructure.

The developer needs to be aware Trangie and Tomingley do not accept commercial waste (therefore cannot be considered a disposal site for this project).

The documentation states "the three waste facilities in Narromine do not accept Hazardous Wastes" this is correct, but Narromine Waste Facility can accept asbestos if appropriately contained/wrapped and the site is notified.

The 'Detailed Waste Management Plan' wording was a grammatical error that duplicated reference to a single detailed Construction Waste Management Plan.

Edify have consulted with the NSC Manager of Waste and Community Facilities (**Appendix B-3**) and confirmed that the Trangie waste facility, located within the Narromine Shire Council LGA, is able to accept most of the anticipated construction and operation materials detailed in the Concept Waste Management Plan (Appendix F of the EIS), with the Narromine facility available to accept the remaining construction and operation waste as well. Further consultation to open an account will be conducted once an Engineering, Procurement and Construction (EPC) contractor has been selected and a detailed Construction Waste Management Plan has been compiled.

At this phase of the project, no farm infrastructure is proposed to be removed from the land parcel during site preparation works. Other site preparation works will include installation of access roads and minor pavement works to Eumungerie road, which will result in minor quantities of spoil material where site materials cannot be re-used. The volume of material for spoil cannot be estimated at this phase of the project until geotechnical investigations have been conducted, however they will be detailed in the Construction Waste Management Plan.

Traffic Impacts

NSC has concerns around the significant increase of Heavy Vehicles on the Eumungerie Road during the construction period. The Traffic Impact Assessment notes that Truck and Dog vehicles would transport quarry material, from Narromine.

Justification of the assessment around number of vehicles turning into the facility from Narromine is requested. NSC would like to understand how realistic this is and whether a BAL should be considered in addition to the BAR. The commitments to sourcing of local materials would indicate that a greater percentage of trucks from the south via Eumungerie Road would be expected.

The traffic impact assessment has not identified any specific local school bus routes and conflicts that may arise from existing accesses and stops used in vicinity of the site and main transport route. A measure should be included to ensure the safety of buses stopping and identify that it is not only heavy vehicles that may conflict with bus safety.

As detailed in Section 3.2 of the amended TIA (**Appendix F**), access distribution for each type of vehicle is likely to be entering site in the construction and operation period would all be from the south via Eumungerie Road. The access distribution and vehicle type entering/exiting site were assessed against the *Austroads Guide to Traffic Management Part 6* which has resulted in the determination for a BAR treatment to facilitate site access. No vehicle movements are expected to/from the north as there are no large townships or quarries within a reasonable distance of the site. Accordingly, no left turn treatment is required, as all project traffic would arrive from the south and turn right into the site.

At this phase of the project, all project traffic including light and heavy vehicles, are proposed to be entering the project site from the south via Eumungerie Road, with the heavy vehicle access necessitating installation of a BAR into the subject lot.

Section 2.4 of the amended TIA (**Appendix F**) identified three school bus services on local and regional roads within vicinity of the site that stop at regular intervals along the roads, detailed as follows:

- The S661 school bus travels along Eumungerie Road and Dubbo-Burroway Road between 8.12am to 8.43am and 3.38pm to 4.08pm.
- The S151 Rawsonville route travels along Burraway Road between Coolbaggie Road and Newell Highway from 7.40am to 8.05am and 4.05pm to 4.25pm.
- The S160 Buddah route travels along Warren Road between Eumungerie Road and Mitchell Highway from 8.30am to 8.45am and 3.15pm to 3.30pm.

Appendix C has been updated to include the following mitigation and minimization of conflicts with the local school bus routes:

- the project will avoid heavy vehicle movements in the peak school bus times to limit the interactions of larger vehicles with vulnerable vehicles.
- Construction personnel travelling to and from site using light vehicles will also be made aware of the school bus routes, stop locations and times, and will be encouraged to ensure extra care and vigilance when passing these vulnerable road users.

Future Approvals

The EIS in discussion of the proposed subdivision has not addressed the planning mechanism to achieve the subdivision. At which stage of the project the subdivision of land is required, has not been clearly detailed. The EIS states that "subdivision for the purpose of the internal substation and battery facility will be required". However, does not explain why this is required. Will the BESS (and substation) remain at end of life of the project and be excluded from rehabilitation, as is planned for the leased land?

If the subdivision of the land is required, this should be within the scope of the approval sought for the SSD project and not a separate Development Application approval to be determined by Narromine Shire Council, at some undisclosed future stage. An application for a subdivision certificate can be received by Council. If the land is to be acquired by Essential Energy and excised for a 'public purpose' pursuant to SEPP (Exempt and Complying Development Codes) 2008, this should be clarified in future submission report by Edify.

The EIS does not include plans for proposed structures, nor appropriate site plans, with buildings or transportable structures shown. The EIS mentions future applications for construction certificate would also be needed. The developer should consider that in accordance with s19 of the *Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021*, a certifier must not issue a construction certificate for building work unless the design and construction of the building, as described in the relevant building work plans and specifications, is consistent with the development consent. Consideration should be made as to whether further development applications are sought, or additional details of the proposed building work is provided.

As discussed in Section 4.1.1.5 of the EIS, the proposed subdivision of the subject lot is for the purpose of a substation and associated connection infrastructure, which connects into the Essential Energy owned and operated 132 kV line and will be owned and operated by Essential Energy as their permanent asset. The substation footprint is typically 0.5 – 1 ha and is permanent infrastructure that will not be removed during decommissioning, as it will form part of the National Electricity Network once constructed. An example of the main components of a substation are displayed in **Plate 1**. The substation is required to facilitate connection of the solar farm and BESS to the overhead 132 kV line. Note, if a centralised BESS facility is constructed it would be externally adjacent to the subdivided land for the substation, however it would be removed during decommissioning and rehabilitated back to the pre-existing land condition.

The subdivision will be pursued by Essential Energy under their own regulatory processes, likely to be acquisition of land for a *public purpose* as noted in the NSC submission, following determination of the project DA and finalisation of a power connection agreement. During this process, the infrastructure design and total footprint will be confirmed.

Plate 1: Example Solar Farm Substation Infrastructure and Footprint

Estimated Cost of Development

The EIS notes the Estimated Development Cost has been estimated by Denary Quantity Surveying and reported to Narromine Shire Council separately to the EIS. An abbreviated version dated 2 February was received. This was based on a preliminary design only and the scoping report information. NSC was expecting the CIV to be calculated at the time of lodgement of the EIS, with the calculations based on the details proposed, and with a breakdown of the items used to calculate the CIV. It is unclear if the road upgrade proposed, labour and personnel costs, including the payment of long service levies and other associated construction and labour costs, temporary laydown areas to be rectified have been included.

The Estimated Development Cost was provided separately to the EIS to NSC via email on December 10, 2024, which included updated costs for proposed road upgrades, labour and personnel, payment of long service levies and other associated construction and labour costs, as well as rectification of temporary laydown areas.

Project Footprint and Impact on Agricultural Land

The EIS states: 'Depending on an economic and technical assessment that will be undertaken during the project's Connection Application phase with Essential Energy, the BESS will be located either:

- **in a single, centralised location, next to the substation, or**
- **distributed in modular enclosures throughout the site, in a decentralised manner similar to typical solar inverter enclosures.'**

The assessment identifies that in areas where earthworks are necessary for construction of the BESS, substation and switching station, site facilities or access tracks, soils will be subject to higher impact disturbance. It appears the 'Burroway Solar Farm: Soil and Agricultural Impact Assessment' report assumes a centralised design. Commitments to returning land to pre-disturbance agricultural status following the life of the Project, should be

aligned with the design and measures for managing soil. Reducing the land required to have topsoil stripped and stockpiled for extensive periods is encouraged.

The impacts on land for a centralised versus distributed BESS configuration are negligible as the overall disturbance to the land as a result of the BESS has been captured as either the centralised design option, or as part of the solar array footprint. In Section 5 of the Burroway Solar Farm Soil and Agricultural Impact Assessment (SAIA) (Minesoils, 2023) impacts on land used for agriculture have been assumed over the entire 495 ha of the land parcel and were defined as a temporary decrease in agricultural land, in which the land use will be re-established on decommissioning.

A single, centralised BESS typically encompasses an area of up to 5 ha located next to the substation, in which the module enclosures are all installed on a hardstand pad. This centralised design option was assessed in the SAIA, with the impacts falling under the temporary decrease in land used for agriculture definition. The hardstand pad is typically built up on the existing surface, resulting in minor disturbance/removal of the topsoil. The centralised BESS option has been micro-sited on Land and Soil Capability (LSC) class 6 soils to ensure the temporary impact on higher class agricultural land identified throughout the site is avoided (Figure 11 of SAIA). Management in line with Section 6.2 of the SAIA will be undertaken throughout all phases of the project to ensure the pre-existing land use will be reinstated on decommissioning.

A distributed BESS configuration involves the micro-siting of individual battery enclosures with the solar inverter enclosures throughout the solar array footprint. Individual solar inverters are installed for each solar array throughout the site and have been assessed for impacts as part of the SAIA, defining them alongside the solar arrays as a temporary decrease in agricultural land use. The distributed battery enclosures, alongside the solar inverter enclosures, result in minimal disturbance of topsoil as they are installed on the existing surface on small pads throughout the solar array footprint. This infrastructure can be removed on decommissioning and rehabilitated to the original land condition without significant excavation or surface disturbance. Management in line with Section 6.2 of the SAIA will be undertaken throughout all phases of the project to ensure the pre-existing land use will be reinstated on decommissioning. The impacts as a result of a distributed battery system have therefore been accounted for as part of the solar array with inverters footprint.

Water Balance

The EIS provides vague details regarding water supply and use requirements. A water balance should be provided and the water source and proposed storages clarified. The estimated 30ML requirement is not specified as what this volume accounts for. Ensuring a fire-fighting volume is reserved is supported. The EIS does not clarify how much water is otherwise proposed to be stored onsite.

The Traffic Impact Assessment notes MRV and HRV movements during the construction period, includes both water trucks and vehicles transporting materials such as concrete and fencing supplies which would be sourced from Dubbo. Clarity surrounding whether this means both the water and materials are to be sourced from Dubbo is sought.

The EIS indicates that any water required for cleaning of the panels will be brought to site in water trucks. Additional clarity on where this water is sourced is sought to be provided. The Traffic Impact Assessment does not mention any truck movement in the operational traffic details (section 3.1.2).

The EIS states: 'the project is not expected to have any impact on the availability of current surface water or groundwater resources to local landholders during either construction or operation' (section 5.5.3.3). However, the source of water to supply the project has not been identified, other than to say is supplied from 'off site' (section 7.5.5).

Water supply requirements were summarised in Section 4.2.2 and Section 7.5 of the EIS and have been further detailed below in response to the NSC submission and outcomes of consultation with NSC (**Appendix B-3**).

Construction

The peak raw water (non-potable) demand is expected to occur during site set up, due to road construction and compaction, between months three and seven. The peak potable water demand is expected to occur during

installation of the solar panels and BESS when workforce is at 250 full-time equivalents (FTE), between months eight and ten. This results in the following estimated daily demand rates:

- Maximum daily non-potable construction demand = 75 kilolitres per day (kL/d)
- Maximum daily potable construction demand = 12.5 kL/d

The total water demand during construction has been estimated at 22 megalitres (ML), detailed as follows:

- Construction of Hardstands (BESS and substation): 0.2 ML
- Road Construction / Compaction: 9.5 ML
- Dust Suppression: 4.4 ML
- Vehicle and Equipment Washdown: 4.7 ML
- Potable Water: 3.1 ML

As stated in Section 4.2.2 of the EIS, the 30 ML of water use accounts for the estimated total water use during the construction and decommissioning phase, mostly for non- potable water use. The total construction water use relevant for each construction activity is listed above, with the remaining approximately eight ML from the total estimated 30 ML dedicated to decommissioning water use. Water usage will largely be facilitated via water carting to site during these periods, and by the 20,000 L static water supply tank that will be installed on site.

Operation

As stated in Section 4.2.2 of the EIS, up to 500 kL per year of potable water may be required during operation for cleaning, maintenance and staff amenities. The maximum daily operational demand provided below is a worst-case scenario based on the total 500 kL annual use, as it is anticipated that yearly rainfall will perform the cleaning required for the solar panels, and as such the expected daily operational water use will be closer to the 0.3 kL/d associated with water use for staff amenities. This water use will be provided by the proposed 20,000 L potable water tank located adjacent the operations and maintenance buildings (**Figure 3**).

- Maximum daily potable operational demand = 1.4 kL/d (0.3 kL/d for staff amenities, remaining 1.1 kL/d for maintenance including solar panel cleaning)

It is anticipated that all water sourcing during the operational phase will be potable, sourced from the local standpipe on Nymagee Street. Key maintenance activities such as cleaning of solar panels is expected to be facilitated by rainfall.

Water Sourcing

Edify has consulted with NSC on water sourcing and supply in which several Council sources were put forward as options, including:

- Potable water standpipe on Nymagee Street,
- Raw water standpipes at:
    - McGrane Way (near Nellie Vale Road intersection), and
    - Narromine wetlands dams.

NSC confirmed the standpipes can support three to five water truck loads per day, however supply during summer months may be reduced. All options are viable for water supply options as they are reasonably close to the project (between 18 and 20 km from site) and able to supply sufficient water for the project without compromising ongoing supply.

Assuming the water cart loads specified by NSC are approximately 15,000 L in capacity, the potable water supply requirements for the project construction and operation can be facilitated by the potable standpipe on Nymagee Street. The peak four months requiring a maximum 75,000 L non-potable daily water supply can also be facilitated by the two raw water standpipes, within the three to five water cart load NSC specification. The final sourcing option will not be selected until prior to construction commencing and will be agreed with NSC. Supply details and any potential reporting requirements will be included in the Environmental Management Plans for construction and operation.

As detailed in Section 3.1.2 of the amended TIA (**Appendix F**) the solar farm is expected to generate minimal level of traffic during operation for the purposes of maintenance and operational services. The operational water

demand detailed above will be serviced by the on-site 20,000 L static water tank, which would be filled approximately every 20 to 70 days from the local potable standpipe, with the 20- day re-fill interval accounting for the worst-case scenario of 1.4 kL/day demand. The non-potable static water supply associated with the five 45,000 L water tanks for fire-fighting purposes would also require intermittent inspection and filling from the local raw water standpipes. The traffic movements associated with filling the onsite water tanks is considered negligible.

Stormwater Management

Stormwater management has not been adequately addressed in the EIS and supporting documents. One of the key infrastructure installation activities, noted in the EIS, was the installation of drainage works and regrading of surface features. However, in section 4.3.1.10 Drainage Management the EIS states: No permanent drainage designs are required or proposed due to the reduced risk of stormwater run-off impacts. The future submissions should clarify the extent of site grading and drainage basins and the like.

It is unclear what measures are proposed. The developer should commit to ensuring post-development flows leaving the site are consistent with pre-development flows.

Potential impacts of surface water and proposed management of stormwater during construction and operation are discussed in Section 7.5 of the EIS and have been detailed further below in response to the NSC submission.

The subject lot is characterized by open plains, with a gently undulating rise of approximately 20 metres (m) in elevation in the middle of the lot. The subject lot is not mapped within a flood prone zone, nor are there any waterways within the subject lot or in close proximity, with the closest watercourse approximately 6 km from the subject lot at its closest point. The Burroway Solar Farm EIS has noted that there would only be regarding surface features where required (i.e. BESS and substation locations), however flexibility in design of solar arrays will allow installation of infrastructure over the minor site undulations without significant regrading of the surface.

No permanent drainage is proposed for the site, however temporary erosion, sediment and drainage controls will be utilized during construction to manage overland flow and stormwater run-off within the subject lot, ensuring sediment laden water does not exit the subject lot. These controls will be designed and implemented as part of a Construction Erosion and Sediment Control Plan (CESCP), to be developed in the pre-construction phase of the project. The CESCP will be developed in accordance with the Management Urban Stormwater: Soils and Construction (Landcom, 2004) and International Erosion Control Association Australasia guidelines. Operational management will involve maintenance of groundcover in the subject lot to maximise infiltration.

When considering the site context including the relatively flat topography and lack of defined flow paths on or leaving site, alongside the reduced ground disturbance anticipated and proposed stormwater run-off management during construction, post-development flows are expected to be consistent with pre-development flows.

Accommodation and Employment

The EIS references the pressure of the construction period on local accommodation for workers to be expected in Narromine. NSC would welcome future consultation regarding an accommodation and employment strategy. It is agreed that finalisation of this strategy during the detailed design and/or pre-construction phase is appropriate, to allow the most accurate information on the local and regional accommodation resources and relevant cumulative impacts be utilised.

Edify acknowledges this comment and commits to the development of an Accommodation and Employment Strategy in consultation with NSC.

Cumulative Impacts

The Burroway Wind Farm proposed by ACE Power, should be included as a project within close proximity to the Burroway Solar Farm by Edify.

The Burroway Wind Farm is in the initial scoping stage and not currently available on the NSW Major Projects portal. Cumulative impacts cannot be assessed as there are no project details available and given the stage this project is in; it is unlikely to have overlapping construction timeframes that would result in cumulative impacts.

4.4 DPIRD AGRICULTURE

The agriculture department of DPIRD requested further details in relation to the Agricultural Impact Assessment (AIA) (Minesoils, 2023) completed for the Burroway Solar Farm EIS.

Agri-solar Implementation

Further detail is required to support the proposed agri-solar enterprise. This should be included in a Grazing Management Plan including (but not limited to):

- **Sheep handling infrastructure such as fencing and laneways under the solar array, watering points, sheep yards, loading ramp, shearing shed, etc.**
- **Pasture management – the establishment and maintenance of appropriate pasture given the likelihood of weed invasion following cropping and expected soil disturbance for the construction and operational stages. Retention of at least 70% of ground cover is recommended.**

Edify acknowledges the comments from DPIRD and commits to the development of a Grazing Management Plan that will include details on sheep handling infrastructure and pasture management in the post-determination phases.

Edify have extensive experience in the implementation of 'Agri-solar' principles. 'Agri-solar' is an important evolution in the way land is used around solar farm infrastructure which involves the continuation of modified agricultural activities such as sheep farming. Edify's Gannawarra Solar Farm project currently hosts around 500 merino sheep, in regional Victoria, Kerang. Second to Gannawarra is Edify's Darlington Point Solar Farm located in southwest NSW, with merino lambs and approximately 400 ewes reported in January 2025. Various renewable projects in Queensland (including Edify's Collinsville Solar Farms) have reported success with 'Agri-solar' enterprises hosting sheep amongst solar farm infrastructure (Queensland Government, 2024).

Groundcover

- **In the event agriculture or agri-solar is not undertaken, ground cover should be maintained at a minimum of 70% to prevent soil erosion.**
- **Detail on the measures and management practices to re-establish vegetation and grazing on the land during the operation of the project need to be provided.**

Edify acknowledges the comments from DPIRD and commits to the development of a Vegetation Management Plan as a sub-plan under the Construction and Operation Environmental Management Plans post-determination, if Agri-solar enterprises are not pursued. The plan will ensure on completion of construction, groundcover has been established to at least 70% and will detail groundcover maintenance measures for the duration of operation.

Biosecurity

The *NSW Biosecurity Act 2015* was introduced to prevent, eliminate and minimise biosecurity risks, including adverse effects on the economy, environment or community. The proponent should develop a comprehensive Biosecurity Risk Management Plan for the project, including (but not limited to):

- **The management of the risk of introduction, presence, or spread of plant pests or diseases, weeds and pest animals.**
- **Actions for plant, machinery and washdown areas to ensure they are free of weed seed/plant material.**
- **Arrangements for decontamination of vehicles entering the site, and onsite plant and equipment, if they have come into contact with food, organic or animal waste that have moved directly from an agricultural premises or facility (e.g. a dairy, feedlot).**

The Biosecurity Risk Management Plan should consider all potential biosecurity risks and identify appropriate strategies to prevent, eliminate or minimise those risks. Please refer the proponents to the Biosecurity Risk Management in Land Use Planning and Development Guide for consideration.

Edify acknowledges the comments from DPIRD and commits to the development of a Biosecurity Risk Management Plan post-determination, that will include at a minimum the details requested in the submission stated above.

Decommissioning

The Department requires:

- **Dismantling and removing solar panels, structures and ancillary infrastructure (cables, inverters, fencing) from the site to a depth of 500mm and recycling, reusing or disposing materials and waste products, and returning the site to its pre-existing use and land and soil capability per the Land Capability Assessment Scheme (LSC) (Second Approximation) Class as identified in the AIA. It also involves disconnecting the development from the electricity network.**

Rehabilitation plans for all infrastructure during and post-construction with appropriate groundcover management usually locally native species to limit dust and other land use conflict issues.

Edify acknowledges the comments from DPIRD on decommissioning requirements and will abide by them as detailed in Section 7.2, Section 7.4 and Appendix D of the EIS, and repeated below as follows:

- A Concept Waste Management Plan under Appendix F of the Burroway Solar Farm EIS was drafted, which will be utilized to develop Construction, Operation and Decommissioning Waste Management Plans in the pre-construction and operation phases of the project. These plans will include measures for recycling, reusing and disposal of materials.
- The Burroway Solar Farm will be rehabilitated following decommissioning and removal of infrastructure to its previous use and pre-existing LSC capability as per the SAIA.

The DPIRD requirement for removal of infrastructure to a depth of 500 mm on decommissioning was not a commitment detailed in the EIS, however, Edify acknowledge this requirement and will include it under the decommissioning procedures. This commitment has been listed under *Waste* in **Appendix C** of this submissions report.

4.5 FIRE AND RESCUE NSW

Fire and Rescue NSW (FRNSW) provided recommended conditions to be implemented should the project be approved.

FRNSW notes the project includes a 100 MW / 400 MWh BESS and that BESS facilities present special problems of fighting fire and suitable additional provisional are likely to be required in accordance with E1D17 and E2D21 of the National Construction Code 2022. The following conditions have therefore been recommended:

1. **Prior to construction a Fire Safety Study (FSS) is developed in accordance with the requirements of the Hazardous Industry Planning Advisory Paper (HIPAP) No.2[2] and submitted to FRNSW for review.**
    - **The FSS is to be used to inform the design and as such it is FRNSW Position[3] that the FSS be developed to the satisfaction of FRNSW prior to any further submission being made to the 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 consideraitons[4].**
2. **Prior to occupation or commissioning an Emergency Plan (EP) is developed for the site in accordance with HIPAP No.1[5].**

3. **Prior to occupation or commissioning an Emergency Services Information Package (ESIP) is developed for the site in accordance with FRNSW fire safety guideline – Emergency services information package and tactical fire plans[6].**

4. **Prior to occupation or commissioning an emergency responder's induction package is developed for the site in consultation with, and to the satisfaction of FRNSW. The package should inform first responders of site-specific features and safety measures to ensure they are able to undertake their duties effectively. The format of the induction package should be such that it can be readily shared across all agencies.**

The Bushfire Impact Assessment (Appendix O of the EIS) and Section 7.9 of the EIS included commitments to prepare a Fire Safety Study and Bushfire Assessment Report at a minimum in consultation with emergency services during the design / pre-construction phase.

Edify acknowledges the recommendations from FRNSW and does not object to undertaking these requirements. Prior to operation of a BESS, Edify agrees to the imposition of conditions of consent requiring the preparation of:

- A Fire Safety Study in accordance with the requirements of HIPAP No.2
- An Emergency Plan in accordance with HIPAP No.1
- An Emergency Services Information Package (ESIP) in accordance with FRNSW fire safety guideline – Emergency services information package and tactical fire plans
- An Emergency Responders Induction Package

These updated commitments have been detailed in the amended mitigations in **Appendix C**.

4.6 NSW DCCEEW HERITAGE

4.6.1 Historical heritage

Heritage NSW provided the following comments and recommendations in relation to the Historic Heritage Assessment Report (OzArk Environment and Heritage, 2023).

- **The subject site is not included on any statutory heritage list and is not in the vicinity of any listed heritage items.**
- **The historic homestead 'Kookaburra' is adjacent to the project. The Historic Heritage Assessment Report (HHAR) has assessed that 'Kookaburra' (identified in the HHAR as HS1) does not meet the threshold for State or local significance. However, should the project area or development footprint be amended in the future to include 'Kookaburra' and its immediate surrounds a detailed assessment of its historical archaeological potential and heritage significance should be undertaken.**
- **The HHAR has assessed that there were no locations within the project area or development footprint with potential to contain significant historic subsurface archaeological deposits.**
- **The HHAR has recommended an unanticipated finds protocol be implemented during construction. Heritage NSW supports this assessment. Please refer to Attachment A for recommended draft conditions for historical archaeology.**

Edify acknowledges the recommendations from Heritage NSW and will implement the below unexpected find protocol provided in Appendix A of the Heritage NSW submission, as part of the project environmental management plan/s:

1. All reasonable steps must be taken to avoid harm, modification of, or impact to, relics except as authorised by this approval.
2. Ensure workers on site receive suitable heritage inductions prior to carrying out any development on site, and that records are kept of these inductions.
3. A procedure for the management of unexpected relics and human remains must be developed in consultation with Heritage NSW. This procedure must:
   a) be prepared in accordance with Heritage NSW guidelines and codes of practice; and
   b) include a hold point requiring the development of a revised Historical Archaeological Assessment in the event an unexpected relic is identified.

i) The Historical Archaeological Assessment must be prepared in accordance with the guideline Archaeological Assessment (1996) and Assessing Significance for Historical Archaeological Sites and Relics (2009) to inform and guide archaeological mitigation measures.
ii) If harm cannot be avoided in whole or part, an Archaeological Research Design and Excavation Methodology (ARDEM) with a nominated Excavation Director should also be prepared to guide any proposed excavations or salvage program.
iii) The Historical Archaeological Assessment must be provided to the Secretary of the Department of Planning, Housing and Infrastructure for approval in consultation with Heritage NSW.

c) must be implemented for the duration of the project.

The project refinements discussed in Section 3.1 will not impact on the Kookaburra historic homestead.

4.6.2 Aboriginal cultural heritage

Heritage NSW provided the following comments in relation to the Aboriginal Cultural Heritage Assessment Report (OzArk Environment and Heritage, 2023). The ACHAR has been updated in response to the NSW DCCEEW Heritage submission and is provided in **Appendix E**.

Consultation

We request that additional documentation of the consultation process be provided. The applicant needs to provide evidence that consultation was kept continuous as the last consultation recorded in the ACHAR is date August 2023. Heritage NSW requires that consultation with Registered Aboriginal Parties (RAPs) is continuous. Under our policy and guidelines, breaks in consultation of over six months may not constitute continuous consultation.

Edify have undertaken additional consultation with the RAPs involved in the ACHAR consultation and investigations for the project via a letter emailed out in January 2025 providing key project updates and timelines (**Appendix B-1**). This consultation was supplemented with in-person meetings with the Narromine LALC and the Nguumambiny Indigenous Corporation on February 6, 2025 to discuss the project and potential training and employment opportunities, as detailed in Section 3.2.

Notably, since the finalisation of the ACHAR in August 2023, there have been no project design amendments or critical changes to construction methodologies.

Code of Practice Compliance

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 generally requires, as per Requirement 1b of the *Code of Practice for Archaeological Investigation for Aboriginal Objects in NSW* (DECCW 2010), that AHIMS searches are less than 12 months old. Please provide and updated AHIMS search.

As per Section 89A of the *National Parks and Wildlife Act 1974,* please ensure that all Aboriginal objects and sites are registered with the Aboriginal Heritage Information System (AHIMS) in a reasonable timeframe. The 15 sites identified during the survey have not been provided to AHIMS.

The original AHIMS search conducted in March 2023 identified 46 records for Aboriginal heritage sites. An updated search of the AHIMS database was conducted on March 10, 2025 and returned 66 records for Aboriginal heritage sites within the same 15 x 15 km search area (GDA Zone 55 Eastings: 614615–640288 Northings: 6437338–6462260) provided in Appendix 3, Figure 2 of amended ACHAR (**Appendix E**). Fifteen of the additional Aboriginal sites recorded within the search area can be attributed to the results of the investigations conducted during the Aboriginal Cultural Heritage Assessment as detailed in Section 6 of the amended ACHAR (**Appendix E**). The remaining five records consist of one artefact site with a culturally modified tree (35-3-0346) and four artefact sites (27-6-0061, 35-3-0347, 35-3-0348, and 35-3-0349). These sites were recorded as part of the Narromine to Narrabri Inland Rail project and are distant to the current project.

The registration of the Aboriginal Cultural Heritage sites has been completed and AHIMS numbers have been added throughout the amended ACHAR and listed in Table 6-3 of the amended ACHAR (**Appendix E**).

Management and Mitigation Measures

Please update to relevant departmental names throughout the ACHAR.

Please include the Department of Planning, Housing and Infrastructure Compliance contact details (compliance@planning.nsw.gov.au) in the unexpected finds protocol.

Relevant departmental names have been updated throughout the amended ACHAR (**Appendix E**), including the abbreviations and glossary on pages v to vi.

The DPHI Compliance contact details have been included under Section 9.3 of the amended ACHAR (**Appendix E**).

4.7 NSW DCCEEW WATER

The NSW DCCEEW Water Group provided recommendations and comments for further detail required pre-determination. Water supply requirements were summarised in Section 4.2.2 and Section 7.5 of the EIS and have been further detailed below in response to the NSW DCCEEW Water group submission and outcomes of consultation with NSC.

Water supply, take and licensing

The proponent should quantify site water demands during construction and operation of the project and demonstrate there are feasible and reliable sources available to meet these demands.

The proponent should confirm the licensing arrangements for any dams on site.

Water supply requirements were summarised in Section 4.2.2 and Section 7.5 of the EIS and have been further detailed below in response to the NSW DCCEEW Water submission and outcomes of consultation with NSC (**Appendix B-3**).

Construction

The peak raw water (non-potable) demand is expected to occur during site set up, due to road construction and compaction, between months three and seven. The peak potable water demand is expected to occur during installation of the solar panels and BESS when workforce is at 250 full-time equivalents (FTE), between months eight and ten. This results in the following estimated daily demand rates:

- Maximum daily non-potable construction demand = 75 kilolitres per day (kL/d)
- Maximum daily potable construction demand = 12.5 kL/d

The total water demand during construction has been estimated at 22 megalitres (ML), detailed as follows:

- Construction of Hardstands (BESS and substation): 0.2 ML
- Road Construction / Compaction: 9.5 ML
- Dust Suppression: 4.4 ML
- Vehicle and Equipment Washdown: 4.7 ML
- Potable Water: 3.1 ML

As stated in Section 4.2.2 of the EIS, the 30 ML of water use accounts for the estimated total water use during the construction and decommissioning phase, mostly for non- potable water use. The total construction water use relevant for each construction activity is listed above, with the remaining approximately eight ML from the total estimated 30 ML dedicated to decommissioning water use. Water usage will largely be facilitated via water carting to site during these periods, and by the 20,000 L static water supply tank that will be installed on site.

Operation

As stated in Section 4.2.2 of the EIS, up to 500 kL per year of potable water may be required during operation for cleaning, maintenance and staff amenities. The maximum daily operational demand provided below is a worst-

case scenario based on the total 500 kL annual use, as it is anticipated that yearly rainfall will perform the cleaning required for the solar panels, and as such the expected daily operational water use will be closer to the 0.3 kL/d associated with water use for staff amenities. This water use will be provided by the proposed 20,000 L potable water tank located adjacent the operations and maintenance buildings (**Figure 3**).

- Maximum daily potable operational demand = 1.4 kL/d (0.3 kL/d for staff amenities, remaining 1.1 kL/d for maintenance including solar panel cleaning)

It is anticipated that all water sourcing during the operational phase will be potable, sourced from the local standpipe on Nymagee Street. Key maintenance activities such as cleaning of solar panels is expected to be facilitated by rainfall.

Water Sourcing

Edify has consulted with NSC on water sourcing and supply in which several Council sources were put forward as options, including:

- Potable water standpipe on Nymagee Street,
- Raw water standpipes at:
    - McGrane Way (near Nellie Vale Road intersection), and
    - Narromine wetlands dams.

NSC confirmed the standpipes can support three to five water truck loads per day, however supply during summer months may be reduced. All options are viable for water supply options as they are reasonably close to the project (between 18 and 20 km from site) and able to supply sufficient water for the project without compromising ongoing supply.

Assuming the water cart loads specified by NSC are approximately 15,000 L in capacity, the potable water supply requirements for the project construction and operation can be facilitated by the potable standpipe on Nymagee Street. The peak four months requiring a maximum 75,000 L non-potable daily water supply can also be facilitated by the two raw water standpipes, within the three to five water cart load NSC specification. The final sourcing option will not be selected until prior to construction commencing and will be agreed with NSC. Supply details and any potential reporting requirements will be included in the Environmental Management Plans for construction and operation.

The farm dams on site will be excluded from the development footprint and are not intended to be used for construction and operational water needs. The dams will likely function as a water source for sheep if 'Agri-solar' is implemented.

Local water utility water supply impacts

The proponent should:

- **Confirm the volume of potable and non-potable water to be sourced from town water supplies (either directly or by water carting) during construction.**
- **If town water is proposed, demonstrate that the relevant local water utilities are satisfied that the town water systems can accommodate the water demands without impacting existing services.**
- **Confirm with the relevant local water utilities, the impact of the project and potential additional costs from infrastructure upgrades or increased operational activities.**
- **Confirm water carting arrangements by providing detail that there are carting providers available to cart water for the construction phase of the project.**

As detailed above, there are three Council water sources in the form of standpipes or wetlands available for use by the project as confirmed by NSC (**Appendix B-3**). The volumes required for construction and operation are not anticipated to require water source infrastructure upgrades as the demand is not significant, however NSC will be consulted on appropriate infrastructure use.

Local water carting resources are available in Narromine and Dubbo, if required, with bulk and construction water services listed. Selection of a water carting company will be the responsibility of the EPC contractor, who will also progress the water sourcing agreement through NSC.

Construction

The peak raw water (non-potable) demand is expected to occur during site set up, due to road construction and compaction, between months three and seven. The peak potable water demand is expected to occur during installation of the solar panels and BESS when workforce is at 250 full-time equivalents (FTE), between months eight and ten. This results in the following estimated daily demand rates:

- Maximum daily non-potable construction demand = 75 kilolitres per day (kL/d)
- Maximum daily potable construction demand = 12.5 kL/d

The total water demand during construction has been estimated at 22 megalitres (ML), detailed as follows:

- Construction of Hardstands (BESS and substation): 0.2 ML
- Road Construction / Compaction: 9.5 ML
- Dust Suppression: 4.4 ML
- Vehicle and Equipment Washdown: 4.7 ML
- Potable Water: 3.1 ML

As stated in Section 4.2.2 of the EIS, the 30 ML of water use accounts for the estimated total water use during the construction and decommissioning phase, mostly for non- potable water use. The total construction water use relevant for each construction activity is listed above, with the remaining approximately eight ML from the total estimated 30 ML dedicated to decommissioning water use. Water usage will largely be facilitated via water carting to site during these periods, and by the 20,000 L static water supply tank that will be installed on site.

Operation

As stated in Section 4.2.2 of the EIS, up to 500 kL per year of potable water may be required during operation for cleaning, maintenance and staff amenities. The maximum daily operational demand provided below is a worst-case scenario based on the total 500 kL annual use, as it is anticipated that yearly rainfall will perform the cleaning required for the solar panels, and as such the expected daily operational water use will be closer to the 0.3 kL/d associated with water use for staff amenities. This water use will be provided by the proposed 20,000 L potable water tank located adjacent the operations and maintenance buildings (**Figure 3**).

- Maximum daily potable operational demand = 1.4 kL/d (0.3 kL/d for staff amenities, remaining 1.1 kL/d for maintenance including solar panel cleaning)

It is anticipated that all water sourcing during the operational phase will be potable, sourced from the local standpipe on Nymagee Street. Key maintenance activities such as cleaning of solar panels is expected to be facilitated by rainfall.

Sewage impacts

The proponent should:

- **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.**
- **Confirm with the relevant local water utility which sewerage system will receive and manage the sewage load (if this option is preferred), and if this system can accommodate the wastewater demands without impacting existing services.**
- **Confirm with the relevant local water utility, the impact of the project and potential additional costs from infrastructure upgrades or increased operational activities.**

Consultation with NSC (**Appendix B-3**) confirmed there are no septic receival stations available in Narromine, however NSC recommended the sewage disposal be via the Dubbo sewage treatment plant, operated by the Dubbo Regional Council. The Dubbo sewage treatment plant was contacted by the proponent and confirmed they can accept the liquid waste generated by the project, on the basis that amounts are confirmed with the treatment plant and approval applied for in the post-determination phases.

It is anticipated that the sewage generated by the project will be minimal and temporary based on a peak construction workforce of 250 FTE. The Dubbo sewage treatment plant is licenced for more than 1000 – 5000

ML annual maximum volume of discharge, which is expected to service the minor project disposal requirements. During the post-approval phase, the selected EPC will develop a Waste Management Plan which will quantify sewage disposal amounts and consult with Dubbo Regional Council to confirm potential infrastructure upgrade requirements associated with the sewage disposal.

Sediment and Erosion Control

The proponent should develop the proposed Sediment and Erosion Control Plan in accordance with industry standards including the guideline, Managing Urban Stormwater: Soils and Construction (Landcom, 2004).

Edify acknowledges this recommendation from NSW DCCEEW Water Group and has committed to developing and implement a Construction Erosion and Sediment Control Plan in accordance with the Managing Urban Stormwater: Soils and Construction (Landcom, 2004) guideline.

4.8 NSW RURAL FIRE SERVICE

The NSW RFS provided comments in relation to the proposed 100 MW / 400 MWh BESS infrastructure. The BFAR has been updated in response to the NSW RFS submission and is provided in **Appendix G**.

The subject land is located in grassland fire hazard. Grass fires are known to have a fast rate of spread with minimal residual heat.

The NSW RFS role is to prevent fire impacting the asset and/or spread from a structural fire into the surrounding landscape.

The EIS and Bushfire report does not adequately address the location of the BESS from a firefighting access and suppression operation. The BESS is located greater than 1 km from the Eumungerie Road property access gate. The proposed internal access road traverses a the 132kV power line easement. Further the bushfire report states:

"A dedicated static water supply of 20,000L for bush firefighting purposes is recommended at strategic locations within the solar farm, having consideration for essential equipment and accessibility e.g., near the main entrance."

The NSW RFS requires the proponent to adequately justify the location of the BESS from a fire prevention, protection and suppression perspective.

Edify acknowledges NSW RFS comments and has amended the project BFAR (**Appendix G**) in response, as well as the project infrastructure layout (**Figure 3**) to clearly illustrate firefighting asset locations including water tanks. The BFAR was updated both in response to the NSW RFS submission and to further align the project with best practice standards and guidelines, in particular for providing fire-fighting assets and access on the subject lot.

Key updates detailed in the amended BFAR (**Appendix G**), to the project infrastructure layout, and in particular for fire-fighting assets and accesses, are summarized as follows:

- Increased capacity of static water supply available on site dedicated solely for fire-fighting purposes. As discussed in Section 3.4 of the amended BFAR (**Appendix G**), five tanks with 45,000 L capacity have been recommended in strategic locations throughout site (**Figure 3**). This update aligns with Chapter 4.2 of the Victorian Country Fire Authority (CFA) document *Design Guidelines and Model Requirements Renewable Energy Facilities v4* (2023). NSW RFS will be consulted on the proposed amount and location water supply during detailed design to ensure it is appropriate for the site.
- Access is critical for bushfire emergency response, safe firefighting, and evacuation, and as such has been further detailed in the amended BFAR (**Appendix G**) under Section 3.6. Primary access to the subject site will occur from Eumungerie Road via construction of a Basic Right Turn treatment for the proposed solar farm. Internal vehicle access tracks will be constructed to each inverter enclosure and to the substation to allow for site maintenance. On-site tracks will be constructed of compacted gravel and, where required, geotextile fabric will be laid between the soil and the gravel to provide all-weather thoroughfare. Internal access tracks will be approximately 4 m wide to allow for the safe delivery, unloading and installation of key components such as the solar panels, inverters, transformers and BESS units.

The project is pursuing two BESS design configuration options, in which one will be progressed, and finalised in consultation with NSW RFS, during the detailed design phase. These two design options are termed de-centralised and centralised, as detailed below with context provided on their proposed locations throughout the subject lot in relation to fire-fighting access and assets, in response to the NSW RFS query on BESS locations.

The centralised BESS will be located next to the substation in the south-east corner of the subject land as demonstrated in **Figure 3**. The current placement of the potential centralised BESS design within the south-eastern portion of the subject lot provides direct access to the centralised BESS from the proposed site accesses off Eumungerie Road (located in the south-west of the subject site), while also distancing the centralised BESS from the intersection itself (noting the hazardous potential of batteries). A 4 m wide access road will also be installed and maintained around the boundary of the substation and centralised BESS location. As illustrated in **Figure 3**, five water tanks with 45,000 L capacity each have been designated throughout the subject lot. The closest proposed water tanks for the centralised BESS option are as follows:

- One located at the dedicated site access point,
- One placed adjacent the substation and centralised BESS, and
- One placed adjacent the large patch of excluded vegetation in the southern portion of the lot.

It should be noted, that the remaining two tanks are also safely accessible via the site perimeter road in the event of a fire igniting at or near the centralised BESS.

The de-centralised BESS configuration involves the micro-siting of individual battery enclosures alongside the inverter locations distributed throughout the solar array footprint as shown in **Figure 3**. Maintenance tracks will be installed and accessible from the primary subject site access road throughout the solar array allowing all-weather access to a potential de-centralised BESS design configuration in the event of an emergency. APZs for a de-centralised system are captured as part of solar array APZ / landscape management, with a 20 m APZ to be provided between the site boundary and the outermost batteries at minimum in line with the recommendations of the Preliminary Hazards Analysis conducted by ARUP in 2023 (Appendix N of the EIS). The five water tanks displayed in **Figure 3** will provide adequate fire-fighting resources and will be accessible for any potential fire ignition associated with de-centralised BESS enclosures.

4.9 TRANSPORT FOR NSW

TfNSW have requested additional information, including a revision of the Traffic Impact Assessment (Amber, 2023), to address the key issues identified in their submission. The key issues are detailed further in Attachment 1 of the submission. TfNSW have requested additional engagement to prepare and provide the details required in Attachment 1 of their submission. TfNSW have advised the application to be referred to other relevant agencies managing Country Rail Network rail crossings such as the Australian Rail Track Corporation and Sydney Trains. The TIA has been updated in response to the TfNSW submission and is provided in **Appendix F**.

The route study does not provide enough information to assess the impacts on TfNSW assets and the compliance of possible road upgrades and mitigation measures in accordance with *Austroads Guide to Road Design*, *Austroads Guide to Temporary Traffic Management* and TfNSW supplements. This includes rail corridor related comments. Identified in points 1 to 2.

The bridge and culvert assessment required by the TfNSW submission for TfNSW assets along the proposed OSOM routes has been requested through the relevant department and is being progressed through them internally.

Table 18 in Section 9 of the amended TIA (**Appendix F**) details the TfNSW attachment 1 submission queries under key issue point 1 and key issue point 2, and references where these queries are responded to in the document.

The document updates in the amended TIA in relation to key issue point 1 and point 2 are summarised below:

- Concept level route analysis has been conducted for two OSOM routes proposed for use by the project, including Port Botany and Port of Newcastle. The route analysis detailed in Section 6, Appendix H and

Appendix I of the amended TIA used the load and vehicle dimensions detailed in Section 6.1 of the amended TIA for assessment of potential impacts and conflicts with TfNSW assets or projects including:
    - Location, suitability and swept path analysis of pull-over bays/rest areas along each route,
    - Road geometry and alignment,
    - Pinch points along the route that may require check vehicles or road upgrades,
    - Roads under construction as part of a TfNSW project, including potential requirement to move OSOM through these project sites, and
    - Configuration and swept path analysis for OSOM movement through the proposed EnergyCo Port of Newcastle to Elong Elong project.
- Consideration of the following rail crossings in the route analysis, including requirements for each crossing:
    - Dubbo-Coonamble (on Boothenba Road approximately 150 m east of Newell Highway),
    - Troy Junction-Merrygoen (on Golden Highway, approximately 140 m southeast of Lesslies Road),
    - Wallerawang-Gwabegar (on Golden Highway, approximately 70 m northeast of Wargundy Street), and
    - Ulan (on Golden Highway, approximately 30 m west of Mangoola Road).

The mitigations from the route analysis for the queries under key issue point 1 and point 2 have been updated in the project commitments table in **Appendix C** of this report, and summarized as follows:

- The Erskineville Road/Wilson Street/Princes Highway (Newtown) intersection was identified as a pinch point requiring temporary relocation of signage.
- OSOM movements must be timed so they do not coincide with other OSOM movements along the same routes.
- The Pacific Motorway extension TfNSW project is expected to be complete in 2028, after the commencement of the proposal's construction, but the only impediment is if the section of the viaduct over New England Highway is being constructed when the OSOM route movement takes place. It if is already constructed or is yet to be constructed and that section of New England Highway is still open to traffic, access for the OSOM vehicle will be satisfactory. If it is not constructed, re-assessment of the OSOM route at this location for potential diversion route is required.
- The OSOM vehicle must approach and traverse the designated Troy Junction- Merrygoen, Wallerawang-Gwabegar and Ulan level crossings at a speed not less than 35 kilometres per hour. Where the vehicle cannot comply with this, the operator must contact the Rail Infrastructure Manager.

The impact on the State Road network, particularly to the intersection with the Newell Highway and the state classified section of Eumungerie Road has not been adequately addressed. The revised TIA should identify the worst-case scenario for the background traffic and turning traffic volumes in accordance with the requirements of *Austroads Guide to Traffic Management* and TfNSW supplements. Identified in point 3.

Table 18 in Section 9 of the amended TIA (**Appendix F**) details the TfNSW attachment 1 submission queries under key issue point 3, and references where these queries are responded to in the document. The TfNSW submission requested further assessment for the Eumungerie Road/Newell Highway intersection, however as noted in the amended TIA, this intersection would not be utilized or impacted as it is anticipated all vehicles will be travelling from the south.

The document updates in the amended TIA based on further assessments done on the intersections used by the daily construction project traffic, including the Newell Highway/Burraway Road intersection, in relation to key issue point 3 queries are summarised below:

- Section 2.3.3 graphing the monthly variation in daily traffic volumes during the Harvest period, noting the highest volumes are observed in July representing a 8.7% increase in daily two-way traffic volumes compared to the average daily two- way traffic volumes.
- Section 3.2 has detailed intersection light and heavy vehicle use per day during peak construction based on worst-case scenarios for morning and afternoon peak hours, as illustrated in Figure 11 and Figure 12 respectively.
- Section 3.3 includes the projected traffic flow of the adjacent Inland Rail project that is likely to have a cumulative impact on intersection traffic volumes during peak construction period.

- Section 3.4 has detailed total vehicle use of subject intersections during peak construction period, factoring in cumulative traffic from the adjacent Inland Rail project, 8.7% increase during peak harvest period and a 1.5% annual compounding growth rate until 2027.

Findings of the additional assessments conclude that the road network and associated intersections will be able to accommodate traffic generated during construction and operation.

The existing mitigations in relation to traffic and road impacts in Appendix D of the EIS, and repeated in **Appendix C** of this submissions report, are sufficient for the road network and intersections.

5 RESPONSE TO PUBLIC SUBMISSIONS

A submissions register is provided in **Appendix A**, which lists all submissions received from the public and public organisations. As outlined in Section 2.1, 82 submissions were made by individuals and organisations from the public, of which two were in support of the project. Responses to key matters raised, as summarised in Section 2.4, are provided in the relevant sections below.

5.1 THE PROJECT

5.1.1 Site suitability

Five submitters commented on site suitability, broadly stating the location as 'inappropriate' and an impact on country living. One submitter noted that Narromine Shire is an agricultural Shire and raises the question of why solar and wind projects are not proposed on areas of unproductive land or closer to cities, including through installation of rooftop solar panels.

Chapter 3 of the EIS has detailed the strategic planning context of this project against relevant local, state and federal guidelines, strategies and targets, with Chapter 5 detailing statutory context and compliance associated with this project. The site location and proposed infrastructure layout is detailed in Chapter 4 of the EIS, noting key aspects such as the subject lot offering direct connection into an existing electricity line and being located within the dedicated CWO REZ. Assessment of constraints and mitigations, detailed in Chapter 7 on the EIS, have guided design, construction and operation methodologies and increased site suitability such as through the exclusion of vegetation from the development footprint and micro-siting infrastructure on poorer quality soils.

The project is ideally located for the development of a solar farm and BESS for the following key reasons:

- Location within the CWO REZ. The project is within an area declared by the NSW Government as a significant location for investment into renewable energy generation, storage and transmission projects.
- Proximity to existing electricity infrastructure. The project intends to connect directly into an existing Essential Energy 132 kV line, allowing direct export to the grid.
- Proximity to major transport networks. The project can be accessed by Eumungerie Road via Dubbo-Burroway Road and Burraway Road, which are all approved B-double Route's and can be accessed via the Newell Highway or Mitchell Highway. The Main Western Rail line also runs via Dubbo and Narromine in which the Dubbo station is still in use.
- Compatible land use requiring minimal permanent land disturbance. The only permanent land impact required for the project is the substation, connecting the solar farm and BESS infrastructure to the existing Essential Energy 132 kV line. This substation will form part of Essential Energy's transmission assets and comprises approximately 1 ha of the available 495 ha of agricultural land within the subject lot, on land confirmed as low capability (LSC 6). The remaining agricultural land will be temporarily impacted and will be returned to the pre-existing agricultural land compatibility. Additionally, Edify are proposing to implement 'Agri-solar' for the project through grazing sheep, in which they are well versed with various other constructed Edify solar farms currently successfully grazing sheep during operation. By implementing 'Agri-solar' as intended, Edify will be minimizing the duration of the temporary decrease in agricultural land use.
- Flexible design and infrastructure layout. As detailed above, the substation will be located on low capability agricultural land. A centralised BESS configuration would also be micro-sited in this portion of low capability land. The option of a distributed BESS layout allows groupings of BESS to be located throughout the site alongside the solar array inverter enclosures, which may result in an overall smaller footprint than that of the centralised BESS footprint. Both BESS design configurations were factored into the technical investigations with models demonstrating construction and operational noise will not impact sensitive receptors (residences) and analysis demonstrating both design hazards can be suitably mitigated through separation distances, as an example, which can be accommodated on site.
- Minimal environmental and cultural heritage impact. Throughout the scoping and EIS phases, assessments have been conducted to assess the potential impacts of the project on the environment, including biodiversity, and cultural heritage. The design of the project up until this phase of the planning has been guided by the

outcomes of these investigations to minimise the environment and cultural heritage impacts to the greatest extent possible. Impacts have been minimised in the following ways:

- Micro-siting of infrastructure to avoid impacts to all remnant woodlands on the subject land.
- Selecting two options for project access, resulting in minor disturbance to derived grassland (0.11 ha), which will be offset.
- Avoid patches of vegetation and several paddock trees listed as Category 2 Regulated Land.
- Avoiding disturbance to habitat features identified in the BDAR.
- Developing and implementing environmental management plans during construction and operation.
- Avoiding impacts to ten of the 15 Aboriginal heritage sites identified in the ACHAR, with salvage intended for the other five artefacts.
- Developing and implementing an unexpected finds protocol and protocol for long-term management of Aboriginal heritage.

It is acknowledged that small-scale renewable electricity generation and storage in urban areas are an important part of the national energy market (NEM); however, as outlined in the Australian Energy Market Operator's (AEMO) *2024 Integrated System Plan* (ISP) (AEMO 2024), growth is required in both consumer-owned and utility-scale renewable electricity generation and storage to meet the growing demand for electricity as coal generation retires. AEMO forecasts that the remaining coal fleet will close two to three times faster than the announced dates. According to the ISP, investment into renewable energy is required to accommodate 6 GW of generation annually by 2030 and a total of 49 GW / 646 gigawatt hours of dispatchable storage by 2050 to replace the retired coal-fired power stations. The project will help meet energy demands by providing up to 100 MW of renewable electricity to the NEM and installing a battery with a 100MW / 400MWh storage capacity.

5.1.2 Project infrastructure

One submitter commented on Project infrastructure querying how the energy generation will connect to the grid and if new transmission lines will disturb more land.

As detailed in Section 4.1 of the EIS, the project intends to connect the solar farm and BESS infrastructure, via a step-down substation to be constructed as part of the project, into the existing Essential Energy owned and operated 132 kV powerline (Line #94W/1). This ensures energy generated from the operational solar farm is transferred directly into the NSW power grid. No transmission lines are proposed as part of the project infrastructure design.

5.2 PROCEDURAL MATTERS

5.2.1 Assessment process and guidelines

One submitter stated that the Burroway Solar Farm poses various risks that are likely to breach NSW policies. The submitter listed eight potential impacts of the Burroway Solar Farm that they believe have not been appropriately assessed or are likely to breach NSW legislation and policies, including impacts to agricultural land, biodiversity, soils, water resources, visual amenity, socio-economic, cumulative environmental aspects and land restoration on decommissioning.

Chapter 5 and Appendix B of the EIS outlines statutory context for SSD proposals and the project compliance with this governing legislation and guidelines. The eight issues raised have been considered and responded to under the relevant matters in this report, however it is noted under this matter that the EIS was prepared in accordance with the NSW *State Significant Development Guidelines – preparing an environmental impact statement* (DPIE, 2022) and the *Large-scale Solar Energy Guideline* (DPIE, 2022) (Solar Guideline). These guidelines require state significant developments to conduct detailed investigations, that include but are not limited to the eight matters listed in this submission. These assessments must be completed before the project can progress the planning application, and the outcomes of the assessments form part of the project approval conditions such as biodiversity offsets and decommissioning rehabilitation requirements.

The methodology and guiding legislation/policies for each of these technical investigations is provided in the corresponding reports (Appendix F to Appendix O of the EIS).

5.2.2 Engagement

Two submitters commented that there was inadequate engagement with the community and stakeholders of the Project, with one submitter commenting on inadequate consultation of Aboriginal people.

Chapter 5 of the EIS and the project Community Consultation and Engagement Plan (Appendix C of the EIS) details consultation and engagement that has been ongoing with key stakeholders, neighbouring projects and the community since the project scoping phase. The consultation and engagement have been guided by the DPHI *Undertaking Engagement Guidelines for State Significant Projects.*

Edify recognises the importance of stakeholder engagement to the success of the project. Consultation and engagement with stakeholders including the neighbours and the Aboriginal community, and the broader community has been an integral part of the development of the project. Engagement has been undertaken by Edify and OzArk in accordance with the requirements of *Undertaking Engagement Guidelines for State Significant Projects* (DPHI 2024b) (SSD Engagement Guidelines), the *Aboriginal cultural heritage consultation requirements for proponents* (DECCW 2010b) and the SEARs. Engagement for the project is discussed in Chapter 6 of the EIS, which included letters, face-to-face meetings (including with nearby landholders), community information sessions and project communication channels. Chapter 6 of the EIS and **Table 3-1** of this report details the consultation undertaken with the Aboriginal community, as well as other stakeholders of the project, throughout the EIS and post-exhibition phases of the project.

Early project and scoping phase engagement commenced in 2022. Prior to the launch of the project in February 2023, Edify engaged with the Narromine Shire Council in March 2022 to introduce the project and the company. Once preliminary connection discussions were complete with Essential Energy, Edify commenced consultation via phone with the 16 residences within a 5 km radius of the project, of which ten were contactable. Edify followed the introductory phone calls up with provision of a project information package via email to those who opted to receive it. Edify also followed up with in-person meetings for those who requested it in February 2023. Scoping phase engagement in 2023 also included briefing meetings with Essential Energy, NSC representatives, State and Federal Members of Parliament, Narromine Local Aboriginal Land Council and DPHI.

During the ongoing consultation with adjacent neighbours, Edify's development team proactively provided information on common community concerns associated with similar projects, with key areas of discussion including:

- Visual amenity changes to the region and how they will be addressed in the Landscape Character and Visual Impact Assessment (LCVIA).
- Site access roads and their usage.
- Potential noise and dust impacts on adjacent properties during construction.
- General health and wellbeing matters concerning the construction period.
- Weed and vegetation management.

The ten of 16 contactable neighbouring residences indicated they had no objection towards the project and elected to continue receiving updates as the project progressed. The discussions with the Federal Member for Parkes and the Member of Parliament of NSW for the Dubbo electorate were also positive, with no immediate concerns raised. Discussions with NSC representatives have consistently been positive, noting Edify recently received a letter of support for the project following the post-submission meetings that were held in February 2025.

There has been ongoing engagement as part of the EIS phase with the project stakeholders, Aboriginal community and broader community throughout 2023 and 2024 summarised as follows:

- Progress meetings held with Narromine Shire Council November 2023 and March 2024.
- Door-knocking and letter drops in March 2024 to provide details on the project and public exhibition process.
- Engagement with RAPs as part of the ACHAR process from February 2023 to August 2023.

Edify developed a Community Consultation and Engagement Plan to support the EIS that identifies ongoing consultation commitments and outlines clear channels of communication for stakeholders and the community, where they can access project information and progress, as well as provide feedback on the project. This

information is available at the Burroway Solar Farm project webpage on Edify' website (Edify Energy, 2025) as well as the NSW Major Projects portal.

Table 3-1 details the engagement that has been undertaken since the EIS submission.

5.3 ENVIRONMENTAL, SOCIAL AND ECONOMIC IMPACTS

5.3.1 Biodiversity

5.3.1.1 General impact on environment and local flora / fauna

Thirty submitters raised concerns about the project's potential impact on the environment generally as well as threatened flora and fauna species. One submitter commented on the disturbance of habitat of threatened flora and fauna species, with another submitter concerned with the fragmentations of habitats. The health of Llama Creek and the Macquarie River were also raised as an environmental concern, as well as the potential cumulative environmental impact.

The BDAR prepared for the EIS (Appendix F of the EIS) and the amended BDAR prepared for this submissions report (Appendix C), define the 'subject land' as the land proposed for development and related activities. The 'study area' consists of the subject land and development footprint, where direct impacts are predicted, and a 1500m buffer area, where indirect and prescribed impacts are predicted.

The subject land contains small patches or corridors of plant community types (PCTs) in the form of:

- 55- Belah woodland largely occurring in the road corridor in derived, moderate and good condition, excluding the planted patch in the middle of the subject land,
- 82- Western Grey/Poplar Box/White Cypress Pine woodland occurring in moderate condition in the road corridor vegetation,
- 88- Pilliga Box/White Cypress Pine/Buloke shrubby woodland occurring in moderate and good condition in the road corridor vegetation, and,
- 202- Fuzzy Box woodland, occurring as a good condition patch in the middle of the subject land.

The iterative project design process avoids impacts to the vegetation in the above listed PCTs on site and any potential threatened species habitat within the subject land, excluding the minor 0.11 ha of derived Belah woodland that is predominantly grassy, for site access. The footprint of the proposal consists almost entirely of cropped land mapped as Category 1- Exempt Land under the BC Act and is situated in a landscape in which a large proportion of the former vegetation has been cleared for agricultural purposes. The derived PCT 55 does not meet the thresholds to be classified as a threatened ecological community under both NSW and Commonwealth legislation.

Habitat suitability assessments as well as field surveys, in line with the Biodiversity Assessment Method 2020 (BAM) and approved survey methodologies, were conducted for threatened flora and fauna species generated by the BAM for the study area. Fifteen ecosystem credit species were assumed to be present due to habitat suitability. Targeted surveys and habitat suitability assessments confirmed threatened species credit species generated by the BAM are unlikely to occur on site or be impacted by project activities.

Connectivity, where it exists, is confined to narrow bands of remnant woody vegetation in road corridors and along fenced paddock boundaries. The road corridor vegetation forms part of an extensive network of wooded corridors which may facilitate gene flow and the movement of fauna species between larger remnants, thereby ensuring the project has negligible impacts on fragmentation.

No watercourses are mapped as occurring on the subject land; however, two heavily modified watercourses occur within the study area. At its closest point, the Macquarie River is approximately 9 km from the project. It is unlikely that the project will result in any indirect impacts to these waterbodies due to the intended erosion and sediment control and the lack of connectivity from the development footprint to the watercourses in the study area. The location of Llama Creek was unable to be identified however given the lack of watercourses in the footprint the potential impact on the health of these waterways is considered unlikely.

The flexibility in design and layout of solar farm infrastructure lends toward minimised land disturbance. The substation, centralised BESS configuration, internal access roads and operation/maintenance building footprints result in a small portion of disturbed ground in the subject land for the period of operation. The remaining area of the subject land is only minorly disturbed for the construction period, before being rehabilitated utilising stockpiled topsoil and the existing seedbank on the subject land. Additionally, Edify are committed to minimising general impacts on the environment and local biodiversity through implementation of environmental management plans with suitable controls and mitigations throughout construction, operation and decommissioning. Final design and infrastructure layout will continue to prioritise minimal environmental impacts including micro-siting of BESS and installation of infrastructure with all available safeguarding mechanisms.

Potential cumulative impacts were considered for the subject land which is situated in a landscape that has undergone extensive historical clearing for the purposes of agriculture. Much of the land within the wider study area has been converted to cropping, with native vegetation now largely confined to road corridors and fence lines, scattered paddock trees, and scattered larger remnants. The project has avoided all patches of vegetation on site as well as a few scattered paddock trees and will result in the clearance of 0.11 ha of derived grassland for an access. As such, the project is not considered to be adding a to a cumulative impact on local and state biodiversity due these avoidance and minimisation measures.

5.3.1.2 Impacts on birds

Six submitters raised concerns specifically on the potential impacts of the Project on birds, in particular the disruption to migratory birds and risk of bird strikes on the solar arrays.

Bird strike is a key consideration for wind farm developments due to the risk of collision with the blades, however this project is not a wind farm development and as such bird strike was not assessed during the EIS phase.

The ‘lake effect’ is the hypothesis that birds mistake the reflective surface of solar panels for the surface of water and strike the solar panel at a high velocity (i.e. anticipating it to be water rather than a solar panel). Bird deaths due to the ‘lake effect’ are most likely to occur among large-bodied aquatic birds such as ducks, geese, grebes, pelicans, cormorants or swans, and raptors who forage from large waterbodies. The lake effect is not likely to impact other terrestrial threatened bird species, as these birds do not typically land on water. The lake effect is not likely to impact other terrestrial threatened bird species, as these birds do not typically land on water. No threatened species of large-bodied aquatic birds or raptors were considered likely to utilise the project area, which was further confirmed by the lack of detection of these species during the field surveys. The BAM identified the White-bellied Sea-eagle (*Haliaeetus leucogaster*) for consideration, however the habitat constraints required by the species excluded the project site. The ‘lake effect’ is therefore unlikely to impact birds that utilise the project area and surrounds.

Only one species of migratory bird, the White-throated Needletail (*Hirundapus caudacutus*), was identified during the desktop assessment with moderate potential to occur on site due to the subject land occurring within their known geographic distribution and with one of their associated PCTs (55). However, it was not identified during surveys and there are no records for the species within 10 km of the subject land.

The project does not contain any critical/suitable habitat for aquatic dwelling and threatened and/or migratory bird species as identified throughout the BDAR (Appendix F of the EIS), which minimises potential of bird strike as these species are not likely to occur on site.

Photovoltaic solar panels are specifically designed to maximise the absorption of solar energy for the purpose of converting it to electricity. Good quality panels incorporate reflective glass front surfaces to capture and retain as much as possible of the solar spectrum. Typical panels are designed to reflect only about 2% of incoming sunlight and the glass of a solar panel has less reflectivity than window glass (MDER et al 2015). This design feature further reduces the potential for bird strike.

5.3.1.3 Offsetting biodiversity impacts

One submitter made reference to an article stating the Biodiversity Offsets scheme offers no benefit to the environment.

The submission is challenging the benefits of the Biodiversity Offsets scheme which is considered to be out of the scope of this submissions report. Edify are abiding by the requirements of the scheme as detailed below.

The offset requirements are delegated under the BAM, which identifies three main options to offset residual biodiversity impacts that cannot be avoided:

- payment to the Biodiversity Conservation Fund managed by the Biodiversity Conservation Trust
- purchase of credits from the open market
- establishment of a biodiversity stewardship site(s) to generate credits for offsetting the project specifically.

Edify have intentionally developed a preliminary design and infrastructure layout to avoid impacts to the vegetation in the subject land to the greatest extent possible. The outcome of this commitment, as detailed in the BDAR (Appendix G of the EIS), is that only 0.11 ha of derived PCT 55 will be impacted for the site access, which has resulted in an offset obligation of two ecosystem credits.

The project refinements discussed in Section 3.1, involving the exclusion of category 2 sensitive regulated land from the development footprint, do not change this offset obligation.

5.3.2 Impact on and loss of agricultural land

Thirty-seven submitters commented on the impacts to and loss of agricultural land, with key concerns summarised as follows:

- **The project will occupy prime agricultural land.**
- **There will be a loss of agricultural productivity during operations, and potentially after during commissioning due to contamination of the soils.**
- **Construction and maintenance requirements for the solar panels, including cleaning down of panels and clearing land, may cause erosion.**

Edify acknowledge that land within the development footprint will be temporarily unavailable during construction and partially unavailable during operations, for the current land use of cropping. The matter of land contamination has been addressed in Section 5.3.9 of this report.

An assessment of the existing LSC of the development footprint was completed in accordance with the Solar Guideline and *Land and Soil Capability Assessment Scheme* (OEH 2012) in Section 7.4 and Appendix J of the EIS. LSC assessments evaluate the capability of land, using LSC 'classes', to sustain a given land use under specific land management practices, in a manner that minimises soil and land degradation and adverse impacts on receiving environments. The Solar Guideline defines important agricultural land as "land mapped as biophysical strategic agricultural land (BSAL) or a critical industry cluster (CIC), land of LSC classes 1–3 and farmland mapped as state or regionally significant on the north coast."

The development footprint was verified to be occur on approximately 225 ha (57%) of LSC Class 3 (high capability land), 70 ha (17.5%) of LSC Class 4 (moderate capability land), 71 ha (18%) of Class 5 (moderate–low capability land) and 30 ha (7.5%) of Class 6 (low capability land). The project land does not have BSAL or CICs and is not located on the NSW north coast. Due to the nature of the project which will require only localised and sporadic landform modification including minor soil stripping (for cable trenching and some leveling), impacts on LSC are expected to be minor. The project will develop only a portion of the subject lot.

The higher soil impacts associated with the construction of the substation, have been mitigated by the project layout design strategically locating this infrastructure on soils with the lowest agriculture capability (LSC 6).

Following the end of life for the project, development footprint will be re-graded (where required), and any minor stockpiles of topsoil and subsoil be respread over disturbed areas and rehabilitated with either native vegetation or improved pastures depending on the intended final land use. This strategy, along with good soil management practices that Edify have committed to throughout the life of the project, will facilitate the rehabilitation in returning the land to an equivalent LSC class. Therefore, it is anticipated there will be no permanent impacts on LSC classes within the development footprint as a result of the project.

Solar farms create minimal impervious footprint as the solar panels are erected onto post structures effectively allowing the existing ground surface (grass) to be retained for the majority of the site. The advantage of the design is that the panels can be installed to retain the existing contours of the site, respecting and maintaining existing drainage lines. This will ensure that existing drainage flows, and existing points of discharge will be retained. Notwithstanding, drainage improvements may be implemented where existing erosion and scouring is evident and may be addressed through improved or more controlled movement of runoff, facilitated by DPHI approved Erosion and Sediment, and Stormwater Management Plans. Stormwater sheet flows evenly from the downslope of the panels and discharges directly to the existing in-situ ground conditions, and is mobilised for infiltration and surface flows, replicating existing catchment scenario and characteristics. Disturbance of the land surface during construction is expected to be minor and all disturbed surfaces will be revegetated as soon as possible. Construction and operational activities will be governed by erosion and sediment control plans, which will include the measures detailed in Section 6.2 of the SAIA (Appendix J of the EIS) to limit potential impacts to surface soils and water.

5.3.3 Air

One submitter commented on the potential impact to air quality from clearing land.

Monitoring and management of dust levels is a basic requirement of each project during construction and as such air quality impacts were not assessed during the EIS phase. Dust generating activities are assessed during windy conditions and are stopped and rescheduled where adequate control of dust generation cannot be achieved. Visual observation of machinery is undertaken during site inspections in addition to daily pre-start checks which ensure all machinery has appropriate emission control devices, is in good working order and is maintained correctly. Trucks that spray water to suppress dust will be utilised when required which will reduce the impact of dust from the various truck deliveries throughout the construction phase.

5.3.4 Landscape and visual amenity

Fifteen submitters raised concerns regarding the visual amenity impacts of the project, and the disruption to the rural landscape character, all stating the solar farm infrastructure is not visually appealing and will ruin the natural landscape character.

It is acknowledged that the project will introduce new infrastructure elements into the landscape that will be visible from the surrounding area. It is also noted that none of the submissions provided specific concerns related to landscape and visual amenity to their properties from the project, but rather more general concerns and objections.

A Landscape and Visual Impact Assessment (LCVIA) was prepared in Appendix M of the EIS in accordance with the methodology outlined in the Solar Guideline and the *Technical Supplement – Landscape and Visual Impact Assessment* (DPIE 2022). As identified in Section 7.8 of the EIS and the LCVIA there are ten scattered residences located on rural properties within 4 km of the site. These residences are located between 1800 m and 3.8 km from the development footprint. An additional six residences are located greater than 4 km, but within 5 km of the site. Desktop viewshed analysis identified none of these residences would have views of the solar farm infrastructure for the following key reasons:

- Vegetation either at the residence or between the residence and the subject land,
- Natural topography obscuring views, and
- Distances between the residences with potential to see the infrastructure, as identified by the desktop assessment, are more than 2 km and as such the visual sensitivity for the visual receivers are reduced.

The 12 public viewpoints assessed as part of the LCVIA were located on sealed and unsealed local roads adjacent and within 5 km of the subject land. Based on the visibility determined through site inspection, viewshed analysis and assessment against the visual criteria, the overall visual impact is expected to be very low – low for all public viewpoints. The visual impact for motorists will be tapered by a road condition such as speed and angle of the road towards the site. All of the viewshed analysis indicates that the site has partial visibility from the

immediate surrounding areas, however, visibility reduces from further afield and with the presence of existing vegetation.

Edify have committed to measures during the design, construction, operation and decommissioning phase to reduce the visual impacts as detailed in Section 7.8.4 and Appendix D of the EIS.

5.3.5 Cultural heritage

Two submitters commented on the impact of the project on Cultural Heritage.

An ACHAR (Appendix H of the EIS) was completed to identify Aboriginal cultural heritage values within the project site and surrounding area, with findings and management actions detailed in Section 7.2 of the EIS. The archaeological assessment followed the Code of Practice for the Investigation of *Aboriginal Objects in New South Wales* (Code of Practice; DECCW 2010). The Aboriginal cultural heritage assessment followed the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (the Guide; OEH 2011) and the *Aboriginal cultural heritage consultation requirements for proponents* (ACHCRs) (DECCW 2010b). Consultation with RAPs was an integral process for the ACHAR, which included registering of interest in the land, involvement in the field surveys and review and approval of field survey findings and proposed mitigations.

Field surveys identified 15 Aboriginal sites containing 24 artefacts on the subject land. Five sites cannot be avoided by the project, and as such these sites will be salvaged through a collection of surface artefacts before project works commence. The methodology for the salvage presented in the ACHAR will be incorporated into an Aboriginal Cultural Heritage Management Plan (ACHMP) that will be developed and approved in consultation with RAPs prior to works commencing. The ACHMP will include an unanticipated finds protocol, unanticipated skeletal remains protocol, and heritage inductions and long-term management of the Aboriginal sites being impacted.

Further surveys were conducted along the Eumungerie Road corridor in the two footprints proposed for site accesses. No additional sites or constraints were identified associated with these two footprints, and the RAP representative attending the survey did not raise any concerns with the proposed footprint disturbance.

5.3.6 Noise

Four submitters commented on impacts of noise from the project, with two submitters raising the impact of noise associated with the BESS.

A Noise and Vibration Assessment (NVIA) was developed in accordance with the *Interim Construction Noise Guideline* (DECC, 2009), the NSW *Road Noise Policy* (DECCW, 2011) and the *Noise Policy for Industry* (EPA, 2017), provided in Appendix L of the EIS and discussed in Section 7.7 of the EIS.

The modelled construction noise levels for two working scenarios were considered to represent reasonable worst-case scenarios. Given the distance to nearest receivers, the assumptions made in the assessment and the nature of the construction works, results of the construction assessment indicate noise management levels can be complied with during construction.

The final design locations for potential noise-generating infrastructure, in particular the inverters with integrated transformers, tracker motors, substation transformers, BESS components (centralised and de-centralised) and light vehicles, were assessed against the distance between these types of infrastructure and nearby non-project related residences. For BESS infrastructure, operational noise modelling was undertaken as illustrated in Appendix B of the NVIA, for both a centralised and decentralised BESS configuration, with results of the modelling demonstrating all receptors assessed receiving below 35 dB(A)L_{eq}(15min) in both scenarios.

The results of the assessment indicate the operation of the project is predicted to be below all operational noise trigger levels for day, evening and night-time situations. All infrastructure was modelled at their nominated maximum sound power levels, the results concluded the maximum noise level assessment complies with sleep disturbance requirements.

Edify have committed to management measures to reduce any potential noise impacts throughout the design process, construction and operation, including but not limited to:

- Consideration of location of noise-generating infrastructure in the design process, in relation to distance to nearest non-associated sensitive receivers.
- Development and implementation of a construction and operation noise management plan.

It is also noted that the four submissions regarding noise were not from the local or regional area.

5.3.7 Traffic

Four submitters commented on potential safety risks from increased traffic, specifically heavy loads on rural roads, as well as potential road damage.

Edify acknowledges the construction of the project will result in increased heavy vehicle movements on rural roads and has committed to measures during the construction period to manage project-related traffic impacts.

A traffic impact assessment (TIA) was undertaken in accordance with the *RTA Guide to Traffic Generating Developments* and relevant Austroads Guidelines, attached in Appendix K and discussed in Section 7.6 of the EIS. It involved consultation with Transport for NSW, Narromine Shire Council and Dubbo Regional Council. As detailed in Section 4, an updated TIA has also been provided in Appendix F to address specific agency submissions.

The project is expected to generate the highest level of traffic during the peak construction period. Traffic impacts during operation will be negligible. The traffic assessment indicates that the road network is able to accommodate the project traffic during peak construction periods, including the cumulative traffic generated by other major projects within the surrounding area. A Construction Traffic Management Plan will be prepared which would outline a range of traffic management measures in order to ensure the construction traffic would have a minimal impact to the capacity and safety of the surrounding road network. The site access on Eumungerie Road will include an installed Basic Right-turn (BAR) turn treatment which is expected to provide adequate sight distance to allow vehicles to safely enter and exit the site. As detailed in Appendix D of the EIS, the project will conduct a pre-condition and post-condition survey of the relevant sections of the road network during the construction period in consultation with NSC, to ensure the road network is left in a condition equivalent to the start of construction.

5.3.8 Water

Three submitters commented on the water supply requirements for the project.

Further detail on the intended water sourcing requirements and supply arrangements have been built on Section 4.2.2 of the EIS, as detailed in Section 4.3 and Section 4.7 of this submissions report and summarized as follows.

There are three Council water sources in the form of standpipes or wetlands available for use by the project as confirmed by NSC. The volumes required for construction and operation are not anticipated to require water source infrastructure upgrades as the demand is not significant, however NSC will be consulted on appropriate infrastructure use. Water supply for the project construction and operation can be facilitated by these sources. The final sourcing option will not be selected until prior to construction commencing and will be agreed with NSC. Supply details and any potential reporting requirements will be included in the Environmental Management Plans for construction and operation.

Local water carting resources are available in Narromine and Dubbo, if required, with bulk and construction water services listed. Selection of a water carting company will be the responsibility of the EPC contractor, who will also progress the water sourcing agreement through NSC.

5.3.9 Contamination

Twenty-seven submitters raised concerns around potential contamination of soil and water resulting from the leaching of chemicals from solar panels and BESS. Submitters suggested that contamination of these resources would directly impact the agricultural productivity of the surrounding environment.

Potential contamination of the surrounding environment as a result of solar farm infrastructure was not a requirement of the project SEARs, however research has been conducted on this concern and summarised below.

PV panel materials are enclosed and do not mix with water or vaporize into the air, and as such there is little residual risk of chemical releases to the environment during normal use. The most common type of PV panel is made of tempered glass. These Tier-1 modules with tempered glass are also required to pass hail impact tests. A study on the potential for leaching of heavy metals and metalloids from crystalline silicon PV systems was conducted to investigate whether potentially toxic elements could leach into the surrounding environment (Robinson, S.A., Meindl, G.A. 2019). Soils were analysed from beneath panels against a control site away from panels. This was done to determine if soils were being enriched by metals such as lead, cadmium, lithium, strontium etc. and metalloids such as selenium. The results of the findings concluded that there were no significant differences in lead or cadmium levels, with only minor concentration differences in other metals between soil samples under PV panels and the control sample (NSW Department of Planning Industry and Environment, 2020). No elements were present in concentrations that would pose a risk to nearby ecosystems. Such findings indicate that PV systems remain a cleaner alternative to traditional energy sources, such as coal, especially during the operation of these energy production systems (Robinson & Meindl, 2019). Within the NSW Solar Guideline frequently asked questions, it is noted that “the use of metals in solar panels has not been found to pose a risk to the environment.”

At the end of the project life, the solar panels will be decommissioned and sent to a solar panel recycling facility where most of the materials will be separated and reused. The solar panels will not remain on-site at the end of the project life. Edify has engaged with the Sircel to ensure their projects follow a circular practise. Recycling technology is continuing to improve and create more environmentally friendly uses for the materials. There is also no intention for project’s batteries to be discarded to landfill. Lithium-ion batteries form critical asset components and Edify recognises that a total cost of ownership strategy must encompass a robust end-of-life management process to ensure the project is a sustainable investment.

Similar to the PV panels, this equipment will be manufactured by reputable manufacturers meeting all relevant international and domestic standards. The substation and BESS facilities will be designed and constructed by tier one contractors. The project will procure high quality Tier-1 battery cells and systems, and with appropriate management and maintenance, these components are not expected to release any materials that present a risk to the environment. Tier-1 batteries include hermetically sealed battery cells, the temperature of which is controlled using a battery cooling system. A hermetically sealed battery cell is a type of seal that is airtight and impervious to external factors such as moisture, dust, or other contaminants. This assists in prolonging the service life of the battery and reduces the risk of failure or malfunction. Additionally, hermetically sealed batteries are less likely to leak, which can reduce the risk of exposure to potentially harmful chemicals used in the batteries.

Infrastructure containing heavy metals will be contained and will not come into direct contact with soils. Appropriate spill prevention and management measures will be developed as part of the CEMP, which will include spill clean-up procedures which would be implemented during construction and throughout the project’s operations. It is considered that the risk of contamination from the project and subsequent impacts on agricultural productivity and the surrounding environmental are low.

5.3.10 Waste

Sixteen submitters raised concern on the potential waste produced on decommissioning, commenting on the unviability of recycling the solar farm infrastructure.

Waste management was assessed and detailed in Section 7.2 of the EIS, with a concept waste management plan developed and attached as Appendix F of the EIS.

Solar panels are manufactured using few components; predominantly aluminium, glass and silicon, and over 90-95% of a panel's weight can be recycled. These materials can be separated and captured for reuse in the manufacture of other products. Innovations are emerging in the battery value stream that extend the useful life of the battery cells beyond the original project's use case. At the end of the initial 20-25 year expected lifespan, these battery cells will still possess useful capacity that can be used in 'second-life applications' that require less-frequent battery cycling (charge/ discharge).

Edify is committed to project Custodian responsibilities and intends to implement such recycling practices with a local company. Edify has engaged with Sircel, which has a facility located in Parkes, to incorporate a circular practise into their projects. Other companies such as Reclaim PV Recycling or Tindo Solar are based in Adelaide and offer a solar waste management / resource recovery solution. This includes logistics and recycling of PV modules, inverters and batteries. Such companies are expected to open additional facilities in New South Wales in the near future and Edify would seek to utilise as many local services as possible. There is no intention for project's batteries to be discarded to landfill. Lithium-ion batteries form critical asset components and Edify recognises that a total cost of ownership strategy must encompass a robust end-of-life management process to ensure the project is a sustainable investment.

The project will generate a range of wastes during construction, operation and decommissioning which will be managed as far as practicable in accordance with the waste hierarchy and applicable legislation and guidelines. As detailed in Appendix D of the EIS, a waste management plan will be developed and implemented for the construction and decommissioning phase of the project.

5.3.11 Hazards

5.3.11.1 Aviation

Two submitters raised concerns on aviation safety, in particular the reduction of area for safe landings in an emergency.

Air Services Australia were consulted during the public exhibition process and did not raise any aviation concerns, such as reduction of area for safe landings, in relation to this project.

5.3.11.2 Fire risk

Fourteen submitters raised concern about fire risk associated with the project, including concern that the project would start or propagate a grass and/or bushfire, concern about the risk for fire from the BESS and concern regarding potential release of hazardous/toxic smoke from a fire associated with the project.

It is acknowledged that bushfire risk is a serious concern within the surrounding community.

A BFAR was prepared in Appendix O of the EIS and summarised in Section 7.9 of the EIS. Mitigation measures identified to minimise the chance of bushfire ignition due to the project, and to reduce the severity of potential impacts if a bushfire occurs within the site included but were not limited to:

- Provision and maintenance of APZs for infrastructure including solar panels, BESS and the substation.
- The BESS, substation, and associated buildings are to be built to the appropriate Bushfire Attack level (BAL) as per Australian Standard (AS) 3959:2018.
- Provision of static water supply dedicated for fire-fighting only.
- Development and implementation of bushfire management measures under the construction and operation environmental management plans.

In response to NSW RFS submission during the public exhibition, the BFAR was updated to further clarify locations and specifications of key fire-fighting assets on site, including access tracks and water tanks, as well as clearly illustrate the location and fire risk safety requirements (i.e. setback distances) for a de-centralised versus a centralised BESS design configuration. The amended BFAR is attached in Appendix G of this submissions report, with the key amendments summarised as follows:

- Further context and detail have been provided for the project site environment.

- APZs have been further defined with consideration of the findings of the Preliminary Hazards Analysis (Appendix N of the EIS), with the key change identifying the requirement for a 20 m setback distance between the site boundary and the outermost battery enclosures (applies to the centralised and de-centralised BESS design options).
- Static water supply available on site at all times for the purposes of fire-fighting have increased from one 20,000 L tank to five 45,000 L tanks in strategic locations throughout the development footprint, in line with Chapter 4.2 of the Victorian Country Fire Authority (CFA) document *Design Guidelines and Model Requirements Renewable Energy Facilities v4* (2023).
- Detailing installation criteria for any electricity or gas installations required for the project.
- Refining emergency access requirements and maintenance to the de-centralised or centralised BESS configurations.
- Updating the emergency management planning including details required in management plans, and monitoring and consultation requirements.
- Review of the location of a centralised versus de-centralised BESS design configuration for the project infrastructure layout, including illustrating the different fire-fighting assets and setback distances according to each design configuration.

As detailed in Section 4.5 of this report, Edify will also conduct a Fire Safety Study, and develop an Emergency Plan, Emergency Services Information Package and an emergency responder's induction package, in consultation with FRNSW.

With regards to fire risk from the BESS, a preliminary hazard analysis (PHA) was prepared in Appendix N of the EIS, which included an analysis of the severity of the consequences for fire in accordance with the following guidelines:

- Hazardous and Offensive Development Application Guidelines: Applying SEPP 33 (DoP 2011c).
- Hazardous Industry Planning Advisory Paper No. 6 Hazard Analysis and Multi-Level Risk Assessment (DoP 2011d).
- Hazardous Industry Planning Advisory Paper No. 4 Risk Criteria for Land Use Safety Planning (DoP 2011e).

The qualitative analysis undertaken determined that a battery fire has the potential to lead to non-major off-site consequences. BESS fire modelling was performed for two indicative types of modular BESS units. The PHA has shown that risks to the public associated with the operation of the solar farm (including the BESS units) can be effectively managed by establishing appropriate separation distances between the units and the site boundary. The modelling results informed recommendations for the intra-site placement of equipment, as detailed in Section 7.9.4.1 of the EIS, which Edify have committed to incorporating as part of the design and construction process.

5.3.11.3 Firefighting resources

Two submitters raised concerns on firefighting resources, stating it would be a burden on local resources.

Edify are committed to working with the local RFS to ensure the project provides suitable facilities, controls and procedures to effectively manage fire within the site and its surrounds. The project will take several steps to prevent the ignition and spread of bushfire including:

- Preparing a detailed construction and operation Fire Management Plan in consultation with NSW RFS and FRNSW.
- Establishing APZs around all assets where vegetation will be kept to a low height throughout the life of the project.
- Provision of suitable static water supply on-site.
- Establish site access tracks throughout the site including a perimeter track and new site access point from Eumungerie Road.

The amended BFAR (Appendix G) has referenced Chapter 4.2 of the Victorian Country Fire Authority (CFA) document Design Guidelines and Model Requirements Renewable Energy Facilities v4 (2023) for provision of static water supply at the subject site, noting the RFS requirement for addressing "fire suppression" in relation to the project. Based upon static water supply provisions issued by the CFA (2023), the proposed solar farm will require one 45,000 L water tank at the main entrance to the subject site and four additional 45,000 L water tanks

interspersed evenly throughout the subject site. The location of the 45,000 L tanks will be subject to detailed design, however the tanks will be generally situated as follows:

- One located at the site entrance.
- One within the eastern portion of the solar array.
- One within the northern portion of the solar array.
- One placed adjacent to the substation and BESS (if centralised).
- One placed centrally in the site, suitably placed to assist combating potential ignition and spread of fire within the retained portion of PCT 202.

Primary access to the subject site will occur from Eumungerie Road via construction of a BAR. Two site access options have been provisioned for the project. Internal vehicle access tracks will be constructed to each inverter enclosure and to the substation to allow for site maintenance. On-site tracks will be constructed of compacted gravel and, where required, geotextile fabric will be laid between the soil and the gravel. Internal access tracks will be up to 4 metres wide to allow for the safe delivery, unloading and installation of key components such as the solar panels, inverters, transformers and BESS units.

FRNSW and NSW RFS were consulted as part of the public exhibition, with their requirements met, as detailed in Section 4.5 and Section 4.8 of this report.

5.3.11.4 Electro-magnetic fields

One submitter requested details for potential health risks associated with 'Electrical Force and Electromagnetic Radiation'

Potential impacts of Electro-magnetic Fields (EMFs) associated with project infrastructure was assessed as part of the EIS, as detailed in Section 7.9.

The likely level of EMF exposure to the general public at the site boundary is expected to be insignificant based on the published guidance, however the following controls to limit exposure to EMF will be applied:

- Design, selection and procurement of electrical equipment for the project will comply with relevant international and Australian standards for exposure to EMF.
- Location selection for project infrastructure (ie accounting for separation distance to surrounding land uses) and fencing along the project boundary to limit the exposure to EMF for the general public.

5.3.11.5 Radiant heat

One submitter raised concerns on the large-scale solar array altering local temperatures.

Potential localised increases in temperature as a result of utility scale solar installations was not a requirement of the project SEARs, however research has been conducted on this concern and summarised below.

'Heat island' is defined as an area having higher average temperature than its surroundings owing to the greater absorption, retention, and generation of heat by buildings, pavements, and activities. This is usually used in reference to the impact of an urban area on its rural surroundings. Recent studies have now begun investigating the potential heat island effect as a result of utility- scale photovoltaic installations and whether there is a temperature influence on ecosystem function and human health.

The topic has been subject to consideration by the Victorian Planning Panel for solar farms proposed in Greater Shepparton, proposed by Neoen and X-Elio. This is detailed in the Panel Report for the *Greater Shepparton Solar Energy Facility Planning Permit Application 2017-162, 2017-274, 2017-301 and 2017-344* (Panel Report, 2018). One of the Greater Shepparton proponents, in preparation of a response to key issues raised in objecting submissions, commissioned a *Statement of Evidence* by Greg Barron-Gafford from the Research Group Biography, Ecosystem Science (University of Arizona) (Barron-Gafford, 2018). Barron-Gafford (2018), in his Statement of Evidence (SoE) to the Victorian Planning Panel included results on the radius of the measured heat effects. This identified that the Photovoltaic Heat- Island (PVHI) effect was indistinguishable from air temperatures over native vegetation when measured at a distance of 30m from the edge of the PV array. In his SoE he states that:

> ‘This pattern held true for both daytime and night-time conditions. Because the PV panels themselves trap the energy from diffuse sunlight that was able to reach the ground underneath them, air temperatures remain elevated within a PV array. As you leave this “overstorey” of PV panels, energy is able to radiate back towards the atmosphere, as it does in a natural setting, and the PVHI quickly dissipates’.

A more recent study conducted in 2021 by L. Guoqing, R.R. Hernandez, G.A. Blackburn et al.’s found land surface temperature (LST) exhibited a cool island effect that extended up to 730 m away from the boundary of two utility-scale solar installations, with localised reductions of up to 2.3 degrees Celsius (°C). The study assessed LST variations beyond the boundaries of two PV installations in the arid ecosystems of Qinghai Province, China (Longyangxia) and California, United States of America (Stateline), via a combination of remote sensing data analysis and field analysis. The findings of the field analysis conducted at Stateline suggested a cool island effect. The remote sensing data analysis findings were stated as follows:

> ‘The extent of the LST cool island, as defined by differences in LST between adjacent buffers before and after solar park construction, extended up to 730 m away for both Longyangxia and Stateline…’

In conclusion, it is considered that solar arrays would affect air temperatures within the solar array perimeter, but that in relation to outside of the solar array perimeter a heat island effect is unlikely to occur.

5.3.12 Social

5.3.12.1 Livestock welfare

Three submitters raised concerns on the welfare of grazing sheep in the solar farm footprint.

Welfare of livestock is not an assessment requirement as part of the EIS process, however, Edify have ongoing experience in safely and successfully co-locating sheep grazing with operational solar farms as summarised below.

Edify built and operates the Gannawarra solar and battery project in Kerang, Victoria (VIC). This project is now host to around 500 merino sheep. This experience has proven that the sheep take a couple of days to get used to the site and then are very comfortable with the solar array infrastructure, noting the sheep are excluded from the BESS infrastructure. The sheep commonly use the shade from the solar arrays during summer to escape the harsh temperature and conditions. Merino sheep, particularly Wethers and Merino-cross, are currently the most common breeds of sheep involved in solar grazing at Australian solar farms. The Edify Gannawarra and Darlington Point Solar Farms currently in operation, utilise Merino sheep, which have successfully proven to graze within the solar and energy storage infrastructure with the following benefits found with introducing Merino sheep to a solar farm (Edify Energy, 2025):

- Merino Sheep are one of the most common breeds of sheep involved in ‘agri-solar’ grazing, having a reputation for a docile temperament and are not prone to jumping on equipment or damaging electrical cables.
- Merino Sheep growth rate and fertility are potentially higher due to the shade provided by solar panels, as well as lower temperatures particularly during summer months.
- The micro-climate under the solar panels lead to better soil quality and water retention, ultimately providing a higher quality grass for sheep to graze on.

5.3.12.2 Mental health

Thirteen submitters raised concerns on the impact of the project on mental health and wellbeing of the neighbouring landholders and wider community.

Edify acknowledges the planning and development of any major development can cause stress for the local community and neighbouring landholders around the uncertainties with the project’s potential impacts and the increasing renewable development associated with the CWO REZ.

The social impacts and proposed management and mitigations of the project are discussed in the Social Impact Assessment (SIA) (Appendix Q of the EIS) and Section 7.11 of the EIS, acknowledging that the project may generate feelings of stress and anxiety for the local community associated with various matters of the project such as impacts to visual amenity and pressure on local resources. Mitigation measures proposed in Section 6

of the SIA and Section 7.11.4 of the EIS addresses several community concerns related to the project, which should reduce uncertainty, and consequently, mental health and/or stress associated with the project. Not all of the potential impacts will be the responsibility of the proponent to mitigate or manage, their role may be to cooperate or inform the mitigation, provide data and information, through to direct responsibility for mitigation and management of the identified potential social impacts and the opportunity for partnerships.

The positive regional benefits of the project, including employment opportunities and local business flow-on economic effects, will help to reduce mental health stress on some members of the community. As part of the project Community Consultation and Engagement Plan, the local community can directly discuss opportunities or issues as a result of the project.

5.3.12.3 Local workforce

One submitter commented on the project leading to a reliance on external workers rather than sourcing a local workforce.

Impacts and opportunities associated with local business and economy was assessed as part of the SIA (Appendix Q of the EIS). The project will lead to benefits and opportunities associated with local employment, training and procurement opportunities. Procurement opportunities from the construction phase of the project may benefit local and regional businesses as it will procure various goods and non-goods to construct the project. The flow on effects of the construction phase will likely include demand for accommodation and food services, transport, postal and warehousing, rental, hiring and real estate services, and administrative and support services.

A local procurement strategy will see early and regular engagement with local businesses and the Narromine Shire Council to establish relationships with the project contractors. Once a main contractor has been appointed, Edify will hold employment and business opportunities briefings and community networking meeting, prior to the construction phase, to discuss employment, procurement, and local services (e.g., accommodation providers, cafes etc.) opportunities and to register those interested in participating. Edify will monitor registration of interest form responses on website and advertise in local and regional newspapers. Edify will encourage the project workforce, particularly during the construction phase, to support and contribute to the local and regional community through local spending.

5.3.12.4 Community and lifestyle

Eight submitters commented on the project's negative impact on community and the rural lifestyle.

No adjacent neighbours within 5 km of the project raised this concern during the public exhibition stage. Two of the eight submitters were within 100 km of the project, with the remaining six over 100 km from the project.

The project site has been assessed and designed to minimise amenity impacts on the surrounding community as well as retain the rural lifestyle as much as possible through various commitments listed in Appendix D of the EIS including but not limited to:

- Potential retainment of agricultural land use associated with combined use sheep grazing during operation.
- Setback distances from the property boundary and designation of taller infrastructure (substation and O&M building) in the corner of the subject land where visibility from local roads and surrounding sensitive receivers is low.
- Management of increased traffic on roads during construction via a traffic management plan, community information plan/sessions and an upgrade of the site access point for safe entry and exit.
- Maximized distance between potential noise-generating infrastructure during operation and the closest non-associated sensitive receptors.
- Avoiding clearing of all vegetation within the subject land, allowing 'visual relief' of the infrastructure due to the retained patches of vegetation and paddock trees.
- Environmental management plans during construction and operation for other potential amenity impacts such as air quality.

- Rehabilitation post-construction and post-decommissioning to reinstate the pre-existing ground conditions and ensure ongoing ground stability, which will reduce any impacts to the soil and surface water.

Further, Edify will provide ongoing benefits to the local community through local employment opportunities, increased local spend by the contractors/workforce during construction and by establishing a community fund/voluntary planning agreement with NSC, which is designed to support community group projects/local initiatives, local infrastructure upgrades and conservation/enhancement of the natural environment initiatives.

5.3.13 Economic

5.3.13.1 Property values

One submitter commented on the project's potential to decrease neighbouring land value.

Potential impacts to neighbouring property values was not a requirement of the project SEARs, however research has been conducted on this concern and summarised below.

Edify is cognisant that for most households, their home is their primary asset, which in turn means that any factor which may affect its value, including emotional value, is significant and important to understand. After delivering eight projects throughout Queensland and Australia, including the first combined solar plus battery project in Victoria, Edify is not aware of any research or evidence which establishes a correlation between declining real estate values and proximity to renewable infrastructure.

Solar farms are likely to have negligible impact on surrounding property values. This is supported by overseas studies that have investigated the impact of utility-scale solar farms on property values (American Clean Power Association, 2021). A study by the University of Rhode Island (Al-Hamoodah et al. 2018) evaluated 208 solar facilities, 71,373 housing sales occurring within one-mile of solar facilities (Test Group), and 343,921 sales between one-to-three miles of a solar facility (Control Group). The study found no negative impacts to residential home values near solar arrays in rural areas. Similar results were found in a study of 451 solar farms in North Carolina. "Across many samples and specifications, we find no direct negative or positive spillover effect of a solar farm construction on nearby agricultural land values" (Abashidze and Taylor 2022, p. 327)

The most recent and relevant study carried out in Australia was commissioned by the NSW Office of Environment and Heritage and published by planning consultancy Urbis in July 2016. This report comprised an analysis of available sales data and a 'literature review' of Australian and international studies. An example of the literature review includes a 2009 report prepared for the NSW Valuer General's office. Its conclusions are most easily understood when divided into 'agricultural' and 'lifestyle' land. The report recognises that property values are influenced by a range of factors, and it is therefore difficult to determine if solar farms (or other similar infrastructure) can cause land values on neighbouring agriculture properties to increase or decrease.

The NSW Government Valuer General identifies factors that influence rural land value such as land classification, soil type, land size, access, location, permitted uses, productivity, property market conditions and value as a lifestyle block (NSW Government Valuer General 2017). Sale prices reflect other considerations such as improvements that have been made to a property. As part of the EIS, a LCVIA and NVIA was completed and demonstrated the project would have minimal impacts on local amenity. The location of project infrastructure is distant and not visible by surrounding residences for up to 5 km and the project is long-term temporary in nature, with the pre-existing land use to be re- instated on decommissioning.

In summary, it is not expected that the project would affect the values of neighbouring properties.

5.3.13.2 Local economy and businesses

Twelve submitters raised concerns of the project's potential negative impact on local businesses and the local economy.

Potential impacts and opportunities on local economy and business has been assessed as part of the SIA (Appendix Q of the EIS) and in Section 7.11 of the EIS. The project will generate an alternative revenue stream for the associated landholders through landholder agreements, that will assist in sustaining the associated landholder's livelihoods now and into the future.

Edify will enter into a voluntary planning agreement with NSC to inject funds into the local economy that will support various activities like infrastructure upgrades and local community groups initiatives. The construction phase will introduce opportunities associated with procurement of local workforce and business, which will deliver benefits to the local economy. Edify will engage with NSC to develop a local participation plan in which local businesses and contractors can register provision of their goods and services for the selected EPC contractor to utilize during the construction phase.

Edify will also engage with NSC and the local community prior to the construction phase to develop the accommodation and employment strategy and advise on construction periods and the potential associated increase in trade, goods and services such as accommodation needs. Edify will consult with the selected EPC contractor throughout the construction period to encourage the support and contribution to the local and regional community through local spending.

5.3.13.3 Insurance costs

Four submitters raised concerns of the project's potential negative impact on insurance costs for the host landholder and neighbouring landholders.

Potential increased insurance costs for the landholder and neighbouring landholders is not required to be assessed under the EIS, however research has been conducted on this concern and summarised below.

The Insurance Council of Australia has provided guidance on this issue in a key message published on May 14, 2024, stating that:

> 'Current information indicates that insurers generally do not have specific concerns related to a property hosting transmission lines or neighbouring energy infrastructure. At the time of writing, the Insurance Council is not aware of any instances where Insurance Council members have been unable to provide insurances or have increased premiums as a result of a farm (or a neighbouring property) hosting energy infrastructure (ICA 2024).'

Separately in an article published by the Australian Broadcasting Corporation on June 12, 2024, on similar concerns regarding the Culcairn Solar Farm, the Insurance Council of Australia provided the following statement:

> 'Solar farms are not currently impacting or influencing the price of insurance… Premiums are rising because of the escalating costs of natural disasters, the increasing value of homes and vehicles making them more expensive to replace, and inflation pushing up building and vehicle repair costs (Slack-Smith, 2024).'

Edify will have its own insurance policies in place to provide coverage in the unlikely event that the solar project equipment is damaged (i.e. fire, flood, etc), or in the event that their operations cause loss/damage/injury to any third parties. These insurances will be placed with major, globally recognised insurance companies, and will provide a very high standard of cover in line with the expectations of our investors, financiers and various other counterparties to the project.

Edify understands that some adjoining landowners often pose questions regarding the process that occurs if damages occurred to an adjacent project, however the important elements for consideration are:

- For an adjoining landowner to have any liability for fires that have spread from their property into the solar project, it has to be demonstrated that the landowner was negligent in causing damage. In this regard, Edify's facilities are no different from any other – e.g. rural buildings, an adjacent commercial facility e.g. substation, abattoir, etc.
- The occurrence of a fire from a weather event (e.g. a lightning strike) that migrates from the neighbouring landowner's property to Edify's project property would be deemed a natural event and would not likely create a legal liability for the neighbouring landowner. Likewise, if there was a heavy rainfall event and water drained from an adjoining property into Edify's facility, this again would be considered a natural event. In such a case, Edify would not seek to pursue a claim directly against an adjacent landowner's insurances – this is precisely what Edify's own insurance program is for. Such a claim in respect of Edify's assets would be made against Edify's own insurers.

- In Edify's experience, an adjacent landowner would not be required to make any adjustment to their own insurances.

In summary, Edify has its own comprehensive insurance program which would respond to any claim in the event of loss or damage to the Solar Farm and associated infrastructure.

5.3.14 Greenhouse gas emissions

Three submitters queried whether the project would result in a reduction of greenhouse gas emissions as well as the project's potential increase in greenhouse gas emissions as a result of the infrastructure required.

Assessment of project impacts, either positive or negative, on greenhouse gas (GHG) emissions was not a requirement of the project SEARs, however, Edify provide a calculated estimate on annual reduction of GHG as a result of the project operation. Research has been conducted on this concern and summarised below.

With respect to climate change and GHG emissions, the project will contribute to renewable energy supply in NSW, supporting the Commonwealth and State governments in achieving their respective renewable energy and GHG emissions reduction targets.

Once operational, the project will reduce greenhouse gas emissions by an equivalent of approximately 195,800 tonnes of GHG annually.

The GHG emissions associated with the resources required to produce materials for the project are classified as 'Scope 3 emissions', which are indirect emissions of the project but are from sources not owned or operated by Edify. Notably, these emissions are accounted for by the producers of the material in their Scope 1 emissions.

All power generation technologies, regardless of whether they are renewable such as wind and solar, or fossil fuel-based technologies such as coal plants and gas plants, require resources to be mined and extracted for the manufacture of the required equipment (e.g. steel for the boilers and concrete for the cooling towers in a coal plant). Whilst a full comparison of the lifecycle resource requirements of these different technologies is outside of the scope of the EIS and is not a planning consideration under the NSW planning framework, there is a significant body of literature that demonstrates that the total lifecycle GHG emissions of solar PV electricity generation is much lower than the total lifecycle GHG emissions of electricity generation from coal (Burkhardt et al. 2012; Whitaker et al. 2012).

5.4 JUSTIFICATION AND EVALUATION

Twenty-two submitters made comments on the justification and evaluation of the project, summarised as follows:

- **Permanent impacts to agricultural land for unreliable and intermittent energy generation.**
- **Destruction of the environment and impacts to local food/water security and resources, from land clearing and contamination from project infrastructure.**
- **Negative impacts on community, local business and economy.**

The justification and evaluation of the project is discussed throughout Chapter 3, Chapter 5, Chapter 7 and Chapter 8 of the EIS, and summarised below.

The project is consistent with relevant Commonwealth, State, regional and local strategic plans and polices, in particular the NSW *Electricity Infrastructure Investment Roadmap*, which sets out the plan to deliver REZs in NSW. The project will contribute to the energy generation and storage targets for the CWO REZ, with an capacity of 100 MW and battery storage capacity 100 MW / 400 MWh.

The CWO REZ was selected by the NSW Government following a detailed state-wide geospatial mapping exercise to identify optimal locations to host renewable energy generation, including areas with strong renewable energy resource potential, proximity to the existing electricity network, and consideration of potential interactions with existing land uses, including agricultural lands and biodiversity conservation (EnergyCo 2018).

The project area is favourable for the construction and operation of a solar and battery project due to the available solar resource, physical conditions (relatively flat topography and predominantly cleared, agricultural land), absence of biophysical strategic agricultural land and relatively few residences within close proximity. The subject land hosts an existing Essential Energy 132 kV line, making it an optimal location for the export of electricity to the grid. The project footprint has not been amended as it has been designed in a way that minimises as many environmental impacts as possible, such as avoiding placement of permanent infrastructure on higher quality soil and micro-siting of infrastructure so that plant communities and paddock trees will not be impacted.

The project will provide ongoing economic benefits for both the local economy within the Narromine Shire LGA and more broadly, the regional economy through significant employment and business opportunities during construction.

Historically, solar farms have not been built with the inclusion of a battery energy storage system. Instead, solar farms only include the solar infrastructure needed to produce electricity, limiting their productivity to times when both supply and demand align. Whilst solar generation is an important contributor to Australia's energy mix, the technology is solely dependent on sunlight conditions and cannot generate electricity on demand, nor after the sun goes down. Therefore, they often do not maximise the use of the weather dependent energy that is generated. By adding a large-scale battery system, this enables the generator to dispatch electricity on-demand, maximising the value derived. This includes supplying the grid during times of high demand, which could otherwise result in price surges, creating a more stable market with reduced costs for consumers.

The battery component also supports the variability of solar generation by smoothing output. The battery interfaces with the transmission network via a digital inverter, which enables the project to support the grid's frequency, in the event of a contingency or disruption to the network. The system's inverters have a response time within 200 - 300 milliseconds, which is incredibly fast and accurate when compared to traditional, thermal electricity generators. By integrating both solar and battery facilities into one project, this combined system achieves a more balanced supply of power and voltage stability, allowing the operator to control when energy is stored or sent into the grid to ensure sufficient generation is available when it's most needed.

Finally, the battery can also provide an alternative solution to building more poles and wires. Transmission network augmentation can be deferred and sometimes avoided altogether, as this project has the ability to support periods of network congestion (which have been notable from 2017 - 2022). Batteries and other 'non-network solutions' can create savings for the network owners, government and most importantly – household consumers.

Were this project not to proceed, the project's benefits, including contributions to the generation of renewable energy and increased energy security, would not be realised. As renewable energy generation and storage projects are needed in NSW, not proceeding with the project in its proposed location may encourage development in a less favourable location, resulting in undesired outcomes, such as greater requirements for grid connection infrastructure and greater environmental and social impacts.

It is acknowledged that the project will have both impacts and benefits on the surrounding natural and built environments. The impacts have been assessed and can be adequately managed through the proposed design, mitigation, and management during construction and operation. On balance, it is therefore considered that the project is in the public's interest.

5.5 ISSUES BEYOND SCOPE

5.5.1 Justification for renewable energy

Seven submitters made comments on the justification for renewable energy projects as follows:

- **Views that other alternatives should be considered for electricity generation such as nuclear.**
- **Comment that the emissions and use of resources is large for solar projects.**
- **Large amount of infrastructure required for electricity connection and renewable projects leads to greater impact on the environment.**
- **Views that the project won't reduce greenhouse gas emissions.**

The project is consistent with the Commonwealth, State, regional and local strategic plans and polices outlined in Section 3 of the EIS, including *The Paris Agreement*, the *Large-scale Renewable Energy Target*, the N*SW Electricity Strategy*, the *Net Zero Plan Stage 1: 2020–2030*, and the NSW *Electricity Infrastructure Investment Act 2020*. The NSW Government has committed to halving its carbon emissions based on 2005 levels by 2030 and both the state and federal governments have pledged to achieve net zero emissions by 2050. The NSW Electricity Infrastructure Roadmap sets out the plan for how this will be achieved, primarily through the delivery of REZs in NSW.

The project will contribute to the electricity generation and storage targets for the CWO REZ, with an indicative capacity of approximately 100 MW and battery storage capacity 100 MW / 400 MWh. The development and operation of the project, in conjunction with other large-scale renewable energy projects, will contribute to filling the need for replacement power as ageing coal-fired generators close. Once operational, the project will reduce greenhouse gas emissions by an equivalent of approximately 195,800 tonnes of GHG annually.

While all sources of electricity result in some GHG emissions over their lifetime, renewable energy sources have substantially fewer emissions than fossil fuel-fired power plants (World Resources Institute 2020). Most of the lifecycle emissions from fossil generators occur from fuel combustion, which occurs at a high level throughout operations. Conversely, while the manufacture of solar panels requires substantial amounts of energy, studies have found that they offset the energy consumed in production within about two years of operation, depending on the module type (World Resources Institute 2020). The World Nuclear Association conducted a comparison of lifecycle greenhouse gas emissions of various electricity generation sources (World Nuclear Association, 2011), which included the review of studies conducted by government agencies, universities and industry associations. The key outcome of the study is shown graphically in **Figure 7**, which identifies that renewable energy generation (solar and wind) produced significantly lower lifecycle greenhouse gas emissions compared with alternatives such as coal, oil and natural gas.

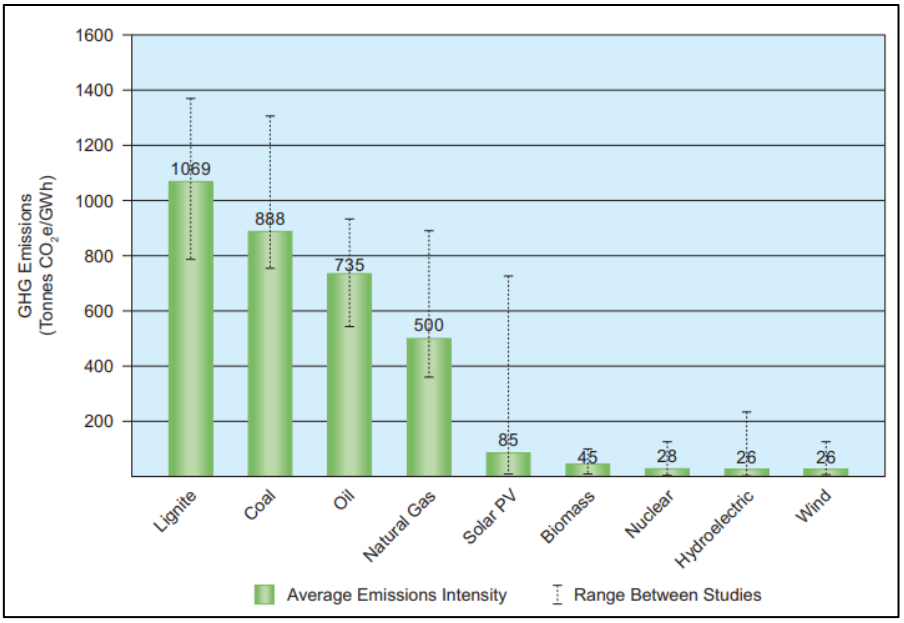


Figure 7: Lifecycle GHG Emissions Intensity of Electricity Generation Methods (World Resources Institute 2020)

All power generation technologies, regardless of whether they are renewable or fossil fuel-based, require resources to be mined and extracted for the manufacture of the required equipment (e.g. steel for the boilers and concrete for the cooling towers in a coal plant). A full comparison of the lifecycle resource requirements of these different technologies and a comparison of alternative power generation is outside of the scope of the EIS and is not a planning consideration under the NSW planning framework.

5.5.2 Supply of project infrastructure

One submitter raised concern on the supply of goods and infrastructure for the project being unethically sourced or involving slave labour.

The factory location for the PV modules which will be procured for the project will largely depend on the module provider selected for the project.

The Commonwealth *Modern Slavery Act 2018* requires entities based, or operating in, Australia, which have an annual consolidated revenue of more than $100 million, to report annually on the risks of modern slavery in their operations and supply chains, and actions to address those risks. Other entities based, or operating, in Australia may report voluntarily.

It is also noted that the Clean Energy Council has formed a Modern Slavery Working Group. The objectives are to facilitate the process of reporting under the *Modern Slavery Act 2018* and raise the standard of practice across the clean energy sector in Australia. It does this by providing a platform to discuss and consider collaboration on efforts to:

- identify and address risks of modern slavery within supply chains
- report under the national Modern Slavery Reporting Requirement.

Edify have internal policies that comply with the *Modern Slavery Act 2018* and the selected EPC contractor will be required to have appropriate policies in line with the *Modern Slavery Act 2018.*

5.5.3 Decommissioning bank guarantees

Five submitters commented on the lack of an upfront financial provision for decommissioning and restoration of the project land.

Edify maintain a long-term equity interest in their projects and provide full lifecycle asset management to align their vision to the needs of their investors, counterparties and other stakeholders including community and local councils for projects. Edify is committed to project Custodian responsibilities and intends to implement such practices with a local company during the decommissioning phase, in which all infrastructure will be removed from site and the site rehabilitated to its pre-existing condition.

The requirement for Edify to estimate or provide financial provision for decommissioning is outside of the scope of the EIS and is not a planning consideration under the NSW planning framework.

5.5.4 Location of renewable projects

Twenty submitters commented on the location of the project within rural areas and productive agricultural land.

The project is within the CWO REZ. Justification for the location of the CWO REZ is outside of the scope of this project. Details on REZs in NSW, and specifically the CWO REZ, are provided on EnergyCo's public website (Central-West Orana Renewable Energy Zone | EnergyCo).

5.5.5 Electricity prices

Two submitters stated the project will result in an increase in electricity prices.

The development of the CWO REZ, , is part of the transformation of the NEM, of which the objective is to provide reliable, secure and affordable electricity to consumers. Once operational, the project will dispatch low-cost electricity into the NEM. Solar PV is now one of the lowest cost sources of energy in the world and in Australia (Brailsford, 2018).

Solar energy forms just one part of the AEMO move towards a sustainable energy system. Solar farms supported by battery energy storage systems add to the supply side of the electricity supply / demand equation, which puts downward pressure on all electricity bills. The AEMO provides excellent guidance for Australia's anticipated energy mix, particularly since AEMO is tasked with managing Australia's energy transition, balance the power system and orchestrate the cheapest mix of electricity generators across every minute of the day.

6 AMENDED PROJECT JUSTIFICATION

6.1 STRATEGIC CONTEXT

The project is consistent with relevant Commonwealth, State, regional and local strategic plans and polices, in particular the *NSW Electricity Infrastructure Investment Roadmap*, which sets out the plan to deliver REZs in NSW. The project will contribute to the energy generation and storage targets for the CWO REZ due to its strategic location within the CWO REZ, with an indicative capacity of around 100 MW and battery storage capacity 100 MW / 400 MWh.

6.2 SITE SUITABILITY

The CWO REZ was selected by the NSW Government following a detailed state-wide geospatial mapping exercise to identify optimal locations to host renewable energy generation, including areas with strong renewable energy resource potential, proximity to the existing electricity network, and consideration of potential interactions with existing land uses, including agricultural lands and biodiversity conservation (EnergyCo, 2018). The project area is favourable for the construction and operation of a solar and battery project due to the available solar resource, physical conditions (relatively flat topography and predominantly cleared, agricultural land), absence of biophysical strategic agricultural land and relatively few residences within close proximity. The subject land hosts an existing Essential Energy 132 kV line, making it an optimal location for the export of electricity to the grid.

6.3 PROJECT DESIGN

The proposed development footprint is the most appropriate area for the project infrastructure based on inputs provided during consultation activities with regulatory and community stakeholders, environmental assessments and the functional requirements of project infrastructure. Where potential impacts cannot be avoided, Edify have minimised environmental impacts and/or implemented mitigation measures, to manage the extent and significance of residual impacts. The Project footprint has not been amended as it has been designed in a way that minimises as many environmental impacts as possible, such as avoiding placement of permanent infrastructure on higher quality soil, micro-siting of infrastructure so that plant communities and paddock trees will not be impacted, limiting the footprint for project infrastructure to the minimum required and minimising impacts on neighbouring landholders.

The project footprint was reviewed against the draft Native Vegetation Regulatory mapping, which was finalised on December 24, 2024, to ensure the development footprint avoids impacts to regulated land. The development footprint avoids the single patch of category 2 sensitive regulated land and two areas of category 2 regulated land, including a 30m buffer between the vegetation and infrastructure with a dedicated 10 m APZ. The project intends to avoid several paddock trees which are mapped as category 2 regulated land. Various other scattered trees shown on the aerial are mapped across the subject lot as category 2 regulated land, which have not been excluded from the development footprint, as most of these were found to no longer exist and the few extant examples have been avoided.

The footprint was also updated to clearly illustrate asset locations (e.g. Water tanks) for the purposes of firefighting as well as the two proposed BAR footprints on Eumungerie Road to facilitate site access, as shown in **Figure 3**.

The placement of infrastructure and the extent of construction activities will be refined during detailed design prior to the commencement of construction to further maximise avoidance, consistent with the project's avoidance and minimisation objectives.

6.4 CONCLUSION

Were this project not to proceed, the project's benefits, including contributions to the generation of renewable energy and increased energy security, would not be realised. Renewable energy generation and storage projects are needed in NSW and the project is proposed in a highly suitable location that makes optimal use of existing transmission infrastructure and minimises the need for additional grid connection infrastructure. The

environmental and social impacts of the project can be readily managed with the application of practical mitigation measures.

In summary, the project is considered to be justified and in the public interest.

REFERENCES

Australian Energy Market Operator (AEMO), 2024. 2024 Integrated System Plan For the National Electricity Market- *A roadmap for the energy transition.* Accessed via: AEMO | 2024 Integrated System Plan (ISP)

Barron-Gafford, G., Minor R., Allen N., Cronin A., Brooks A., Pavao-Zuckerman M., (2016). *The Photovoltaic Heat Island Effect: Larger solar power plants increase local temperatures*. Sci Rep **6**, 35070 (2016). https://doi.org/10.1038/srep35070

Brailsford, L 2018, *New wind and solar now as cheap as existing coal*, Climate Council, 6 December, retrieved 25 February 2025 from https://www.climatecouncil.org.au/new-wind-and-solar-now-as-cheap-as-existing-coal/

Burkhardt J, Heath G, Cohen E 2012, *Life Cycle Greenhouse Gas Emissions of Trough and Tower Concentrating Solar Power Electricity Generation,* Journal of Industrial Ecology, 16(s1), pp. S93–S109.

DECC 2009, *Interim Construction Noise Guideline*. NSW Department of Environment and Climate Change.

DoP 2011a, *Hazardous Industry Planning Advisory Paper No 2 – Fire Safety Study* (HIPAP 2). NSW Department of Planning.

DoP 2011b, *Hazardous Industry Planning Advisory Paper No 1 – Emergency Planning* (HIPAP 1). NSW Department of Planning.

DoP 2011c, *Hazardous and Offensive Development Application Guidelines: Applying SEPP 33* (Applying SEPP 3). NSW Department of Planning.

DoP 2011d, *Hazardous Industry Planning Advisory Paper No 6 – Guidelines for Hazard Analysis* (HIPAP 6). NSW Department of Planning.

DoP 2011e, *Hazardous Industry Planning Advisory Paper No 4 – Risk Criteria for Land Use Safety Planning* (HIPAP 4). NSW Department of Planning.

DPIE 2022a, *State significant development guidelines – preparing an environmental impact statement.* NSW Department of Planning and Environment.

DPIE 2022b, *Large-Scale Solar Energy Guideline.* NSW Department of Planning and Environment.

DPIE 2022c, *Technical Supplement – Landscape and Visual Impact Assessment.* NSW Department of Planning and Environment.

DPHI 2024a, *State significant development guidelines – preparing a submissions report*. NSW Department of Planning, Housing and Infrastructure.

DPHI 2024b, *Undertaking Engagement Guidelines for State Significant Projects.* NSW Department of Planning and Environment.

Edify Energy, 2025. Burroway Solar Farm Project Page. Accessed here: https://edifyenergy.com/project/burroway/

Edify Energy, 2025. Brewongle Solar Farm Project Page Frequently Asked Questions. Accessed here: https://edifyenergy.com/project/brewongle-solar-farm/

Fthenakis, V., Yu, Y. (2013). *Analysis of the potential for a heat island effect in large solar farms.* 2013 IEEE 39th Photovoltaic Specialists Conference (PVSC). pp. 3362-3366, doi: 10.1109/PVSC.2013.6745171.

Guoqing, L., Hernandez, R.R, Blackburn, G.A., Davies, G., Hunt, M., Whyatt, J.D., Armstrong, A., (2021) *Ground-mounted photovoltaic solar parks promote land surface cool islands in arid ecosystems*. Renewable and Sustainable Energy Transition, Volume 1, 100008, ISSN 2667-095X, https://doi.org/10.1016/j.rset.2021.100008.

ICA 2024, *Farm Insurance and Energy Infrastructure*, published 14 May 2024, Insurance Council of Australia.

MDER et al (2015). Questions & Answers Ground-Mounted Solar Photovoltaic Systems. Clean Energy Results. Massachusetts Department of Energy Resources, Massachusetts Department of Environmental Protection, Massachusetts Clean Energy Center. June 2015.

NSW Government Valuer General 2017, *Fact Sheet: Valuing rural land*.

OEH 2012, *The land and soil capability assessment scheme, second approximation: A general rural land evaluation system for New South Wales*. Office of Environment & Heritage, Government of NSW.

Queensland Government (Energy and Climate), 2024. *Queenslanders behind our renewable energy transformation.* Accessed via: Queenslanders behind our renewable energy transformation | Energy and Climate

Robinson, S.A. & Meindl, G.A. (2019). *Potential for leaching of heavy metals and metalloids from crystalline silicon photovoltaic systems.* Journal of Natural Resources and Development. 10.5027/jrnd.v9i0.02

Slack-Smith 2024, *Farmer fears potential public liability insurance risks living next door to Neoen's Culcairn solar farm,* published 12 June 2024, ABC News. Accessed 25 February 2025 from https://www.abc.net.au/news/2024-06-12/farmer-stephen-pumpa-insurance-concerns-neoen-solar-farm/103855680.

World Resources Institute 2020, Setting the Record Straight About Renewable Energy, retrieved February 2025 from https://www.wri.org/insights/setting-record-straight-about-renewable-energy

World Nuclear Organisation 2011, *Comparison of Lifecycle Greenhouse Gas Emissions of Various Electricity Generation Sources*, retrieved February 2025 from https://world-nuclear.org/images/articles/comparison_of_lifecycle.pdf.

APPENDIX A SUBMISSIONS REGISTER

Table A- 1: Submissions Register

Name	Location	Section where comments addressed
Regulatory Agencies		
NSW DCCEEW – Biodiversity, Conservation and Science Group (BCS)	-	Section 4.2
Airservices Australia	-	Section 4.1
Narromine Shire Council	-	Section 4.3
Crown Lands	-	Section 4.1
Department of Primary Industries and Regional Development – Fisheries (DPIRD Fisheries)	-	Section 4.1
Department of Primary Industries and Regional Development – Agriculture (DPIRD Agriculture)	-	Section 4.4
Fire and Rescue NSW	-	Section 4.5
NSW Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) – Heritage NSW	-	Section 4.6
NSW DCCEEW – Water	-	Section 4.7
Department of Primary Industries and Regional Development – Resources (DPIRD Resources)	-	Section 4.1
NSW Rural Fire Service	-	Section 4.8
Transport for NSW	-	Section 4.9
WaterNSW	-	Section 4.1
Public- Organisations		

Name	Location	Section where comments addressed
Rainforest Reserves Australia (BSF_077)	Bungalow, QLD	Section 5.1.1, Section 5.2.1, Section 5.3.1, Section 5.3.2, Section 5.3.4, Section 5.3.8, Section 5.3.10, Section 5.3.13, Section 5.4
Save Our Surroundings (Murrumbidgee) (BSF_068)	Griffith, NSW	Section 5.3.1, Section 5.3.13, Section 5.5.1
Save Our Surroundings (Riverina) (BSF_071)	Lake Albert, NSW	Section 5.3.2, Section 5.3.8, Section 5.4
Save Our Surroundings (Moulamein) (BSF_028)	Moulamein, NSW	Section 5.3.1, Section 5.3.9, Section 5.3.11
Save Our Surroundings (Romsey) (BSF_029)	Romsey, VIC	Section 5.3.2, Section 5.4
Public- Individuals		
Withheld (BSF_023)	Narromine, NSW	Section 5.1.1, Section 5.3.1, Section 5.3.2, Section 5.3.4, Section 5.3.7, Section 5.3.9, Section 5.3.11, Section 5.3.12, Section 5.3.13, Section 5.4, Section 5.5.4
Withheld (BSF_030)	Narromine, NSW	Section 5.3.1, Section 5.3.2, Section 5.3.9,
Withheld (BSF_056)	Narromine, NSW	Section 5.3.1, Section 5.3.2, Section 5.3.4, Section 5.3.7, Section 5.3.9, Section 5.3.11, Section 5.3.12, Section 5.3.13, Section 5.4
Withheld (BSF_059)	Narromine, NSW	Section 5.3.1, Section 5.3.2, Section 5.4
Withheld (BSF_084)	Narromine, NSW	Section 5.1.1, Section 5.3.1, Section 5.3.2, Section 5.3.4, Section 5.3.5, Section 5.3.11,
Withheld (BSF_081)	Dubbo, NSW	Section 5.3.2, Section 5.3.9, Section 5.4, Section 5.5.4
Withheld (BSF_009)	Mendooran, NSW	Section 5.3.2, Section 5.3.11, Section 5.4, Section 5.5.4
Withheld (BSF_010)	Mendooran, NSW	Section 5.3.1, Section 5.3.4, Section 5.3.12,
Noni Hudson (BSF_065)	Dunedoo, NSW	Section 5.3.1, Section 5.3.2, Section 5.3.4, Section 5.3.7, Section 5.3.9, Section 5.3.11, Section 5.3.12, Section 5.3.13, Section 5.4, Section 5.5.4

Name	Location	Section where comments addressed
Withheld (BSF_008)	Mollyan, NSW	Section 5.3.2, Section 5.3.9, Section 5.3.11, Section 5.5.4
Withheld (BSF_011)	Mollyan, NSW	Section 5.3.2, Section 5.3.11, Section 5.4, Section 5.5.4
Withheld (BSF_014)	Mollyan, NSW	Section 5.3.2, Section 5.3.9, Section 5.4
Ian Marsh (BSF_079)	Gulgong, NSW	Section 5.3.1, Section 5.3.2, Section 5.3.10, Section 5.4
Withheld (BSF_001)	Coonabarabran, NSW	Section 5.3.2, Section 5.3.4, Section 5.3.12, Section 5.4, Section 5.5.4
Withheld (BSF_002)	Coonabarabran, NSW	Section 5.3.1, Section 5.3.4, Section 5.5.4
Withheld (BSF_003)	Binnaway, NSW	Section 5.3.4, Section 5.3.13,
Withheld (BSF_004)	Binnaway, NSW	Section 5.3.12, Section 5.3.13, Section 5.4, Section 5.5.4
Withheld (BSF_005)	Binnaway, NSW	Section 5.3.12, Section 5.3.13, Section 5.4
Withheld (BSF_006)	Binnaway, NSW	Section 5.3.1, Section 5.3.12, Section 5.3.13
Withheld (BSF_007)	Binnaway, NSW	Section 5.3.2, Section 5.3.4, Section 5.3.12, Section 5.4, Section 5.5.4
Withheld (BSF_015)	Coolah, NSW	Section 5.3.10, Section 5.4, Section 5.5.1
Withheld (BSF_016)	Coolah, NSW	Section 5.3.12, Section 5.4
Withheld (BSF_019)	Coolah, NSW	Section 5.3.1, Section 5.4
Withheld (BSF_069)	Yarrabin, NSW	Section 5.3.1, Section 5.3.2, Section 5.3.4, Section 5.3.6, Section 5.3.9, Section 5.3.11, Section 5.3.12, Section 5.4, Section 5.5.4
Lisa Kelly (BSF_064)	Nemingha, NSW	Section 5.3.1, Section 5.3.2, Section 5.3.4, Section 5.3.7, Section 5.3.9, Section 5.3.11, Section 5.3.12, Section 5.3.13, Section 5.4, Section 5.5.4
Withheld (BSF_073)	Springfield, NSW	Section 5.3.9

Name	Location	Section where comments addressed
Withheld (BSF_066)	Mitchells Flat, NSW	Section 5.1.1, Section 5.3.2, Section 5.3.4, Section 5.3.6, Section 5.3.9
Withheld (BSF_048)	Coolamon, NSW	Section 5.1.2, Section 5.3.2
Withheld (BSF_070)	Harefield, NSW	Section 5.3.2, Section 5.3.9, Section 5.3.13
Stan Moore (BSF_027)	Gundary, NSW	Section 5.3.9, Section 5.3.10, Section 5.5.3
Emma Shorthouse (BSF_082)	Edgeworth, NSW	Supporting submission
Ian McDonald (BSF_061)	Walcha, NSW	Section 5.3.9, Section 5.3.10, Section 5.3.11, Section 5.3.13, Section 5.4, Section 5.5.1, Section 5.5.3
Withheld (BSF_063)	Griffith, NSW	Section 5.3.1, Section 5.3.9, Section 5.3.10, Section 5.4,
Withheld (BSF_074)	Kooringal, NSW	Section 5.3.9, Section 5.3.12
Withheld (BSF_057/058)	Lake Albert, NSW	Section 5.3.1, Section 5.3.2, Section 5.3.6, Section 5.3.9, Section 5.3.10, Section 5.3.12, Section 5.3.13, Section 5.3.14, Section 5.4, Section 5.5.1, Section 5.5.2, Section 5.5.3, Section 5.5.4
Withheld (BSF_012)	Balgowlah, NSW	Section 5.3.11, Section 5.3.12
Withheld (BSF_080)	Maxwell, NSW	Section 5.2.2, Section 5.3.12
Withheld (BSF_017)	Guyra, NSW	Section 5.1.1, Section 5.2.2, Section 5.3.2, Section 5.3.5, Section 5.3.13, Section 5.4
Withheld (BSF_083)	Avoca Beach, NSW	Supporting Submission
Peter Williams (BSF_060)	Farmborough Heights, NSW	Section 5.3.1, Section 5.3.2, Section 5.3.9, Section 5.3.10, Section 5.5.1
Withheld (BSF_072)	Hay, NSW	Section 5.3.2, Section 5.3.9
John Moore (BSF_050)	Wangaratta, VIC	Section 5.3.10, Section 5.3.11, Section 5.3.13, Section 5.3.14, Section 5.4, Section 5.5.1, Section 5.5.3, Section 5.5.5

Name	Location	Section where comments addressed
Withheld (BSF_021)	Moulamein, NSW	Section 5.3.1, Section 5.3.10
Withheld (BSF_032)	Moulamein, NSW	Section 5.3.2, Section 5.4, Section 5.5.4
Withheld (BSF_035)	Moulamein, NSW	Section 5.3.8
Withheld (BSF_037)	Moulamein, NSW	Section 5.3.1, Section 5.3.9, Section 5.3.11, Section 5.4
Withheld (BSF_041)	Moulamein, NSW	Section 5.3.9
Withheld (BSF_043)	Moulamein, NSW	Section 5.3.2
Withheld (BSF_044)	Moulamein, NSW	Section 5.3.4
Withheld (BSF_045)	Moulamein, NSW	Section 5.3.11
Withheld (BSF_047)	Moulamein, NSW	Section 5.3.2, Section 5.3.13
Withheld (BSF_051)	Moulamein, NSW	Section 5.3.6, Section 5.3.12
Withheld (BSF_024)	Cunninyeuk, NSW	Section 5.3.1, Section 5.3.10, Section 5.4
Withheld (BSF_031)	Barham, NSW	Section 5.3.9
Withheld (BSF_040)	Barham, NSW	Section 5.3.2
Withheld (BSF_052)	Barham, NSW	Section 5.3.1
Withheld (BSF_055)	Barham, NSW	Section 5.3.2, Section 5.4, Section 5.5.4
Withheld (BSF_020)	Swan Hill, VIC	Section 5.3.1, Section 5.3.10, Section 5.4
Withheld (BSF_022)	Swan Hill, VIC	Section 5.3.1, Section 5.3.10, Section 5.4
Withheld (BSF_025)	Swan Hill, VIC	Section 5.3.10, Section 5.4, Section 5.5.1

Name	Location	Section where comments addressed
Withheld (BSF_026)	Swan Hill, VIC	Section 5.3.1, Section 5.3.10, Section 5.4
Withheld (BSF_033)	Gannawarra, VIC	Section 5.3.2, Section 5.3.3
Withheld (BSF_034)	Swan Hill, VIC	Section 5.3.2, Section 5.3.12
Withheld (BSF_036)	Swan Hill, VIC	Section 5.3.2, Section 5.4
Withheld (BSF_038)	Swan Hill, VIC	Section 5.3.12
Withheld (BSF_039)	Gannawarra, VIC	Section 5.3.1
Withheld (BSF_042)	Gannawarra, VIC	Section 5.3.10
Withheld (BSF_062)	Lancefield, VIC	Section 5.3.1, Section 5.3.2, Section 5.3.4, Section 5.3.14, Section 5.4, Section 5.5.3
Withheld (BSF_046)	Romsey, VIC	Section 5.3.1
Withheld (BSF_049)	Romsey, VIC	Section 5.3.1, Section 5.3.11
Withheld (BSF_075)	Redbank Plains, QLD	Section 5.3.9
Withheld (BSF_076)	Springfield, QLD	Section 5.3.1, Section 5.3.9, Section 5.3.13
Withheld (BSF_013)	Kanya, VIC	Section 5.3.2, Section 5.3.9, Section 5.4, Section 5.5.4
Withheld (BSF_054)	Horsham, VIC	Section 5.3.1
Withheld (BSF_053)	Torquay, VIC	Section 5.3.1
Withheld (BSF_067)	Kepnock, QLD	Section 5.4, Section 5.5.5
Cedric Creed (BSF_078)	Goovigen, QLD	Section 5.3.2, Section 5.3.9, Section 5.4, Section 5.5.4

APPENDIX B CONSULTATION AND ENGAGEMENT

Appendix B- 1: RAPs Letter

February 2025

Burroway Solar Farm

Project Update

Burroway Solar Farm

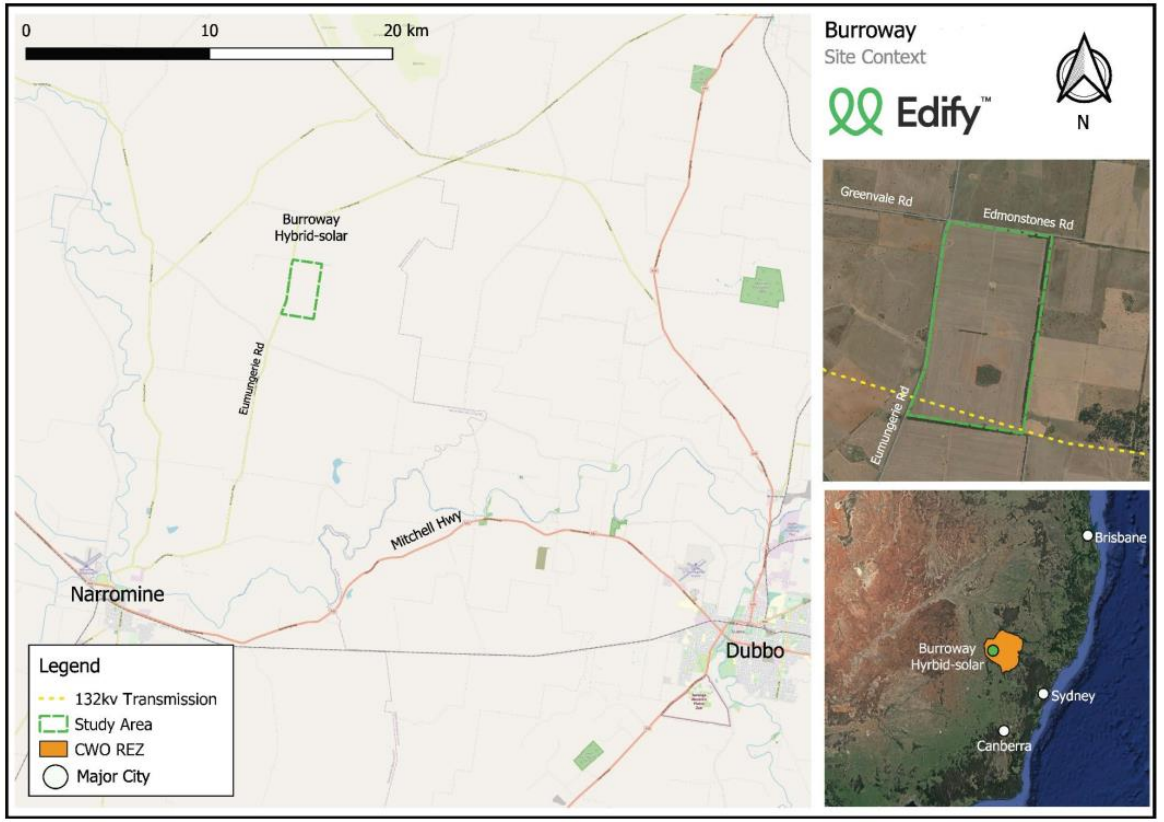
Community Update – February 2025 – Post-EIS Submission

Images: Burroway Solar Farm Project Land, Edify Energy site walk March 2022

Burroway Solar Farm

Project Overview

- Edify Energy are developing the Burroway Solar Farm at Lot 70 DP 1251856, 1955 Eumungerie Road, Burroway located 17.5 kilometres (km) north of central Narromine and approximately 27 km west of Dubbo.
- The project will be located within the Narromine local government area. Site access is available via Eumungerie Road and the study area is approximately 495 hectares (ha).
- OzArk Environment & Heritage (OzArk) previously contacted RAPs regarding the Aboriginal Cultural Heritage Assessment Report (ACHAR) that formed a part of the Environmental Impact Statement (EIS) that was submitted to the Department of Planning, Housing and Infrastructure (DPHI) for development approval in April 2024.



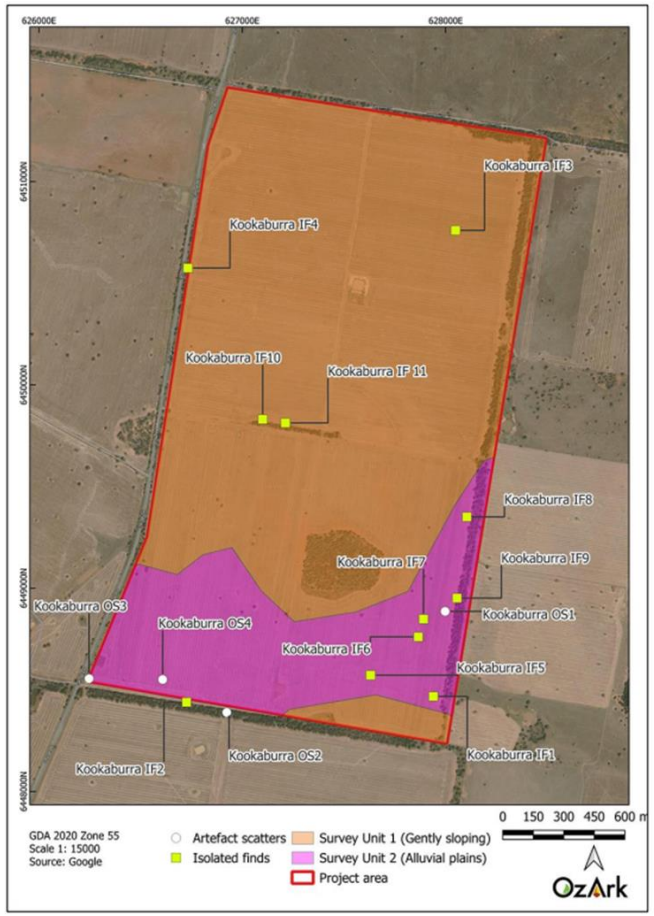
Project Location (from Burroway Solar Farm EIS, Kleinfelder 2024)

Burroway Solar Farm

Aboriginal Cultural Heritage Assessment - Summary

The ACHAR was submitted with the EIS and in summary concluded:

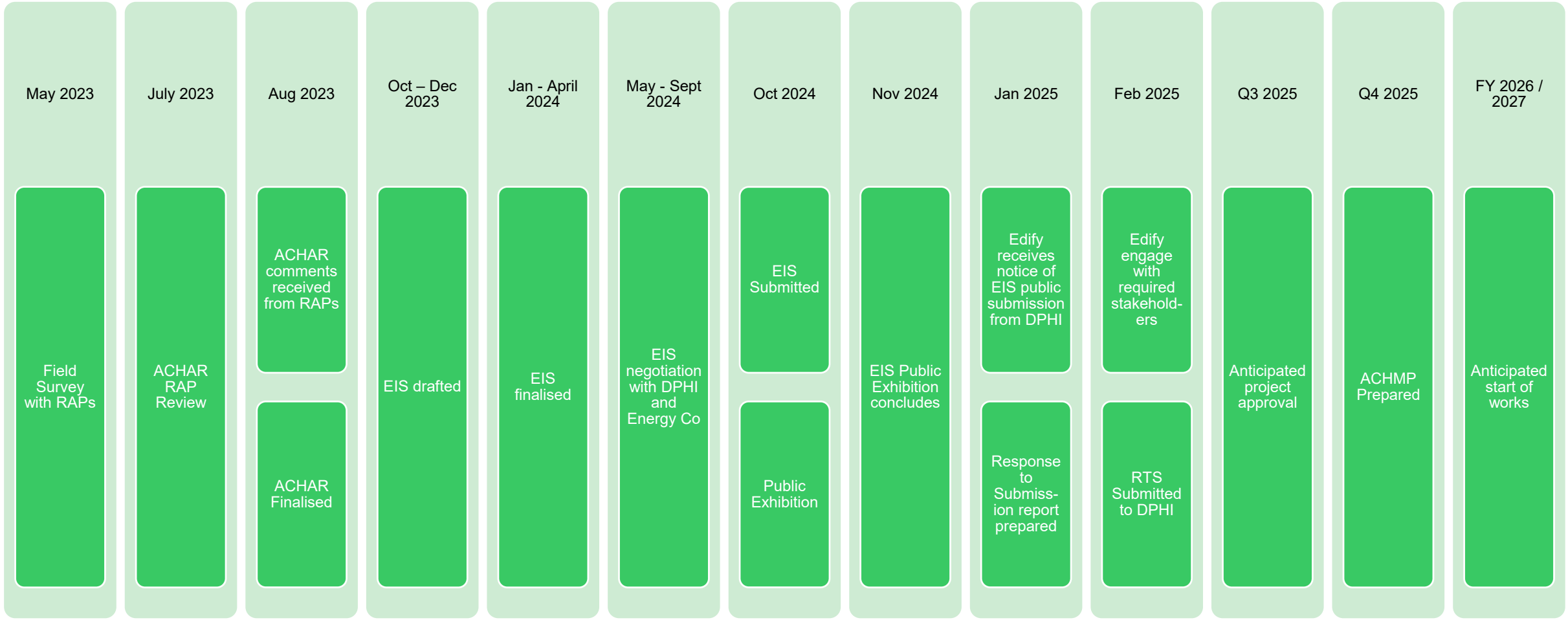
- 15 Aboriginal sites (containing 24 artefacts) were identified during the field survey (May 2023), 5 of which will potentially be impacted and 10 conserved within the landscape
- The ACHAR recommended that these 5 impacted sites be salvage through recording and collection prior to construction
- The archaeological significance of these sites and the project as a whole was assessed as low
- No specific locations were identified by the Aboriginal community within the study area as having intangible cultural significance
- Post development consent of the project, Edify will be preparing an Aboriginal Cultural Heritage Management Plan (ACHMP) in consultation with Registered Aboriginal Parties (RAPs)



Identified Artefact Locations (from Burroway Solar Farm EIS, Kleinfelder 2024)

Project Timeline

Key Dates



Project – Next Steps

Edify is preparing the Response to Submissions report for DPHI review, with project approval anticipated around Q3 2025.

As part of any approval, Conditions of Consent will outline key mitigation measures, including those specific to Cultural Heritage. Edify is committed to ongoing engagement with RAPs to ensure alignment with the ACHAR and to seek guidance in developing the ACHMP.

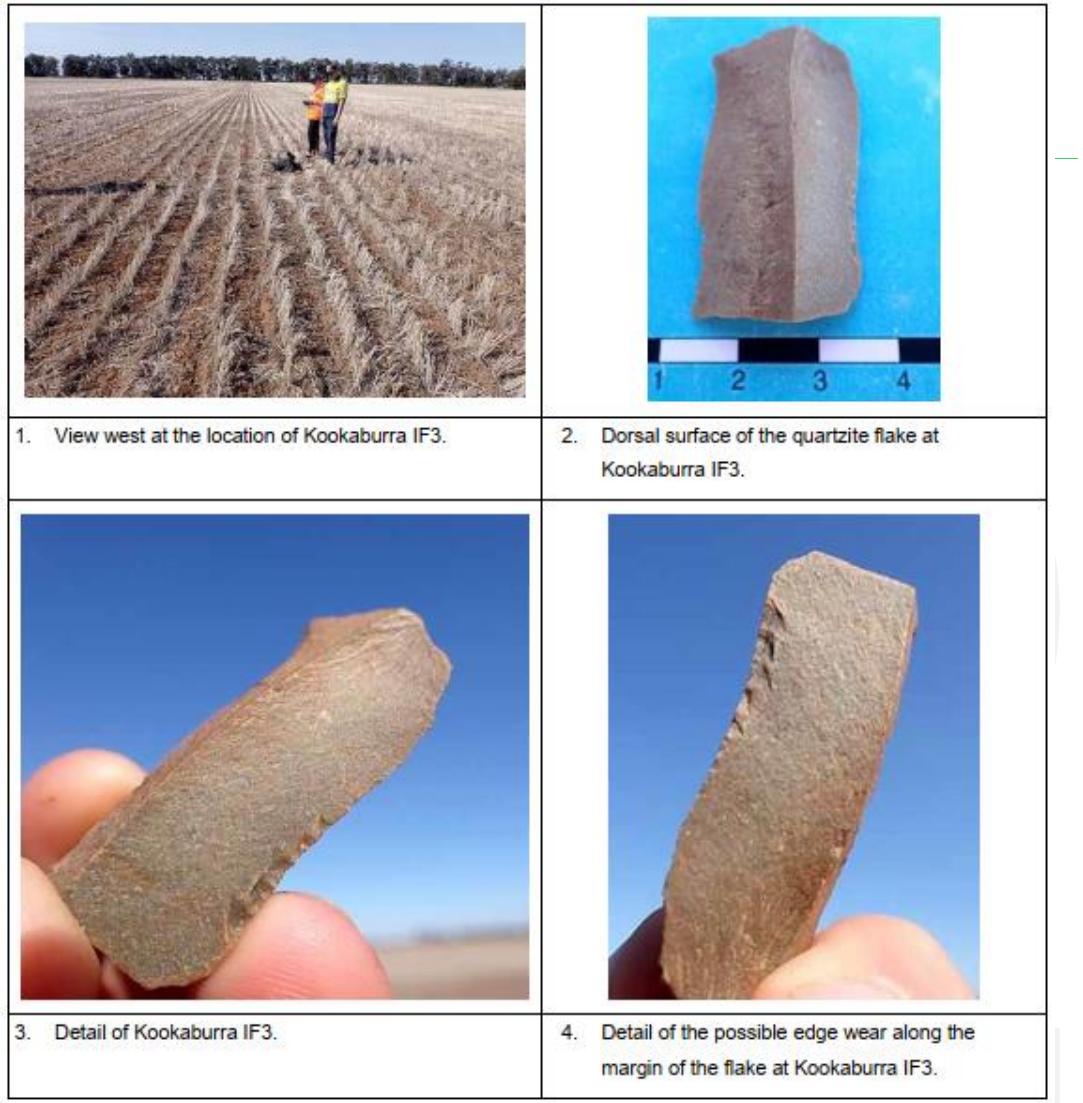
We value the deep knowledge and perspectives of Traditional Owners and will work collaboratively to ensure cultural heritage is not only protected but also meaningfully integrated into the project's ongoing planning and stewardship.

Project Documents

All project documents remain accessible to the public via:

- Burroway Solar Farm | Planning Portal - Department of Planning, Housing and Infrastructure
- Edify Energy — Burroway Solar Farm's project webpage

If you would like copies of any project documents emailed or posted to you, please contact Edify's Development Manager (see page 13).



Identified Artefacts from site survey (from Burroway Solar Farm EIS, Kleinfelder 2024

About Edify

A market leading Australian renewable energy development and investment company

Edify is a market leading renewable energy company with extensive experience in developing, financing and managing renewable projects in Queensland and across Australia. Edify Energy has financed six large-scale solar farms (771MWp) and 360MW / 720MWh of battery storage and is the leading developer of utility-scale solar in Australia. Edify has broad energy expertise, covering project development, project design and engineering, financing, asset management and construction management.

- Experienced management team
- Full project life-cycle support
- Long-term project partner
- Offtake arrangements
- Continuing to grow with the Australian market

About Edify

Our business. Full project lifecycle support

A 250MVA transformer delivery to **Daydream and Hayman** solar farms (Collinsville)

Develop | Structure | Finance | Construct | Own | Manage

01

Front-end development

Project origination, securing land agreements, securing development approval & initiating grid connection processes

02

Project structuring & financing

Negotiation of all project documents, management of due diligence processes and the raising of equity and debt

03

Construction management

Overseeing the EPC contractor and construction activities on behalf of project sponsors

04

Asset management

Maintaining the enduring operational role for the assets including managing O&M contractors, settling contracts and trading power

About Edify

Long-term independent power producer perspective, thought leadership and innovation

About Edify

Australian transaction experience

Project	Size	Location	Status	Comments
Gannawarra Solar Farm	60 MWp DC	Kerang, VIC	Operational. Commissioned in April 2018	PPA with EnergyAustralia First large-scale solar farm in Victoria
Whitsunday Solar Farm	69 MWp DC	Collinsville, QLD	Operational. Commissioned in July 2018	Project received ARENA funding Secured largest Solar 150 Support with Qld Government
Hamilton Solar Farm	69 MWp DC	Collinsville, QLD	Operational. Commissioned in July 2018	Short-term PPA with ERM Power
Daydream Solar Farm	180 MWp DC	Collinsville, QLD	Operational. Commissioned in October 2018	PPA with Origin Equity funding with BlackRock
Hayman Solar Farm	60 MWp DC	Collinsville, QLD	Operational. Commissioned in February 2019	Merchant project with short-term contracts Equity funding with BlackRock
Gannawarra Storage System	25 MW / 50 MWh	Kerang, VIC	Operational. Commissioned in February 2019	Grant funding provided by ARENA and the Victorian Government One of the largest co-located solar farm batteries in the world
Darlington Point Solar Farm	333MWp DC	Darlington Point, NSW	Operational. Commissioned in October 2020	PPA with Delta Electricity Equity funding with Fern Trading Development Corporation.
Riverina Energy & Darlington Point Storage System	150 MW / 300 MWh	Darlington Point, NSW	Operational. Commissioned in June 2023	PPA with Shell Energy for NSW Government and Energy Australia One of the largest and most advanced batteries in NSW.
Koorangie Storage System	185MW / 370MWh	Kerang VIC	Commissioning Q1- 2025	PPA with Shell Energy System Support Agreement contracted with AEMO

Edify Energy has developed and brought to financial close approximately 1GW of renewable energy project.

About Edify

Solar Projects in commercial operation

Edify®

Contacts

Adam Smith
Senior Development Manager

adam.smith@edifyenergy.com
0424 256 951

Patrick Dale
Senior Development Manager

Patrick.dale@edifyenergy.com
0487 177 136

Thank you

Narromine
SHIRE COUNCIL

Wednesday, 12 February 2025

Adam Smith
Edify Energy
Level 4, 22 Darley Road
Manly NSW 2095

Re: Supporting statement for Capacity Investment Scheme Tender

Dear Mr Smith,

Thank you for updating Council in regard to the progress being made towards the development of the Burroway Solar Farm and the upcoming tender for the Capacity Investment Scheme; National Electricity Market Generation.

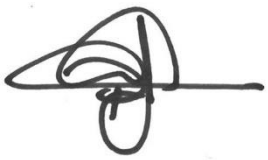
Narromine Shire Council is aware of the proposal to build the Burroway Solar Farm in Narromine Shire and has had ongoing consultation with Edify Energy in this regard.

Council is pleased with the level of consultation that is being undertaken between Edify Energy, local residents and other local stakeholders. This has included discussions regarding the EIS with Council staff.

Council will continue to work with Edify as the project progresses, including in areas such as workforce accommodation and cumulative impacts.

Council is supportive of the Edify Energy tender to the Capacity Investment Scheme and the further discussions regarding the overall development. Please do not hesitate to contact me should further information be needed.

Regards,



Phil Johnston
Director Community & Economic Development
Narromine Shire Council

Hi Anthony

Thankyou, appreciate the discussion, we will be in touch once we have EPC contractor on board and have developed our detailed waste management plan

Adam

Adam Smith

D +61 2 8790 4048
M +61 424 256 951

Edify Energy
PO Box 786
Manly NSW 1655

Gayemagal Country

www.edifyenergy.com

From: Anthony Everett <aeverett@narromine.nsw.gov.au>
Sent: Friday, 31 January 2025 4:00 PM
To: Adam Smith <adam.smith@edifyenergy.com>
Cc: Melanie Slimming <mslimming@narromine.nsw.gov.au>; Geraldine Prince <gprince@narromine.nsw.gov.au>
Subject: RE: Edify Energy Burroway Solar Farm - Response to submissions

Hi Adam
As per discussions council will be able to accept most materials to the Trangie waste facility and the rest to the Narromine facility. Once you have the materials list of what you are looking at bringing to the waste facilities, please reach out so we can direct you to the right direction. Also please contact me to start the process to open an account with the waste disposal.

Regards
Anthony

Regards

Anthony Everett
Manager Waste & Community Facilities

Narromine Shire Council
P.O. Box 115 Narromine NSW 2821
P: 02 6889 9999 | **M:** 0458888674
E: aeverett@narromine.nsw.gov.au
W: www.narromine.nsw.gov.au | www.narromineregion.com.au

From: Geraldine Prince <gprince@narromine.nsw.gov.au>
Sent: Friday, 31 January 2025 3:41 PM
To: Anthony Everett <aeverett@narromine.nsw.gov.au>
Cc: Melanie Slimming <mslimming@narromine.nsw.gov.au>
Subject: FW: Edify Energy Burroway Solar Farm - Response to submissions

Regards

Geraldine Prince
Executive Assistant Infrastructure and Engineering Services
Narromine Shire Council
P.O. Box 115 Narromine NSW 2821
P: 02 6889 9999
E: gprince@narromine.nsw.gov.au
W: www.narromine.nsw.gov.au | www.narromineregion.com.au

From: Adam Smith <adam.smith@edifyenergy.com>
Sent: Friday, 31 January 2025 3:38 PM
To: Geraldine Prince <gprince@narromine.nsw.gov.au>
Subject: Fw: Edify Energy Burroway Solar Farm - Response to submissions

Hi

Emma Yule passed on your details. Edify Energy is developing the Burroway Solar Farm in Narromine.

As part of my consultation with Council, I'd like to explore whether we can use the Narromine Waste Facility during construction and operation. Our EIS and Concept Waste Management Plan are available on the NSW Planning Portal here Burroway Solar Farm | Planning Portal - Department of Planning and Environment

Construction is planned for FY26/27, and we'll engage with Council further once an EPC contractor is on board and we begin developing a detailed waste management plan.

At this stage, could you advise what types and volumes of waste the facility could potentially accept?

Please feel free to call if you have any questions.

Adam

Adam Smith

D +61 2 8790 4048
M +61 424 256 951

Edify Energy
PO Box 786
Manly NSW 1655
Gayemagal Country

www.edifyenergy.com

From: Emma Yule <eyule@narromine.nsw.gov.au>
Sent: Friday, 31 January 2025 12:04 PM
To: Adam Smith <adam.smith@edifyenergy.com>; Phil Johnston <pjohnston@narromine.nsw.gov.au>
Subject: RE: Edify Energy Burroway Solar Farm - Response to submissions

Hi Adam
Some information below, for further discussion.

1. Concept Waste Managment
    a. Narromine Shire Council Waste Facility was not identified.

i. Can you please provide contract details of Councils waste team so I can begin discussion on what can be accepted and volumes

Please email: gprince@narromne.nsw.gov.au – she can forward emails to our waste team.

2. Estimated Cost of Development Report
    a. I provided this on 10/12/2024 post Edify and NSC meeting, can you acknowledge receipt for DPHI
3. Water Balance
    a. Can you advise if Council have a bulk water supply point that we can purchase water from and volumes that are available? I noticed that Nymagee Street Raw Water Standpipe in Narromine is showing as unavailable

What sort of volumes are you requiring? We have a potable water standpipe on Nymagee street and a raw water standpipe available on the McGrane Way (near Nellie Vale road intersection). Standpipes can cater for 3-5 water truck loads per day. Supply during summer can be challenging. The Narromine wetlands have dams that could be utilised for construction water.

4. Waste (Sewage)
    a. Can you advise if Councils Sewage plant can accept sewage from pump trucks?

Council does not have a septic receival station. Dubbo sewer treatment plant would be the closest option.

Regards

Emma Yule
Manager Planning
Narromine Shire Council
P.O. Box 115 Narromine NSW 2821
P: 02 6889 9999
E: eyule@narromine.nsw.gov.au
W: www.narromine.nsw.gov.au | www.narromineregion.com.au

From: Adam Smith <adam.smith@edifyenergy.com>
Sent: Thursday, 30 January 2025 4:09 PM
To: Phil Johnston <pjohnston@narromine.nsw.gov.au>
Cc: Emma Yule <eyule@narromine.nsw.gov.au>
Subject: Edify Energy Burroway Solar Farm - Response to submissions

APPENDIX C UPDATED MITIGATION AND MANAGEMENT MEASURES

Note: New or updated mitigation measures have been **bolded.**

Phase	Mitigation
Biodiversity	
Pre-construction	All personnel will be inducted and will be informed that disturbance of any stand of native vegetation outside the development footprint, or otherwise unauthorised disturbance, could have legislative consequences if done without approval. Evidence of all personnel receiving an induction will be kept on file (signed induction sheets). Before start of work, the extent of permitted vegetation clearing and areas to be retained as native vegetation will be clearly identified. Fencing or bunting will be installed to demarcate 'no go zones' where vegetation is to be retained **or where the mapped patch of category 2 sensitive regulated land is to be excluded from the footprint**. Care will be taken to avoid impacts on native vegetation outside the development footprint, such as the PCT 202 patch in the centre of the southern portion of the project site and the PCT 55 stand in the centre of the lot. A pre-clearing process and unexpected threatened species finds procedure will be implemented. Any fauna found during the disturbance will be allowed (or assisted) to relocate into adjoining habitat.

Phase	Mitigation
Construction	No new areas to be cleared without further assessment. Minor vegetation removal for access will be removed in such a way as to avoid unnecessary damage to surrounding vegetation. Stockpile and compound sites are to be located within the assessed **development** footprint and preferentially according to the following criteria: • At least 40 m away from the nearest waterway. • In areas of low ecological conservation significance (i.e. previously disturbed land). • On relatively level ground. The CEMP must ensure that stockpiling of materials and equipment and parking of vehicles does not occur outside **development** footprint, and that native vegetation outside the footprint is not otherwise disturbed. Stockpiling of materials and equipment, and parking of vehicles will be avoided within the dripline (extent of foliage cover) of any tree. An erosion and sediment control plan will be developed and implemented within a Construction Environmental Management Plan (CEMP). **A Biosecurity Risk Management Plan will be developed and implemented as part of a CEMP.** Construction machinery (bulldozers, excavators, trucks, loaders and graders) must be clean and free from soil or weeds before entry to the work site. Weed-free fill only to be used for on-site earthwork, if required. Any herbicide use is to be in accordance with the requirements on the label. Any person carrying out herbicide application would be appropriately trained and competent in its use. Any bush rock encountered on site is to be relocated to the edge of the disturbance area to enhance habitat. Where possible, dead wood and hollow logs should be relocated to the edge of the disturbance area to enhance habitat. No bush rock and little timber should be expected. If fauna is detected, work must be stopped immediately and the area left undisturbed until the individuals have dispersed or suitably qualified personnel are engaged to facilitate their removal. Any human structure will be thoroughly searched for evidence of habitation by animals prior to removal. If evidence is detected, a relevant qualified person will be contacted to arrange the relocation of species occupying the structure. Emergency spill procedures are to be developed in order to prevent environmental damage associated with chemicals, including fuel and herbicides.

Phase	Mitigation
Operation	No new areas to be cleared without further assessment. The OEMP must ensure that stockpiling of materials and equipment and parking of vehicles does not occur outside **development** footprint, and that native vegetation outside the footprint is not otherwise disturbed. Vehicles will not be parked within the dripline (extent of foliage cover) of any tree. An erosion and sediment control plan will be developed and implemented within an OEMP. **A Biosecurity Risk Management Plan will be developed and implemented as part of an OEMP.** Any herbicide use is to be in accordance with the requirements on the label. Any person carrying out herbicide application would be appropriately trained and competent in its use. Any bush rock encountered on site is to be relocated to the edge of the disturbance area to enhance habitat. Where possible, dead wood and hollow logs should be relocated to the edge of the disturbance area to enhance habitat. No bush rock and little timber should be expected. Emergency spill procedures are to be developed in order to prevent environmental damage associated with chemicals, including fuel and herbicides.
Decommissioning	Management and mitigation measures to be implemented as part of decommissioning will be similar to those implemented during construction. Decommissioning will largely focus on reinstatement of the project site to its original (pre-construction) condition and land capability. Consideration will be given to enhancing biodiversity values to the extent that they do not conflict with proposed final land use.
Aboriginal and Historic Heritage	
Construction	The Project can avoid impact to 10 of the 15 Aboriginal sites identified during the assessment. These sites should be protected during the construction of the Project through the use high-visibility temporary fencing. It is recommended that the 5 sites be salvaged through the recording and collection of the surface artefacts, prior to construction works proceeding. A requirement for further heritage study or Aboriginal cultural heritage assessment if ground disturbance activities are to occur beyond the assessed area. **The unanticipated finds protocol for historical archaeology, detailed in Section 4.6.1 of this submissions report, will be included under project Environmental Management Plan's for each phase.** A requirement for all work to stop and the unanticipated finds procedure to be followed should any suspected Aboriginal objects be observed during project construction or operation. Procedures should human skeletal remains be discovered during construction or operation.

Phase	Mitigation
Operation	A protocol for the long-term management of Aboriginal objects. A requirement for all work to stop and the unanticipated finds procedure to be followed should any suspected Heritage or Aboriginal objects be observed during project construction or operation. Procedures should human skeletal remains be discovered during construction or operation.
Soils and Land	
Construction / Operation	Ongoing consultation with stakeholders will identify and address concerns if they arise. **Develop and implement a Grazing Management Plan if the agri-solar practice is adopted during operation. Where agri-solar is not viable, develop and implement a Vegetation Management Plan to commence at completion of construction and into operation to revegetate the groundcover.** Implement all measures specified in management plans identified in the EIS and/or consent conditions. All soil that is proposed to be disturbed during the Project will be stripped and re-used in construction and/or stockpiled for use in rehabilitation. Channelised drainage patterns should be minimised and the Project should limit hard engineering solutions for erosion control and preference soft, vegetated structures. All soil resources are to be managed throughout construction, operation and decommissioning phases of the Project in accordance with recommendations outlined in Section 6.2 of the Soil and Agricultural Impact Assessment. Development of a Construction and Operation Erosion and Sediment Control Plan with suitable erosion and sedimentation controls, as outlined in Section 6.2 of the Soil and Agricultural Impact Assessment, will be implemented. Stock fences, dams, and access tracks to be retained and maintained to accommodate Agri-solar. Pest species will be managed in accordance with measures outlined in Section 5.4.1 of the Soil and Agricultural Impact Assessment. Any use of herbicides will be carried out in accordance with the regulatory requirements and in a manner to prevent spray drift or runoff of herbicide onto neighbouring properties cropping. Biosecurity will be managed in accordance with measures outlined in Section 5.4.2 of the Soil and Agricultural Impact Assessment. **Infrastructure containing heavy metals will be contained and will not come into direct contact with soils.**
Decommissioning	A Rehabilitation and Decommissioning Management Plan will ensure the land can be successfully returned to pre-disturbance land and soil capability and final land use commitments following decommissioning. All soil resources are to be managed throughout construction, operation and decommissioning phases of the Project in accordance with recommendations outlined in Section 6.2 of the Soil and Agricultural Impact Assessment.
Water	

Phase	Mitigation
Construction	**The selected EPC will refine construction potable and non-potable water needs and consult NSC for approval of water sourcing from three local standpipes as detailed in Section 4.3 and Section 4.7 of this submissions report.** Potential impacts on water and water resources as a result of construction will be managed in accordance with an Erosion and Sediment Control Plan (ESCP), as outlined in Section 7.4.4, developed in accordance with the specific management measures identified in the Soil and Agricultural Impact Assessment. Locating temporary stockpiles away from any potential flow paths and locating, shaping and revegetating long-term stockpiles to minimise hydrological disruption. Infilling farm dams (if proposed) on the project site with a gentle batter that is consistent with the local ground slope and directs runoff into the natural drainage path next to the dam. Re-profiling (if required) and revegetating disturbed areas not occupied by project facilities (such as the temporary lay-down area) to match pre-existing topography. Developing and implementing procedures for the testing and management of construction wastewater if disposal is required. Storing fuels and chemicals in accordance with the approved Construction Environmental management Plan (CEMP) and the National Code of Practice NOHSC:2017(2001) (NOHSC 2001) and other relevant standards. Storing fuel and chemicals in an impervious bunded area at least 50 m away from water bodies and drainage lines. Refuelling plant and machinery will be undertaken a minimum of 50 m away from water bodies and drainage lines, where practicable in designated bunded refuelling areas, with spill kits available at all times during the refuelling process. Implementing a spill response plan (to be prepared as part of the CEMP) which will include containment and remediation procedures, placement of spill kits and SDSs, and training requirements for staff. Disposing all hazardous chemicals and waste off site in accordance with relevant NSW government regulations and guidelines. Daily inspection of all machinery and plant to ensure no leakage of fuels, lubricants or other liquids.

Phase	Mitigation
Operation	**Edify will refine operational potable and non-potable water needs and consult NSC for approval of water sourcing from three local standpipes as detailed in Section 4.3 and Section 4.7 of this submissions report.** Maintaining vegetation cover under all solar panel arrays to maximise water infiltration. Storing fuels and chemicals in accordance with the Operation Environmental Management Plan (OEMP), National Code of Practice NOHSC:2017(2001) (NOHSC 2001) and other relevant standards. Undertaking regular inspection of equipment and facilities to identify spills or leaks. Implementing a spill response plan (based on that used for construction). **The farm dams on site will be excluded from the development footprint and are not intended to be used for construction and operational water needs.**
Decommissioning	Management and mitigation measures to be implemented as part of decommissioning will be similar to those implemented during construction. Decommissioning will seek to re-establish pre-existing slopes (where modified by the project) and drainage. **The selected contractor to complete the decommissioning will refine decommissioning / rehabilitation potable and non-potable water needs and consult NSC for approval of water sourcing from an appropriate Council source confirmed at each project phase, as detailed in Section 4.3 and Section 4.7 of this submissions report.**
Traffic and Transport	
Pre-construction	Prior to construction, a pre-condition survey of the relevant sections of the existing road network should be undertaken in consultation with Council. It is proposed to provide a Basic Right Turn treatment at the site access on Eumungerie Road. The implementation of a community information and awareness program would assist in managing the traffic impacts. Prior to construction commencing and during the construction period, a program of consultation shall be initiated to ensure local residents are aware of construction traffic accessing the project.

Construction	Construction Traffic Management Plan that includes: • The sections of the road network utilised by the proposal are to be monitored and maintained to ensure continued safe use by all road users, and any faults attributed to construction of the solar farm would be rectified. • Neighbours of the solar farm are to be consulted and notified regarding the timing of major deliveries which may require additional traffic control and disrupt access. • **The project will avoid heavy vehicle movements in the peak school bus times to limit the interactions of larger vehicles with vulnerable vehicles.** • **Construction personnel travelling to and from site using light vehicles will also be made aware of the school bus routes, stop locations and times, and will be encouraged to ensure extra care and vigilance when passing these vulnerable road users.** • Provide additional information regarding the traffic volumes and distribution of construction vehicles that is not available at this time including: Road transport volumes, distribution and vehicle types broken down into: - Hours and days of construction. - Schedule for phasing/staging of the project. The origin, destination and routes for: - Employee and contractor light traffic. - Heavy vehicle traffic. - Oversize and overmass traffic. • A map of the primary haulage routes highlighting critical locations including rest areas and pullover bays. • An induction process for vehicle operators and regular toolbox meetings. • A complaint resolution and disciplinary procedure. • Local climatic conditions that may impact road safety of employees throughout all project phases (e.g. fog, wet and significant dry, dusty weather). **For OSOM movements, the following considerations during planning and as part of the permit process is required:** • **The Erskineville Road/Wilson Street/Princes Highway (Newtown) intersection was identified as a pinch point requiring temporary relocation of signage.** • **OSOM movements must be timed so they do not coincide with other OSOM movements along the same routes.** • **The Pacific Motorway extension TfNSW project is expected to be complete in 2028, after the commencement of the proposal's construction, but the only impediment is if the section of the viaduct over New England Highway is being constructed when the OSOM route movement takes place. It if is already constructed or is yet to be constructed and that section of New England Highway is still open to traffic, access for the OSOM vehicle will be satisfactory. If it is not constructed, re-assessment of the OSOM route at this location for potential diversion route is required.** • **The OSOM vehicle must approach and traverse the designated Troy Junction- Merrygoen, Wallerawang-Gwabegar and Ulan level crossings at a speed not less than 35 kilometres per hour. Where the vehicle cannot comply with this, the operator must contact the Rail Infrastructure Manager.** The implementation of a community information and awareness program would assist in managing the traffic impacts. Prior to construction commencing and during the construction period, a program of consultation shall be initiated to ensure local residents are aware of construction traffic accessing the project. If deemed necessary, specific warning signs advising the changed traffic operations and heavy vehicle movements are to be appropriately located on approaches to and from the transport routes on Council roads. These should warn existing road users of changed traffic conditions. The use of day warning notices where signs are activated on a specific day to warn local road users of construction activities may also be applied. On-site mitigation measures targeted at safety and reducing the impact of on-site transport would include:

Phase	Mitigation
	• On-site speed restrictions; • Appropriate dust suppression measures; • Maintenance program for on-site access tracks to ensure safe access; • Loading and unloading is proposed to occur within the work area. No street or roads would be used for material storage at any time; • Sufficient car parking is to be provided on-site to ensure vehicles do not park on the surrounding road network • All car parking and loading areas to be designed in accordance with the relevant Australian Standard (2890 series) and Council requirements • Management of vehicular access to and from the site is essential in order to maintain the safety of the general public as well as the workforce.
Decommissioning	At the end of construction, a post-condition survey would be undertaken to ensure the road network is left in a condition equivalent to that at the start of construction.
Noise and Vibration	
Design	As part of the detailed design process, the final locations for potential noise-generating infrastructure, in particular the substations and BESS facilities, will consider the distance between this type of infrastructure and nearby non-project related residences, so as to minimise operational noise impacts, where practicable.

Phase	Mitigation
Construction	A Construction Noise Management Plan (CNMP) could be prepared prior to the commencement of works and implemented through all phases of the proposed construction works. Measures within the CNMP could include: • Notification and continued consultation with the non-associated neighbours and local community before construction commences, • Suitable inductions for staff of the CNMP, • Provision of a Project community liaison for all complaints and opportunities, • Noise and vibration monitoring should be undertaken upon receipt of a complaint to identify and quantify the issue and determine options to minimise impacts. • Employing best practices in line with approved guidelines and standards for reduction of noise emissions, • Maintain standard working hours, • Where practical, simultaneous operation of dominant noise generating plant should be managed to reduce noise impacts, such as operating at different times or increase the distance between plant and the nearest identified receiver. • High noise generating activities such as jack hammering should only be carried out in continuous blocks, not exceeding 3 hours each, with a minimum respite period of one hour between each block. • Where possible, reversing beepers on mobile equipment would be replaced with low-pitch tonal beepers (quackers). Alternatives to reversing beepers include the use of spotters and designing the site to reduce the need for reversing may assist in minimising the use of reversing beepers. • Equipment which is used intermittently should be shut down when not in use. • All engine covers should be kept close while equipment is operating. • The construction site would be arranged to minimise noise impacts by locating potentially noisy activities away from the nearest receivers wherever possible. • To minimise heavy equipment handling noise, material stockpiles should be located as far as possible from the nearest receptors • Loading and unloading areas should be located as far as possible from the nearest receptors. • Where possible, trucks associated with the work area should not be left standing with their engine operating in a street adjacent to a residential area. • All vehicular movements to and from the site should comply with the appropriate regulatory authority requirement for such activities.
Operation	While compliance with all operational noise trigger levels is expected, it is recommended the project implement an operations noise management plan to further minimise the risk of any unexpected noise issues.
Landscape and Visual	

Phase	Mitigation
Design	No specific landscaping or visual screening treatments are proposed in relation to private receivers. Good design principles includes: • The design will retain the existing roadside planting along the boundaries of the site to reduce the overall visual impact, • The small patch of remnant woodland, stand of planted vegetation and scattered paddock trees will be retained as part of the development to fragment the views of the development across the site, • Consideration will be given to the colours of the PCUs, the battery facility, O&M buildings and storage shed to ensure minimal contrast and to help blend into the surrounding landscape to the extent practicable. • Apply urban design principles and objectives during detailed design phase. • For ancillary structures minimise reflective surfaces with a preferred use of muted colours.
Construction	The following measures will be implemented to minimise visual impacts during construction: • Demarcation and exclusion fencing will be installed around trees and vegetation to be retained. • Limiting disturbance and rehabilitating disturbed areas. • Minimising light spill from the development into adjacent properties and road corridors by directing construction lighting into the construction areas and ensuring the site is not over-lit. This includes the sensitive placement and specification of lighting to minimise any potential increase in light pollution. • Temporary hoardings, barriers, traffic management and signage should be removed when no longer required. • The site to be kept tidy and well maintained, including removal of all rubbish at regular intervals. • There should be no storage of materials beyond the construction boundaries.
Operation	The following measures will be taken to minimise visual impacts during the operation phase of the project: • Restrict external lighting to the area where the maintenance shed, permanent site office, and switch yard are located. • All external lighting around buildings to be faced downwards and inwards to minimise impacts to neighbouring properties.
Decommissioning	The following measures will be taken to minimise visual impacts during the decommissioning phase of the project: • A rehabilitation and decommissioning strategy will be implemented to return the site to its pre-existing condition.
Hazards	

Design	Design of fire water containment system in one of two ways: • Permanent containment system: the civil design of the site can be scoped such that it is possible to contain all runoff in a designated catchment area (e.g., a bund or some form of holding basin); or • Temporary containment: the site can be designed such that, in the event of a fire brigade response that may lead to contaminated runoff, drainage can be thoroughly sealed, and firewater contained on-site. In essence, this is a temporary bund. Usage of BESS units containing explosion prevention systems in accordance with NFPA 68 and/or NFPA 69. Provision of adequate stand-off distances for batteries from other BESS units and PV units (as determined by distances set out in PHA or as outlined in a Underwriters Laboratories (UL) 9540A test report). It is also recommended that the BESS design that is selected for use at BSF undergoes UL 9540A testing, including 45-degree flame tilt scenario testing. Provision of adequate ventilation to relieve the off gassing of combustible gases from thermal runaway in line with National Fire Protection Authority (NFPA) 69. Inclusion of a battery monitoring system in BESS units and an off-gas detection system. An APZ will be established around all solar array assets, BESS enclosures, substation and permanent operations and maintenance buildings which aligns with the separation distances detailed in the PHA consequence modelling for BESS unit types. **A minimum 20 m APZ will be installed between the site boundary and outermost battery enclosures at a minimum.** The development of a site-specific Emergency Response Plan by the Proponent in consultation with emergency services, and in accordance with NSW WHS Regulations and the latest guidelines set by FRNSW in the guidance note *Fire safety study considerations for large-scale external lithium-ion battery energy storage systems*. The BESS, substation, and associated buildings are to be built to the appropriate Bushfire Attack level (BAL) as per Australian Standard (AS) 3959:2018. **Ongoing management of bush fire is an iterative process, with modification of bush fire management infrastructure (e.g. roads, water supply) and practices (e.g. APZ management) undertaken both due to external influences (e.g. RFS collaboration) or internal influences (e.g. detailed design, modification applications). As such, Edify propose that detailed design of the project is undertaken in collaboration with the RFS and Narromine Shire Council to best ensure final designs best comply with PBP 2019 and align with local preferences for onsite management.** **NSW RFS will be consulted on the amount and location of dedicated static water supply for firefighting purposes, having consideration for essential equipment and accessibility e.g., near the main entrance. The BFAR has identified five locations for 45,000 L tanks for the purposes of firefighting.** **Any electricity or gas installations required for the project will be installed in line with Section 3.5 of the amended BFAR.** A Fire Safety Study in accordance with FR NSW requirements will be developed with the following key requirements: • **The FSS is to be used to inform the design and as such it is FRNSW Position[3] that the FSS be developed to the satisfaction of FRNSW prior to any further submission being made to the 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 consideraitons[4].** Controls to limit exposure to EMF are recommended: • Design, selection and procurement of electrical equipment for the project will comply with relevant international and Australian standards for exposure to EMF;

Phase	Mitigation
	• Location selection for project infrastructure (ie accounting for separation distance to surrounding land uses) and fencing along the project boundary will assist to limit the exposure to EMF for the general public;
Construction	**On-site access tracks will be constructed of compacted gravel and, where required, geotextile fabric will be laid between the soil and the gravel to provide all-weather thoroughfare. Internal access tracks will be approximately 4 m wide to allow for the safe delivery, unloading and installation of key components such as the solar panels, inverters, transformers and BESS units.** The speed of vehicles shall be limited near BESS units. Speeds should be determined such that vehicles are not likely to breach security fencing (or supplemental vehicle barriers shall be adopted). A construction environmental management plan (and ongoing operational plan) should include the following: • Detailed measures of to prevent or mitigate fires igniting (E.g., hot works permits for works which may result in the ignition of fire) • Work that should not be carried out during total fire bans (E.g., hot works not to be carried out on total fire ban days, or any prohibited activities or exemptions that are declared and notified by the Commissioner of NSW RFS under RF Act s.99) • Availability and location of fire-suppression equipment, access and water. **The location of water tanks should be delineated via onsite signposting to guide use by emergency authorities, with a copy of final detailed design map of the project provided to the local Fire Control Centre (109 Manildra Street, Narromine 2821, ph. 02 6881 3900) for reference prior to, and during, an emergency event. The location of the emergency assembly point(s), BESS, substation, retained vegetation parcels, subject site access, internal roads and static (or reticulated) water supplies will be clearly identified on the plans provided to the RFS.** • Appropriate storage and maintenance of fuels and other flammable materials; • Notification of the local NSW RFS Fire Control Centre for any works that have the potential to ignite surrounding vegetation, proposed to be carried out during a bushfire fire danger period to ensure weather conditions are appropriate; • Any additional matters as agreed and required by the NSW RFS District Office. • **Procedures for identification of works being undertaken during the Bush Fire Danger Period (generally 1 October to 31 March) that have potential to result in ignition resulting in a bush fire. The relevant contractor will be required to notify the lead construction contractor who will, in turn, notify the local NSW RFS Fire Control Centre of the proposed works. Management measures outlined by the RFS FCC will be applied during the relevant works.** • **Additional matters as required under Conditions of Consent issued for the project.** **Annual monitoring of the recommended fire mitigation actions will ensure the actions are maintained to the specified performance criteria (if relevant).**

Operation	**Prior to occupation or commissioning an Emergency Plan (EP) is developed for the site in accordance with HIPAP No.1[5].** **Prior to occupation or commissioning an Emergency Services Information Package (ESIP) is developed for the site in accordance with FRNSW fire safety guideline – Emergency services information package and tactical fire plans[6].** **Prior to occupation or commissioning an emergency responder's induction package is developed for the site in consultation with, and to the satisfaction of FRNSW. The package should inform first responders of site-specific features and safety measures to ensure they are able to undertake their duties effectively. The format of the induction package should be such that it can be readily shared across all agencies.** Security fencing around the facility in accordance with AS 1725:2003 *Chain-link fabric security fences and gates.* Separate security fencing around critical and hazardous assets in accordance with AS 1725. A CCTV security system should be installed in accordance with AS/NZS 62676.1.1:2020 *Video surveillance systems for use in security applications. System requirements - Performance requirements for video transmission,* as a minimum around critical and hazardous assets. Regular O&M inspections to monitor for breaches should be undertaken, in line with the regular scheduled maintenance regime. The maintenance frequency will be developed in later stages of the Project. Electrical assets shall be installed in accordance with AS/NZS 3000:2018 *Electrical Installations*. Maintenance personnel should be appropriately qualified (electricians A/B class). The speed of vehicles shall be limited near BESS units. Speeds should be determined such that vehicles are not likely to breach security fencing (or supplemental vehicle barriers shall be adopted). Maintenance of the APZ will be as follows: • Grass – Grass to be short, mown and maintained to a height <10cm; • Trees – Where possible, avoid any tree canopy in the APZ. If tree canopy cannot be avoided in the APZ, then ensure: - Canopy cover is less than 15%; - Branches do not touch or overhang any infrastructure buildings; - Lower limbs are removed up to a heigh of 2m above ground; - Canopies are separated by at least 2m; and - Preference should be given to smooth barked and evergreen trees. The operational environmental management plan for the site should include annual monitoring of the fire mitigation works for the solar farm and will involve the following: • Access performance criteria (against the recommended performance criteria detailed in this report and NSW Fire Trail Standards); • APZ/setbacks and landscaping performance criteria (managed areas and surrounding fuel loads) as per the recommended performance criteria detailed in this report; and • Water supplies and water supply access conditions. • Monitoring should be conducted ahead of the annual declared bushfire season by appropriately qualified staff or contractor and reported to the proponent's Site Environmental Manager.

Phase	Mitigation
	• Notification of the local NSW RFS Fire Control Centre for any works that have the potential to ignite surrounding vegetation, proposed to be carried out during a bushfire fire danger period to ensure weather conditions are appropriate; • Any additional matters as agreed and required by the NSW RFS District Office. **The Operational Environmental Management Plan (or similar) for the project should include annual monitoring of the fire mitigation works, to be undertaken prior to commencement of the Bush Fire Danger Period (generally 1 October to 31 March), and will involve the following:** • **Assessment of site access and internal road compliance against Conditions of Consent, any applicable management plans and acceptable solutions for property access as listed under Table 5.3b of PBP 2019.** • **Review of internal ground fuel management and management of the site APZ in-line with IPA requirements provided under PBP 2019 (see Table 4) and the RFS document *Standards for Asset Protection Zones* (n.d.).** • **Review of water supply management, ensuring that onsite static water supplies remain accessible and in good repair for RFS use.** • **Additional matters as required under Conditions of Consent issued for the project.** • **Monitoring should be conducted by an appropriately qualified staff member or contractor, with results of the monitoring to be documented and provided to the project Environmental Manager (or equivalent role) for recording and application of recommended actions.** **Stakeholders provided in Table 6 of the amended BFAR shall be kept up to date with onsite management through provision of the most up to date copy of the OEMP, which is proposed to include onsite bush fire management provisions**
Social and Economic	

Phase	Mitigation
Planning / Pre-construction	The Community and Stakeholder Engagement Plan will be progressively implemented and updated by Edify. The plan provides procedures for: • informing stakeholders of potential impacts • providing project-related updates • registering and responding to complaints and feedback. • Ongoing engagement with the local business community will be undertaken to discuss and maximise local opportunities for project support. An accommodation and employment strategy (AES) will be prepared prior to project construction in consultation with the Narromine Shire Council to: • reduce the potential for adverse impacts on local accommodation availability, services or events due to the construction workforce, • maximise local employment and commercial opportunities • facilitate the accommodation and the workforce associated with the development, • investigate options for prioritising the employment of local workers for the construction and operation of the development, where feasible, • Consult with accommodation providers to utilise short-term accommodation where possible, to minimise negative impacts on tourists and other users, and reduce pressure on the rental market, • Consider alternative accommodation options (such as temporary worker accommodation) in collaboration with other projects in the region, • include a program to monitor and review the effectiveness of the strategy over the life of the development. Local employees, contractors, manufacturing facilities, materials and services will be preferentially engaged during construction and operation, where qualification and experience criteria are met. **Edify will enter into a voluntary planning agreement with NSC to inject funds into the local economy that will support various activities like infrastructure upgrades and local community groups initiatives. Edify will engage with NSC to develop a local participation plan in which local businesses and contractors can register provision of their goods and services for the selected EPC contractor to utilize during the construction phase.**
Construction	The Community and Stakeholder Engagement Plan will be progressively implemented and updated by Edify. The plan provides procedures for: • informing stakeholders of potential impacts • providing project-related updates • registering and responding to complaints and feedback. Ongoing engagement with the Narromine Shire Council will be undertaken to discuss and resolve any concerns during construction and operation. Ongoing engagement with the local business community will be undertaken to discuss and maximise local opportunities for project support. Hold employment and business opportunities briefings and community networking meeting, prior to the construction phase, to discuss employment, procurement, and local services (e.g., accommodation providers, cafes etc.) opportunities and to register those interested in participating. Monitor registration of interest form responses on website and advertise in local and regional newspapers. The project website will be maintained during construction and operation and include provision for the community and other stakeholders to submit comment and feedback.

Phase	Mitigation
Operation	The Community and Stakeholder Engagement Plan will be progressively implemented and updated by Edify. The plan provides procedures for: - informing stakeholders of potential impacts - providing project-related updates - registering and responding to complaints and feedback. Ongoing engagement with the Narromine Shire Council will be undertaken to discuss and resolve any concerns during construction and operation. The project website will be maintained during construction and operation and include provision for the community and other stakeholders to submit comment and feedback.
Waste	
Planning	Concept Waste Management Plan completed as part of EIS.
Construction / Operation	A Waste Management Plan (WMP) will be prepared prior to issue of Construction Certificate in consultation with Narromine Shire Council. The WMP apply to project construction and operation and will detail at a minimum: • measures to minimise waste, including opportunities to avoid, reuse, recycle, recover, or treat waste • expected waste outputs in detail, including quantity and classification of expected wastes • measures to separate waste into appropriate categories on site to allow appropriate disposal • disposal methods, including which waste facilities they will be transferred to and expected costs and approvals required • details of contractor for collection and disposal of waste. **The selected EPC will consult with NSC and open an account for construction waste disposal.** **For disposal of liquid waste (sewage) the selected EPC will consult with and apply for a disposal approval through the Dubbo sewage treatment plant.**
Decommissioning	The majority of the Project components are recyclable and mitigation measures will be in place to maximise reuse and recycling in accordance with resource management hierarchy principles. **At the end of the project life, the solar panels will be decommissioned and sent to a solar panel recycling facility where most of the materials will be separated and reused. The solar panels will not remain on-site at the end of the project life.** The implementation of a Waste Management Plan and identification of recycling waste facilities in the LGA, will lessen the impacts from decommissioning waste disposal on regional landfills, the biological environment and social environment. **Dismantle and remove solar panels, structures (excluding substation) and ancillary infrastructure (cables, inverters, fencing) from the project to a depth of 500mm.**
Cumulative	
Design	Timing and location of other developments in the region will be monitored by Edify and, if a risk of adverse cumulative impacts during project construction (or decommissioning) is identified, discussions will be held with council and/or other project proponents to consider ways of minimising such impacts.

Phase	Mitigation
Construction / Decommissioning	Implementation of the management and mitigation measures for each of the forementioned environmental aspects are addressed throughout Section 7 and the technical reports. It is expected that these measures, if implemented effectively, will minimise the risk of most cumulative impacts during the construction and decommissioning phases of the project.
Air Quality	
Construction	**Dust generating activities will be assessed during windy conditions and stopped and rescheduled where adequate control of dust generation cannot be achieved. Visual observation of machinery will be undertaken during site inspections in addition to daily pre-start checks which ensure all machinery has appropriate emission control devices, is in good working order and is maintained correctly. Trucks that spray water to suppress dust will be utilised when required which will reduce the impact of dust from the various truck deliveries throughout the construction phase.**

APPENDIX D UPDATED BDAR

APPENDIX E UPDATED ACHAR

APPENDIX F UPDATED TIA

APPENDIX G UPDATED BFAR