Hillview Wind Farm

Scoping Report

Prepared for HILLVIEW ENERGY HUB PTY LTD ATF HILLVIEW ENERGY HUB TRUST

November 2024

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Approved by

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21 November 2024

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Executive summary

Hillview Energy Hub Pty Ltd ATF Hillview Energy Hub Trust proposes to develop the Hillview Wind Farm (the project) approximately 12 km east of Uralla in the local government area (LGA) of Uralla in the New England Region of New South Wales (NSW). The project is within the New England Renewable Energy Zone (REZ) and will connect to the proposed The Energy Corporation of NSW (EnergyCo) East substation.

The project will consist of approximately 55 wind turbine generators (WTGs), including transmission, ancillary and temporary infrastructure. The wind turbine model to best suit the site and wind profile will be selected during the development phase of the project. The model selected will influence the number and location of turbines and determine the overall generation capacity of the project (anticipated 200–300 MW).

A project investigation area of 6,124 hectares (ha) has been established. Within the project investigation area, a development corridor of approximately 2,069 ha has been the focus of preliminary baseline investigations. The final layout and capacity of the project will be selected on the basis of environmental constraints identification, outcomes of stakeholder engagement, engineering assessment and design of project infrastructure.

The land within the project investigation area is privately owned and is bisected by Hillview Road and Carlon Menzies Road, local unsealed roads managed by Uralla Shire Council. Currently used for agricultural grazing and historically used for cropping, the project investigation area is characterised by large expanses of cleared land interspersed with scattered patches of remnant vegetation.

The project aligns with both the NSW and Commonwealth Governments' objectives for energy security and reliability and emissions reductions. The project will contribute to the Commonwealth Government's plan to reduce Australia's greenhouse gas emissions by 43% by 2030, and net zero emissions by 2050. Once operational, the project could abate approximately 700,000 tonnes of greenhouse gases annually and power up to 150,000 NSW households per year.

The project is a State Significant Development (SSD) pursuant to Schedule 1 of State Environmental Planning Policy (Planning Systems) 2021. Accordingly, approval for the project is required under Part 4 of the NSW *Environmental Planning and Assessment Act 1979*.

This Scoping Report has been prepared to support a request for the Secretary's Environmental Assessment Requirements (SEARs) for the project. A preliminary environmental assessment has been carried out and is documented in this report to assist in the identification of matters that will require further assessment in the environmental impact statement (EIS), and the level of assessment that should be carried out for each matter.

This Scoping Report has been prepared in accordance with *State Significant Development Guidelines – Preparing a Scoping Report* (DPIE 2021a). The aspects identified as requiring detailed assessment in the EIS include amenity – visual, biodiversity, access – traffic, social and amenity – noise. Aspects requiring standard assessment include heritage – Aboriginal and historical, hazards and risks, land, water and air.

TABLE OF CONTENTS

Executive summary **ES.1**

1 Introduction **1**

1.1 Project overview 1

1.2 The applicant 3

1.3 Related development 3

1.4 Purpose of this report 3

2 Strategic context **5**

2.1 Site and surrounds 5

2.2 Strategic planning framework 10

2.3 Project justification 14

3 Project description **17**

3.1 Overview 17

3.2 Physical layout and design 18

3.3 Activities and uses 21

3.4 Timing 22

3.5 Alternative considered 23

4 Statutory context **25**

5 Engagement **29**

5.1 Scoping phase consultation 29

5.2 EIS phase consultation 32

6 Proposed assessment of impacts **34**

6.1 Amenity – visual 35

6.2 Biodiversity 39

6.3 Access and traffic 46

6.4 Social 47

6.5 Amenity – noise and vibration 49

6.6 Heritage – Aboriginal 51

6.7 Heritage – historical 52

6.8 Hazards and risks 53

6.9 Land 55

6.10 Water 58

6.11 Air 60

6.12 Cumulative impact 60
6.13 Matters requiring no further assessment 65
7 Conclusion 66
References 67
Abbreviations 69

Appendices

Appendix A Schedule of lands A.1
Appendix B Scoping summary table B.1
Appendix C Preliminary visual impact assessment C.1
Appendix D Social impact scoping report D.1
Appendix E Preliminary noise impact assessment E.1
Appendix F Aboriginal cultural heritage assessment F.1
Appendix G Historical heritage assessment G.1

Tables

Table 1.1 Summary of applicant details 3
Table 2.1 Renewable development and infrastructure within proximity the project investigation area 6
Table 2.2 Key features of the project site and surrounds 9
Table 2.3 Alignment with key strategic planning frameworks 10
Table 3.1 Project overview 17
Table 3.2 Supporting infrastructure 21
Table 4.1 Statutory context 25
Table 5.1 Engagement with local community stakeholders 30
Table 5.2 Engagement with government and regulatory agencies 31
Table 5.3 Engagement tools and methods during preparation of the EIS 33
Table 6.1 Level of assessment required in EIS 34
Table 6.2 Landscape character units 35
Table 6.5 Cumulative impact assessment scoping summary table 62
Table 6.6 Matters requiring no further assessment in the EIS 65
Table A.1 Hillview Wind – Schedule of land A.2
Table B.1 Scoping summary table B.2

Figures

Figure 1.1 Regional strategic context 2
Figure 2.1 Local context 8
Figure 3.1 Indicative project layout 19
Figure 6.1 Preliminary assessment – visual figure (blue & black line) 37

Figure 6.2	Zone of visual influence	38
Figure 6.3	Plant Community Types (PCTs)	42
Figure 6.4	Preliminary noise impact assessment	50
Figure 6.5	Land and soil classification	56

1 Introduction

1.1 Project overview

Hillview Energy Hub Pty Ltd proposes to develop the Hillview Wind Farm (the project). The project includes the installation, operation, maintenance and decommissioning of a wind farm comprising up to approximately 55 wind turbine generators (WTGs) and associated infrastructure. The project is located approximately 12 kilometres (km) south-west of Uralla and lies within the Uralla Shire Local Government Area (LGA) in New South Wales. The regional context of the project is shown in Figure 1.1.

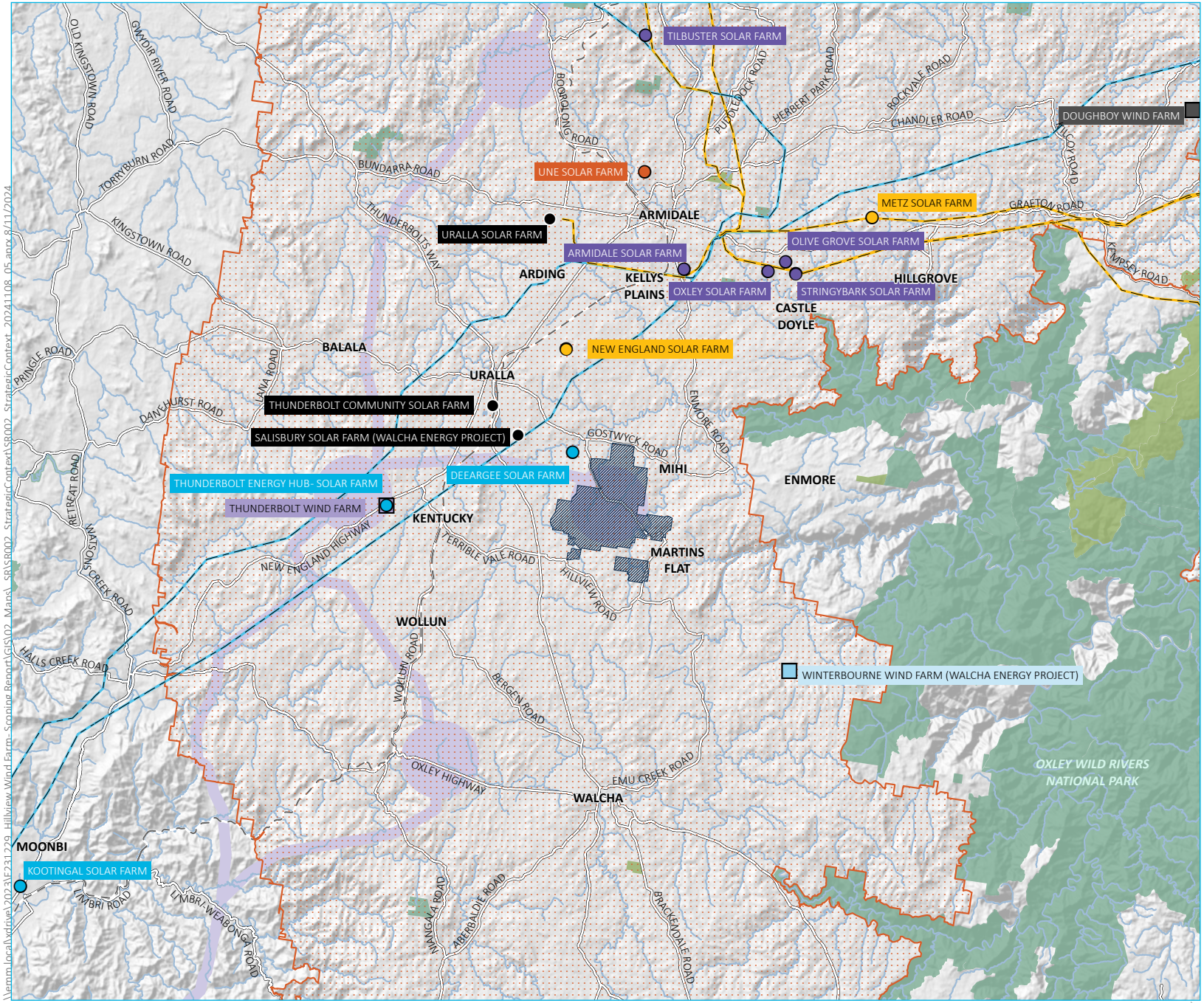
The project is located within the New England Renewable Energy Zone (REZ) and will connect into The Energy Corporation of NSW's (EnergyCo) proposed Eastern Hub substation.

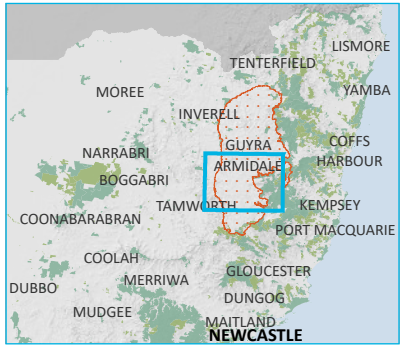
A project investigation area of approximately 6,124 hectares (ha) has been established with preliminary environmental and constraints investigations focussed on a 2,069 ha development corridor within the project investigation area.

The project will be designed to avoid and minimise impacts where possible. The exact land area to be covered by the project components (i.e. development corridor) will be refined as the project design progresses and will be informed by the outcomes of community and stakeholder engagement and the findings of the environmental, social and economic assessment.

The project is consistent with NSW Government policy for development of renewable energy generation and will assist in meeting the Commonwealth Government and NSW Government emissions reduction targets.

The project is a State Significant Development (SSD) pursuant to Schedule 1 of State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP) and approval for the project is required under Part 4, Division 4.7 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).





KEY

- Project investigation area
- New England REZ transmission corridor
- New England Renewable Enery Zone

Solar development

- Approved
- In planning
- Operational
- Under construction
- Withdrawn

Wind development

- Approved
- In planning
- Withdrawn

Operating system voltage

- 132 kV
- 330 kV

Existing environment

- Rail line
- Major road
- Named watercourse
- Named waterbody
- NPWS reserve
- State forest

Source: EMM (2024); ABS (2021); DCSSS (2023); GA (2009)

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Regional strategic context

Hillview Wind Farm
Scoping Report
Figure 1.1

EMM creating opportunities

1.2 The applicant

The applicant is Hillview Energy Hub Pty Ltd as trustee for Hillview Energy Hub Trust, which is a subsidiary of ACE Power Development 2 Pty Ltd (ACE Power). Applicant details are provided in Table 1.1.

ACE Power is involved across the entire lifecycle of renewable energy projects, and is committed to accelerating the transition of Australia's electricity network with clean, reliable energy. Its experienced team is headquartered in Sydney with a local presence in Queensland, Western Australia and South Australia. ACE Power has decades of industry expertise in developing, financing and delivering renewable energy projects.

With a strong focus on collaboration with local communities and providing an overall positive impact to the community and environment, ACE Power is developing its 10 GWp pipeline with a technology mix focusing on onshore wind, solar and battery projects situated at strategic locations across Australia.

ACE Power is backed by shareholder and partner, Pelion Green Future, a leading clean energy and sustainability investment holding focused on facilitating the clean energy transition globally.

Table 1.1 Summary of applicant details

Attribute	Description
Company name	HILLVIEW ENERGY HUB PTY LTD ATF HILLVIEW ENERGY HUB TRUST
ABN	82 805 693 742
Address	Suite 402 39 East Esplanade Manly NSW 2095

1.3 Related development

The project would form part of the Hillview Energy Hub. The Hillview Energy Hub will be delivered through three separate but related SSD applications to the NSW Department of Planning, Housing, and Infrastructure (DPHI). All developed by ACE Power, the Hillview Energy Hub comprises the following:

- Eastern Hub Firming Battery – The Eastern Hub Firming Battery involves the development of a battery energy storage system with a capacity of 1000 MW. Secretary's Environmental Assessment Requirements (SEARs) were received for the Eastern Hub Firming Battery in July 2024. Detailed investigations and consultation for the Eastern Hub Firming Battery have been underway since 2022 and will support the efficient transfer and storage of energy from Hillview Energy Hub.
- Hillview Solar Farm – The Hillview Solar Farm involves the development of a 272 MW solar farm. SEARs for Hillview Solar Farm were received in July 2024. Detailed investigations and consultation for the Hillview Solar Farm have been underway since 2023 and will support the efficient development of the project.
- Hillview Wind Farm – The subject of this request for SEARs, as described in Section 3 of this Scoping Report.

This Scoping Report addresses the Hillview Wind project only. SEARs for the Eastern Hub Firming Battery and Hillview Solar Farm have been sought separately.

1.4 Purpose of this report

The project is SSD pursuant to Schedule 1 of the Planning Systems SEPP and approval for the project is required under Part 4, Division 4.7 of the EP&A Act. An SSD application for the project is to be accompanied by an environmental impact statement (EIS).

This Scoping Report supports a request to DPHI for the SEARs. The SEARs will identify the matters to be assessed in the EIS and the level of assessment required.

This report has been prepared by EMM Consulting Pty Limited (EMM) on behalf of ACE Power in accordance with the *State Significant Development Guidelines – Preparing a Scoping Report* (DPIE 2022a) (Scoping Report Guidelines). Other NSW Government SSD technical guidelines have been considered where applicable, as well as the *NSW Wind Energy Guideline for State Significant Wind Energy Development* (DPE 2016).

This Scoping Report provides a high-level description of the project, including the project investigation area and its surroundings, the environmental planning pathway for approval and the identification of key potential environmental issues that may be associated with the project.

2 Strategic context

2.1 Site and surrounds

2.1.1 Regional context

The project investigation area is located within the Uralla LGA in the New England North-West region of NSW. The region is characterised by its productive agricultural lands. The New England Highway connects the region to major population centres along the east coast, and it is approximately 12 km west of the project investigation area. The regional context of the project is shown in Figure 2.1.

i Towns and population centres

The township of Uralla, with a population of 2,388 people, is the closest service centre to the project investigation area. The local areas of Gostwyck, Salisbury Plains and Mihi are close to the project investigation area and have very small rural populations.

Other major population centres in the New England REZ include Armidale (21 km north of the project), Tamworth (70 km south of the project) and Inverell (115 km north-west). These major regional centres provide important employment and health services including Armidale Airport, University of New England campuses, regional hospitals and allied health services.

ii Conservation areas

Natural resources near the project investigation area include:

- Cunnawarra National Park – approximately 35 km north-east of the project investigation area
- Carrai National Park – approximately 65 km east of the project investigation area
- Willi Willi National Park – approximately 80 km south-east of the project investigation area
- Oxley Wild Rivers State Conservation Area – approximately 35 km east of the project investigation area
- Imbota Nature Reserve – approximately 18 km north-east of the project investigation area
- Bulagaranda Aboriginal Area – approximately 40 km north-west of the project investigation area
- Macleay River, within the Oxley Rivers area – approximately 40 km east of the project investigation area.

The project investigation area is also located approximately 70 km from the portion of the Gondwana Rainforests World Heritage Area within the New England region. The Gondwana Rainforests World Heritage Area covers several discrete areas, in north-east NSW and south-east Queensland which comprise remaining areas of old growth rainforest.

iii Renewable energy and other developments

The project investigation area is located within the New England REZ, which is an area recognised by the NSW Government for its potential natural energy resources and connectivity to transmission infrastructure. The New England REZ has an intended transfer capacity of 8 GW and is anticipated to deliver up to $10.7 billion in private sector investment.

There are several renewable energy developments and associated infrastructure projects within proximity to the project investigation area. Projects that are within 60 km and lodged with DPHI or have been publicly announced are listed in Table 2.1.

ACE Power is aware of the community and stakeholder concerns about potential cumulative impacts and the importance of properly assessing and managing these impacts for the New England REZ. To address these concerns, ACE Power has commenced and will continue to:

- engage with EnergyCo and provide up-to-date information regarding this project as part of the coordinated delivery of the REZ
- consider and assess information available in the public domain, and where appropriate, provided by EnergyCo and other developers relating to development with the potential for cumulative impacts.

The cumulative impact assessment for the EIS will meet the required standards set out in the *Cumulative Impact Assessment Guidelines for State Significant Projects* (DPE 2022). This involves evaluating the scale and significance of the cumulative impacts of our project together with those of other relevant future projects, focusing on key issues that could be significantly affected.

Table 2.1 Renewable development and infrastructure within proximity the project investigation area

Project	Development type	Proximity to Hillview Solar	Status
Metz Solar Farm	Solar Farm	55 km north-east of the project investigation area	Approved – Operating
New England Solar Farm	Solar Farm and BESS	6 km north-west of the project investigation area	Approved – Stage 1 operational Stage 2 in construction
Tilibuster Solar Farm	Solar Farm and BESS	55 km north-east of the project investigation area	Approved – yet to be constructed
Thunderbolt Community Solar Farm	Solar Farm	9 km north-west of the project investigation area	Approved
Armidale Solar Farm	Solar Farm	19 km north of the project investigation area	Approved
Olive Grove Solar Farm	Solar Farm	24 km north-east of the project investigation area	Approved
Stringybark Solar Farm	Solar Farm	24 km north-east of the project investigation area	Approved
UNE Solar Farm	Solar Farm	25 km north of the project investigation area	Approved – Operating
Oxley Solar Farm	Solar Farm and BESS	50 km north-east of the project investigation area	Approved – yet to be constructed
Thunderbolt Wind Farm	Wind Farm	15 km west of the project investigation area	Approved – yet to be constructed
Winterbourne Wind Farm	Wind Farm	12 km south-west of the project investigation area	Proposed – at response to submissions stage
Oven Mountain Pumped Hydro	Pumped Hydro	50 km east of the project investigation area	Proposed – at response to submissions stage
Bendemeer Solar Farm	Solar Farm and BESS	40 km south-west of project investigation area	Proposed – at response to submissions stage

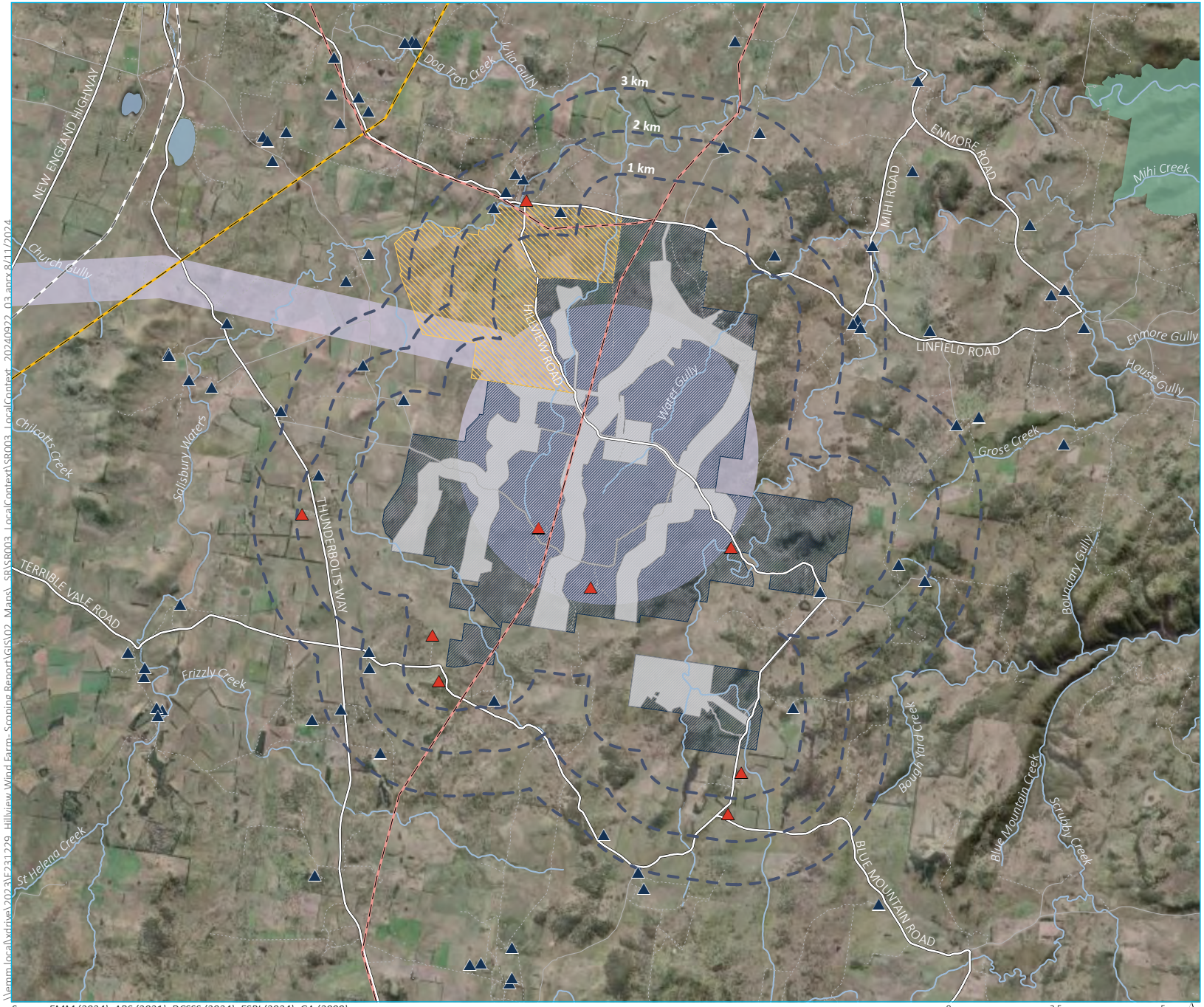
Project	Development type	Proximity to Hillview Solar	Status
Armidale Battery Energy Storage System	BESS	25 km north-east of the project investigation area	Proposed – at response submissions stage
Armidale East BESS	BESS	40 km north-east of the project investigation area	Proposed – EIS preparation stage
Eathorpe BESS	BESS	45 km north-east of the project investigation area	Proposed – EIS preparation stage
Deeargee Solar Farm	Solar Farm and BESS	Adjacent – north-western boundary	Proposed – EIS preparation stage
Gara Battery Energy Storage System	BESS	48 km north-east of the project investigation area	Proposed – SEARs requested
Hillview Solar Farm	Solar Farm	Within project investigation area	Proposed – EIS preparation
Eastern Hub Firming Battery	BESS	Within project investigation area	Proposed – EIS preparation
New England REZ Transmission Project	High voltage electricity network infrastructure	Within project investigation area	Proposed – SEARs requested
Bendemeer Solar Farm	Solar Farm	40 km south-west of project investigation area	Development feasibility announced
Bendemeer Wind Farm	Wind Farm	40 km south-west of project investigation area	Development feasibility announced
Uralla Energy Park	Wind, Solar and BESS	20 km north-west of the project investigation area	Development feasibility announced
Boorolong Wind Farm	Wind Farm and BESS	60 km north-west of project investigation area	Development feasibility announced
Northern Tablelands Wind Farm	Wind Farm	32 km north of the project investigation area	Development feasibility announced
Salisbury Solar Farm	Solar Farm and BESS	20 km south-west of the project investigation area	Development feasibility announced
Ruby Hills Wind Farm	Wind Farm	50 km south-west of the project investigation area	Development feasibility announced
Yarrowyck Wind Farm	Wind Farm	32 km north-west of the project investigation area	Development feasibility announced

2.1.2 Local context

The land within the project investigation area is zoned RU1 Primary Production under the Uralla Local Environmental Plan 2012 (Uralla LEP) and is predominately used for agricultural purposes. The majority of the project investigation area has been modified by historical land use practices and past disturbances associated with land clearing, mining, cropping and intensive livestock grazing.

The project investigation area can be accessed from Hillview Road, Carlon Menzies Road Gostwyck Road or Blue Mountain Road, all of which connect into Thunderbolts Way. There are three residences within the project investigation area which are associated with the project. The nearest non-associated private residences are located on the eastern and western boundaries adjacent to Blue Mountain Creek and Cook Station Creek respectively.

The local context of the project is shown in Figure 2.1.



KEY

- Development corridor
- Project investigation area
- New England REZ transmission corridor
- Deeargee solar farm
- Project buffer

Sensitive receiver

- Project associated
- Non-associated

Existing environment

- Rail line
- 66 kV transmission line
- 330 kV transmission line
- Major road
- Minor road
- Vehicular track
- Named watercourse
- Named waterbody
- NPWS reserve

INSET KEY

- Local government area
- Project investigation area

Source: EMM (2024); ABS (2021); DCSSS (2024); ESRI (2024); GA (2009)

0 2.5 5 km

GDA2020 MGA Zone 56

N

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Local context

Hillview Wind Farm
Scoping Report
Figure 2.1

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creating opportunities

2.1.3 Project site

The project investigation area is approximately 6,124 ha and encompasses 191 land parcels (Appendix A – Schedule of lands).

A summary of the key features of the development corridor and surrounds is provided in Table 2.2.

Table 2.2 Key features of the project site and surrounds

Aspect	Description
LGA	The project investigation area is within the Uralla LGA.
Land zoning	The project investigation area is zoned RU1 Primary Production under the *Uralla Local Environmental Plan 2012* (Uralla LEP).
Nearby townships	Uralla is located 12 km to the north-east of the project investigation area. The closest regional centre is Armidale which is located 23 km north of the project investigation area.
Landscape	The landscape within the project investigation area is generally flat, cleared paddocks interspersed by clusters of remnant vegetation.
Land use	Land within the project investigation area is currently utilised for sheep and cattle grazing.
Site history	The project investigation area is located in a region with a rich Aboriginal history. Historically, land was claimed by squatters who raised Merino sheep for both domestic and international markets and the region remains largely pastoral. It is understood that pasture improvement and cropping has also historically been undertaken within the site.
Residences	There are two associated residences located within the development corridor and an additional nine within the project investigation area.
Nearby natural features	The development corridor intersects with a few minor watercourses and their tributaries including Atchesons Gully, Water Gully, and Cook Station Creek.
Nearby infrastructure	Hillview Road is an unsealed local road which bisects the project investigation area. Gostwyck Road and Blue Mountain Road, also sealed local roads adjoin the project investigation area along the outer northern and southern limits of the project investigation area.
Surrounding development	The project investigation area is within the New England REZ. Other renewable energy and transmission developments within close proximity to the project include: • New England Solar Farm (10 km north of the project investigation area) • EnergyCo, East Hub substation (adjacent to the project investigation area). Where relevant, cumulative impacts from the project and relevant development near the project will be assessed in accordance with the *Cumulative Impact Assessment Guidelines for Significant Projects* (DPIE 2021). Cumulative impacts are discussed in Section 6.12.
Planning context	The project investigation area is not within any land identified as: • prohibitive zooming for the project • flood prone land • traversed by stock routes. The project investigation area is identified as containing or being constrained by: • biophysical strategic agricultural land (BSAL) • bushfire prone land.

2.2 Strategic planning framework

An overview of the relevant key policies, plans, and strategies, and how the project aligns with these, is provided in Table 2.3.

Table 2.3 Alignment with key strategic planning frameworks

Plan, policy or strategy	Description	Alignment with strategic framework
International context		
The Paris Agreement	The Paris Agreement is a legally binding international treaty on climate change adopted by 196 parties in 2015. As a signatory to the agreement, the Commonwealth Government has committed to reducing greenhouse gas (GHG) emissions by 26-28% on 2005 levels by 2030.	The project will contribute to meeting Australia's commitments under the Paris Agreement by contributing to a reduction in the National Electricity Market (NEM) annual GHG emissions.
National context		
Large-scale Renewable Energy Target	The Australian Government Clean Energy Regulator administers the Large-scale Renewable Energy Target which incentivises investment in renewable energy power stations such as wind and solar farms. The Large-scale Renewable Energy Target of 33,000 GW hours of additional renewable electricity generation was met at the end of January 2021 (Clean Energy Regulator 2021). The annual target will remain at 33,000 GW hours until the scheme ends in 2030.	It is noted that the annual target has been met and will remain at 33,000 GW until the scheme ends in 2030. The project will contribute to meeting the renewable energy target.
Capacity Investment Scheme	The Capacity Investment Scheme (CIS) provides a national framework to encourage new investment in renewable energy capacity and battery storage. The CIS involves the Australian Government seeking competitive tender bids for renewable capacity and clean dispatchable capacity projects to: • deliver an additional 32 GW of capacity by 2030 • fill expected reliability gaps as ageing coal power stations exit the network • deliver the Australian Government's 82% renewable electricity by 2030 target. The Australian Government will provide revenue underwriting for successful CIS tender projects, with an agreed revenue 'floor' and 'ceiling'. This will provide a long-term revenue safety-net that decreases financial risks for investors and encourages more investment when and where it is needed. Revenue underwriting is being used domestically and globally to support investment into the energy transition.	The project is within in the New England REZ and will support and assist in achieving the Australian Government's renewable energy targets.

Plan, policy or strategy	Description	Alignment with strategic framework
Integrated System Plan 2024	The *Integrated Systems Plan* (ISP 2024) prepared by the Australia Energy Market Operator (AEMO) is an: "Actionable roadmap for eastern Australia's power system to optimise consumer benefits through a transition period of great complexity and uncertainty."	The ISP 2024 highlights the urgent need for investment in new renewable energy generation, transmission, and storage projects to meet the NEM renewable electricity generation targets and deliver secure, reliable and affordable energy. ISP 2024 recognises that renewable generation, focused in identified REZ's is an optimal development path for reliability and affordability within the NEM. As a renewable energy project connected by transmission and support by storage, the project strategically aligns with the objectives of the ISP 2024.
Hydrogen Headstart program	The Commonwealth Government is investing $4 billion in the Hydrogen Headstart program. Headstart will provide revenue support for large-scale renewable hydrogen projects through competitive hydrogen production contracts. This investment will: • accelerate development of Australia's hydrogen industry • catalyse clean energy industries • help Australia connect to new global hydrogen supply chains.	The renewable energy demand increase associated with development of a hydrogen industry in Australia is substantial. Per the Australian Energy Market Operator's (AEMO) 2024 Integrated System Plan, an emerging hydrogen industry would increase annual renewable electricity demand by at least 55 TWh per annum by 2050 (p.26). The project in this scoping report is one of a very large number of renewable generators required to realise the Australian Government's hydrogen ambition.
Net Zero 2050	In October 2021, the Australian government released its *Long-Term Emissions Reduction Plan* to achieve net zero emissions by 2050. The Plan aims at reaching a net zero economy through a technology-based approach, whilst protecting relevant industries, regions, and jobs. It is part of an overarching strategy for emissions reduction, which includes a Technology Investment Roadmap and its Low Emissions Technology Statements.	The project will reduce GHG emissions associated with energy generation over its operational life. The project will contribute to the Commonwealth Government's plan to reduce Australia's GHG emissions by 43% by 2030, and net zero emissions by 2050, with 82% of Australia's energy to be derived from renewables by 2030. The project could abate approximately over 700,000 tonnes of GHG annually and power up to about 150,000 households per year.
State context		
Net Zero Plan Stage 1: 2020 – 2030	The *Net Zero Plan Stage 1: 2020–2030* outlines the NSW Government's plan to grow the economy and create jobs while helping the state to deliver a 35% reduction in emissions compared to 2005 levels.	The project contributes to Priority 1 of the Net Zero Plan: "Drive uptake of proven emissions reduction technologies that grow the economy, create new jobs or reduce the cost of living." The project is within the New-England REZ. The region has been identified as an ideal location to play a key role in a renewable energy future for NSW due to its good renewable energy resources and opportunity to utilise electricity network infrastructure. The project will utilise these benefits to contribute to the NSW Net Zero Plan.

Plan, policy or strategy	Description	Alignment with strategic framework
The Climate Change (Net Zero Future) Act 2023	*The Climate Change (Net Zero Future) Act 2023* commits the NSW government to effective action on climate change including a 50% emissions reduction on 2005 levels by 2030, 70% reduction by 2035, and net zero emissions by 2050. The Act legislates: • guiding principles for action to address climate change • emissions reduction targets • an objective for NSW to be climate resilient • establishment of an independent Net Zero Commission expert.	The project is within the New England REZ and is ideally placed to assist in meeting emissions reduction targets for NSW.
NSW Electricity Infrastructure Investment Roadmap	The Electricity Infrastructure Roadmap coordinates investment in transmission, generation, storage and firming infrastructure as ageing coal-fired generation plants retire. The roadmap includes actions that will deliver 'whole of system' benefits. The roadmap sets out a plan to deliver the state's first five REZs in the Central-West Orana, New England, South-West, Hunter-Central Coast, and Illawarra regions.	The project is within the New England REZ and is ideally placed to contribute to the success of the roadmap. Once operational, the project could power up to 150,000 households per year.
Wind Energy Guideline	The *Wind Energy Guideline* provide the community, industry and regulators with guidance on the planning framework for the assessment of large-scale wind energy development proposals that are SSD and identifies the key planning considerations relevant to wind energy development in NSW.	Site selection and impact assessment considerations detailed in the guideline have been and will continue to be used to inform the project and will be considered in the EIS.
Draft Energy Policy Framework – Wind Energy Guideline	The Department has recently put a new *Draft Energy Policy Framework* out for public consultation until 29 January 2024. The draft framework is proposed to support faster and more consistent decision making and provide greater certainty to communities and the energy industry.	Whilst the *Draft Energy Policy Framework* does not apply to the project, the project aligns in principle with objectives of the policy, in that it is suitably located, the environmental impacts will be fully examined, and comprehensive consultation will be undertaken during the assessment process.
Regional and Local Context		
New England North West Regional Plan 2041	New England North-West Regional Plan 2041 outlines the NSW Government's land use planning priorities and decisions over the next 20 years for the North West region. This region extends from Tamworth in the south to the Queensland border in the north and includes the Uralla Local Government Area. The Plan recognises the region as one of the most productive agricultural regions in Australia but also highlights unprecedented opportunity that the renewable energy, green technology and the food fibre processing sectors provide in fostering a resilient and diverse economy.	The project aligns with the objectives and actions Objective 9 of the Regional Plan 2041 by: • contributing to the national renewable energy target • investing in areas within the region which have been recognised for their renewable energy potential • promotion of renewable energy development with ready access to connect within the electricity network • locating the project away from important agricultural land

Plan, policy or strategy	Description	Alignment with strategic framework
	The vision of the plan is to be realised through the objective and strategies which are focused on: • coordinating land use planning to support growth, community needs and regional economic development • protecting the viability and integrity of the rural land and leverage opportunities in agribusiness and food processing to strengthen the sector • protecting natural assets and increase climate and community resilience • leveraging off renewable energy technology and investment.	• promoting energy security and stability through a more diverse energy mix • co-location of renewable energy projects to maximise infrastructure efficiencies.
Uralla Shire Community Strategic Plan 2022–2031	The *Uralla Shire Community Strategic Plan* (Uralla CSP) provides the combined vision and outlook of the community over the 10 years from 2022 until 2031. The CSP identified four strategies which are central to achieving the shared vision of a vibrant community with a growing economy supporting a sustainable quality of life. These four strategies are: • society • economy • environment • leadership. Within these strategies, renewable energy is recognised as an emerging sector for the region due to the economic, social and environmental opportunities it provides.	The project aligns with the objectives of Section 7.2 – Adapting to Climate Change, which state that Council will: • continue to support renewable energy projects in appropriate locations • continue to investigate ways to organise land use such that it supports renewable and clean energy technologies, as these opportunities suit the Uralla Shire climate due to its high wind and solar energy potential, providing an ongoing competitive advantage.
Uralla Shire Local Strategic Planning Statement	The *Uralla Shire Local Strategic Planning Statement* (Uralla LSP) sets the strategic direction for land use planning within the Shire over the 20 year period to 2040. The statement sets four key strategic directions which will guide land use planning decisions within the Shire: • productivity • liveability • sustainability • infrastructure. The LSP highlights the opportunities the LGA's landscape and proximity to major transmission lines provide the renewable energy sector. A region known for its rich agricultural soils, the statement recognises the need for development to be appropriately managed to minimise adverse impacts on the local environment and agricultural productivity.	The Uralla LSP aims to support renewable energy sector projects where appropriately located and impacts managed. Located within the New England REZ and designed to minimise impact the project aligns with the objectives of the Uralla LSP. A full assessment of impacts will be undertaken within the EIS along with continued consultation with the Uralla Shire Council to ensure consistency with the Uralla LSP.

2.3 Project justification

2.3.1 Project benefits

The project is directly aligned with the Commonwealth and NSW Government's strategic policy direction for the electricity sector and will contribute to the continued growth of renewable energy generation and storage capacity within the New England REZ.

The project is consistent with the principles of Ecologically Sustainable Development, as defined by Clause 193 of the NSW *Environmental Planning and Assessment Regulation 2021,* particularly in relation to climate change reduction and intergenerational equity. The project is in the public interest as it meets a demonstrated need and provides public benefits. This project will also:

- contribute to and support the development of the New England REZ by providing renewable energy generation and storage capacity and improving the security, stability and resilience of the NEM
- facilitate the shift away from coal-fired power generation, supporting Australia's transition towards clean and renewable sources of energy
- avoid, minimise and mitigate adverse impacts on the environment and community during construction and operation
- establish a strong network of positive and long-term relationships within the local community and contribute to economic and social growth within the Uralla LGA and surrounds
- create employment opportunities in the order of 210 full-time equivalent (FTE) jobs during construction and 17 FTE through operation.

2.3.2 Contribution to the National Electricity Market

The NSW Government has set emissions reduction targets of 50% by 2030, 70% by 2035 and net zero by 2050.

AEMO has forecast that four of the five operating coal fired power stations in NSW will be closing in the next 10–15 years. The National Electricity Market (NEM) must almost triple its capacity to supply energy by 2050 to replace retiring coal capacity which is becoming increasing less reliable, more difficult to maintain and less competitive against firmed renewable energy.

NSW relies on local generation and power transfers from Queensland, Victoria and in the next few years, following the completion of Project EnergyConnect, South Australia.

The NSW Government Electricity Infrastructure Roadmap[1] has identified the need to deliver 12 GW of renewable energy and 2 GW of long duration storage by 2030 to maintain reliable energy sources in NSW. The CSIRO 2023-34 GenCost report[2] has found that renewable generation is the lowest cost of new build electricity technology including the cost of the supporting network, even despite cost increases for wind generation.

Renewables accounted for almost 40% of the total electricity delivered through the NEM in 2023, momentarily reaching up to a 72.1% share on 24 October 2023. Rooftop solar alone contributed more electricity to the grid in the first quarter of 2024 (13%) than did grid-scale solar, wind, hydro or gas. At the same time, investments in grid-scale renewables, connecting transmission and firming technologies continue to gain momentum.

[1] Frequently asked questions | EnergyCo (nsw.gov.au)

[2] CSIRO releases 2023-24 GenCost report - CSIRO

Wind generation in NSW is likely to provide the majority of new utility scale renewable energy build in NSW. AEMO's 2024 Integrated System Plan (ISP)[3] forecasts that wind generation will dominate installations through to 2030. The ISP lays out a plan for the energy transition at the least cost to consumers. Based on wind monitoring undertaken at the site, the Project would provide higher levels of generation during the morning, overnight and early morning. This generation pattern largely opposes the generation patters of the Hillview Solar Farm, that has been modelled based on long-term meteorological observations.

The generation profiles of Hillview Wind Farm and Hillview Solar Farm are presented in Plate 2.1Of importance, is the relatively higher capacity factor between the hours 8pm and 8am – a time of the day solar generators can generate only a very small or no energy. This pattern is further accentuated during summer period when solar production is at its highest. During winter, the wind generation daily profile is less variable, but importantly, solar production is lower and wind production is relatively higher, meaning the counter-correlation between the generation types is maintained.

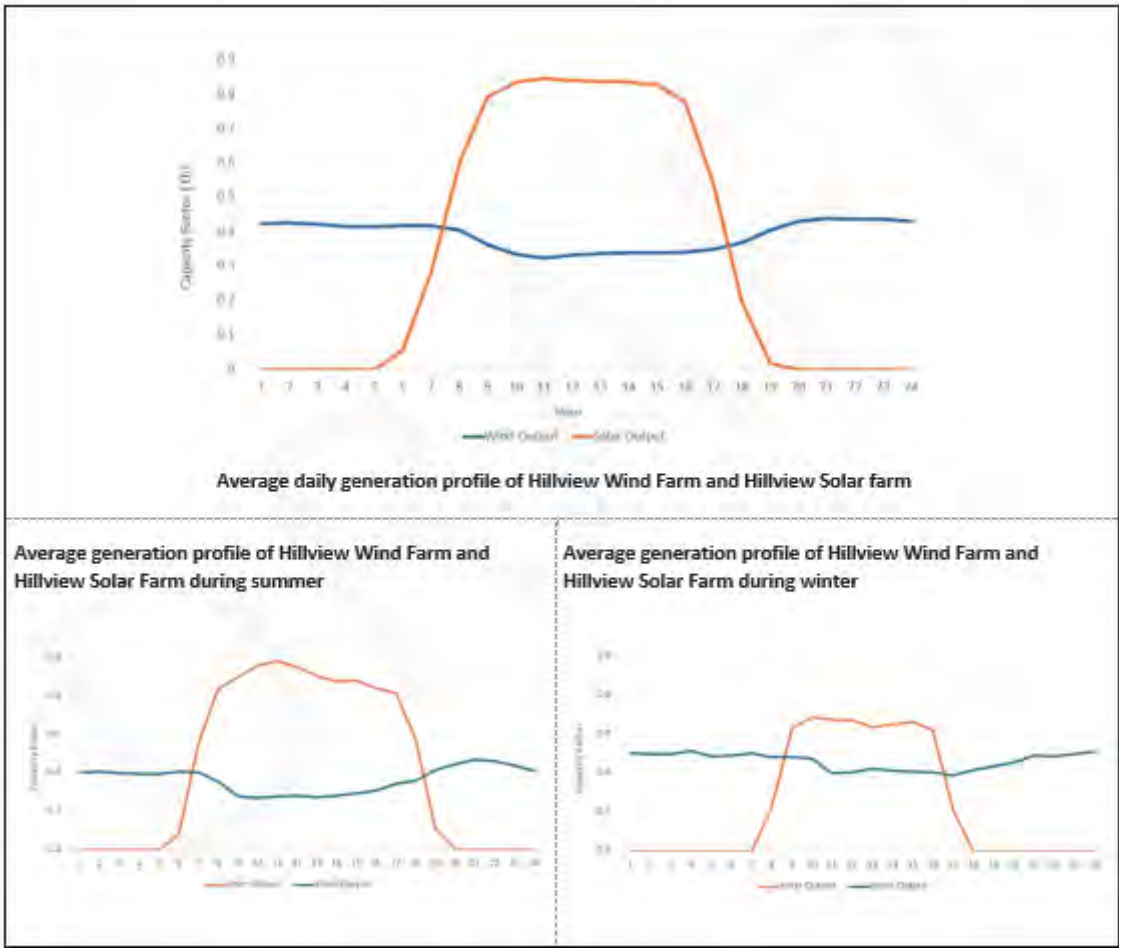


Plate 2.1 Generation profiles of Hillview Wind Farm and Hillview Solar Farm, and during the summer and winter period

Because of the materially different generation profile between solar and wind farm, having both types of generation in the network is important to support reliable and affordable electricity supply in NSW. This generation is further supported by utility scale batteries, like the Eastern Hub Firming Battery.

[3] AEMO | 2024 Integrated System Plan (ISP)

To enable the energy transition with a reliable source of lowest cost energy production, further development wind generation in NSW is critical. In particular, there are national and state targets which will only be achieved with increased development of wind generation in NSW.

2.3.3 Justification of project site

The project investigation area is ideally located for the development of a wind farm due to the following:

- The project investigation area has very good wind resource with relatively flat terrain that would mean complex earthworks can be avoided during construction.
- The available wind resource is anti-correlated with the solar resource proposed to be utilised as part of the Hillview Solar Farm, enabling a more efficient utilisation of the proposed transmission infrastructure.
- The project investigation area is within the New England REZ, an area nominated for significant investment in renewable energy generation, storage and transmission projects.
- The project investigation area is located in close proximity to the proposed EnergyCo. East substation and can export the electricity generated by the project directly into the grid.
- The proposal is a permissible land-use, is compatible with existing surrounding land uses and, in the future, will integrate with the continued use of land for agricultural activities to be implemented (i.e. agrivoltaics set-up – regional sheep grazing).
- The existing agricultural land use within and surrounding the project investigation area is compatible with large-scale renewable energy generation.
- The construction and operation of a wind farm is not anticipated to result in significant adverse biophysical, cultural, social or economic impacts.
- The site is well connected to the classified road network providing suitable connections to the regional centre of Uralla, and other major regional centres such as Armidale and Tamworth.

3 Project description

3.1 Overview

The project includes the installation, operation, maintenance and decommissioning of a wind farm comprising approximately 55 WTGs and ancillary infrastructure. A project overview is provided in Table 3.1.

Project infrastructure will be contained within a defined development corridor. This will be the area within which WTGs and ancillary infrastructure and will be generally located to allow the flexibility for further detailed design whilst also allowing a detailed environmental assessment process to be completed. The final layout and capacity of the project will then be selected based on environmental constraints identification, outcomes of stakeholder engagement, engineering assessment and design of project infrastructure.

Table 3.1 Project overview

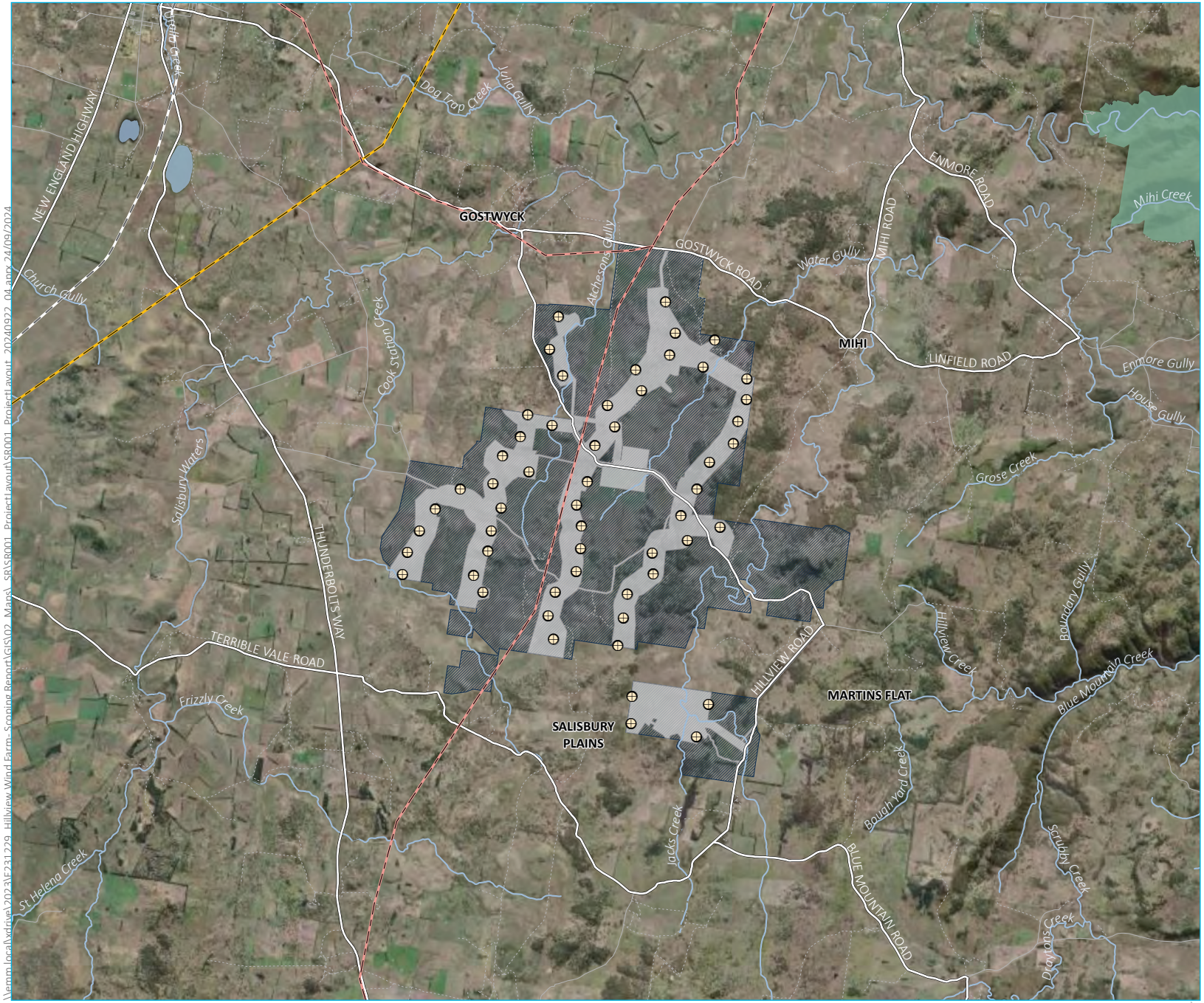
Project element	Details
Overview	
Project investigation area	Approximately 6,124 ha
Indicative development corridor	Approximately 2,069
Wind farm	
Number of wind turbines	55 WTGs (indicative)
Generation capacity	Approximately 200–300 MWac
Ancillary development/activities	
Site access	• Hillview Road – shared access with Eastern Hub Firming Battery and Hillview Solar (primary) • Carlon Menzies Road • Gostwyck Road
Connection infrastructure	• Transformers and electrical control and safety equipment to support the connection of the project
Construction	
Construction period	Approximately 30 months
Construction workforce peak	Approximately 210 full time equivalent (FTE) personnel
Workforce accommodation	Non-local staff will be accommodated within an accommodation facility to be constructed within the project investigation area
Operations	
Project lifespan	35 years
Operations workforce	Approximately 17 FTE
Decommissioning	
Decommissioning period	24 months
Decommissioning workforce	Approximately 210 full time equivalent (FTE) personnel
Workforce accommodation	Non-local staff will be accommodated within an accommodation facility to be constructed within the project investigation area.

3.2 Physical layout and design

It is anticipated that the physical layout and design of the project will comprise the following key infrastructure elements:

- wind turbines – approximately 55 (3 blade) WTGs with a height of up to 270 m (uppermost blade tip)
- substation and transmission connection – on-site collector substations and overhead powerlines to connect the wind farm to the electricity transmission network via the proposed Eastern Hub substation.
- electrical connections – a combination of underground cables and overhead powerlines connecting WTGs to the on-site collector substations
- operations and maintenance (O&M) facility – including site offices, O&M buildings, amenities, equipment sheds, storage and parking areas
- site access and internal access roads – including access points from Hillview Road (primary access), Carlon Menzies Road, and Gostwyck Road; wind turbines will be connected via a network of internal access tracks.
- temporary construction infrastructure to facilitate construction which is likely to include on-site concrete batching plant, rock crushing facility, laydown and storage areas and site offices; each turbine location will also include a hard stand area and a turbine laydown area for assembly.
- temporary and permanent meteorological masts.

An indicative project layout is provided in Figure 3.1. The layout and design will be refined further through the preparation of the EIS for the project. The following sections describe the project design and layout considerations for key infrastructure elements.



KEY

- Development corridor
- Project investigation area
- Wind turbine generator

Existing environment

- Rail line
- 66 kV transmission line
- 330 kV transmission line
- Major road
- Minor road
- Vehicular track
- Named watercourse
- Named waterbody
- NPWS reserve

INSET KEY

- NPWS reserve
- State forest

Indicative project layout

Hillview Wind Farm
Scoping Report
Figure 3.1

EMM
creating opportunities

Source: EMM (2024); ABS (2021); DCSSS (2023); ESRI (2024); GA (2009)

\\emm.local\xdrive\2023\EF231229_Hillview_Wind_Farm_Scoping_Report\GIS\02_Maps_SR\SR001_ProjectLayout\SR001_ProjectLayout_20240922_04.aprx 24/09/2024

3.2.1 Wind turbines

A wind farm is proposed with a generation capacity of approximately 200–300 MW. The project will include installation of approximately 55 WTGs positioned to maximise the use of the available wind resource. The final number and placement will be determined as part of the final layout to be assessed in the EIS.

Indicative dimensions for the WTGs and associated infrastructure are:

- maximum height (uppermost blade tip): approximately 270 m
- lowermost blade tip: approximately 50 m
- rotor diameter (including nacelle): approximately 185 m.

Figure 3.1 provides an indicative WTG layout for the project. Comprising approximately 55 WTGs, the layout is generally composed of three long tranches of 15–19 WTGs running north-to-south from Gostwyck Road in addition to a smaller four WTG clusters in the south-west corner. The WTGs will have three blades with the rotor and nacelle mounted on a tower with an internal ladder or lift. WTGs will be installed at final locations in accordance with the micro-siting restrictions identified in the EIS and will depend on a range of factors including WTG technology, available grid capacity, economies of scale, and environmental constraints.

3.2.2 Electrical collection system and substation

A network of underground and overhead powerlines will be installed across the development corridor and will connect WTGs to the on-site collector substation.

Cabling may be underground or aboveground depending on geotechnical conditions.

The on-site collector substation will be constructed within the development corridor to convert the on-site AC reticulated electricity to 330 kV for export to the grid.

Electricity generated by the project will be exported to the grid via a high voltage overhead line network connection.

3.2.3 Network connection

A high voltage overhead transmission line will connect the on-site collector substation to EnergyCo's proposed Eastern Hub substation. The precise location of the overhead transmission line has not yet been determined as this will be confirmed as part of further design works during the preparation of the EIS and following detailed design of the Eastern Hub substation.

3.2.4 Accommodation facility

The non-local construction workforce will be accommodated in a temporary accommodation facility, which will be to be constructed within the project investigation area. The accommodation facility will be developed to accommodate up to 100 construction workers.

The facility would be comprised of prefabricated modular structures and single-storey demountable accommodation buildings; various buildings for supporting facilities potentially including dining, amenities, gymnasium, administration; modular sewage treatment plant and associated on-site effluent irrigation area; on-site fuel storage and a car park.

Approval is sought for a facility with the capacity to accommodate up to 100 people. If other options are available prior to construction commencing, they will be properly considered.

3.2.5 Site access

Subject to detailed traffic studies, it is expected that access to the project investigation area will primarily be via Carlon Menzies Road then Hillview Road with secondary accesses provided via Blue Mountain Road, and Gostwyck Road. The transport route to the project will be finalised during the EIS phase but is anticipated to use the New England Highway to Uralla, then Thunderbolts Way, Carlon Menzies Road and Hillview Road.

Internal access tracks will be subject to detailed design but will service both as access for servicing and maintaining project infrastructure and any required buffers/fire trails.

Over-size, over-mass (OSOM) vehicles will require access to the development corridor and the preferred route is the subject of ongoing route analysis. It is expected that (EnergyCo, through its Memorandum of Understanding (MOU) with Transport for NSW (TfNSW), will be coordinating and facilitating necessary upgrades to the classified road network from NSW ports to REZs, where TfNSW is the roads authority.

If further construction planning identifies a preferred port of origin for OSOM vehicles that is not within NSW, consultation on routes would be undertaken with the relevant State-based roads authorities, and planning authorities as required.

3.2.6 Supporting infrastructure

Supporting infrastructure will be required during the construction and operation phases (see Table 3.2).

Table 3.2 Supporting infrastructure

Stage	Infrastructure
Construction	Site office and amenities, construction compound, laydown areas, concrete batching plant, rock crushing facility, soil stockpiles access tracks and temporary storage areas, security fencing and lighting and drainage works.
Operations	Site office and O&M buildings (including offices, amenities and equipment storage sheds) with parking, hardstands, permanent meteorological monitoring masts, new access tracks, upgrades to existing access tracks, security fencing and lighting.

3.3 Activities and uses

3.3.1 Construction

i Overview

Construction is expected to be completed over a 30-month period. Construction will be undertaken during standard day time construction hours (i.e. 7:00 am to 6:00 pm Monday to Friday and 8:00 am to 1:00 pm on Saturdays).

Earthworks will be required for the preparation of the final development corridor, including turbine foundation excavation, hardstands, underground cable runs, and access track formation and drainage works.

Where required, additional or improved drainage channels, sediment control ponds and dust control measures will be implemented.

Laydown areas, waste handling, fuel and chemical storage areas will be strategically placed to minimise potential environmental impacts during construction.

ii Workforce

It is anticipated that the construction workforce will peak at approximately 210 FTE workers during the peak of construction activities.

The construction workforce will be sourced locally where possible, though it is anticipated that a large portion of the workforce will be from outside the region. The project includes the construction of an on-site accommodation facility with 100 beds to accommodate the non-local workforce.

Potential impacts to accommodation, infrastructure, and services in the region will be considered in the social impact assessment for the project.

3.3.2 Operations

The operational lifespan of the project is expected to be 35 years, depending on the nature of WTG technology and energy market demands.

Operational activities will require an estimated 17 FTE employees and comprise regular maintenance of project infrastructure, vegetation, weed and pest management, cleaning, equipment calibration and internal road maintenance.

Regular maintenance will be required throughout operations, including for internal roads, drainage, fencing and vegetation as well as service, repair, or replacement of WTGs.

Light vehicle access will be required throughout operations and occasional heavy vehicle movements may also be required for maintenance works.

Agricultural activities will continue throughout operations, with co-existence of agriculture with the wind farm a key design consideration.

3.3.3 Decommissioning

At the end of the project's operational life, the project will enter a 24-month decommissioning and rehabilitation phase. During the decommissioning phase, all above ground structures built as part of the project will be removed and the site rehabilitated generally to its pre-existing land use, as far as practicable.

The aim of the decommissioning stage is to ensure the site is safe, stable and non-polluting and that the visual impact of above ground ancillary infrastructure is minimised. The EIS will describe how vegetation will be restored. The land capability is unlikely to change during operations and the pre-existing use will be maintained.

3.4 Timing

The project is expected to commence construction in 2028, subject to relevant approvals, and will take approximately 30 months to complete depending on scheduling of the construction works. It is anticipated that the project will be constructed in stages.

The timing of each stage and the duration of the overlap between stages will be determined during detailed design following project approval. A conservative breakdown of timing for each of the project phases is as detailed below:

- construction phase – 30 months
- testing and commissioning phase – 6 to 12 months
- operational lifespan – 35 years
- decommissioning phase – 24 months.

3.5 Alternative considered

Alternatives to the project have been considered, including alternative locations, alternative project layouts and not proceeding with the project.

3.5.1 Alternative locations

Alternatives to the project investigation area have been considered by ACE Power as part of the site identification process, including other potential sites in the New England REZ and other areas of NSW. ACE Power assesses a site's access to the electricity network, identifies potential land use conflicts, identifies areas of relatively lower ecological value, and ensures economically competitive energy resources are available.

In selecting the Hillview Wind Farm site, ACE Power has reviewed a broad range of alternative sites and project configuration options. The phases of site selection for the Hillview Wind Farm site broadly followed the below stages:

1. **Selection of development region:** NSW has a range of regions with wind resources suitable to support wind farm development, including four of the five declared NSW REZs (New England, Central West Orana, South-west and Hunter). Outside of the REZs, NSW hosts some areas with strong wind resource, but many of these regions pose other challenges to wind farm development, including access to high-voltage powerlines, land use conflicts (including proximity residential dwellings), transport access and proximity to electricity consumers.

   The Central West Orana and South West REZs were not selected as suitable candidate regions for the project. Based on the proposed and existing electricity generation in these REZs, it is considered likely these regions will reach forecast network capacity in the medium term (without changes to the configuration of the proposed network upgrades). The Hunter REZ was not selected due to site availability and potential land use conflicts.

   The New England REZ was selected as there is currently expected to be suitable network capacity (based on the proposed REZ transmission upgrades), land use compatibility assessments and the availability of sites suitable for wind development.

2. **Engagement with host landowners:** Within the New England REZ, ACE Power engaged with a wide range of landowners to find a site where a wind farm could be compatible with the existing farming operation on the land, that had access to high-quality wind resource and was close-by to potential connections in the network. The Hillview Wind Farm site was selected following extended engagement with a broad range of landowners within the REZ and following a range of preliminary feasibility studies.

3. **Refinement of site boundaries:** As part of an in-depth engagement process with host landowners, the project boundaries were defined. Initial environmental (further information available in Section 6) and technical studies were undertaken to establish a broad "development corridor" within the site which would then contain the wind farm infrastructure.

4. **Refinement of project layout and development footprint (to be completed during the EIS phase):** As part of the EIS phase, and following the lodgement of this report, more detailed environmental and technical assessments will be undertaken to refine the project layout. In addition, further engagement with near neighbours and the broader community will be completed.

3.5.2 Alternative project layouts

The project investigation area has been selected following detailed multi-criteria constraints review at a state, regional and REZ level to identify the most suitable and feasible location of the WTGs. The development corridor is identified as the most suitable location as it avoids highly productive agricultural land and key areas of environmental significance including BSAL land.

Environmental and social constraints have been, and will continue to be, a key consideration during the refinement of the development corridor within the project investigation area. The development corridor and indicative project layout detailed in Figure 3.1 have been the subject of an iterative design process that has been informed by proximity to future grid connection points, leaseholder consultation, telecommunication infrastructure, and adjoining projects. Furthermore, a preliminary ecological site visit was undertaken and identified areas of higher and lower ecological sensitivity enabling ACE power to undertake an informed but early iterative design of the WTG layout.

The final development corridor (including WTG placement, grid connection and site access) will be refined as part of the preparation of the EIS and will be informed by the outcomes of technical assessments (including biodiversity, Aboriginal cultural heritage, visual amenity and noise and vibration) and outcomes of engagement with community and regulatory stakeholders.

As part of further design refinements, the following principles will be adopted:

- minimisation of vegetation clearing in areas of higher conservation value, and native vegetation will be strategically avoided as far as practicable
- maximising the use of previously disturbed land (i.e. land previously modified by agricultural operations including cleared areas, established access tracks and local roads)
- minimising disturbance to the minimum area required for infrastructure
- protecting significant Aboriginal cultural and historic heritage values as determined through the preparation of Aboriginal cultural and historic heritage assessments
- minimising direct and indirect impacts on neighbouring landholders, by locating infrastructure away from nearby residences and adjoining properties, where possible
- using a flexible approach to design which responds to identified environmental impacts and constraints.

3.5.3 Do nothing

The ‘do nothing’ scenario would allow for the continued use of the project investigation area for agricultural production; however, it would also forego the project benefits listed in Section 2.3.1, which include contributions to the development of the New England REZ and supporting Australia’s transition towards clean and renewable sources of energy. The local areas and broader region would not realise the economic benefits to local and regional communities provided by direct employment opportunities and flow-on effects.

4 Statutory context

The key relevant statutory requirements for the project having regard to the EP&A Act, other Commonwealth and NSW legislation, and environmental planning instruments are summarised in Table 4.1. This table has been set out in accordance with the Scoping Report Guidelines and *State Significant Development – Preparing an Environmental Impact Statement* (insert reference) (EIS Guidelines), to cover the following:

- power to grant approval (i.e. approval pathway)
- permissibility
- consistent approvals
- Commonwealth approvals
- approvals not required (pursuant to Section 4.41 of the EP&A Act)
- mandatory matters for consideration.

Detailed consideration of relevant statutory requirements will be provided in the EIS.

Table 4.1 Statutory context

Approval	Requirement
Power to grant approval	
EP&A Act Planning Systems SEPP	Part 4 of the EP&A Act relates to development assessment and consent, Part 4, Division 4.7 relates to the assessment of development deemed to be significant to the state (or SSD). Section 4.36(2) of the EP&A Act states that a: *… State environmental planning policy may declare any development, or any class or description of development, to be State significant development.* The Planning Systems SEPP identifies development that is SSD. Section2.6(1) of the Planning Systems SEPP states: *(1) Development is declared to be State significant development for the purposes of the Act if:* *(a) the development on the land concerned is, by the operation of an environmental planning instrument, not permissible without development consent under Part 4 of the Act, and* *(b) the development is specified in Schedule 1 and 2.* The project meets both these requirements, it requires development consent, and is a development specified in Schedule 1 of the Planning Systems SEPP. Schedule 1 of the Planning Systems SEPP defines the following as SSD: *Electricity generating works and heat or co-generation* *Development for the purpose of electricity generating works or heat or their co-generation (using any energy source, including gas, coal, biofuel, waste, hydro, wave, solar and wind power) that:* *(a) has a capital investment value of more than $30 million.* The project is development for the purpose of electricity generation and will have a capital investment value of more than $30 million. The capital investment value for the project is estimated to be in the order of $1 billion. Consequently, the project meets the threshold criteria and is SSD.

Approval	Requirement
Permissibility	
State Environmental Planning Policy (Transport and Infrastructure) 2021	Under Section 2.36(1) of *State Environmental Planning Policy (Transport and Infrastructure) 2021,* development for the purpose of electricity generating works, such as the project, maybe carried out by any person with consent on any land in a prescribed rural, industrial, or special use zone. The project is within a rural land use zone, RU1 Primary Production. Development for the purpose of electricity generating works is therefore permissible with consent.
Consistent approvals	
Overview	Section 4.42 of the EP&A Act outlines that the approvals listed below cannot be refused if necessary for carrying out an approved SSD and are to be consistent with the terms of the development consent for the SSD.
An approval under Section 138 of the NSW *Roads Act 1993*	Under Section 138 or Part 9, Division 3 of the *Roads Act 1993*, a person must not undertake any works that impact on a road, including connecting a road (whether public or private) to a classified road, without approval of the relevant authority, being either Transport for NSW or local council, depending upon the classification of the road. Road upgrades or works within a designated road corridor will be assessed and addressed within the EIS and where required, approval will be sought from the relevant road authority.
An environment protection license under Part 3 of the NSW *Protection of the Environment Operations Act 1997* (POEO Act)	The POEO Act regulates pollution to the environment and requires licences for environment protection including waste, air, water and noise pollution control. Section 48 of the POEO Act requires an environment protection licence (EPL) to undertake scheduled activities at any premises. Scheduled activities are defined in Schedule 1 of the POEO Act. An EPL will be sought in relation to the construction and operation of the project.
Commonwealth approvals	
*Environmental Protection and Biodiversity Conservation Act 1999 (*EPBC Act)	The EPBC Act aims to protect matters of national environmental significance (MNES). If an action will, or is likely to, have a significant impact on any MNES, it is deemed to be a 'controlled action' and requires approval from the Commonwealth Environment Minister or the Minister's delegate. A search of the Commonwealth Protected Matters Search Tool indicates that there are no World Heritage Properties or National heritage places within the vicinity of the project area. Whilst the project area has been largely cleared and highly disturbed, there is potential for Commonwealth listed threatened ecological communities, threatened species and migratory species to occur within the development corridor. Field surveys will be undertaken to determine whether the plant community types (PCTs) identified within the project investigation area are representative of threatened ecological communities listed under the EPBC Act and whether threatened species habitat is present. The outcomes of these survey will be used to determine whether a referral to the Commonwealth Department of Climate Change, Energy, the Environment and Water is required.
Native Title Act 1993	The Commonwealth *Native Title Act 1993* recognises and protects native title rights in Australia. It allows a native title determination application (native title claim) to be made for land or waters where native title has not been validly extinguished, for example, extinguished by the grant of freehold title to land. Claimants whose native title claims have been registered have the right to negotiate about some future acts, such as mining or granting of a lease over the land covered by their native title claim. Where a native title claim is not registered, a development can proceed through mediation and determination processes, though claimants will not be able to participate in future act negotiations. There are no current native title claims relevant to the project investigation area.
Civil Aviation Regulation 1988	Reporting of tall structure is required under the Civil Aviation Regulations 1988. A detailed assessment in accordance with the regulations and consultation with the relevant agencies will be undertaken as part of the preparation of the EIS. Engagement with relevant agencies including the Civil Aviation Safety Authority and Air Services Australia will be undertaken.

Approval	Requirement
Heavy Vehicle National Law	Approvals will be required for the transport of wind turbines and associated infrastructure by OSOM vehicles. The requirements for such OSOM vehicles. The requirements for the subject OSOM transport will be assessed via a route analysis study as part of the EIS.
Other Approvals	
Overview	Section 4.41 of the EP&A outlines the following approvals, permits etc are not required for an approved SSD.
Fisheries Management Act 1994	A permit under the *Fisheries Management Act 1994* to block fish passage or dredge or carry out reclamation work on water land will not be required pursuant to Section 4.41 of the EP&A Act. The project may require work in water land to facilitate the upgrade of road crossings or establish new crossings of watercourse within the project investigation area. These works will be undertaken in accordance with NSW DPI *Policies and Guidelines on Fish-Friendly Waterway Crossings* (undated), and *Policy and Guidelines for Fish Habitat Conservation and Management* (DPI 2013).
Heritage Act 1977	An approval under Part 4, or an excavation permit under Section 139, of *the Heritage Act 1977* will not be required pursuant to Section 4.41 of the EP&A Act. Notwithstanding, there are no listed heritage items within the development corridor.
National Parks and Wildlife Act 1979	An Aboriginal heritage impact permit under Section 90 of the *National Parks and Wildlife Act 1974* will not be required pursuant to Section 4.41 of the EP&A Act. The EIS will include an Aboriginal Cultural Heritage assessment that will be undertaken in consultation with Registered Aboriginal Parties and will provide comprehensive assessment of cultural heritage values and recommendations to protect heritage items and sites.
Rural Fires Act 1997	A bushfire safety authority under Section 100B of the *Rural Fires Act 1997* will not be required pursuant to Section 4.41 of the EP&A Act. A bushfire assessment in accordance with NSW Rural Fire Service *Planning for Bushfire Protection 2019* will be carried out to inform the EIS.
Water Management Act 2000	A water use approval under Section 89, a water management work approval under Section 90 or an activity approval (other than an aquifer interference approval) under Section 91 of the *Water Management Act 2000* pursuant to Section 4.41 of the EP&A Act. Construction work near or within watercourses within the project investigation area may be required. These works will be carried out in accordance with DPIE's various guidelines for controlled activities.
Contaminated Land Management Act 1997	The *Contaminated Land Management Act 1997* provides a framework for the investigation and remediation of land that the Environmental Protection Authority (EPA) considered to be significantly contaminated. Section 60 of the Act requires landowners whose land has been contaminated or persons whose activities have contaminated the land to notify the EPA when they become aware of the contamination. Preliminary searches indicate the project will not be developed on land listed on the Contaminated Lands Register.
Crown Land Management Act 2016	Under the *Crown Management Act 2016,* consent from the Department of Primary Industries (DPI) is required for works over Crown Land. Preliminary investigations indicate that there is Crown land within the project investigation area. Consultation with the Department and further investigation of the potential effects to Crown land will be undertaken.

Approval	Requirement
Mandatory considerations – Considerations under EP&A Act	
Section1.3 of the EP&A Act	Relevant objectives of the EP&A Act are: *(a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,* *(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,* *(c) to promote the orderly and economic use and development of land,* *(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,* *(f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),* *(g) to promote good design and amenity of the built environment,* *(j) to provide increased opportunity for community participation in environmental planning and assessment.* The above will be considered in the EIS.
Section 4.15 of the EP&A Act	Pursuant to Section 4.15 of the EP&A Act, the consent authority must consider the following relevant matters for consideration: • relevant environmental planning instruments, including: – State Environmental Planning Policy (Biodiversity and Conservation) 2021 – State Environmental Planning Policy (Resilience and Hazards) 2021 – State Environmental Planning Policy (Transport and Infrastructure) 2021 – Uralla Local Environmental Plan 2012 • the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality • the suitability of the site for the development • the public interest.
Mandatory considerations – Considerations under other legislation	
Biodiversity Conservation Act 2016 (BC Act)	The likely impact of the project on biodiversity values will be assessed in a biodiversity development assessment report. The Minister for Planning and Public Spaces may (but is not required to) further consider the likely impact of the project on biodiversity values under the BC Act.
Mandatory considerations – Environmental planning instruments	
State Environmental Planning Policy (Resilience and Hazards) 2021 – Chapter 3	The EIS will consider the potential for the project to impact on contaminated land. The EIS will consider the following relevant departmental guidelines: • *Applying State Environmental Planning Policy No. 33 Hazardous and Offensive Development* • *Hazardous Industry Planning Advisory Paper (HIPAP) No. 3 – Risk Assessment* • *HIPAP No. 12 – Hazards*.
State Environmental Planning Policy (Resilience and Hazards) 2021 – Chapter 4	The EIS will consider the potential for the project to impact on contaminated land.
Uralla LEP	In accordance with the Uralla LEP 2012, the EIS will consider: • relevant objectives and land uses for the RU1: Primary Production zone • heritage items and conservation areas • Aboriginal places of heritage significance • flood-prone land • soil stability • water quality and flows.

5 Engagement

This chapter outlines the key stakeholder and community engagement carried out during the scoping phase of the project. It provides an overview of the engagement approach, and a review of stakeholder identification and engagement activities undertaken to date. A summary of community views expressed about the project is also provided and will be used to inform engagement approach and activities to be undertaken as part of the EIS preparation.

Scoping phase engagement activities and future EIS phase engagement approach and activities will be undertaken in accordance with the following guidelines:

- *Undertaking Engagement Guidelines for State Significant Project* (DPIE 2021c)
- *Social Impact Assessment Guideline for State Significant Projects* (DPIE 2021d) (SIA Guideline)
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010a).

5.1 Scoping phase consultation

ACE Power have a high-level framework for the delivery of communication and engagement throughout the planning and assessment process for each state of the project. This framework is dynamic in nature and evolves based on stakeholder and community feedback. Engagement for Hillview Wind Farm Scoping Phase commenced in February 2024 and a further comprehensive engagement program is planned for later 2024 as part of the EIS phase. Consultation to date has included:

- a community drop-in session
- sending project briefing letters to nearby residences within approximately 5 km of the project
- face-to-face meeting and briefings, telephone calls and emails
- establishment of a project website
- sending project briefing letters issued to elected representative and key stakeholders.

Further detail is provided on engagement within the following community and regulatory stakeholders in the following sections.

5.1.1 Local community stakeholder consultation

A summary of engagement undertaken during the scoping phase with the local community is provided in Table 5.1.

Table 5.1 Engagement with local community stakeholders

Method	Timing	Purpose	Stakeholders
Telephone calls, emails and invitations to face-to-face meetings	From February 2024	To provide a Project overview, confirm the approval process and indicative timelines. Receive feedback on key concerns and opportunities with stakeholders.	Project neighbours within 5 km of the development corridor.
Project website launch	April 2024	To provide an online website with the project information and channels to interact with community stakeholders.	All stakeholders.
Project briefing letter	April 2024	To provide a project briefing including high-level project and proponent information for key stakeholders.	Adjoining project neighbours, project neighbours within 4 km of the development corridor.
Door knock	May 2024	To provide a project briefing including high-level project and proponent information for key stakeholders nearby to the project that ACE had not been able to contact previously.	Project neighbours within 4 km of the development corridor.
Meetings with community groups	From May 2024	To provide a project briefing including high-level project and proponent information for key stakeholders. Receive feedback on key local issues and potential benefit sharing mechanisms.	Community groups within New England Region.
Newspaper advertisement (Armidale Express)	July 2024	To provide awareness of the project and direct interested stakeholders to the Community Drop-in Session and project website.	All stakeholders within the New England region.
Radio interview (ABC New England)	July 2024	To provide a Project overview, confirm the approval process and indicative timelines. To provide awareness of the project and direct interested stakeholders to the Community Drop-in Session and project website.	All stakeholders within the New England region.
Community Drop-in session	July 2024	To provide a Project overview, confirm the approval process and indicative timelines. Receive feedback on key concerns and opportunities with stakeholders.	Local community groups, local community members and local government agencies.
Ad-hoc responses to enquires	July-November 2024	Respond to questions raised by individuals and groups about the projects. Receive feedback on key concerns and opportunities with stakeholders.	All stakeholders.
Project update brochure	October 2024	Provide a project update to neighbours of the project and notify about proposed next steps in the development timeline.	Neighbours within 8 km of the project.

i Feedback from the community

Community information sessions held at the Uralla Court House on Wednesday 24 and Thursday 25 July provided the opportunity for the ACE Power project team to engage face to face with the local community to introduce the project. The sessions provided opportunities for the community to ask questions, as well as provide valuable feedback to the project team on important values within the local area and concerns or areas of interest regarding the project. The Uralla Court House was set up with a series of poster sized detailed project maps, community sign-in and feedback forms and was manned by ACE power project team members.

Valuable conversations were had with members of the community, Government agency representatives, and local community group members. Feedback from all in attendance was generally positive. Many of the questions from the community were themed around potential traffic impact, the risk of environmental impacts and key potential economic benefits to the local area.

Key Matters raised by community members included:

- community benefit sharing and infrastructure needs within the local/regional area
- traffic and construction transport routes, including impact to local roads
- biodiversity and environmental impacts; nature-positive approach and environmentally sensitive design
- technology impact on businesses, including dairy goat farming operations
- workforce accommodation and impacts on local housing.

A key outcome of the sessions was raising awareness with the community with some of those in attendance planning to discuss with their neighbours and encourage them to attend future consultation sessions.

5.1.2 Government and regulatory agencies

A summary of engagement during the scoping phase with government and regulatory stakeholders is provided in Table 5.2.

Table 5.2 Engagement with government and regulatory agencies

Method	Timing	Purpose	Stakeholders
Briefing letters	April 2024	To provide an overview of Hillview Wind approval pathway and timeline.	Crown Lands, Department of Climate, Energy, Environment and Water (DCEEW) - Biodiversity Conservation and Science, Department of Primary Industries – Agriculture, EPA, Fire & Rescue NSW, Fisheries, Heritage, Local Land Services, NSW Rural Fire, TfNSW.
Briefing meetings	April and May 2024	To provide an overview of Hillview Wind Farm approval pathway and timeline. To understand key concerns and opportunities with regulatory stakeholders.	DPHI, Uralla Shire Council, Armidale Regional Council.
Presentation to the Minister for Planning and Public Spaces' office	June 2024	To provide an overview of Hillview Wind Farm approval pathway and timeline. To understand key concerns and opportunities with regulatory stakeholders.	Representatives from the Department of Planning, Infrastructure and Housing and staff from the Minister for Planning and Public Spaces' office.
Presentation to Council	August 2023	To provide an update to the Council.	Uralla Shire Council and senior staff.

Responses were received from TfNSW, the Department of Primary Industries – Agriculture, Rural Fire Service and DCCEEW – Biodiversity, Conservation and Science Division, which all provided general terms and requirements for the preparation of the EIS.

i Council engagement

ACE has engaged with the Uralla Shire Council, to receive feedback about the project, particular areas of concern and seek opportunities for the project, the REZ and Council to deliver positive impacts for the Uralla Shire and region. Key areas of focus for the Council were:

- transport route selection and transport impacts, particularly in the context of the buildout of the REZ and anticipated overlapping construction programs of the different projects
- temporary workers accommodation, location sizing and configuration
- the delivery, administration and long-term benefit of the community benefit funding that would be provided by the project.

The issues raised by the Uralla Shire Council are currently being investigated and will be discussed with Council to identify the best way forward.

5.2 EIS phase consultation

During the preparation of the EIS, ACE Power will consult with relevant Commonwealth, State and local government authorities, infrastructure and service providers, community groups, Traditional Owners, neighbours and affected landowners.

Aboriginal stakeholders will be identified and consulted with during the preparation of the EIS in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DEECCW 2010), and the recently released *First Nations Guidelines* (Office of Energy and Climate Change 2022). Engagement with Traditional Owners for the related EHFB project was undertaken in April 2024 and included commentary regarding the relationship with the Hillview Wind Project.

EnergyCo will continue to be consulted with in relation to interlinkages with the proposed East Hub substation, transmission line and other matters related to the REZ build-out.

Consultation during the development of the EIS will aim to:

- proactively inform, consult and involve stakeholders using clear and consistent key messages
- continue to collaborate with key stakeholders to identify potential issues, impacts, opportunities and benefits
- communicate the progress of the project and key findings or outcomes of assessments
- enable stakeholders to have input into the preparation of the EISE, project planning, investigate opportunities for visual treatment and identify opportunities for benefits sharing
- implement response and feedback strategies to address stakeholder concerns and use these to inform the evolution of the project.

A range of tools and methods will be used to communicate and engage with the community and other stakeholders during preparation of the EIS, with examples provided in Table 5.3. Issues raised during engagement will be documented by the project team to inform the project design, environmental assessment, and the preparation of the EIS.

Table 5.3 Engagement tools and methods during preparation of the EIS

Engagement methods	Detail
Advertising	Advertising in local media to advise of upcoming consultation opportunities and provide project updates.
Briefings	Formal letters or meetings with key stakeholders including landowners, MPs, Councillors and council staff to provide updates on the project.
Community contact cards	Business-size card provided to specialists and contractors to give to community stakeholders if approached.
Doorknocking	Project representatives go door to door to speak with impacted landowners and neighbours and/or provide them with project briefings and information.
Drop-in sessions	Multi-hour time periods when stakeholders can drop in to speak to the project team, view documents and plans and ask questions.
Email inbox	A dedicated project inbox (info@hillviewenergyhub.com) for managing community and stakeholder correspondence.
Letterbox drops or unaddressed mail	General information about the project delivered by the project team or Australia Post.
Letters	Addressed mail containing information, clarification, responses or requests to a particular household, business or individual.
Media releases/statements	Proactive or responsive media statements or announcements provided to the media and other key stakeholders to provide updates, address concerns and clarify information.
Meetings	One-on-one or small group meetings to discuss project issues and concerns in more detail.
Newsletters	Regular project information distributed by email or in hard copy to registered stakeholders.
Phone line	A dedicated number for stakeholders to contact ACE Power. The number is 1800 931 994.
Photography	Photos, composites, concept and artist imagery can help illustrate processes and make technical information more accessible.
Pop-up stalls	An engagement booth/stall set up at community events, shopping centres and key locations to intercept and engage stakeholders.
Presentations	Presentations about the project delivered to a group of interested persons, club or committee on request or by invitation.
Site tours	An escorted tour of the project investigation area to understand how the project is located geospatially and fits into the surrounding environment.
Surveys	Online or offline surveys to obtain input and feedback on project decision-making.
Social media	Online social connection platforms used to share project information and interact with stakeholders.
Website	Updates to the existing websites including descriptions of the project, company information, frequently asked questions, plans, maps, media releases and contact information.
Workshops	A structured method working with groups of stakeholders to identify and suggest solutions for project issues and concerns.

6 Proposed assessment of impacts

A preliminary environmental assessment has been carried out to identify matters requiring further assessment in the EIS and the level of assessment that should be carried out. In accordance with the Scoping Report Guidelines (DPIE 2022), the following factors have been considered in the identification of matters needing further assessment for the project:

- the scale and nature of the likely impact of the project and the sensitivity of the receiving environment
- whether the project is likely to generate cumulative impacts with other relevant future projects in the area
- the ability to avoid, minimise and/or offset the impacts of the project, to the extent known at the scoping phase.

The following sections of this chapter present the identified matters requiring further assessment and the proposed approach to the respective assessments. In addition to the preliminary environmental assessment presented herein, preliminary technical studies have been carried out for key issues of amenity – visual, heritage – Aboriginal, social, and amenity – noise and vibration.

These preliminary technical studies have been commenced to ensure that the values of the project investigation area and surrounds are taken into consideration early in the planning and design of the project. Measures implemented through the scoping phase to avoid and minimise impacts are also described.

Matters have been categorised per the categories identified in the Scoping Report Guidelines (DPIE 2022). A scoping summary table in accordance with the Scoping Report Guidelines is included in Appendix B. Also, in accordance with the Scoping Report Guideline, the level of assessment identified for each matter is presented in Table 6.1.

Table 6.1 Level of assessment required in EIS

Level of assessment	Aspect
Detailed	Amenity – visual
	Biodiversity
	Access – traffic
	Social
	Amenity – noise
Standard	Heritage – Aboriginal
	Heritage – historical
	Hazards and risk
	Land
	Water
	Air

6.1 Amenity – visual

A preliminary visual impact assessment (PVIA) has been undertaken to assess the potential visual impacts of the project on landscape features and visual settings. The PVIA is included in Appendix C. The visual assessment of a Wind Farm project is guided by the following guidelines:

- Wind Energy: Visual Assessment Bulletin AB 01 For State significant wind energy development (2016) (VA Bulletin) NSW Department of Planning and Environment
- Guidelines for Landscape and Visual Impact Assessment Third Edition (2013) (the GLVIA), prepared by the Landscape Institute and Institute of Environmental Management and Assessment
- Guideline for landscape character and visual impact assessment (2020) Centre for Urban Design Transport for NSW.

6.1.1 Existing environment

The landscape within and surrounding the project investigation area can be described as wide flat plains between low ridges and rolling hills. Reflective of its historic use for grazing and cropping, the project investigation area predominantly consists of agricultural pasture with small patches of native woodland, scattered trees and planted windbreaks.

i Landscape character units

The PVIA identified three distinct landscape character units (LCUs) that will be refined and characterised in greater details in the EIS stage of the project. The LCUs described and their scenic quality assessed, in accordance with VA Bulletin, in Table 6.2.

Table 6.2 Landscape character units

LCU	Name	Description	Preliminary scenic quality rating
LCU01	Oxley Water Corridors	• Water courses in this project investigation area consist of narrow, irregular creeks with usually steep banks, lined with trees and surrounding pasture lands • Scattered trees remain to mark a creek's course across the landscape in creeks such as Salisbury Waters, Atchesons Gully, Water Gully, Mihi Creek, and Cook Station Creek • Extensive remnant tree cover over the northern part of Water Gully and adjoining ridges • Open water is rarely visible from ground level locations.	Moderate
LCU02	Salisbury Plains	• Comprising cleared plains and adjoining lower slopes frequently dissected by permanent and ephemeral creeks • A generally flat or gently undulating landscape • A visual patchwork of varying colour and texture due to differences in management and grazing practices • Linear windbreaks of exotic trees and clusters of planting around farm dwellings are present.	Low
LCU03	Remnant Bushland	• Remnant bushland primarily occurs on ridges and hilltops in the south and east of the project investigation area • Trees of varying densities form a strong visual element • Cleared plains provide a forested backdrop to the landscape.	Moderate

6.1.2 Potential impacts

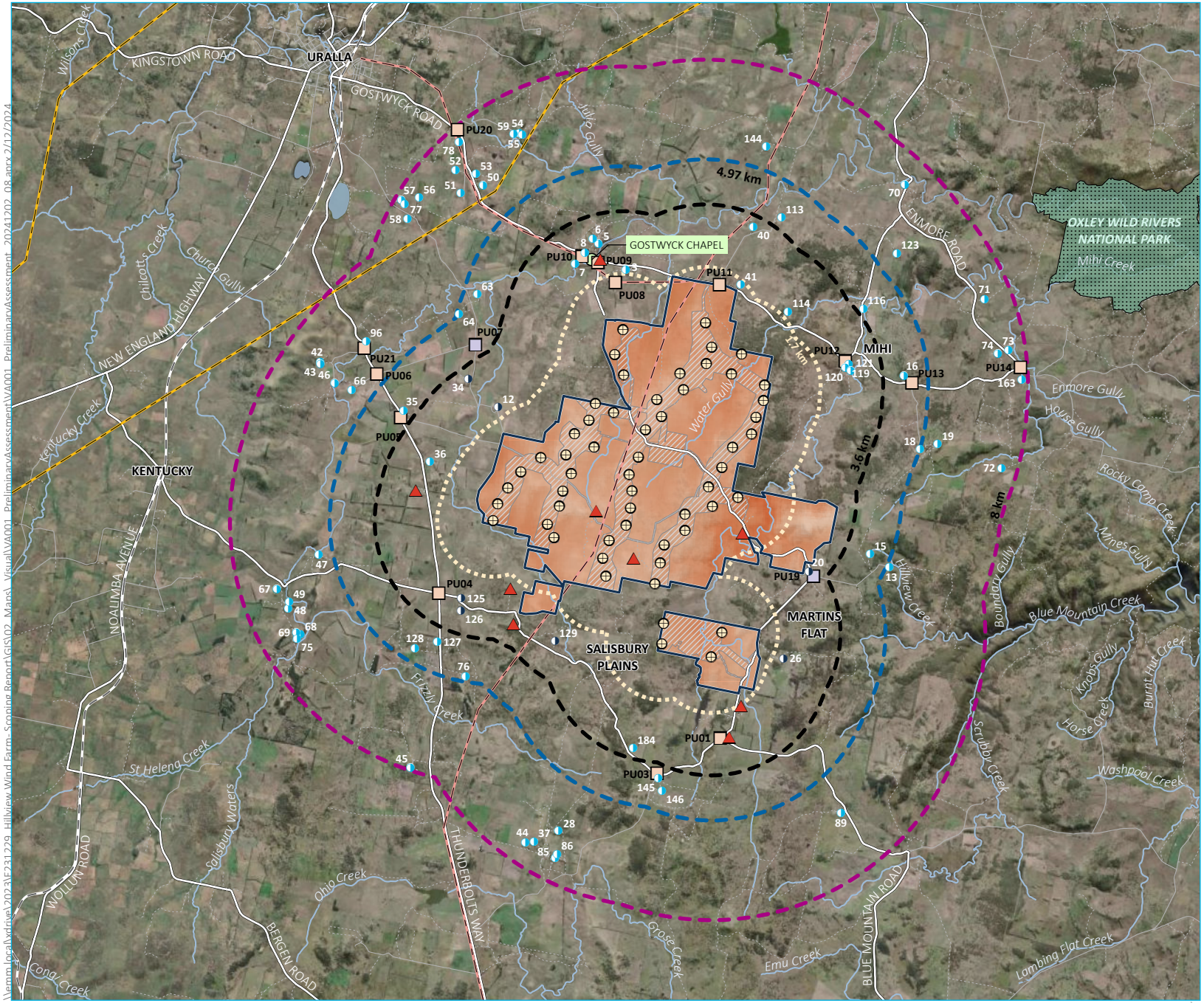
The PVIA identifies locations surrounding the project from which the relevant project infrastructure can be seen and that may have the potential for visual impacts. The PVIA then assessed, using the applicable guidance methodologies, whether a more detailed assessment would be required in the Landscape and Visual Impact Assessment (LVIA) at EIS stage for the identified receivers and viewpoints within the study area.

Based on the preliminary assessment results, 74 non-associated dwellings, many of which are in the north-eastern corner near Uralla, have a high potential to view the project. Among the 74 dwellings, 7 have turbines in at least three 60° sectors (up to 180°) that require further assessment during the Environmental Impact Statement (EIS) phase (Figure 6.1).

There are also 11 public receptors within 8 km of the project likely to view the project, including users of the local road network including Hillview Road, Blue Mountain Road and Thunderbolts Way, users of Gostwyck Chapel and users of Deeargee Woolshed.

The preliminary findings of the ZVI (Figure 6.2) demonstrate the following:

- The undulating topography of the project investigation area and the irregular shape of the project corridor will lead to a patchy variation in visibility.
- High ground to the north-east and south-east of the project will limit potential visibility in this direction.
- Areas of higher potential visibility of the project occur where the topography is more plains like to the west and north-west of the project area.



KEY

- Project investigation area
- Development corridor
- Visual setback- 1.7 km
- Black line- 3.6 km
- Blue line- 4.97 km
- Project investigation area- 8 km
- Wind turbine generator
- Project associated residence

Non-associated residence

- Up to two 60° sectors
- Three or more 60° sectors

Public viewpoint

- Up to two 60° sectors
- Three or more 60° sectors

Key landscape feature

- Gostwyck Chapel
- National heritage Listed- Gondwana Rainforests of Australia
- NPWS reserve
- Named waterbody

Existing environment

- Rail line
- 66 kV transmission line
- 330 kV transmission line
- Major road
- Minor road
- Vehicular track
- Named watercourse

Wind resource m/s

8

5

Preliminary visual assessment

Source: EMM (2024); ACE (2024); DCSSS (2023); ESRI (2024); GA (2009)

0 5 10 km

GDA2020 MGA Zone 55

N

Hillview Wind Farm
Scoping Report
Figure 6.1

EMM
creating opportunities

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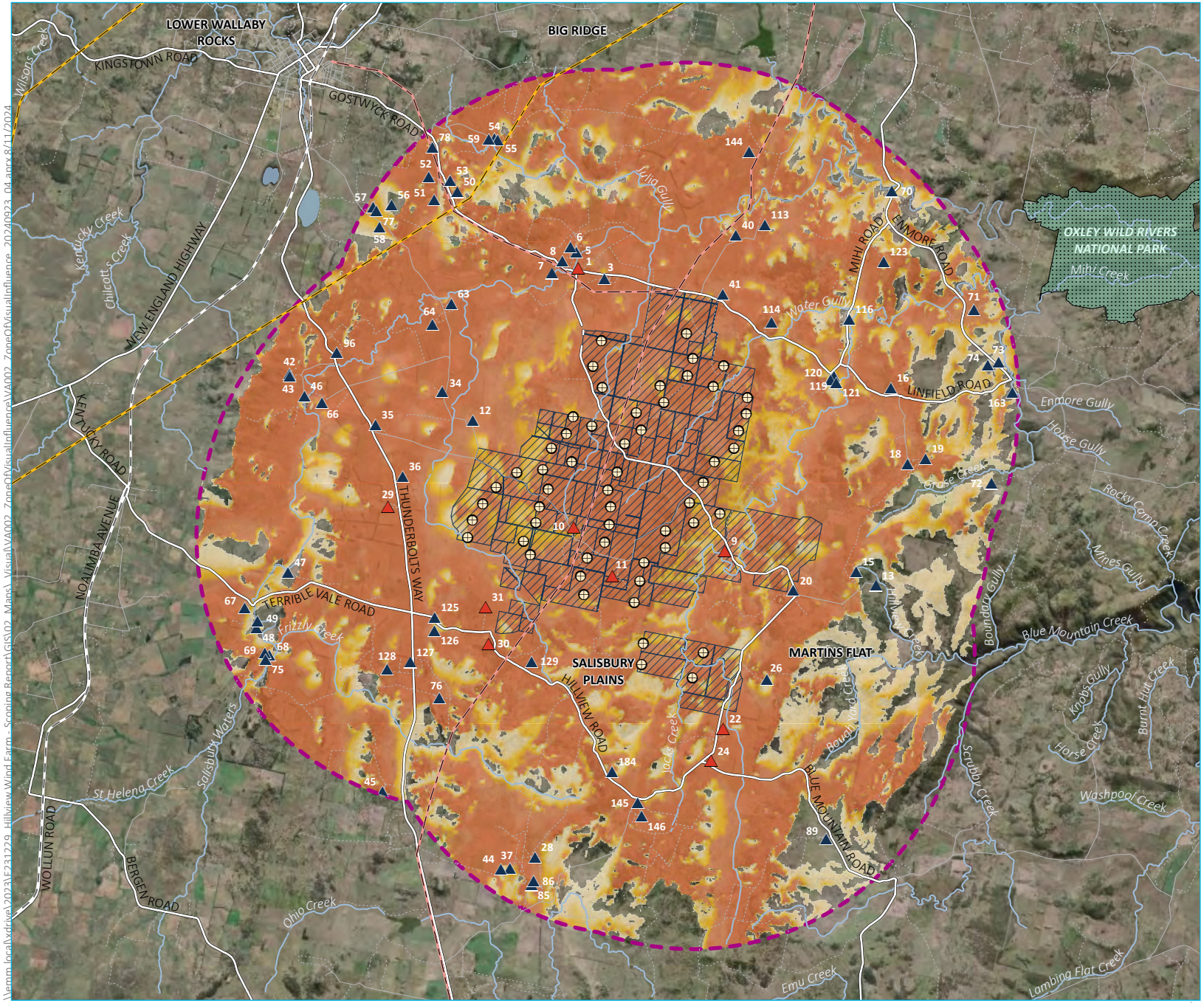

KEY

- Project investigation area 8 km
- Project associated landowner
- Wind turbine generator

Receptor

- Project associated
- Non-associated

Zone of visual influence

- Highly visible
- Not very visible

Existing environment

- Rail line
- 66 kV transmission line
- 330 kV transmission line
- Major road
- Minor road
- Vehicular track
- Named watercourse
- Named waterbody
- NPWS reserve
- National heritage Listed - Gondwana Rainforests of Australia

Source: EMM (2024); ABS (2021); DCSSS (2023); ESRI (2024); GA (2009)

0 5 10 km

GDA2020 MGA Zone 55

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Zone of visual influence

Hillview Wind Farm
Scoping Report
Figure 6.2

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6.1.3 Assessment approach

An LVIA will be prepared for the EIS that evaluates each receptor or group to determine how visual perceptions are influenced by for factors such as topography, vegetation coverage and other screening elements. The LVIA will be undertaken in accordance with the 2016 Wind Energy Bulletin (DPE 2016b) unless a new guideline is released by DPHI at the time of preparing the EIS.

The LVIA will include:

- landscape character assessment
- visual magnitude, sensitivity assessment, WTG shadow flicker and blade glint assessment
- preparation of visual study inputs, including consulting the community on aspects of the study and providing an overview of landscape values as identified by the community
- zone of visual influence figures, including further detailed assessment from areas identified as having potential visibility in the PVIA
- viewpoint analysis including detailed assessment and rating of key viewpoints within the visual catchment
- a cumulative visual impact assessment of the project and neighbouring renewable energy developments
- performance objectives and mitigation measures to reduce visual impacts.

6.2 Biodiversity

6.2.1 Existing environment

The project investigation area is located entirely within the Armidale Plateau subregion of the New England Tablelands Interim Biogeographical Regionalisation of Australia (IBRA) region (DoEE 2018) which is characterised by a gently undulating to hilly plateau at an elevation of approximately 1,100 m.

Review of historical and recent aerial imagery indicates that the project investigation area lies within a landscape of remnant woodlands and forests in varying degrees of disturbance. The development corridor has been strategically placed in areas where the majority of woody vegetation is now absent, with the cleared, non-woody vegetated areas accounting for large proportions of the development corridor, and subsequently, reduced impacts to biodiversity values.

The historically cleared lands are typically associated with Category 1 – Exempt Land in accordance with the *Local Land Services Act 2013*, where pasture-improving flora species have been introduced for livestock grazing and therefore have the potential to generate no offset requirement.

Land identified as Category 1 – Exempt Land lies within the development corridor and does not require assessment of biodiversity values under the Biodiversity Assessment Method (BAM) 2020 (DPIE, 2020) except for the assessment of “prescribed impacts” under Clause 6.1 of the Biodiversity Conservation Regulation 2017.

Category 2 – Regulated Land is also present within the development corridor and this type of land must be assessed in line with the BAM, with native vegetation to be aligned with best fit plant community types (PCTs).

6.2.2 Potential impacts

i Native vegetation communities

Eight native vegetation communities occur within the project investigation area as currently mapped with 'moderate' to 'high' confidence by the NSW State Vegetation Type Map (SVTM) (DPE 2022) (Refer to Figure 6.3). These are:

- 3344 – New England Ribbon Gum Grassy Forest
- 3345 – New England Snow Gum-Black Sally Woodland
- 3351 – Armidale Creekflat Snow Gum Woodland-Scrub
- 3352 – Armidale Quartz Hills Stringybark Forest
- 3353 – Guyra Silvertop Stringybark Moist Forest
- 3359 – New England Hills Stringybark-Box Woodland
- 3461 – Macleay Gorges Stringybark-Red Gum Grassy Forest
- 3723 – Western New England Panic-Wiregrass Grassland.

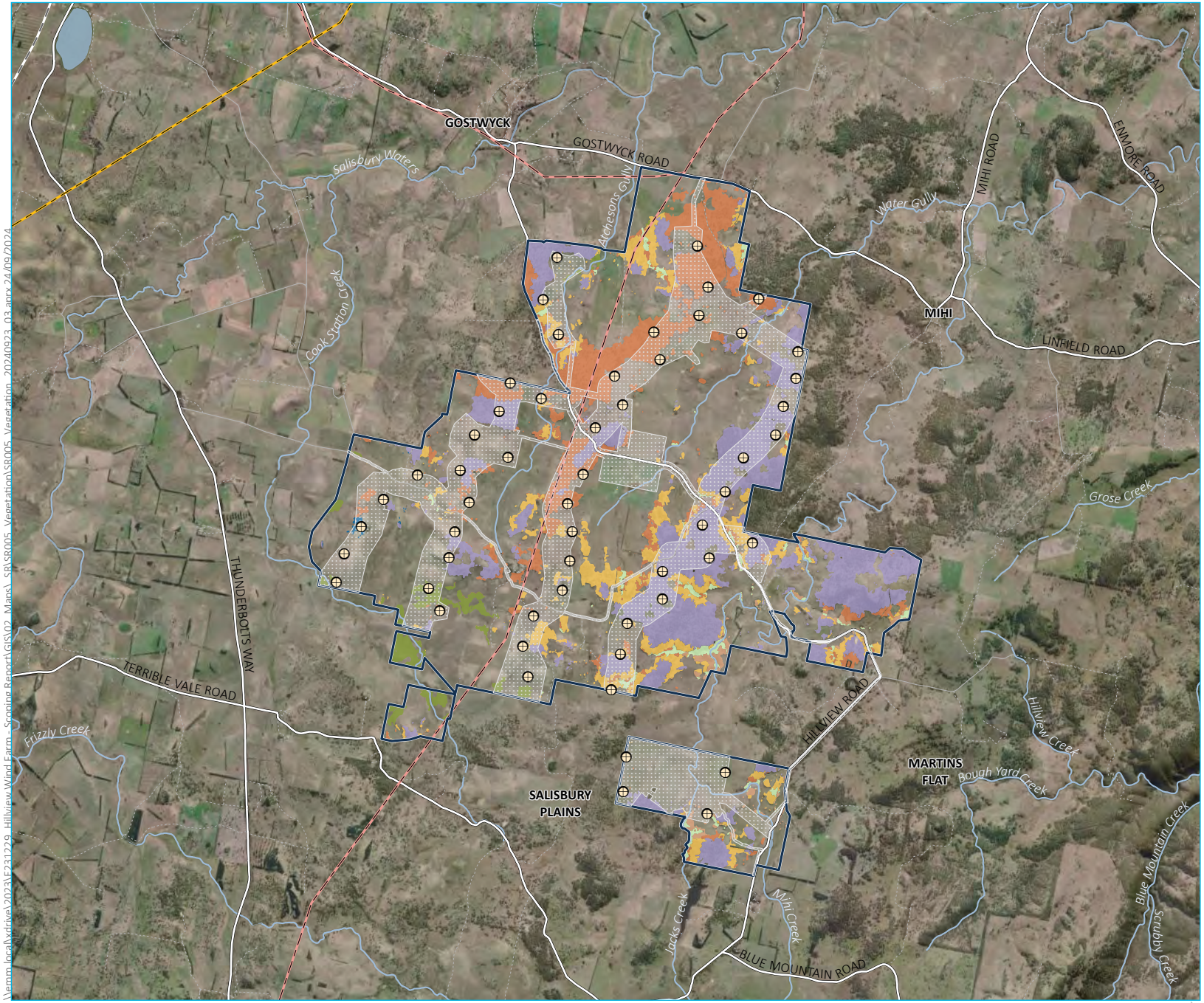
Three PCTs (3344, 3345 and 3359) mapped within the project investigation area have associated threatened ecological communities (TECs) and are shown in Table 6.3. In total, five TECs have the potential to occur on site which are either listed under the *Biodiversity Conservation Act 2016* (BC Act) and/or the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Table 6.3 Threatened ecological communities (TECs) with a moderate to high likelihood of occurrence and associated plant community types (PCTs) mapped on the NSW State Vegetation Type Map (SVTM) (DPE, 2022)

TEC name	Associated PCTs on site	BC Act[1] listing status	EPBC Act[2] listing status	SAII[3] entity	Likelihood of occurrence	Justification
New England Peppermint (*Eucalyptus nova-anglica*) Woodland on Basalts and Sediments in the New England Tableland Bioregion	PCT 3344 PCT 3345	Critically Endangered	Critically endangered (listed as New England Peppermint (*Eucalyptus nova-anglica*) Grassy Woodlands)	Yes	High	This critically endangered ecological community (CEEC) is known within the New England Tableland IBRA bioregion. Vegetation in the project investigation area could conform to this community. Both PCT 3344 and 3345 are mapped within the project investigation area, with PCT 3344 in particular being mapped extensively by the SVTM (DPE 2022).

TEC name	Associated PCTs on site	BC Act[1] listing status	EPBC Act[2] listing status	SAII[3] entity	Likelihood of occurrence	Justification
Ribbon Gum-Mountain Gum-Snow Gum Grassy Forest/Woodland of the New England Tableland Bioregion	PCT 3344	Endangered	-	-	High	This endangered ecological community (EEC) is known within the New England Tableland IBRA bioregion. Vegetation within the project investigation area could conform to this community. PCT 3344 is mapped extensively within the project investigation area by the SVTM (DPE 2022).
White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions	PCT 3359	Critically Endangered	Critically endangered (listed as White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland)	Yes	High	This CEEC is known within the New England Tablelands. PCT 3359 is mapped extensively within the project investigation area by the SVTM (DPE 2022). The vegetation in the project investigation area could conform to this community in a woodland or derived native grassland form.

Notes: 1: *Biodiversity Conservation Act 2016* (BC Act), 2: *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), 3: Serious and Irreversible Impact



KEY

- Development corridor
- Project investigation area
- Wind turbine generator

Plant community type

- PCT 3344 | New England Ribbon Gum Grassy Forest
- PCT 3345 | New England Snow Gum-Black Sally Woodland
- PCT 3351 | Armidale Creekflat Snow Gum Woodland-Scrub
- PCT 3352 | Armidale Quartz Hills Stringybark Forest
- PCT 3353 | Guyra Silvertop Stringybark Moist Forest
- PCT 3359 | New England Hills Stringybark-Box Woodland
- PCT 3723 | Western New England Panic-Wiregrass Grassland

Existing environment

- Rail line
- 66 kV transmission line
- 330 kV transmission line
- Major road
- Minor road
- Vehicular track
- Named watercourse
- Named waterbody

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Source: EMM (2024); ABS (2021); DCSSS (2023); ESRI (2024); GA (2009)

0 2.5 5 km

GDA2020 MGA Zone 55

N

Plant community types (PCTs)

Hillview Wind Farm
Scoping Report
Figure 6.3

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ii Threatened species

At present, targeted threatened species surveys have not been undertaken. The surveys will and will be undertaken for the Biodiversity Development Assessment Report (BDAR) at the EIS stage. There is a high chance of several threatened flora species occurring within the development corridor along with threatened bird species. In particular, two plant species, Austral Toadflax (*Thesium australe*) and Bluegrass (*Dichanthium setosum*), could occur within the development corridor and are known to occur in the region in highly modified habitats such as disturbed grassland, on the edges of active crops, and within old cropping fields. Table 6.4 contains a list of threatened species with a moderate to high likelihood of occurrence within the project investigation area, assessed via a 10 km NSW BioNet Atlas Search (DPE 2024) and EPBC Protected Matters Search Tool (PMST) report (DDCCEEW 2024).

Table 6.4 Threatened species with a moderate to high likelihood of occurrence

Scientific name	Common name	BC Act[1] listing status	EPBC Act[2] listing status	SAII[3] entity	Likelihood of occurrence	Justification
Artamus cyanopterus cyanopterus	Dusky Woodswallow	Vulnerable	-	-	High	Species likely to forage or nest in or around the woodlands within or adjacent to the project investigation area.
Callistemon pungens	-	-	Vulnerable	-	Moderate	Species may occur within the project investigation area. The species is usually found within the riparian vegetation of rocky streams.
Chthonicola sagittata	Speckled Warbler	Vulnerable	-	-	Moderate	Species may forage or nest in or around the woodlands within or adjacent to the project investigation area.
Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	Vulnerable	-	-	High	Species likely to forage or nest in or around the woodlands within or adjacent to the project investigation area.
Dasyurus maculatus	Spotted-tailed Quoll	Vulnerable	Endangered	-	Moderate	Species may forage or den in or around the woodlands within or adjacent to the project investigation area.
Dichanthium setosum	Bluegrass	Vulnerable	Vulnerable	-	High	*Dichanthium setosum* occurs on the New England Tablelands, in grassy woodlands, as well as grazed pastureland. The project investigation area is within the species' range, and habitat is present in the project investigation area. A high number (162) of BioNet records within 25 km have been recorded for this species, including records along the western and southern boundaries of the project investigation area. The latest record is dated to 2021.
Eucalyptus nicholii	Narrow-leaved Black Peppermint	Vulnerable	Vulnerable	-	Moderate	*Eucalyptus nicholii* is sparsely distributed, but widespread on the New England Tablelands. It occurs in grassy woodlands and could occur as an isolated tree in the project investigation area. The project investigation area is within the species' range, and habitat is present on site.

Scientific name	Common name	BC Act[1] listing status	EPBC Act[2] listing status	SAII[3] entity	Likelihood of occurrence	Justification
Hieraaetus morphnoides	Little Eagle	Vulnerable	-	-	Moderate	Species may inhabit the project investigation area; the cleared areas provide preferred hunting grounds and paddock trees may provide room for adequate nests to be formed.
Petroica boodang	Scarlet Robin	Vulnerable	-	-	High	Species likely to forage or nest in or around the woodlands within or adjacent to the project investigation area.
Phascolarctos cinereus	Koala	Endangered	Endangered	-	Moderate	Species may forage in the project investigation area.
Pteropus poliocephalus	Grey-headed Flying Fox	Vulnerable	Vulnerable	-	Moderate	This species is likely to visit the project investigation area in times of seasonal Eucalyptus bloom. Presence of a breeding camp will need confirmation.
Thesium austral	Austral Toadflax	Vulnerable	Vulnerable	-	High	*Thesium australe* is known to occur in the New England Tablelands. The species can occur in grassy woodland, as well as grassland pastures. Recent BioNet records from 2023 and 2024 show it occurs along the southern boundary of the project investigation area.

Notes: 1: *Biodiversity Conservation Act 2016* (BC Act), 2: *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), 3: Serious and Irreversible Impact

iii Aquatic biodiversity

Review of the Department of Primary Industries spatial mapping for Key Fish Habitat (DPI 2020) and freshwater threatened species distribution found that seven creeks (Atchesons Gully, Water Gully, Jack's Creek, Mihi Creek, Rough Yard Creek, Hillview Creek and the unnamed tributary of Cook Station Creek) that flow within the project investigation area are key fish habitat. None of these watercourses are listed as containing threatened fish species habitat (DPIE 2024). Two Crayfish species (Small Mountain Crayfish (*Euastacus simplex*) and Small Crayfish (*Euastacus spinichelatus*)), both listed as 'Endangered' under the EPBC Act, were reported in the Matters of National Environmental Significance (MNES); however, their distribution maps do not intersect with the project investigation area.

If the project is proposed to impact these watercourses, within the development corridor, a habitat assessment and targeted surveys may be required. If waterway crossings are required, the project will also need to consider an appropriate design in accordance with the *Policy and Guidelines for Fish Friendly Waterway Crossings* (DPI, 2013).

iv Serious and Irreversible Impact entities

Serious and Irreversible Impact (SAII) entities are currently the most at risk of extinction threatened entities within NSW. Each SAII entity has been assigned to one or more of the four principles prescribed within Clause 6.7 of the *Biodiversity Conservation Regulation 2017* with any impacts to these entities, due to a proposed development, being more heavily scrutinised by the consent authority. Consequently, direct and/or indirect impacts to these entities is recommended to be avoided.

Two CEECs that are likely to occur within the project investigation area are listed as SAII entities under the BAM (DPIE, 2020):

- New England Peppermint (*Eucalyptus nova-anglica*) Woodland on Basalts and Sediments in the New England Tableland Bioregion
- White Box - Yellow Box - Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions.

Two critically endangered bird species that are also listed as SAII entities, being the Regent Honeyeater (*Anthochaera phrygia*) and Swift Parrot (*Lathamus discolor*), can occur within the landscape. However, these species only require assessment if a development will impact land that is identified to be an Important Habitat Area. Neither the project investigation area, nor the surrounding land, are identified on the Important Habitat Areas maps for either species. A large area of mapped Regent Honeyeater important habitat occurs 30 km west of the project investigation area, within the Bundarra-Barraba Important Bird Area. This mapped region is one of three known breeding regions for the species (DPIE 2024).

The Matters of National Environmental Significance (MNES) search identified four threatened frog species, that are also listed as SAII entities, which may occur either within the project investigation area or surrounding landscape.

Of these, two species, the Glandular Frog (*Litoria subglandulosa*) and the Peppered Tree Frog (*Litoria piperata*) have BioNet records within a 25 km buffer area, with only two records of Glandular Frog and one record of Peppered Tree Frog. However, if the project is to impact watercourses and/or adjacent riparian habitat within the development corridor, further habitat assessment and targeted surveys may be required for SAII candidate threatened frog species.

Additional SAII entities may exist within or immediately adjacent to the project investigation area. Confirmation of PCTs within the project investigation area and the preparation of the BAM calculator (DPIE, 2020) will help inform the possible presence of any other SAII entity and will be addressed within the BDAR appropriately.

6.2.3 Assessment approach

Due to the project being a State Significant Development, entry into the Biodiversity Offset Scheme (BOS) is automatically triggered. Field surveys along with a BDAR will be required to address the requirements of the BC Act, including the BAM, and EPBC Act. The BDAR will be prepared in accordance with the BAM (DPIE, 2020) and will describe the project and the associated biodiversity values, how the project has avoided and minimised impacts to biodiversity and assess those residual impacts that could not be avoided.

As the BC Act and the BAM 2020 do not necessarily cover all threatened entities listed under the EPBC Act, the BDAR will include sections that address impact assessment requirements in accordance with the EPBC Act and NSW *Fisheries Management Act 1994* (FM Act), where relevant.

A biodiversity assessment to support an Environmental Impact Statement (EIS) will include the following:

- detailed vegetation mapping in the field to map PCT and stratify these PCTs into broad condition states (vegetation zones)
- identification of the potential direct, indirect and prescribed impacts this development will have on the surrounding landscape, as well as cumulative impacts
- a review of habitat mapping, local literature review, and regional vegetation mapping

- development of a refined list of candidate species requiring survey based on the outcomes of the habitat assessment, with priority given to TECs and candidates for SAII
- vegetation plots undertaken to measure vegetation integrity scores of different vegetation zones; any vegetation above the vegetation integrity threshold that requires offsetting will be avoided through the design process or offset in accordance with the BOS
- a land category assessment in accordance with the *Local Land Services Act 2013* (LLS Act) along with the confirmation of Category 1 – Exempt Land within the development corridor via grassland assessments
- consideration of any impacts to key fish habitat and threatened aquatic species along with appropriate surveys
- assessment of land mapped as containing Biodiversity Values, particularly areas recorded as "Identified Old Growth Forest", and consideration of avoidance and minimisation measures to be put in place to limit impacts to areas of significant biodiversity
- consideration of impacts to MNES, including TECs and whether referral to the Commonwealth is required
- consultation with the Biodiversity Conservation Division (BCD) prior to submission regarding key risk items like adequacy and appropriateness of avoidance and minimisation measures; an accompanying site visit to discuss the nature of impacts is recommended
- if required, engagement of species experts in line with prescriptions in the BAM (DPIE, 2020) to assess impacts on threatened candidate species.

6.3 Access and traffic

6.3.1 Existing environment

The New England Highway (A15) is a national highway connecting passengers and freight between the Hunter Valley and Queensland. The New England Highway passes through Uralla, and it connects with the regional road network including Thunderbolts Way (RR7719) providing access to Uralla and Armidale. The local road network includes Hillview Road and Gostwyck Road. Local roads are used mainly for property access and therefore do not carry significant amounts of traffic.

6.3.2 Potential impacts

The project will generate traffic during construction related to the movement of construction workers and the delivery of materials, plant and equipment. Construction traffic generation has the potential to impact on intersection performance and traffic volumes capacity on the surrounding network and along key transport routes.

Proposed new access point from the public road network, likely Hillview Road and Gostwyck Road will be required for project construction access. From these access points, internal access tracks will also be established to connect the project components and other infrastructure areas to the public road network. The internal access tracks will serve as both access for servicing and maintaining project infrastructure and fire trails.

OSOM vehicles will be required to transport oversized infrastructure and project components from port locations (likely Port of Newcastle or Port of Brisbane) to the project. EnergyCo will work alongside TfNSW to upgrade the State's Road network to help the transition to renewable energy under the 'Port to REZ' Memorandum of Understanding (MOU) released in September 2023. The preferred route and access point for OSOM deliveries will be subject to more detailed route analysis prior to the lodgement of the EIS.

Ongoing road maintenance requirements and any potential need for localised upgrades to mitigate traffic impacts during construction will also need to be considered. Should upgrades be identified, these will be detailed in the EIS. Operational traffic generation will be limited to some daily light vehicle movements and heavy vehicle deliveries on an as-required basis.

6.3.3 Assessment approach

Engagement with Transport for NSW (TfNSW) will be undertaken to identify existing road safety concerns and ensure any potential deficiencies in the classified road network are clearly understood and assessed. Similarly, engagement will be undertaken with Uralla Shire Council to understand the capacity and condition of the local road network for construction traffic.

A traffic impact assessment will be carried out to investigate potential impacts associated with the project. The traffic impact assessment will include:

- projections of traffic volumes (both light and heavy vehicles) and identifying transport routes for construction, and operation
- assessment of the potential traffic impacts of the project on road network function, including intersection performance, site access arrangements, and road safety, including school bus routes, public transport and cyclist safety
- assessment of the capacity and condition of the existing road network to accommodate the type and volume of traffic generated by the project (including OSOM vehicles and escorted deliveries) during construction, and operation with any potential cumulative impacts from other renewable energy projects in the region
- details of measures to manage potential impacts, including a schedule of road upgrades (if required), schedule of dilapidation surveys, road maintenance contributions, and other traffic control measures, developed in consultation with the relevant road authorities.

The assessment of traffic and access impacts will be prepared using the following guidelines, policies and design requirements:

- *Guide to Traffic Generating Developments* (RTA , 2002)
- *Austroads Guide to Road Design (various publications)*
- *Austroads Guide to Traffic Management (various publications)*
- *Australian Standard AS 2890 Parts 1 and 2*
- *Australia Code for Dangerous Goods Transport.*

6.4 Social

6.4.1 Existing environment

The project site is located in Salisbury Plains, which is a small agricultural area (ABS 2021a). The neighbouring areas of Gostwyck and Mihi are included in the project's local study area for the Social Impact Assessment.

Gostwyck, Salisbury Plains, and Mihi are home to a collective population of 110 people, and with a median age of 54 years, which is relatively older than NSW's median age of 43. Predominant settlement features of the local area include cattle farming operations and rural homesteads.

Relative to the New England REZ, the population of the local area is typically older with a high proportion of adults (people aged 25 to 64 years), fewer children, a higher rate of home ownership (58.3% outright ownership, compared to 37.3%), and a higher labour force participation rate (72.7% compared to 56.1%) (ABS, 2021a). Personal and household weekly incomes in the local area ($1,916) are in line with NSW average ($1,829) (ABS, 2021a).

6.4.2 Potential impacts

The identification of potential social impacts and benefits was an iterative process informed by:

- the review of project activities and the social effects they could generate
- analysis of existing baseline socio-economic conditions across the social locality
- stakeholder mapping and analysis of the feedback generated through stakeholder engagement.

There are a range of positive and negative social impacts that require to be considered in the SIA.

Potential social impacts include:

- impacts to livelihood (such as the potential for lowered agricultural productivity caused by disruption to farming and potential biosecurity and weed risk due to increased vehicle activity)
- health and wellbeing impacts (such as increased noise and public safety issues due to trucks and increased vehicle movements)
- impacts to access and surroundings (such as changes to the landscape due to the construction and operation of the project)
- impacts on culture and community (such as from potential loss of heritage and changes in the community due to a new workforce entering the area)
- increased opportunities for employment and occupational training
- economic in-flows to the local community
- opportunities for diversification of landholder income.

The project will look to initiate measures that maximise positive impacts and benefits (such as utilising local workforce and supplies), in addition to other mitigation measures to manage potential negative impacts.

6.4.3 Assessment approach

Potential social impacts and benefits will be assessed in accordance with the requirements of the *Social Impact Assessment Guideline for State Significant Projects* (DPIE 2021) and will utilise the risk assessment matrix presented in the *Technical Supplement Social Impact Assessment Guideline for State Significant Projects* (DPIE 2021). The SIA will be led by a suitably qualified Social Scientist.

The identification of social impacts will be informed by community and stakeholder engagement activities, as well as SIA field study activities, and will be conducted in an integrated manner to ensure consistency, reduce duplication, and allow for management of consultation fatigue. In addition, findings from the technical assessments will be considered to understand the consequences to the community and existing research and previous SIAs will inform the identification of the social impacts.

6.5 Amenity – noise and vibration

6.5.1 Existing environment

Land within the project investigation area and surrounds is predominantly agricultural. Given the project's rural setting, background noise at nearby sensitive receptor is likely to be low and characterised by equipment and machinery associated with agricultural production activities, vehicle movements along the local roads and natural sounds (livestock, birds, insects etc.).

The *NSW Wind Energy: Noise Assessment Bulletin* (DPE 2016) provides a baseline noise criterion of 35 dB(A) at non-associated residences. At associated residences, the Bulletin enables an increase above the baseline noise criterion of 35 dB(A), subject to a formal agreement and ensuring the landowner is appropriately informed and understand the agreed noise levels.

6.5.2 Potential impacts

Noise impacts from the project during construction will include noise generated by bulk civil earthworks, delivery and assembly of infrastructure, on-site collector substation and grid connection works and operation of light and heavy vehicles.

Operational noise impact will include the operation of the WTGs, and ancillary infrastructure. The location of noise- generating infrastructure within the development corridor will be determined with consideration to noise impact on surrounding residences.

Noise prediction contours (Figure 6.4) and predicted noise levels are provided in Appendix E. The preliminary noise assessment concludes that the 35 dB(A) baseline criterion can be achieved at all non-associated residences.

KEY

- Project associated landowner
- Wind turbine generator

Sensitive receiver

- Project associated residence
- Non-associated residence

Operational noise contour (dB)

- 35 dB
- 37 dB
- 39 dB
- 41 dB
- 43 dB
- 45 dB

Existing environment

- Rail line
- 66 kV transmission line
- 330 kV transmission line
- Major road
- Minor road
- Vehicular track
- Named watercourse
- Named waterbody
- NPWS reserve

Source: EMM (2024); DCSSS (2023); ESRI (2024); GA (2009)

0 5 10 km

GDA2020 MGA Zone 56

N

Preliminary noise impact assessment

Hillview Wind Farm
Scoping Report
Figure 6.4

EMM creating opportunities

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6.5.3 Assessment approach

As part of the EIS for this Project, a detailed noise and vibration assessment will be conducted. This assessment will focus on:

- construction noise and vibration
- traffic noise assessment due to construction traffic
- operational wind farm noise
- operational noise from ancillary equipment.

At this stage of the Project design phase, there is insufficient detail to assess the above items. Construction noise and vibration impacts will be assessed against ICNG and *Assessing vibration: a technical guideline*. Once construction schedules are developed and traffic impacts understood, an assessment of road traffic noise arising from haul routes and construction worker traffic will be conducted against the Road Noise Policy.

Ancillary equipment for the wind farm may include various size transformers, associated HVAC equipment and potentially battery storage. At this stage, there is no firm design information to conduct a detailed assessment. A detailed assessment will be conducted against environmental noise requirements of NPFI.

As more information becomes available during the design process, and turbine technology is selected, a detailed assessment at all hub height wind speeds will be conducted to confirm compliance with the NSW Noise Assessment Bulletin for the final design and selected technology. The results of these assessments will be incorporated into the Noise and Vibration Impact Assessment which will support the EIS for this Project.

6.6 Heritage – Aboriginal

6.6.1 Existing environment

The project investigation area has been largely cleared of vegetation most likely due to pastoralism and agricultural practices. The project area demonstrates the presence of several different soil landscapes: Bald Knob (9236ba), Ironstone (9236ir), Kellys Plains (kp), MIHI (9236mi), Saumarez (9236sz), Whites Hill (9236wh), Powers Creek (po), and McCanns Flat (mc). The main features of the project area and its surrounds comprise Atchesons Gully, Water Gully and Cook Station Creek.

An Aboriginal Cultural Heritage Assessment was undertaken for the nearby New England Solar Farm in 2018, which found four landform classes – crest, hillslope, flat, and watercourse. Aboriginal sites were identified within each defined landform class with the highest frequency of sites identified on crests (57%), followed by hill slopes (30%), flats (6%) and watercourses (6%).

An Aboriginal Heritage Information Management System (AHIMS) search was undertaken for the project, and identified two Aboriginal heritage sites situated within the project investigation area, but not within the development footprint:

- The Ranch IF-1 (#21-4-0386) – a single greywacke axe blank or scraper blank located within a rock crevice of a creek. The area has been subject to substantial water wash and erosion and in situ subsurface deposits are deemed unlikely.
- The Ranch OS-1 (#21-4-0385) – nine artefacts scattered over an area approximately 136 m x 69 m. The site is located around the edges of a dry creek bed surrounded by low lying hills on three sides while the eastern side opens into a larger valley. The dispersed artefacts of quartzite and basalt include flakes, a core and a blade.

Initial predictive modelling indicates Aboriginal sites are most likely to occur within 200 m of watercourses and along crest landforms Areas that are not in proximity to water sources and have been subject to disturbance activities are considered to be of lesser risk and are probably more appropriate locations for development in relation to Aboriginal heritage.

6.6.2 Potential impacts

Construction of the project has the potential to impact known and currently unidentified Aboriginal heritage sites. The Project's ground surface impact will be limited to the pad of each individual WTG plus the cables linking these turbines to centralised points and internal access tracks to link project infrastructure during construction and operation.

Hillview Energy Hub will seek to avoid impacts to Aboriginal heritage sites wherever possible. Due to the nature of wind farm infrastructure, impacts to Aboriginal heritage sites can often be avoided with careful consideration of project design post archaeological investigations (e.g. survey and/or modelling).

6.6.3 Assessment approach

The development corridor requires further investigation to characterise and assess potential cultural materials and provide suitable management and mitigation as part of the EIS. This includes more detailed field survey, consultation with the local Aboriginal community and if required, test excavation.

As such, in accordance with Heritage NSW guidelines, further assessment would comprise an Aboriginal cultural heritage assessment (ACHA). The ACHA will be prepared with general consideration to the following guidelines:

- Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011)
- Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010a)
- Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010b).

6.7 Heritage – historical

6.7.1 Existing environment

The project investigation area falls within the Uralla LGA. An extensive search of national, state, and local heritage registers was conducted on 4 December 2023. An initial desktop analysis of the project investigation area involved reviewing parish and pastoral maps, historical aerial imagery, and other historical assessments of the region.

No heritage-listed sites are within the project investigation area or its immediate or proximity. The nearest listed items of heritage significance within a 5 km radius of the project investigation areas include Deeargee Woolshed (LEP I11) at 1081 Gostwyck Road, Gostwyck NSW, listed in Schedule 5 of the Uralla LEP.

The region is known for its squatting runs, created in the early-mid 1800s. Extensive clearing of land in the project investigation area and its vicinity likely took place in the 1860s, driven by the landscape improvement requirements mandated by the Robertson Land Acts applicable to pastoral runs.

From 1904, there were numerous subdivisions, with the project investigation area slowly being divided into smaller portions.

6.7.2 Potential impacts

Construction works will include levelling, excavation, and ground disturbance activities which has the potential to impact archaeological resources. Further, the construction of OMPs, roads and installation of enabling infrastructure will also create sub-surface disturbance, increasing the probability of disturbing archaeological resources.

Hillview Energy Hub will seek to avoid impact to historic heritage sites wherever possible. Any impacts and their subsequent mitigation and management measures will be identified in the EIS.

6.7.3 Assessment approach

A historical heritage assessment of built, archaeological and landscape values and a statement of heritage impact (technical report) will be prepared as part of the EIS. The assessment will include more detailed desktop research and consultation, which will also provide valuable information on the historical heritage values of the project investigation area and broader region. An inspection of the project investigation area may also be required, should the desktop analysis yield information that clearly suggests the presence of historical sites.

The technical report will also consider the wider region to determine the potential for historical finds to be present in the project investigation area and if so, assess the potential significance of the finds and provide recommendations for the appropriate management of any finds.

6.8 Hazards and risks

6.8.1 Aviation safety

The EIS will consider potential interactions between the proposed WTGs and local air services (including safety hazards associated with intrusion of airspace and impacts on navigation instruments).

The closes known airport to the project is Armidale Regional Airport located 33 km to the north-west. Given the rural landscape, there may also be smaller aerodromes and runways surrounding the project investigation area. Additional activities associated with agricultural operations (e.g. aerial spraying and pest management) mat also occur in the locality.

An aviation impact assessment will be prepared and will assess potential impacts on available activities (including aerodromes, air routes, airspace and navigation/radar) and provide safety advice in respect to relevant requirements of air safety regulations and procedures (including consultation with relevant aviation agencies).

The assessment will be undertaken in accordance with:

- Civil Aviation Safety Regulation 1998
- guidance material from Civil Aviation Safety Authority
- National Airports Safeguarding Framework Guideline d: Managing the Risk to Aviation Safety of Wind Turbine Installations (Wind Farms)/ Wind Monitoring Towers (DITRDC 2012)
- specific requirement as advised by Airservices Australia.

6.8.2 Bushfire

The project investigation area includes large portions of mapped Vegetation Category 1 and 2 bushfire prone land, interspersed with areas excluded from bushfire risk vegetation category.

The project has the potential to be exposed to bushfire risk from grasslands and areas of dense vegetation within and adjacent to the project investigation area. There is also a risk of a fire starting within the project investigation area and spreading to adjacent land.

A bushfire hazard assessment will be prepared to identify potential hazards and risks associated with bushfires and to demonstrate compliance with *Planning for Bush Fire Protection* (RFS 2019).

6.8.3 Telecommunications

WTG can result in electromagnetic interference that has potential to disrupt telecommunications such as radio, tv broadcasts, aviation signals. mobile phone services, GPS systems and radar services.

The EIS will consider potential interactions between proposed WTGs and nearby telecommunication services (including point to point microwave links, meteorological radars, mobile voice-based communications, wireless and satellite internet services, broadcast and digital radio and broadcast, digital and satellite television).

A telecommunication assessment will be prepared and will assess potential impacts on telecommunication services. Where impacts are identified, recommendations will be provided to mitigate and management impacts.

6.8.4 Blade throw

A blade throw risk assessment will be completed as part of the EIS and will assess the likelihood of blade throw and calculate typical blade throw distances to determine appropriate separation distance between WTGs, residences and property boundaries. The assessment will also determine appropriate separation distances between WTGs and infrastructure associated with the proposed East Hub substation and other neighbour projects such as Hillview Solar, Eastern Hub Firming Battery and Deeargee Solar Farm.

Management measures will be recommended such as, regular inspections of WTGs to mitigate blade throw risk.

6.8.5 Preliminary hazard analysis

The EIS for the Project will include an assessment of potential hazards and risks associated with the construction and operation of the project. A preliminary risk screening will be completed in accordance with State Environmental Planning Policy (Resilience and Hazards) 2021 (resilience and Hazards SEPP). Exposure to electromagnetic fields will also be assessed against the International Commission on Non-Ionizing Radiation Protection (1998) *Guidelines for Limiting Exposure to Time-varying Electric, Magnetic and Electromagnetic Fields.*

6.8.6 Waste

The project area is current used for agriculture and generates farm-related waste-streams. There are several waste facilities within the Uralla LGA and neighbouring Armidale LGA and Walcha LGA including the Uralla Waste Management Facility (20 km north-west of the project area), Armidale Waste Management Facility (40 km north of the project area) and Walcha Waste Depot (45 km south of the project area), which also operate for larger, non-household building and farming waste.

The majority of the waste produced will be in the construction and decommissioning phases of the project. There will be minimal waste generated in the operational phase. Potential impacts may occur due to the volumes of construction and decommissioning waste relative to the capacity of the waste management facilities within the Uralla LGA.

All waste produced by the project will be managed in accordance with the waste hierarchy, and will be classified, stored and handled in accordance with the *Waste classification guidelines – part 1: classifying waste* (EPA 2014). A conceptual waste management plan will be prepared in the EIS phase and updated during detailed design to form the project's waste management plan, which will be reviewed throughout the life of the project in consultation with DPHI and Uralla Shire Council.

6.9 Land

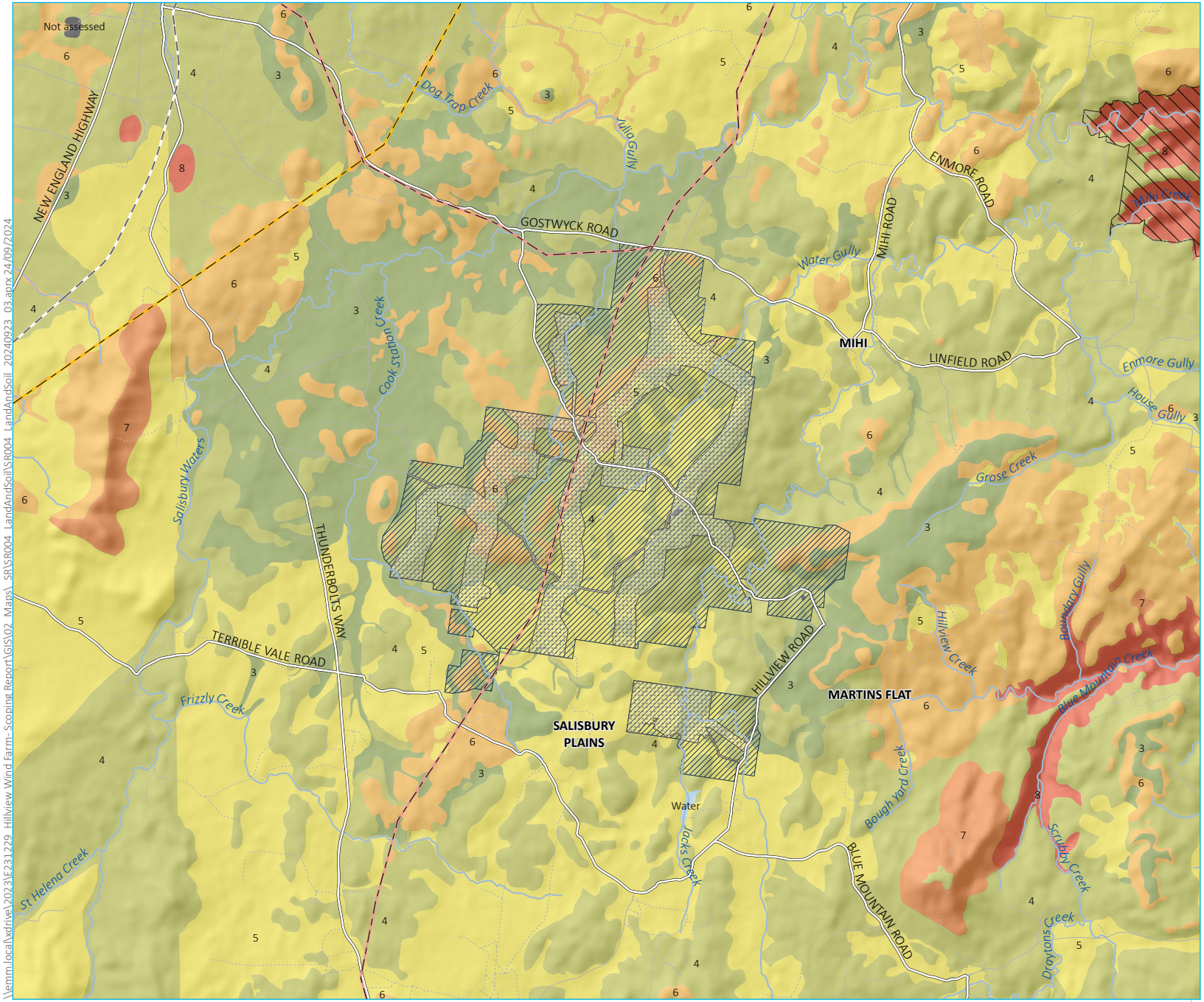
6.9.1 Existing environment

The land within the project investigation area is zoned RU1 Primary Production under the Uralla LEP and is currently used for agricultural purposes. Due to the historic use of land for agricultural activities, such as agricultural clearing, extensive livestock grazing and cropping, the land is highly modified and disturbed.

Land and soil capability (LSC) classes mapped within the project investigation area (Figure 6.5) are:

- Class 3 (1,137 ha), which is characterised as high capability land that has moderate limitation and is capable of sustaining high-impact land uses (OEH 2012)
- Class 4 (4,788 ha), which is characterised as moderate capability land with moderate to high limitation for high impact land uses (OEH 2012)
- Class 5 (2,792 ha), which is characterised as moderate-low capability land with high limitation for high impact land uses (OEH 2012)
- Class 6 (1,990 ha), which is characterised as low capability land with very high limitations for high impact land uses (OEH 2012)
- Class 7 (36 ha), which is characterised as very low capability land with severe limitations which will restrict most land uses (OEH 2012)
- Class 8 (3 ha), which is characterised as extremely low capability land with limitations so severe it is incapable of sustaining most land uses (OEH 2012).

According to the Australian Soil Classification system, soils within the project investigation area and surrounds is mapped as yellow kurosol and yellow chromosol.



KEY

- Development corridor
- Project investigation area

Australian Land Use and Management (ALUM)

- 3- Moderate limitations
- 4- Moderate to severe limitations
- 5- Severe limitations
- 6- Very severe limitations
- 7- Extremely severe limitations
- 8- Extreme limitations
- Not assessed
- Water

Existing environment

- Rail line
- 66 kV transmission line
- 330 kV transmission line
- Major road
- Minor road
- Vehicular track
- Named watercourse
- NPWS reserve

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Source: EMM (2024); DPE (2022); DCSSS (2023); GA (2009)

0 5 10 km

GDA2020 MGA Zone 56

N

Land and soil capability map

Hillview Wind Farm
Scoping Report
Figure 6.5

EMM
creating opportunities

6.9.2 Potential impacts

i Construction

Soil disturbance during construction may result in:

- topsoil and subsoil impacts (e.g. degradation and loss of topsoil, compaction of soil through vehicle movement and poor reinstatement and soil inversion or mixing resulting in changes in constraints such as salinity and sodicity within the soil profile)
- disturbance and form changes affecting natural surface drainage
- erosion and sedimentation, particularly during clearance and soil exposure activities resulting in:
  - on-site impacts (such as erosion of constructed landforms)
  - off-site impacts (such as eutrophication of downstream waters)
- increased dust generation.

These impacts could result in reduction of soil quality that could be deleterious to agricultural productivity and land use after rehabilitation if not suitably managed or mitigated.

Decreasing soil quality or volumes during construction could result in limitations to rehabilitation from loss or degradation of soil materials that are needed to reinstate the soils in a suitable condition.

Any negative impact to soil characteristics presents a risk of harm to the land and soil capability and productivity of the project investigation area post-rehabilitation.

ii Operations

Once constructed, the land within the development corridor will not be able to be used for the same intensity of agricultural production; however, there are opportunities to co-locate agricultural land uses, such as grazing, to maintain a level of agricultural productivity. Inappropriate management of soils could result in negative impacts to soil characteristics, which may impact the land and soil capability and agricultural productivity of the development corridor post-rehabilitation.

Erosion during operations may result in hazards associated with erosion gullies and tunnelling (due to dispersive subsoils and non-cohesive sands in areas) and accumulated sediments, uncontrolled water and dust.

6.9.3 Assessment approach

A land, soil and erosion (LSE) assessment will be prepared as part of the EIS and will include:

- a description of the biophysical environment (including soil landscapes and LSC class)
- an erosion hazard analysis
- an impact assessment of the project on soil types, LSC class and agricultural productivity
- recommendations for site decommissioning and rehabilitation to restore disturbed land back to agriculture.

6.10 Water

6.10.1 Existing environment

The project investigation area is located within the upper reaches of the Macleay River catchment, close to its boundary with the Gwydir and Namoi catchments.

The development corridor crosses mapped creeks including:

- Atchesons Gully (4th order)
- Water Gully (4th order)
- Mihi Creek (4th order).

The development corridor includes further land within the catchment of the following additional mapped creeks:

- Cook Station Creek (4th/5th order)
- Bough Yard Creek (3rd order)
- Hillview Creek (1st order).

The Project is situated within the up-stream sections of these mapped creeks, which flow north and converge with Salisbury Waters, except for Bough Yard Creek and Hillview Creek, which flow east and eventually join the Macleay River. The majority of the area is within the Armidale Plateau subregion, which is characterised by an undulating to hilly plateau. The local topography of Salisbury Plains can be described as a mix of low rolling hills and flatter areas that are frequently bisected by drainage networks and their adjacent floodplains, terraces and foot slopes.

The project investigation area is outside the flood planning area as mapped under the Uralla LEP. Flood modelling was undertaken as part of the *New England Solar Farm Surface Water Assessment* (EMM 2018c) to inform project design and the refinement process for the nearby New England Solar Farm. The 1% annual exceedance probability (AEP) event was modelled to identify flood impact inundation zone of Salisbury Waters which is fed by the Atchesons Gully and Water Gully. The following key observations were made, which may be relevant to the project:

- There are multiple 1st order and 2nd order streams are mapped within the project investigation area, these watercourses are known to be of low value, often without a discernible channel. Exclusion of project infrastructure within these watercourses should be minimised where practicable.
- A proposed minimum infrastructure setback distance from all 3rd order or higher streams be applied across the development footprint.
- Flooding extent modelled relevant to the Salisbury Waters does not encroach on the project footprint. The inundation zone of the 1% AEP has identified an inundation zone that is within close proximity to the creek with some localised flooding to neighbouring low lying areas.

Flooding will be considered for this project, with opportunities to minimise potential interactions with floodwaters and to avoid areas subject to inundation or high flood hazard.

6.10.2 Potential impacts

The construction of the project has the potential to result in the following impacts to water resources in the absence of suitable controls:

- ground disturbance during bulk earthworks and other site activities could lead to exposure of soils and potential erosion and mobilisation of sediment into receiving watercourses
- contamination of surface waters or groundwater as a result of accidental spillage of materials such as fuel, lubricants, herbicides and other chemicals used to support construction activities
- partial blockage or redirection of floodwaters and downstream impacts as a result of poorly considered construction activities
- demand for water during construction.

Operation has the potential to result in the following impacts to water resources in the absence of suitable controls:

- demand for water for land management purposes
- potential ongoing erosion of soils and mobilisation of sediment into receiving watercourses
- contamination of surface water or groundwater as a result of accidental spillage of materials such as fuel, lubricants, herbicides and other chemicals used to support site activities, or through poor site and vegetation management practices
- partial blockage or redirection of floodwaters and downstream impacts as a result of poorly considered permanent facilities.

Specific design considerations and mitigation measures may be recommended to minimise potential impacts within and along drainage lines. Roads and services that require watercourse crossings will be designed and constructed in accordance with relevant regulations and best practice design and construction methods.

The project is not likely to impact groundwater during construction, operation, or decommissioning due to the limited amount of subsurface disturbance activities required during the installation and decommissioning of project infrastructure.

6.10.3 Assessment approach

A water resource assessment will be prepared and will include a review of the existing water environment, an assessment of potential impact on water resources and a description of any proposed mitigation and management measures. The water resource assessment will include:

- complete site characterisation, including mapping to effectively characterise surface water features, groundwater features and relevant water users
- the likely impact of the project (including flooding) on surface water and groundwater resources, drainage channels, wetlands, riparian land, farm dams, groundwater dependent ecosystems, related infrastructure, adjacent licensed water users and basic landholder rights, and measures proposed to monitor, reduce and mitigate these impacts
- a qualitative review and assessment of the likely risks and impacts of the project on flooding and floodplain areas using available flood data and mapping

- a review of the relevant regulatory requirements (e.g. Water Sharing Plans) of relevance to the catchment and groundwater sources in which the project is located
- consideration of water requirements and supply arrangements for construction and operation (including any potential impacts on local surface water and groundwater users)
- erosion and sediment control measures that will be implemented to mitigate any impacts in accordance with *Managing Urban Stormwater: Soils & Construction* (Landcom 2004).

6.11 Air

6.11.1 Existing environment

The current land use of the project site and surrounding properties is primarily agricultural which is likely to impact upon the local and regional air quality.

Consequently, existing pollutants are likely to include animal manure, dust and exhaust emissions from vehicle movements and construction works, and smoke from domestic fires and regulated burning.

6.11.2 Potential impacts

The project is not anticipated to generate significant air quality impacts during construction or operation. Dust may be generated during construction due to an increase in exposed areas following site preparation works and from construction traffic movements on unsealed roads. This dust generation is expected to be localised, unlikely to have significant impacts at nearby receivers, and able to be easily mitigated through implementation of standard management measures.

No significant dust generation is expected during operations given exposed areas will have been rehabilitated.

Minor levels of dust may be generated during decommissioning as a result of structures being removed, areas being temporarily exposed, and rehabilitation works. This will only occur for a short duration before rehabilitation of exposed areas has been established.

6.11.3 Assessment approach

A quantitative air quality impact assessment with dispersion modelling is not considered warranted given the risk of air quality impact is low and will not extent beyond the construction phase of the project.

The impact of construction emissions on surrounding human and ecological sensitive receivers, along with the potential cumulative impact caused by the concurrent construction of the EnergyCo Eastern Hub Firming Battery, will be assessed as part of the EIS using a qualitative impact assessment approach.

6.12 Cumulative impact

The project will contribute to the overall development of the New England REZ. Other proposed, approved and under construction renewable energy developments within and in the vicinity of the New England REZ and the project are summarised in Table 2.1.

Consideration of potential cumulative impacts for projects within a proximal location to the project area and the proposed assessment approach is provided in Table 6.5.

The project may generate cumulative impacts in conjunction with a limited number of surrounding projects both during construction and operation. With SSD projects like Hillview Solar, Eastern Hub Firming Battery and New England REZ transmission project intersecting the project, cumulative impacts in relation to workforce and accommodation (social), increased traffic and heavy vehicle volumes (traffic) and changes to the visual landscape from introduced infrastructure (visual) will need to be further evaluated. Whilst robust environmental assessment is needed, this proximity or 'clustering' of project will also likely result in community benefit including generation of jobs and upskilling opportunities, and contribution to the local economy and community through purchase of goods and services.

In preparation of the EIS, a cumulative impact assessment will be undertaken in accordance with the *Cumulative Impact Assessment Guidelines for State Significant Projects* (DPIE 2022). Consistent with these guidelines, the following matters will be considered: amenity – visual, biodiversity, heritage – Aboriginal, heritage – historical, traffic, land, noise and vibration and social impacts.

Table 6.5 Cumulative impact assessment scoping summary table

Project	Distance to project	Project status	Indicative timing/overlap	Potential cumulative impacts
Metz Solar Farm	55 km north-east	Approved – Operational.	Operational phase will overlap.	• Amenity visual – No potential overlap in impacts. • Biodiversity – No potential overlap in impacts. • Heritage – Aboriginal & historical – No potential overlap in impacts. • Traffic – No overlap - low risk of cumulative traffic impacts due to distance from the project. • Social – Standard assessment – low risk of cumulative social impacts due to distance from the project (limited to cumulative use of available workforce and accommodation in regional centres). • Land – No overlap - low risk of cumulative impacts due to distance from the project. • Amenity noise and vibration – No potential overlap in impacts.
New England Solar Farm	6 km north-west	Approved – Stage 1 operational. Stage 2 to commence construction 2024 and be operational by 2026.	30 months' construction timeframe remaining – construction unlikely to overlap. Operations will overlap.	• Amenity visual – There are likely to be some viewsheds, especially looking east from the western side of the solar farm, where WTGs are visible as a background element beyond the solar farm. Due to careful consideration of visual impacts of the solar farm, including mitigating screening treatments where necessary, there is a low risk of cumulative visual impacts being unacceptable. • Biodiversity – No potential overlap in impacts. • Heritage – Aboriginal & historical – No potential overlap in impacts. • Traffic – Overlap in operations traffic - low risk of cumulative construction traffic impacts due to project schedules not aligning. • Social – Standard assessment – potential risk of cumulative social impacts due to proximity of the projects (limited to cumulative use of available workforce and accommodation in regional centres). Will be mitigated by onsite accommodation facility. • Land – No overlap - low risk of cumulative impacts due to distance from the project. • Amenity noise and vibration – No potential overlap in impacts.
Tilbuster Solar Farm	55 km north-east	Approved – yet to be constructed.	12 months construction –unlikely to overlap. Operations will overlap if this project is developed.	• Amenity visual – No potential overlap in impacts. • Biodiversity – No potential overlap in impacts. • Heritage – Aboriginal & historical – No potential overlap in impacts. • Traffic – No overlap - low risk of cumulative traffic impacts due to distance from the project. • Social – Standard assessment – low risk of cumulative social impacts due to distance from the project (limited to cumulative use of available workforce and accommodation in regional centres). • Land – No overlap - low risk of cumulative impacts due to distance from the project. • Amenity noise and vibration – No potential overlap in impacts.
Oxley Solar Farm	50 km north-east	Approved – yet to be constructed.	12-18 months construction – unlikely to overlap. Operations will overlap if this project is developed.	• Amenity visual – No potential overlap in impacts. • Biodiversity – No potential overlap in impacts. • Heritage – Aboriginal & historical – No potential overlap in impacts. • Traffic – No overlap - low risk of cumulative traffic impacts due to distance from the project. • Social – Standard assessment – low risk of cumulative social impacts due to distance from the project (limited to cumulative use of available workforce and accommodation in regional centres). • Land – No overlap - low risk of cumulative impacts due to distance from the project. • Amenity noise and vibration – No potential overlap in impacts.
Thunderbolts Wind Farm	15 km west	Approved – yet to be constructed.	24-36 months construction – potential for construction to overlap. Operations will overlap if this project is developed.	• Amenity visual – No potential overlap in impacts. • Biodiversity – No potential overlap in impacts. • Heritage – Aboriginal & historical – No potential overlap in impacts. • Traffic – Overlap in operations traffic - low risk of cumulative construction traffic impacts due to project schedules not aligning. • Social – Standard assessment – low risk of cumulative social impacts due to distance from the project (limited to cumulative use of available workforce and accommodation in regional centres). • Land – No overlap - low risk of cumulative impacts due to distance from the project. • Amenity noise and vibration - No potential overlap in impacts.

Project	Distance to project	Project status	Indicative timing/overlap	Potential cumulative impacts
Winterbourne Wind Farm	12 km south	Proposed – at response to submissions stage.	30 months construction – potential to overlap. Operations will overlap if this project is developed.	• Amenity visual – No potential overlap in impacts. • Biodiversity – No potential overlap in impacts. • Heritage – Aboriginal & historical – No potential overlap in impacts. • Traffic - Overlap in operations traffic - low risk of cumulative construction traffic impacts due to project schedules not aligning. • Social – Standard assessment – potential risk of cumulative social impacts due to proximity of the projects (limited to cumulative use of available workforce and accommodation in regional centres). Will be mitigated by onsite accommodation facility. • Land – No overlap - low risk of cumulative impacts due to distance from the project. • Amenity noise and vibration - No potential overlap in impacts.
Oven Mountain Pumped Hydro	50 km east	Proposed – at response to submissions stage.	4-5 years construction – likely to overlap. Operations will overlap if this project is developed.	• Amenity visual – No potential overlap in impacts. • Biodiversity – No potential overlap in impacts. • Heritage – Aboriginal & historical – No potential overlap in impacts. • Traffic – No overlap - low risk of cumulative traffic impacts due to distance from the project. • Social – Standard assessment – low risk of cumulative social impacts due to distance from the project (limited to cumulative use of available workforce and accommodation in regional centres). • Land – No overlap - low risk of cumulative impacts due to distance from the project. • Amenity noise and vibration – No potential overlap in impacts.
Bendemeer Solar Farm	40 km south-west	Proposed – at response to submissions stage.	18 months construction – no overlap likely (2025/2026). Operations will overlap if this project is developed.	• Amenity visual – No potential overlap in impacts. • Biodiversity – No potential overlap in impacts. • Heritage – Aboriginal & historical – No potential overlap in impacts. • Traffic – No overlap - low risk of cumulative traffic impacts due to distance from the project. • Social – Standard assessment – low risk of cumulative social impacts due to distance from the project (limited to cumulative use of available workforce and accommodation in regional centres). • Land – No overlap - low risk of cumulative impacts due to distance from the project. • Amenity noise and vibration – No potential overlap in impacts.
Armidale Battery Energy Storage System	25 km north-east	Proposed – at response submissions stage.	12 months construction – no overlap likely (2025/2026). Operations will overlap if this project is developed.	• Amenity visual – No potential overlap in impacts. • Biodiversity – No potential overlap in impacts. • Heritage – Aboriginal & historical – No potential overlap in impacts. • Traffic – No overlap - low risk of cumulative traffic impacts due to distance from the project. • Social – Standard assessment – low risk of cumulative social impacts due to distance from the project (limited to cumulative use of available workforce and accommodation in regional centres). • Land – No overlap - low risk of cumulative impacts due to distance from the project. • Amenity noise and vibration – No potential overlap in impacts.
Armidale East BESS	40 km north-east	Proposed – EIS preparation stage.	18 months construction – likely to overlap. Operations will overlap if this project is developed.	• Amenity visual – No potential overlap in impacts. • Biodiversity – No potential overlap in impacts. • Heritage – Aboriginal & historical – No potential overlap in impacts. • Traffic – No overlap - low risk of cumulative traffic impacts due to distance from the project. • Social – Standard assessment - low risk of cumulative social impacts due to distance from the project (limited to cumulative use of available workforce and accommodation in regional centres). • Land – No overlap - low risk of cumulative impacts due to distance from the project. • Amenity noise and vibration – No potential overlap in impacts.

Project	Distance to project	Project status	Indicative timing/overlap	Potential cumulative impacts
Eathorpe BESS	45 km north-east	Proposed – EIS preparation stage.	12-18 months construction – no overlap likely (2025/2026). Operations will overlap if this project is developed.	• Amenity visual – No potential overlap in impacts. • Biodiversity – No potential overlap in impacts. • Heritage – Aboriginal & historical – No potential overlap in impacts. • Traffic – No overlap - low risk of cumulative traffic impacts due to distance from the project. • Social – Standard assessment – low risk of cumulative social impacts due to distance from the project (limited to cumulative use of available workforce and accommodation in regional centres). • Land – No overlap - low risk of cumulative impacts due to distance from the project. • Amenity noise and vibration – No potential overlap in impacts.
Hillview Solar Farm	Within project investigation area	Proposed – EIS preparation stage.	24 months construction –overlap likely (2027/2028). Operations will overlap if this project is developed.	• Amenity visual – Detailed assessment – further assessment required to determine cumulative impacts. • Biodiversity – Standard assessment of impacts on biodiversity • Heritage – Aboriginal & historical – standard assessment of impact on Aboriginal and heritage landscapes. • Traffic – Detailed assessment – cumulative impacts on local and regional road network will require assessment. • Social – Detailed assessment – cumulative impacts on local population, accommodation and goods and services will require assessment. • Land – Standard assessment – cumulative impacts on regional agricultural productivity will be assessed. • Amenity noise and vibration – detailed assessment – further assessment required to determine cumulative noise impacts (construction, traffic and operational).
Eastern Hub Firming Battery	Within project investigation area	Proposed – EIS preparation stage.	18 months construction –overlap likely (2027/2028). Operations will overlap if this project is developed.	• Amenity visual – Detailed assessment – further assessment required to determine cumulative impacts. • Biodiversity – Standard assessment of impacts on biodiversity • Heritage – Aboriginal & historical – standard assessment of impact on Aboriginal and heritage landscapes. • Traffic – Detailed assessment – cumulative impacts on local and regional road network will require assessment. • Social – Detailed assessment – cumulative impacts on local population, accommodation and goods and services will require assessment. • Land – Standard assessment – cumulative impacts on regional agricultural productivity will be assessed. • Amenity noise and vibration – detailed assessment – further assessment required to determine cumulative noise impacts (construction, traffic and operational).
New England REZ Transmission Project	Within project investigation area	Proposed – SEARS requested.	Construction – likely to overlap. Operations will overlap if this project is developed.	• Amenity visual – Detailed assessment – further assessment required to determine cumulative impacts. • Biodiversity – Standard assessment of impacts on biodiversity • Heritage – Aboriginal & historical – standard assessment of impact on Aboriginal and heritage landscapes. • Traffic – Detailed assessment – cumulative impacts on local and regional road network will require assessment. • Social – Detailed assessment – cumulative impacts on local population, accommodation and goods and services will require assessment. • Land – Standard assessment – cumulative impacts on regional agricultural productivity will be assessed. • Amenity noise and vibration – detailed assessment – further assessment required to determine cumulative noise impacts (construction, traffic and operational).

6.13 Matters requiring no further assessment

Consideration of matters listed in Appendix B of the Scoping Report Guidelines (DPIE 2022a) that do not require further assessment in the EIS are listed in Table 6.6.

Table 6.6 Matters requiring no further assessment in the EIS

Matter	Consideration
Access – rail, port and airport facilities	The project area does not contain rail, port or airport facilities. No interactions with such facilities are proposed as part of this project.
Amenity – odour	The project will not generate any odour emissions.
Built environment	The project will have no impact on the built environment.
Hazards and risks – dam safety	There are no existing farm dams within the development corridor.
Hazards and risks – coastal hazards	The project area is not within a coastal zone.
Hazards and risks – land movement	The project area does not contain land mapped as landslide risk. Erosion risks will be considered in the EIS.
Heritage – natural	The project investigation area does not contain any areas of natural heritage significance.

7 Conclusion

Hillview Energy Hub Pty Ltd proposes to develop the Hillview Wind Farm (the project). Located within the New England REZ and on land that is highly disturbed, generally clear of vegetation and proximal to transmission infrastructure, the project site is deemed to be highly suitable for development of the proposed nature.

This Scoping Report has been prepared to assist with the development of SEARs for the project, which will guide the preparation of the EIS. Section 6 above, identified that the following key environmental issues associated with the Project that will require detailed assessment within the EIS:

- amenity – visual
- biodiversity
- access – traffic
- amenity – noise and vibration
- social.

The project as outlined in this Scoping Report will be refined during the preparation of the EIS, including in response to the findings of detailed environmental investigations and feedback from community and stakeholder engagement. The EIS will be prepared in accordance with the SEARs provided by the Planning Secretary.

References

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RFS (Rural Fire Service) 2019, Planning for Bushfire Protection.

RTA (Roads and Traffic Authority) 2002, Guide to Traffic Generating Developments Version 2.2.

Abbreviations

ABS	Australian Bureau of Statistics
ACHA	Aboriginal Cultural Heritage Assessment
AEMO	Australia Energy Market Operator
AHIMS	Aboriginal Heritage Information Management System
ASC	Australian soil classification
BAM	*Biodiversity Assessment Method*
BC Act	*Biodiversity Conversation Act 2016*
BDAR	Biodiversity Development Assessment Report
BESS	Battery storage energy system
BP	before present
BSAL	Biophysical Strategic Agricultural Land
CEEC	Critically endangered ecological community
DPHI	Department of Planning, Housing and Infrastructure
EIS	Environmental Impact Statement
EMM	EMM Consulting Pty Limited
EPA	Environment Protection Authority
EPL	Environment protection licence
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPBC Act	*Environment Protection Biodiversity Conservation Act 1999* (Commonwealth)
GHG	greenhouse gas
GW	Gigawatt
Ha	Hectare
HV	High voltage
HIPAP	Hazardous Industry Planning Advisory Paper
IBRA	Interim Biogeographic Regionalisation for Australia
ICNG	NSW *Interim Construction Noise Guideline*
km	kilometre
km^2	square kilometre
kV	kilovolt
LCA	land category assessment
LCZ	landscape character zone
LEP	Local Environmental Plan
LGA	Local Government Area

LSC	land and soil capability
LVIA	Landscape and visual impact assessment
MNES	Matters of National Environmental Significance
MW	Megawatt
NEM	National Electricity Market
NSW	New South Wales
OSOM	over-size, over-mass
O&M	Operations and maintenance
PCT	plant community type
PCU	power conversion unit
PMST	Commonwealth Protected Matters Search Tool
POEO Act	*Protection of the Environment Operations Act 1997*
PV	photovoltaic
PVIA	Preliminary Visual Impact Assessment
RAP	Registered Aboriginal Party
REZ	Renewable Energy Zone
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SIA	Social Impact Assessment
SSD	State significant development
TEC	threatened ecological community
TfNSW	Transport for NSW
WTG	wind turbine generator

Appendix A
Schedule of lands

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A.1 Schedule of lands

The schedule of land for the project investigation area is summarised in Table A.1.

Table A.1 Hillview Wind – Schedule of land

Lot	Plan	Lot	Plan
6	DP1099058	45	DP755836
5	DP1099058	46	DP755836
2	DP1243987	202	DP755835
4	DP1099058	1	DP983887
3	DP1099058	1	DP966707
1	DP184356	16	DP755820
2	DP1099058	90	DP755820
1	DP1243987	84	DP755820
230	DP755835	158	DP755820
47	DP755836	89	DP755820
83	DP755820	41	DP755820
27	DP755820	42	DP755820
39	DP755820	34	DP755820
32	DP755820	33	DP755820
31	DP755820	1	DP121903
113	DP755835	126	DP755835
222	DP755835	1	DP1244660

Appendix B
Scoping summary table

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B.1 Scoping summary table

Table B.1 Scoping summary table

Level of assessment	Matters	Cumulative impact assessment	Engagement	Relevant policies and guidelines	Scoping report references
Detailed	Amenity – Visual		Specific	• *Guidelines for Landscape and Visual Impact Assessment* (United Kingdom Landscape Institute of Environmental Management and Assessment 2013) • *Wind Energy: Visual Assessment Bulletin AB 01 for State Significant Wind Energy Development* (DPE 2016) • *Guidance Note for Landscape and Visual Assessment* (Australian Institute of Landscape Architects 2018).	Section 6.1
	Biodiversity		General	• *Biodiversity Assessment Method* (DPIE 2020c) • *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities* (DEC 2004) • *Surveying Threatened Plants and their Habitats: NSW Survey Guide for the Biodiversity Assessment Method* (DPIE 2020d) • *Species Credit Threatened Bats and their Habitats* (OEH 2018) • *NSW Survey Guide for Threatened Frogs* (DPIE 2020e) • *Commonwealth EPBC 1.1 Significant Impact Guidelines – Matters of National Environmental Significance* (Commonwealth of Australia, 2013) • *Commonwealth Department of the Environment – Survey Guidelines for Nationally Threatened Species* (various).	Section 6.2
	Access – Traffic	Detailed	General	• *Guide to Traffic Generating Developments* (RTA 2002) • *Austroads Guides to Road Design* (various publications) • *Austroads Guides to Traffic Management* (various publications) • Australian Standard AS 2890 Parts 1 and 2 • Australian Code for Dangerous Goods Transport.	Section 6.3
	Social		Specific	• *Social Impact Assessment Guideline for State Significant Projects 2021* (DPIE 2021).	Section 6.4

Level of assessment	Matters	Cumulative impact assessment	Engagement	Relevant policies and guidelines	Scoping report references
	Amenity – Noise			• NSW Interim Construction Noise Guideline (DECC 2009) • NSW Noise Policy for Industry (EPA 2017) • NSW Road Noise Policy (DECCW 2011) • Assessing Vibration: A Technical Guideline (DECC 2006) • NSW Wind Energy: Noise Assessment Bulletin (DPE 2016c).	Section 6.5
Standard	Heritage – Aboriginal			• Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011) • Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010) • Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010).	Section 6.6
	Heritage – Historical			• The principal articles of The Burra Charter – The Australia ICOMOS Charter for Places of Cultural Significance (ICOMOS 2013) • Statements of Heritage Impact (Heritage Office 1996) • Investigating Heritage Significance Draft Guideline (Heritage Office 2004) • Assessing Heritage Significance (Heritage Office 2001) • Assessing Significance for Historical Archaeological Sites and 'Relics' (Heritage Branch Department of Planning 2009).	Section 6.7
	Hazards and risks			• Hazardous Industry Planning Advisory Paper No. 6 – Guideline for Hazard Analysis (DoP, 2011a) • Multi-Level Risk Assessment (DoP, 2011b) • Hazardous and Offensive Development Application Guidelines: Applying SEPP 33 (DoP, 2011).	Section 6.8
	Land			• Land Use Conflict Risk Assessment Guideline (DPI 2011) • Best Practice Erosion and Sediment Control (IECA 2008).	Section 6.9

Level of assessment	Matters	Cumulative impact assessment	Engagement	Relevant policies and guidelines	Scoping report references
	Water			• Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004) • Managing Urban Stormwater: Soils and Construction Volume 2 (DECC 2008) • Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ 2000) • Guidelines for Instream Works on Waterfront Land (NOW 2012) • Guidelines for Riparian Corridors on Waterfront Land (NOW 2012) • Guidelines for Watercourse Crossings on Waterfront Land (NOW 2012).	Section 6.10
	Air			• N/A.	Section 6.11

Appendix C

Preliminary visual impact assessment

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Hillview Wind Farm

Preliminary Visual Impact Assessment

Prepared for Hillview Energy Hub ATF Hillview Energy Hub Pty Ltd

November 2024

Hillview Wind Farm

Preliminary Visual Impact Assessment

Hillview Energy Hub ATF Hillview Energy Hub Pty Ltd

E231229 RP2

November 2024

Version	Date	Prepared by	Reviewed by	Comments
V1	12 August 2024	Simon Lacey	Tadd Andersen	Draft for review
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TABLE OF CONTENTS

1 Introduction **1**

1.1 Project overview 1

2 Assessment methodology **3**

2.1 Overview 3

2.2 Assessment methodology 3

3 Preliminary baseline study **5**

3.1 Land use 5

3.2 Existing landscape 5

3.3 Landscape character 6

4 Preliminary assessment **11**

4.1 Study area 11

4.2 Sensitive receivers 11

4.3 Community consultation 11

4.4 Preliminary assessment tools 12

4.5 Viewshed mapping 16

4.6 Viewpoint identification 18

5 Conclusion **26**

5.1 Landscape character 26

5.2 Preliminary assessment summary 26

References **27**

Tables

Table 2.1 Scenic quality classification 4

Table 3.1 Landscape character units 9

Table 4.1 Selected viewpoints for private receivers 19

Table 4.2 Selected public viewpoints 24

Figures

Figure 1.1 Indicative Project layout 2

Figure 3.1 Landscape character units 10

Figure 4.1 Preliminary assessment 15

Figure 4.2 Zone of visual influence 17

Photographs

Photograph 3.1	A rolling landscape with hills framed by native woodland	6
Photograph 3.2	Water corridor landscape along Gostwyck Road	7
Photograph 3.3	Agricultural plains landscape looking northwest from Gostwyck Road towards Oxley Wild Rivers National Park in the background	8
Photograph 3.4	Facing west along Gostwyck Road / Mihl Road showing a landscape of remnant bushland with a foreground of cleared pastures	8

Plates

Plate 4.1	Visual magnitude tool	13
Plate 4.2	Multiple wind turbine tool	14

1 Introduction

Hillview Energy Hub Pty Ltd proposes to develop the Hillview Wind Farm (the project) approximately 18 km east of Uralla in the local government area (LGA) of Uralla in the New England Region of New South Wales (NSW). The project is within the New England Renewable Energy Zone (REZ) and would connect to the proposed Energy Co. Eastern substation.

1.1 Project overview

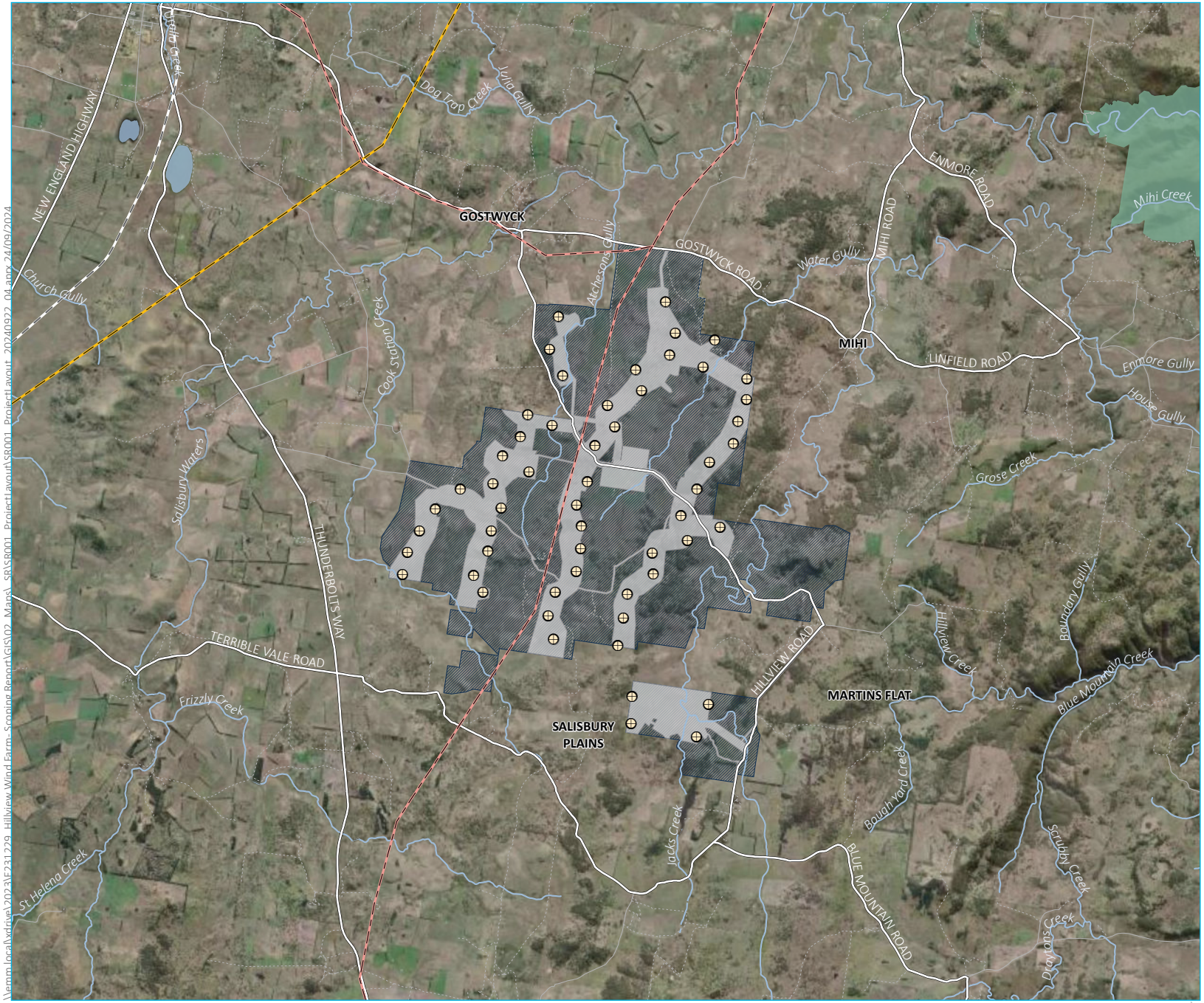
The project includes the installation, operation, maintenance and decommissioning of a wind farm comprising approximately 55 WTGs and ancillary infrastructure

A project investigation area of approximately 6,124 hectares (ha) has been established with preliminary environmental and constraints investigations focussed on a 2,069-ha development corridor within the project investigation area.

It is anticipated that the physical layout and design of the project will comprise the following key infrastructure elements:

- wind turbines – approximately 55 (3 blade) WTGs with a height of up to 270 m (uppermost blade tip)
- substation and transmission connection – on-site collector substations and overhead powerlines to connect the wind farm to the electricity transmission network via the proposed Eastern Hub substation
- electrical connections – a combination of underground cables and overhead powerlines connecting WTGs to the on-site collector substations
- operations and maintenance (O&M) facility – including site offices, O&M buildings, amenities, equipment sheds, storage and parking areas
- site access and internal access roads – including access points from Hillview Road (primary access), Carlon Menzies Road, and Gostwyck Road. Wind turbines will be connected via a network of internal access tracks
- temporary construction infrastructure – to facilitate construction and likely to include on-site concrete batching plant, rock crushing facility, laydown and storage areas and site offices; each turbine location will also include a hard stand area and a turbine laydown area for assembly
- temporary and permanent meteorological masts.

An indicative project layout is provided in Figure 1.1. The layout and design will be refined further through the preparation of the EIS for the project. The following sections describe the project design and layout considerations for key infrastructure elements.



KEY

- Development corridor
- Project investigation area
- Wind turbine generator

Existing environment

- Rail line
- 66 kV transmission line
- 330 kV transmission line
- Major road
- Minor road
- Vehicular track
- Named watercourse
- Named waterbody
- NPWS reserve

INSET KEY

- NPWS reserve
- State forest

Indicative project layout

Hillview Wind Farm
Visual Assessment
Figure 1.1

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Source: EMM (2024); ABS (2021); DCSSS (2023); ESRI (2024); GA (2009)

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2 Assessment methodology

2.1 Overview

This preliminary visual impact assessment (PVIA) is a preliminary evaluation of the potential visual impacts of the Project on landscape values, visual amenity, and scenic vistas. It presents findings from fieldwork and assessment of landscape features and visual settings.

Visual impacts from wind projects are evaluated according to the *Wind Energy: Visual Assessment Bulletin AB 01 For State significant wind energy development* (2016) (VA Bulletin) NSW Department of Planning and Environment.

Additional guidance is provided by the following guidelines:

- *Guidelines for Landscape and Visual Impact Assessment Third Edition* (2013) (the GLVIA), prepared by the Landscape Institute and Institute of Environmental Management and Assessment
- *Wind Energy Guideline* (2024) (Wind Guideline), prepared by the NSW Department of Planning, Housing and Infrastructure
- *Guideline for landscape character and visual impact assessment* (2020) Centre for Urban Design Transport for NSW.

2.2 Assessment methodology

The following studies have been undertaken during the development of this PVIA report.

2.2.1 Visual baseline study

The visual baseline establishes the existing landscape and visual conditions. This forms the basis of determining the level of impacts of a proposed project. The assessment method used in this report is adapted from the GLVIA and VA Bulletin, which involve information review, consultation, field observations and photography, computer-based data processing and analysis, and application of subjective professional judgement. The following desktop assessment has been carried out:

- the use of preliminary assessment tools helps identify receptors with potential sensitivity
- key viewpoints and landscape features were identified using available maps and background documents
- a preliminary Zone of Visual Influence (ZVI) was created to define the theoretical area where the Project could be visible.

2.2.2 Landscape character

The landscape character is determined by the number, size, type and contrast of elements present. Typically, the key elements are topography, vegetation, water features and built elements. Other important factors are the consistency of these elements and whether they have developed progressively over time and become well integrated into a harmonious landscape. In addition, consideration must be given to the prevalence of change, including whether the landscape is experiencing large-scale development.

2.2.3 Scenic quality

Scenic quality refers to the relative scenic or aesthetic value placed on the landscape by the community. This is based on the presence of key landscape features known to be associated with community perceptions of high,

moderate, or low scenic quality. In accordance with the VA Bulletin, a scenic quality 'frame of reference' has been assessed. The scenic quality classifications used in this assessment are identified in Table 2.1.

Table 2.1 Scenic quality classification

Scenic quality	Landforms	Vegetation	Waterbodies
High	Isolated peaks, steep rocky ridges, cones or escarpments with distinctive form and/or colour contrast that become focal points. Larger areas of distinctive rock outcrops or boulders. Well defined, steep sided valley gorges.	Strongly defined patterns with combinations of eucalypt forest, naturally appearing openings, streamside vegetation and/or scattered exotics. Distinctive stands of vegetation that may create unusual forms, colours or textures in comparison to surrounding vegetation.	Visually prominent lakes, reservoirs, rivers, streams and swamps.
Moderate	Steep, hilly and undulating ranges that are not visually dominant. Broad shallow valleys. Moderately deep gorges or moderately steep valley walls. Minor rock outcrops.	Predominantly open forest or woodland combined with some natural openings in patterns that offer some visual relief. Vegetative stands that exhibit a range of size, form, colour, texture and spacing.	Intermittent streams, lakes, rivers, swamps and reservoirs.
Low	Large expanses of flat or gently undulating terrain. Indistinct, dissected or unbroken landforms that provide little illusion of spatial definition or landmarks.	Extensively cleared and cropped areas with very limited variation in colour and texture.	Natural waterbody absent.

2.2.4 Community consultation

Community consultation for the visual component has taken place during the scoping phase of the Project via face-to-face drop-in sessions held at the Uralla Court House on 24 July and 25 July, providing insights into community perspectives on landscape values to inform the PVIA. Community consultation will continue throughout the Project to gather as much community feedback as possible.

3 Preliminary baseline study

The Project investigation area is located within the Uralla LGA in the New England Northwest region of NSW. The region is characterised by its productive agricultural lands. The New England Highway connects the region to major population centres along the east coast, and it is approximately 12 km west of the Project investigation area. The context of the Project is shown in Figure 1.1.

The Project is in close proximity to several other State Significant Development (SSD) and SSD modification Projects within the New England REZ. Of note, the Deeargee Solar Farm adjacent on the northwestern boundary, New England Solar Farm, 6 km north-west of the Project investigation area, and Winterbourne Wind Farm, 12 km south-west of the Project investigation area.

The township of Uralla, with a population of 2,388 people, is the closest service centre to the Project with the closest rural communities being Gostwyck, Salisbury Plains and Mihi. Armidale (21 km north of the Project) is the key academic centre in the region with emerging agricultural and renewable energy industries. Key employment areas exist at the Armidale Airport and in the other existing industrial zones. Compact urban growth will be prioritised in Armidale's existing urban zones.

3.1 Land use

All land within the study area is zoned RU1 Primary Production under the Uralla Local Environmental Plan 2012 (Uralla LEP) and is predominantly used for agricultural purposes. The project investigation area has been significantly modified by historical land use practices and land disturbance associated with land clearing, cropping and livestock grazing. Aerial photos indicate land use has changed little since at least the middle of last century. Cattle and sheep grazing for wool, breeding stock and meat continue to dominate agricultural activities undertaken in the wider regional area.

3.2 Existing landscape

Within the project investigation area, landform consists of wide flat plains between low ridges and rolling hills. The flatter areas are divided by permanent and ephemeral creeks. Elevation across the project investigation area is variable, ranging from approximately 1,020 m to 1,100 m Australian Height Datum (AHD).

To the east of the Project investigation area there are two ridges running in a north-south direction in the vicinity of Water Gully and Mihi Creek. This high ground is significantly covered by native woodland that extends north to Gostwyck Road. Aside from these two ridges, vegetation over much of the project investigation area consists of agricultural pasture with small patches of native woodland, scattered trees and planted windbreaks. From aerial photo analysis there is a clear gradient of decreasing tree cover/increasingly open pasture across the project investigation area from the south-east to the north-west. Also, more prevalent in the north and west of the project investigation area are vegetative windbreaks, consisting of usually non-native tree and shrub species planted in linear forms.

Built form in the project investigation area is characterised by scattered farm dwellings and their associated agricultural structures such as sheds, silos and cattle yards. These dwellings are linked by an informal network of narrow and often winding roads.

Photograph 3.1 shows the open, undulating landscape prevalent in the west and north of the project investigation area with native woodland visible on the hills in the background.

Photograph 3.1 A rolling landscape with hills framed by native woodland

3.3 Landscape character

An assessment of "how the Project will affect the elements that make up the landscape, the aesthetic and perceptual aspects of the landscape and its distinctive character" (Technical Supplement) is required in the EIS. This preliminary review of the landscape character is based upon desktop analysis and a preliminary field visit.

The landscape within and surrounding the project investigation area and its surrounds can be characterised into three broad categories as described below. These are defined by the vegetation, landform, land use and presence of water.

i Oxley water corridors

Water corridors contrast with surrounding landscape as a narrow, irregular line of trees surrounded by pasture. This landscape character is most evident along parts of Salisbury Waters in the north of the project investigation area, while in many locations only scattered trees remain to mark a creek's course across the landscape. Named creeks that demonstrate this landscape character within the project investigation area include Salisbury Waters, Atchesons Gully, Water Gully, Mihi Creek and Cook Station Creek. Though, extensive tree cover over the northern part of Water Gully and its adjoining ridges, is more representative of the remnant bushland landscape character described in Section 3.3iii below.

Water corridors carry their water in narrow channels with low but usually steep banks, which can make water corridors less visible from afar. A typical water creek within the character unit is shown in Photograph 3.2.

Photograph 3.2 Water corridor landscape along Gostwyck Road

ii Salisbury plains

The majority of the project investigation area is comprised of this landscape character zone as it includes cleared plains and their adjoining lower slopes. This flat or gently undulating landscape is frequently dissected by permanent and ephemeral creeks. Vegetation cover consists mainly of extensive pasture that creates a visual patchwork of varying colour and texture. This variation is due to differences in management and grazing practices between paddocks. The scattered presence of linear windbreaks of exotic trees, and clusters of planting around farm dwellings, are an important feature of this landscape type. Farm dwellings are identified as sensitive receivers / private viewpoints in later sections of this report.

This landscape type is partially defined by the presence and location of the other landscape categories. This includes the water corridors (Section 3.3i) that traverse it and the remnant bushland (Section 3.3iii) that often forms a backdrop.

Typical agricultural plains in the western part of the project investigation area are shown in Photograph 3.3.

Photograph 3.3 **Agricultural plains landscape looking northwest from Gostwyck Road towards Oxley Wild Rivers National Park in the background**

iii Remnant bushland

Remnant bushland occurs primarily on ridges and hilltops in the south and east of the project investigation area and extends along the northern section of Water Gully. These areas contain trees of varying densities and form a strong visual element as they rise from the cleared plains to provide a forested backdrop to the landscape. Remnant bushland on hills to the west of the project investigation area is shown in Photograph 3.4.

Photograph 3.4 **Facing west along Gostwyck Road / Mihl Road showing a landscape of remnant bushland with a foreground of cleared pastures**

3.3.2 Landscape character units and scenic quality

The evaluation of three distinct landscape character units (LCUs) were recognised, in the greater regional area, with one predominant LCU within the project investigation area. Their scenic quality has been assessed using a standardised framework in accordance with VA Bulletin.

Table 3.1 summarises the LCUs with a more detailed description with Figure 3.1 showing the mapping of these LCUs in the context of the Project.

Table 3.1 Landscape character units

LCU	Name	Description	Preliminary scenic quality rating
LCU01	Oxley Water Corridors	• Water courses in this project investigation area consist of narrow, irregular creeks with usually steep banks, lined with trees and surrounding pasture lands. • Scattered trees remain to mark a creek's course across the landscape in creeks such as Salisbury Waters, Atchesons Gully, Water Gully, Mihi Creek, and Cook Station Creek. • Extensive remnant tree cover over the northern part of Water Gully and adjoining ridges. • Open water is rarely visible from ground level locations.	Moderate
LCU02	Salisbury Plains	• Comprising cleared plains and adjoining lower slopes frequently dissected by permanent and ephemeral creeks. • A generally flat or gently undulating landscape. • A visual patchwork of varying colour and texture due to differences in management and grazing practices. • Linear windbreaks of exotic trees and clusters of planting around farm dwellings are present.	Low
LCU03	Remnant Bushland	• Remnant bushland primarily occurs on ridges and hilltops in the south and east of the project investigation area. • Trees of varying densities form a strong visual element. • Cleared plains provide a forested backdrop to the landscape.	Moderate

KEY

- Project investigation area 8 km
- Project associated landowner
- Wind turbine generator

Landscape character unit

- LCU01- Oxley water corridor
- LCU02- Sailsbury Plains
- LCU03- Remnant bushland

Existing environment

- Rail line
- 66 kV transmission line
- 330 kV transmission line
- Major road
- Minor road
- Vehicular track
- Named watercourse
- Named waterbody
- NPWS reserve
- National heritage Listed- Gondwana Rainforests of Australia

Source: EMM (2024); DCSSS (2023); ESRI (2024); GA (2009)

0 5 10 km

GDA2020 MGA Zone 55

N

Existing landscape character units

Hillview Wind Farm
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Figure 3.1

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4 Preliminary assessment

4.1 Study area

The initial step in the assessment process is to define the visual study area around the proposed wind farm. The study area defines the limits of the visual impact assessment. Even though the Project infrastructure may be visible beyond the study area extents, there is no requirement that the visual impacts be assessed.

The visual study area is defined by the VA Bulletin as 8 km from the WTGs. Figure 4.1 illustrates the extents of the visual study area.

4.2 Sensitive receivers

'Sensitive receiver' refers to people who have potential views of the Project. They are represented and assessed using the locations of dwellings that surround the project investigation area.

There are 74 non-associated dwellings within the visual study area. Figure 4.1 shows the sensitive receivers (associated and non-associated) who are considered in this PVIA.

There are two heritage items listed on the Uralla Local Environment Plan 2012 that are within 8 km of the Project:

- Gostwyck Chapel
- Deeargee Woolshed.

Whilst not generally open to the public, these heritage items meet the requirements for a public viewpoint according to the Technical Supplement and therefore are considered as public viewpoints in this PVIA.

4.3 Community consultation

4.3.1 Scope and activities

As part of this PVIA, the primary objective of community consultation is to:

- establish key landscape features
- define areas of scenic quality
- identify key public viewpoints valued by the community.

Hillview Energy Hub Pty Ltd have a framework which guides the delivery of communication and engagement throughout the planning and assessment process for each phase of the project. This framework is dynamic in nature and evolves based on stakeholder and community feedback. Engagement for Hillview Wind Farm Scoping Phase commenced in February 2024 and a further comprehensive engagement program is planned for later in 2024 as part of the EIS phase. The survey has been active since February 2024. The engagement activities include the following targeted visual and landscape questions:

- How would you describe the landscape surrounding your home?
- What elements of the surrounding landscape are most important to you?
- Thinking about the views from your home, what views do you enjoy the most? And why? What about that view makes it important?

- Are there any nearby hiking trails, lookouts, or places you like to visit? If so, what is it about that place that you enjoy
    - the views
    - water
    - the peace and quiet
    - other (describe)?
- Consider how the project would affect your local area and rank each potential impact and benefit ('very positive', 'positive', 'neutral', 'negative' or 'very negative') – visual amenity.
- We welcome image submissions of:
    - a landscape feature, place or view that you consider to be significant, scenic or beautiful
    - a landscape feature, place or view that captures the character of your area
    - a significant aspect of the landscape that you value – it could be intangible or non-visual like cultural, heritage, ecological elements of the landscape.

    Willing participants are invited to upload & share 1-2 images relating to any of these 3 themes with us.

4.3.2 Consultation outcomes

Valuable conversations were had with members of the community, Government agency representatives, and local community group members. Feedback from all in attendance was generally positive. Many of the questions from the community were themed around potential traffic impact, the risk of environmental impacts and key potential economic benefits to the local area. Further consultation during the EIS Phase will be encouraged to provide outcomes from the community in relation to visual and landscape impacts.

4.3.3 Next steps

Consultation undertaken from February 2024 for the Hillview Wind Farm has largely been undertaken by ACE Power, with continued engagement throughout 2024 and 2025 as part of the project EIS Phase.

4.4 Preliminary assessment tools

The preliminary assessment tools identify the locations that may have a substantial visual impact and need to be considered in the design development of the wind farm. These locations will also need to be assessed in further detail during the EIS.

The tools used to identify the locations with potential visual impacts are described below.

4.4.1 Visual setback

A visual setback (required under the Wind Guideline) indicates the distance from a WTG where the WTG is likely to have a dominant appearance. This is the distance at which the high impact rating will be triggered. It is generally recommended that WTG placement avoids the area within the setback.

Based on the turbine height of 270 m, the setback would be 1.7 km from the turbines (refer to **Figure 4.1**).

4.4.2 Visual magnitude

The visual magnitude tool identifies the distance from the WTG at which viewpoints or dwellings need to be assessed. This distance is based on the WTG height, which is 270 m. The visual magnitude tool (as shown in Plate 4.1 uses two lines as follows:

- Black line – indicates where detailed consideration to the visual impacts on dwellings and key public viewpoints. The locations below the black line need detailed consideration.
    - The black line distance for this Project is 3.62 km from the WTGs.
- Blue line – indicates the threshold within which a viewpoint may need further consideration due to factors like topography or landscape features. These would be considered for further assessment during the EIS.
    - The blue line distance for this Project is 4.97 km from the WTGs.

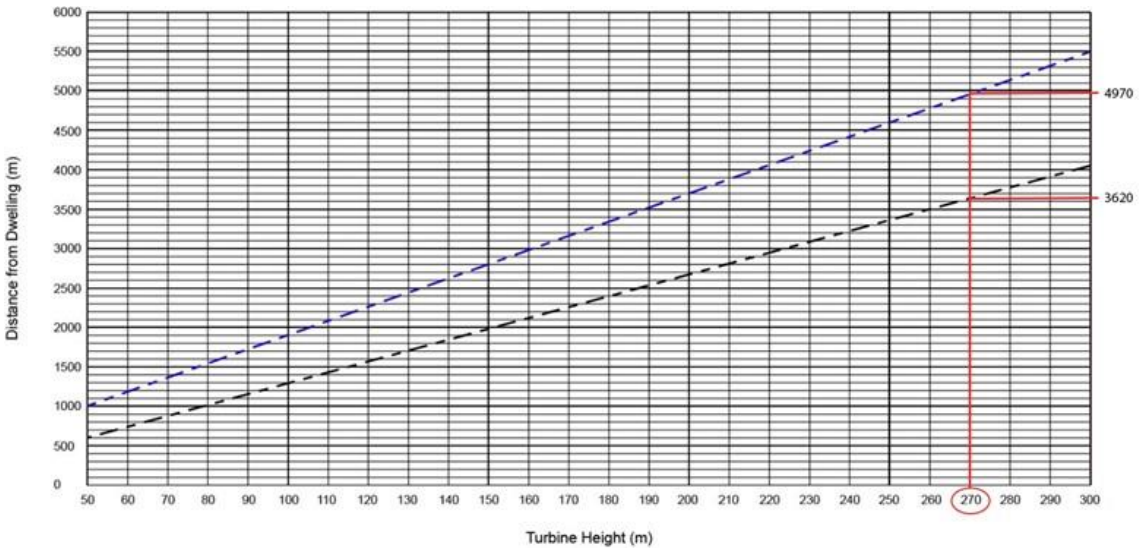


Plate 4.1 Visual magnitude tool

This study maps the 'black line threshold' and 'blue line threshold' around each WTG location as illustrated on Figure 4.1.

4.4.3 Multiple wind turbine tool

The multiple wind turbine tool provides a preliminary indication of the potential cumulative impacts from the proposed wind turbines. To do this, views from each dwelling are mapped into 60° sectors (6 sectors to cover 360° views). Where WTGs are located in three or more sectors, detailed consideration needs to be given to the potential cumulative visual impacts. Plate 4.2 illustrates the sectors as presented in the VA Bulletin.

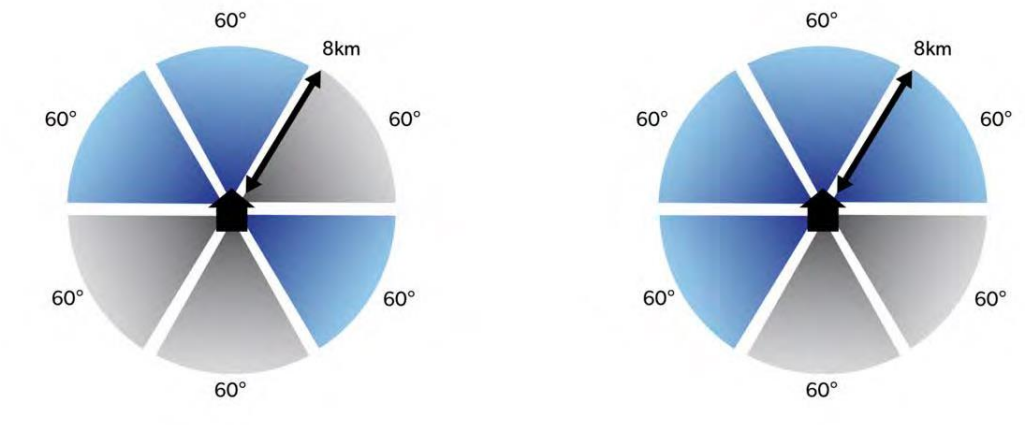
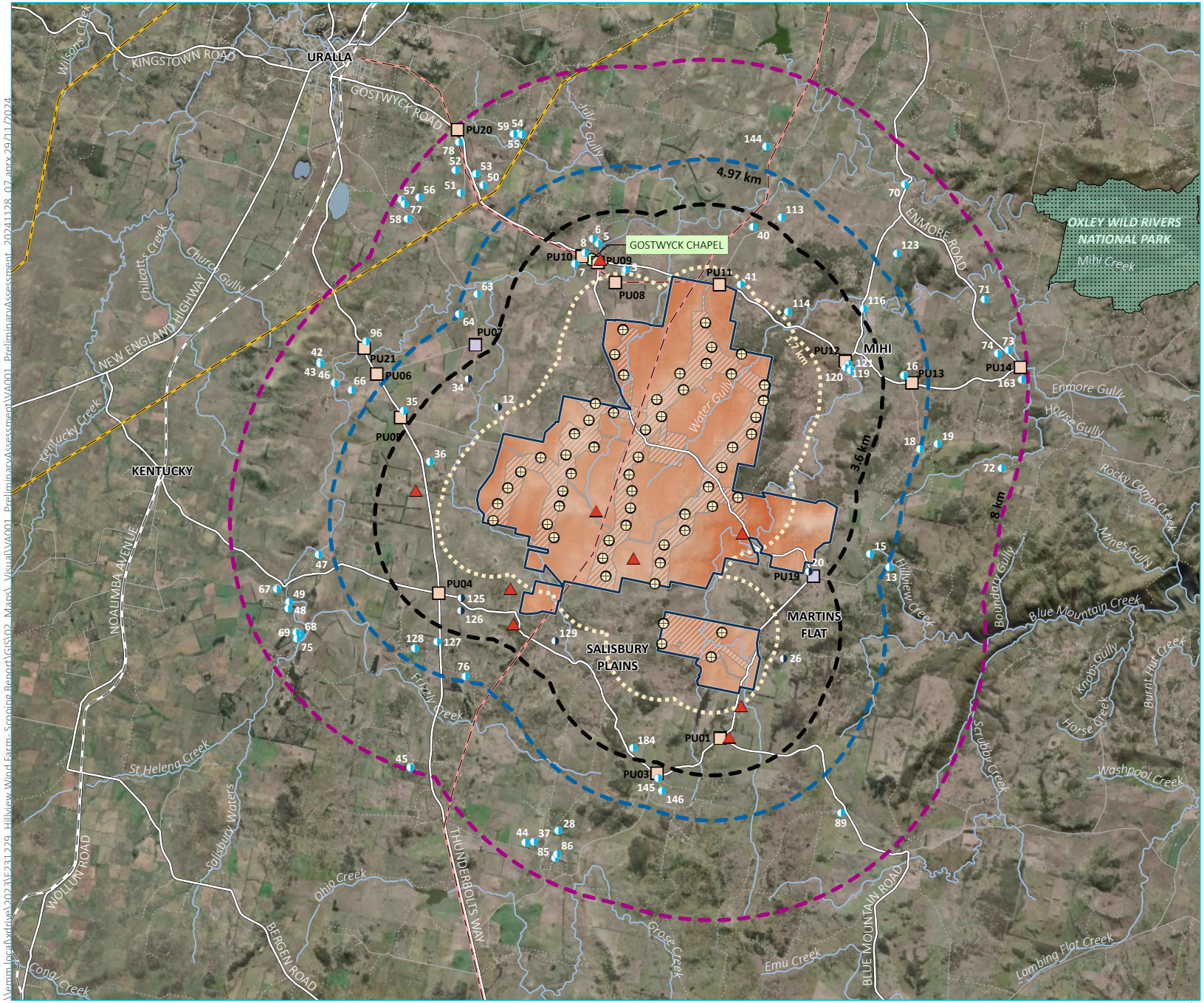


Plate 4.2 Multiple wind turbine tool



KEY

- Project investigation area
- Development corridor
- Visual setback- 1.7 km
- Black line- 3.6 km
- Blue line- 4.97 km
- Project investigation area- 8 km
- Wind turbine generator
- Project associated residence

Non-associated residence
- Up to two 60° sectors
- Three or more 60° sectors

Public viewpoint
- Up to two 60° sectors
- Three or more 60° sectors

Key landscape feature
- Gostwyck Chapel
- National heritage Listed- Gondwana Rainforests of Australia
- NPWS reserve
- Named waterbody

Existing environment
- Rail line
- 66 kV transmission line
- 330 kV transmission line
- Major road
- Minor road
- Vehicular track
- Named watercourse

Wind resource m/s
- 8
- 5

Preliminary assessment

Source: EMM (2024); ACE (2024); DCSSS (2023); ESRI (2024); GA (2009)

0 5 10 km

GDA2020 MGA Zone 55

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Hillview Wind Farm
Visual Assessment
Figure 4.1

EMM creating opportunities

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4.5 Viewshed mapping

Viewshed mapping is a method of mapping the theoretical visibility of the Project across the surrounding landscape. Using geographic information systems (GIS) technology, it combines the topography of the land with project modelling to analyse potential visibility of the Project. The results are the zone of visual influence (ZVI).

Viewshed mapping is used to identify the locations with views to the project infrastructure. It illustrates the area in the surrounding landscape from which the Project may be visible. It also indicates areas that have intervening hills or other landforms that block views.

The ZVI will assist in determining where potential visual impacts will occur, and to what extent. This will be used to eliminate the need to assess viewpoints that do not have line of sight to the WTGs.

4.5.1 Zone of visual influence

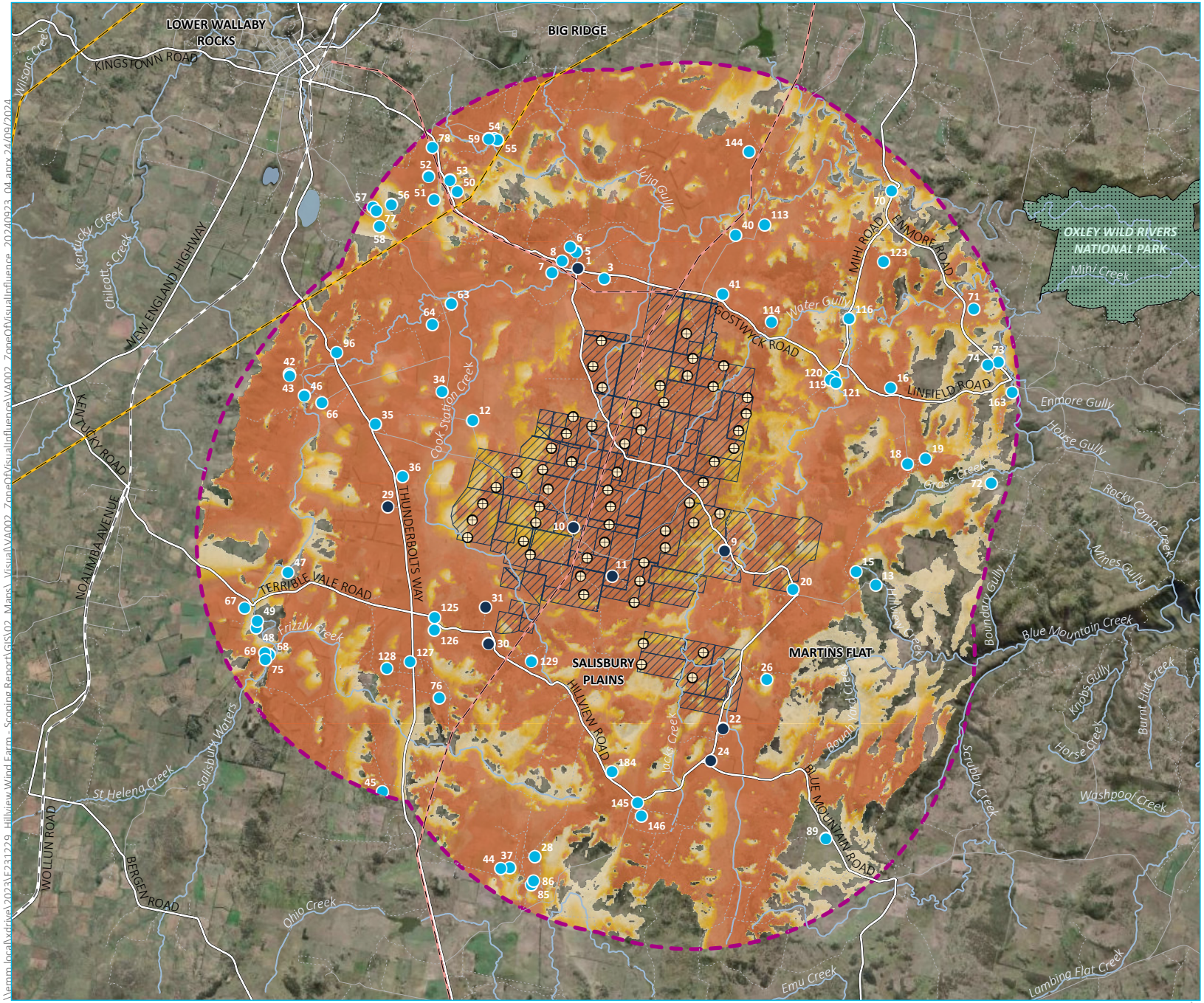
A ZVI diagram illustrates the theoretical visibility of the proposed project infrastructure, or the area over which a development can theoretically be seen (Figure 4.2).

The ZVI diagram is generated using a digital elevation model (DEM) which covers the project investigation area. The DEM was built using publicly available ELVIS spatial data from the Foundation Spatial Data Framework. The DEM is representative of the bare earth surface and only takes into account the topography of the landscape. This does not account for any vegetation (trees), or structures (e.g. rural dwellings, farm sheds and agricultural infrastructure) that may screen views into the development footprint. It represents a worst-case scenario in terms of project visibility.

It is important to note that the VA Bulletin requires that vegetation (trees) and built structures not be included in the mapping. The resulting maps can therefore only show where landforms obstruct views. This can be important for viewpoints that are behind vegetation or buildings and have no or obstructed views of the proposed development yet are assessed as having a potential impact in this PVIA.

Note the following regarding the ZVI diagram:

- The ZVI does not account for the diminishing size of project elements as the viewer moves further away. It only indicates where project elements will be visible.
- It does not indicate specifically how many WTGs or which turbines are visible from a particular location.
- The ZVI uses colour to indicate high visibility and low visibility. Highly visible areas show locations on the ground from which all or most turbines would be visible. Low levels of visibility are locations where small numbers of turbines are visible. No colour within the study area would indicate locations where no turbine is predicted to be visible.



KEY

- Project investigation area 8 km
- Project associated landowner
- Wind turbine generator

Receptor

- Project associated
- Non-associated

Zone of visual influence

- Highly visible
- Not very visible

Existing environment

- Rail line
- 66 kV transmission line
- 330 kV transmission line
- Major road
- Minor road
- Vehicular track
- Named watercourse
- Named waterbody
- NPWS reserve
- National heritage Listed - Gondwana Rainforests of Australia

Source: EMM (2024); ABS (2021); DCSSS (2023); ESRI (2024); GA (2009)

0 5 10 km

GDA2020 MGA Zone 55

N

Zone of visual influence

Hillview Wind Farm
Visual Assessment
Figure 4.2

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4.5.2 Summary of ZVI

The ZVI is used to select viewpoints by indicating areas that are predicted to have views into the Project. Conversely, it indicates areas that are not predicted to have any views of the Project. With this knowledge, viewpoints can be selected from areas where the Project is visible. Areas that do not have line-of-sight to the Project can be eliminated from the assessment.

The ZVI indicates:

- the topography of the region does little to limit views into the project investigation area within the visual study area
    - visibility is at its highest on the western side of the project investigation area
    - residences on the north, south, and western side of the project investigation area are likely to experience a higher visual impact
- residences and public trails on the eastern side of the project investigation area are likely to experience low visual impacts due to the terrain in this area
- users of Thunderbolts Way, Hillview Road, and Gostwyck Road have opportunities to see into the project investigation area as it passes near the boundaries on the northern, western, and southern sides.

The ZVI is a tool to help identify the WTG's visibility from the surrounding landscape. The extent of the Project's visibility and the potential for impacts on visual amenity is verified by field work and photographic evidence.

4.6 Viewpoint identification

The final step in the PVIA is to identify the private receivers and the public viewpoints that would have line of sight to the project infrastructure. These are the viewpoints that will be assessed in detail during the EIS stage of the Project.

For the purposes of the preliminary assessment, there are two types of viewpoints. These are:

- private viewpoints – locations that are not accessible to the public (mainly residences) and have views into the project investigation area; these views are limited to the 8 km visual study area
- public viewpoints – locations that are publicly accessible (roads, parks, trails, tourist areas) and offer views into the project investigation area; these views are limited to the 8 km visual study area.

The selection of the viewpoints is based on the locations of residences and public areas. This was overlaid with the viewshed mapping to determine which locations had the potential for visual impacts from the Project. Viewpoints selected satisfy both criteria, falling within the affected ZVI and required by the preliminary assessment tools.

4.6.1 Private receivers

Private receivers are primarily residences and land held by private individuals. Access to these locations is typically restricted, limiting the number of people who are impacted by a Project. However, these are locations where people spend most of their time. Therefore, duration of a visual impact is substantial for those living there.

Private receivers are assessed in one of two ways:

- Residences near the Project that are likely to have significant visual impacts area assessed individually. These are likely to require detailed assessments in the LVIA. During the LVIA process, photographs will be taken from the residence, in a location that captures views from important rooms in the house.

- Residences further away from the Project are assessed in groups. Typically, a viewpoint is selected to represent a cluster of residences. The viewpoint is chosen where the impact is likely to be greatest for that group of residences. Photographs that represent a cluster of residences are usually taken from the roadway or common drive.

The residences identified with potential visual impacts and the rational for the selection are listed in Table 4.1 and shown in Figure 4.1.

Table 4.1 Selected viewpoints for private receivers

Viewpoint reference - Residences	Viewpoint type	Location	Below black line	Below blue line	Number of sectors	Requires further assessment
3	Private dwelling	1170 Gostwyck Road Gostwyck	Yes	No	2	Yes
5	Private dwelling	979 Gostwyck Road Gostwyck	Yes	No	2	Yes
6	Private dwelling	979 Gostwyck Road Gostwyck	Yes	No	2	Yes
7	Private dwelling	979 Gostwyck Road Gostwyck	Yes	No	2	Yes
8	Private dwelling	979 Gostwyck Road Gostwyck	Yes	No	2	Yes
12	Private dwelling	1057 The Gap Road Salisbury Plains	Yes	No	3	Yes
13	Private dwelling	252 Gills Road Salisbury Plains	No	No	2	No
15	Private dwelling	252 Gills Road Salisbury Plains	No	Yes	2	Yes
16	Private dwelling	183 Linfield Road Mihi	No	Yes	2	Yes
18	Private dwelling	194 Dwyers Range Road Mihi	No	No	2	No
19	Private dwelling	231 Dwyers Range Road Mihi	No	No	2	No
20	Private dwelling	1815 Hillview Road Salisbury Plains	Yes	No	3	Yes
26	Private dwelling	1522 Hillview Road Salisbury Plains	Yes	No	3	Yes
28	Private dwelling	Hillview Road Salisbury Plains	No	No	2	No

Viewpoint reference - Residences	Viewpoint type	Location	Below black line	Below blue line	Number of sectors	Requires further assessment
34	Private dwelling	900 The Gap Road Salisbury Plains	Yes	No	3	Yes
35	Private dwelling	2894 Thunderbolts Way Salisbury Plains	No	Yes	2	Yes
36	Private dwelling	2726 Thunderbolts Way Salisbury Plains	Yes	No	2	Yes
37	Private dwelling	355 Mirani Road Walcha	No	No	2	No
40	Private dwelling	Hillview Road Gostwyck	Yes	No	2	Yes
41	Private dwelling	Hillview Road Gostwyck	Yes	No	2	Yes
42	Private dwelling	112 Talisker Road Uralla	No	No	1	No
43	Private dwelling	112 Talisker Road Uralla	No	No	1	No
44	Private dwelling	355 Mirani Road Walcha	No	No	2	No
45	Private dwelling	1805 Thunderbolts Way Salisbury Plains	No	No	1	No
46	Private dwelling	113 Talisker Road Uralla	No	No	1	No
47	Private dwelling	Terrible Vale Road Salisbury Plains / Terrible Vale Rd, Kentucky South	No	No	1	No
48	Private dwelling	496 Terrible Vale Road Kentucky South	No	No	1	No
49	Private dwelling	498 Terrible Vale Road Kentucky South	No	No	1	No
50	Private dwelling	605 Gostwyck Road Uralla	No	No	2	No
51	Private dwelling	544 Gostwyck Road Uralla	No	No	1	No
52	Private dwelling	546 Gostwyck Road Uralla	No	No	1	No
53	Private dwelling	565 Gostwyck Road Uralla	No	No	1	No
54	Private dwelling	210 Dog Trap Road Uralla	No	No	2	No
55	Private dwelling	210 Dog Trap Road Uralla	No	No	2	No
56	Private dwelling	The Gap Road Uralla	No	No	1	No

Viewpoint reference - Residences	Viewpoint type	Location	Below black line	Below blue line	Number of sectors	Requires further assessment
57	Private dwelling	245 The Gap Road Uralla	No	No	1	No
58	Private dwelling	326 The Gap Road Uralla	No	No	1	No
59	Private dwelling	210 Dog Trap Road Uralla	No	No	2	No
63	Private dwelling	645 The Gap Road Salisbury Plains	No	Yes	2	Yes
64	Private dwelling	664 The Gap Road Salisbury Plains / 678 The Gap Road Uralla	No	Yes	2	Yes
66	Private dwelling	3031 Thunderbolts Way Salisbury Plains	No	No	2	No
67	Private dwelling	496 Terrible Vale Road Kentucky South	No	No	1	No
68	Private dwelling	500 Terrible Vale Road Kentucky South	No	No	1	No
69	Private dwelling	500 Terrible Vale Road Kentucky South	No	No	1	No
70	Private dwelling	794 Enmore Road Mihi	No	No	1	No
71	Private dwelling	1253 Enmore Road Mihi	No	No	1	No
72	Private dwelling	558 Linfield Road Mihi	No	No	1	No
73	Private dwelling	1453 Enmore Road Mihi	No	No	1	No
74	Private dwelling	558 Linfield Road Mihi	No	No	1	No
75	Private dwelling	502 Terrible Vale Road Kentucky South	No	No	1	No
76	Private dwelling	2102 Thunderbolts Way Salisbury Plains	No	Yes	2	Yes
77	Private dwelling	The Gap Road Uralla	No	No	1	No
78	Private dwelling	448 Gostwyck Road Uralla	No	No	1	No
85	Private dwelling	355 Mirani Road Walcha	No	No	2	Yes
86	Private dwelling	355 Mirani Road Walcha	No	No	2	No
89	Private dwelling	Hillview Road Salisbury Plains	No	No	1	No

Viewpoint reference - Residences	Viewpoint type	Location	Below black line	Below blue line	Number of sectors	Requires further assessment
96	Private dwelling	3118 Thunderbolts Way Uralla	No	No	2	No
113	Private dwelling	310 Gostwyck War Service Road Gostwyck	No	Yes	2	Yes
114	Private dwelling	1673 Gostwyck Road Mihi	Yes	No	2	Yes
116	Private dwelling	313 Mihi Road Mihi	No	Yes	1	Yes
119	Private dwelling	495 Mihi Road Mihi	Yes	No	2	Yes
120	Private dwelling	495 Mihi Road Mihi	Yes	No	2	Yes
121	Private dwelling	495 Mihi Road Mihi	Yes	No	2	Yes
123	Private dwelling	91 Mihi Road Mihi	No	No	1	No
125	Private dwelling	61 Hillview Road Salisbury Plains	Yes	No	3	Yes
126	Private dwelling	68 Hillview Road Salisbury Plains	Yes	No	3	Yes
127	Private dwelling	2183 Thunderbolts Way Salisbury Plains	No	Yes	2	Yes
128	Private dwelling	2147 Thunderbolts Way Salisbury Plains	No	Yes	2	Yes
129	Private dwelling	419 Hillview Road Salisbury Plains	Yes	No	4	Yes
144	Private dwelling	777 Elliots Road Dangarsleigh	No	No	2	No
145	Private dwelling	960 Hillview Road Salisbury Plains	No	Yes	1	Yes
146	Private dwelling	960 Hillview Road Salisbury Plains	No	Yes	1	Yes
163	Private dwelling	558 Linfield Road Mihi	No	No	1	No
184	Private dwelling		Yes	No	2	Yes

4.6.2 Public viewpoints

Public viewpoints represent various types of locations. The types of locations include public gathering areas like parks, sporting fields and walking trails in the surrounding community. They also include roads, trails, scenic viewpoints and campsites that are located within regional, state and national parks, reserves and forests. Tourist attractions, heritage sites and public buildings can also be included in this category.

In accordance with the Visual Assessment Bulletin "Where wind turbines are visible within the horizontal views of the dwelling or key public viewpoints in three or more 60° sectors, the proponents must identify the turbines, relative dwelling and key public viewpoint, along with the relative distance and submit these to the Department as part of the request for SEARs". These turbines will become a focus for assessment in the EIS.

The public areas located near the visual study area include:

- Deeargee Woolshed
- Gostwyck Chapel
- Burnt Hut Boundary Trail.

The roads near the Project with potential views into the Project are:

- Blue Mountain Road
- Hillview Road
- Hazeldean Road
- Mirani Road
- Thunderbolts Way
- Terrible Vale Road
- Carlon Menzies Road
- Salisbury Plains Road
- The Gap Road
- Gostwyck Road
- Gostwyck War Service Road
- Mihi Road
- Linfield Road
- Enmore Road
- Townsend Road
- Dwyers Range Road
- Uruga Road
- Oorawilly Road
- Blue Knobby Road
- Mount Pleasant Road

- Spring Camp Road
- Enmore Station Road
- Jerrets Road
- Gills Road
- Dog Trap Road
- Talisker Road.

The public viewpoints used for this PVIA are selected from the public areas and roads identified from the ZVI. Only locations within the public viewpoint visual study area are selected, and therefore not all the public areas will be represented by viewpoints. The selected public viewpoints are listed in Table 4.2.

Table 4.2 Selected public viewpoints

Viewpoint reference - Residences	Viewpoint type	Location	Below black line	Below blue line	Number of sectors	Requires further assessment
PU01	Public Road	Blue Mountain Road Hillview Road	Yes	No	2	Yes
PU03	Public Road	Hillview Road Mirani Road	No	Yes	2	Yes
PU04	Public Road	Hillview Road Thunderbolts Way Terrible Vale Road	Yes	No	2	Yes
PU05	Public Road	Thunderbolts Way Carlon Menzies Road	No	Yes	2	Yes
PU06	Public Road	Thunderbolts Way Salisbury Plain Road	No	No	2	No
PU07	Public Road	Salisbury Plain Road The Gap Road	No	Yes	3	Yes
PU08	Public Road	Deeargee Woolshed	Yes	No	2	Yes
PU09	Public Road	Gostwyck Road Hillview Road	Yes	No	2	Yes
PU10	Public Road	Gostwyck Chapel	Yes	No	2	Yes
PU11	Public Road	Gostwyck Road Gostwyck War Service Road	Yes	No	2	Yes
PU12	Public Road	Gostwyck Road Mihi Road Linfield Road	Yes	No	2	Yes
PU13	Public Road	Linfield Road Dwyers Range Road	No	No	2	No
PU14	Public Road	Linfield Road Enmore Road Townsend Road	No	No	1	No

Viewpoint reference - Residences	Viewpoint type	Location	Below black line	Below blue line	Number of sectors	Requires further assessment
PU19	Public Road	Hillview Road Gills Road	Yes	No	3	Yes
PU20	Public Road	Gostwyck Road Dog Trap Road	No	No	1	No
PU21	Public Road	Thunderbolts Way Talisker Road	No	No	2	No

5 Conclusion

5.1 Landscape character

The landscape within and surrounding the project investigation area can be described as wide flat plains between low ridges and rolling hills. The flatter areas are divided by permanent and ephemeral creeks. To the east of the project investigation area there are two ridges running in a north-south direction in the vicinity of Water Gully and Mihi Creek. This high ground is significantly covered by native woodland that extends north to Gostwyck Road whilst the low ground consists of decreasing tree cover/increasingly open pasture ranging from the south-east to the north-west.

The PVIA provides a preliminary assessment of the existing landscape within the Project investigation area and surrounding it. In doing so, it identified three landscape character categories that will be refined and characterised in greater detail in the EIS stage of the Project. The categories identified are:

- Oxley Water Corridor
- Salisbury Plains
- Remnant Bushland.

5.2 Preliminary assessment summary

The preliminary assessment is a tool to help identify viewpoints with potential visual impacts from the Project. These viewpoints will be further evaluated and assessed in the detailed LVIA during the EIS.

This preliminary assessment identified 33 (thirty-three) private viewpoints and 11 (eleven) public viewpoints in the community and landscape surrounding the Project that require further assessment.

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Appendix D
Social impact scoping report

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Hillview Wind Farm

Social Impact Assessment

Prepared for Hillview Energy Hub Pty Ltd

November 2024

Hillview Wind Farm

Social Impact Assessment

Hillview Energy Hub Pty Ltd

E231229 RP3

November 2024

Version	Date	Prepared by	Reviewed by	Comments
V1	August 2024	Breannan Dent and Brooke Theobald	Chris Mahoney	Draft
V2	21 November 2024	Breannan Dent and Brooke Theobald	Chris Mahoney	Final

Approved by

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TABLE OF CONTENTS

1 Introduction 1

1.1 The applicant 1

1.2 The project 1

1.3 Activities and uses 6

1.4 Timing 7

2 Methodology 9

2.1 Defining the social locality 10

2.2 Initial social baseline analysis 10

2.3 Community and stakeholder engagement 11

2.4 Preliminary identification and evaluation of social impacts 11

2.5 Assumptions and limitations 12

3 The social locality 13

3.1 Social locality 13

3.2 Key project activities informing social locality 14

4 Initial social baseline analysis 17

4.1 Policy and planning context 17

4.2 Community profiles 21

4.3 Key social trends 25

5 Community and stakeholder engagement 31

5.1 Engagement during the project scoping stage 31

5.2 EIS phase consultation 32

5.3 Considerations for SIA engagement 34

6 Preliminary social impact identification and evaluation 36

6.1 Preliminary social impact identification and evaluation 36

6.2 Cumulative impacts 45

6.3 Project refinement and preliminary mitigation and enhancement measures 45

7 Conclusion 47

Acronyms and abbreviations 49

References 51

Annexures

Annexure A	Proximal project review	A.1
Annexure B	Detailed baseline data	B.1
Annexure C	SIA scoping worksheet	C.1

Tables

Table 1.1	Applicant details	1
Table 1.2	Project overview	2
Table 1.3	Supporting infrastructure	6
Table 2.1	Phases of the SIA process	9
Table 2.2	Social impact categories	11
Table 3.1	Project social locality mapped to ASGS	13
Table 3.2	Key Project activities and potential change to social environment	14
Table 4.1	Overview of policy and planning context	17
Table 4.2	Regional development context	28
Table 5.1	Engagement by ACE Power during Project scoping phase	31
Table 5.2	Engagement tools and methods during preparation of the EIS	33
Table 6.1	Preliminary social impact evaluation	37
Table 6.2	Potential and existing enhancement and mitigation measures	45
Table 7.1	Acronyms and abbreviations	49
Table A.1	Other projects in Uralla LGA and Armidale LGA with potential for cumulative impacts	A.2
Table B.1	Population, dwelling and labour force indicators – local area	B.2
Table B.2	Population, dwelling and labour force indicators – key urban areas	B.4
Table B.3	Population projections, 2021 to 2041	B.7
Table B.4	Housing affordability, 2016 and 2021	B.8
Table B.5	Top three industries of employment, 2021	B.9
Table B.6	Population, dwelling and labour force indicators – sub-regional area	B.10
Table B.7	Population, dwelling and labour force indicators – New England REZ	B.12

Figures

Figure 1.1	Indicative project layout	4
Figure 1.2	Local context	8
Figure 3.1	Project social locality	16
Figure 4.1	Annual population change, 2010 to 2022	26
Figure 4.2	Strategic context	30

1 Introduction

Hillview Energy Hub Pty Ltd proposes to develop Hillview Wind Farm (the project) within the New England Renewable Energy Zone (REZ). The project includes the installation, operation, maintenance and decommissioning of up to approximately 55 wind turbine generators (WTG) and associated infrastructure. The project would be located on the traditional territory of the Anaiwan People, approximately 11 kilometres (km) west of the Uralla township and within the Uralla Shire Council Local Government Area (LGA) in New South Wales. The project is State significant development (SSD) pursuant to State Environmental Planning Policy (Planning Systems) 2021 (the Planning Systems SEPP). It requires assessment and approval under Part 4, Division 4.7 of the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act).

This Social Impact Assessment (SIA) Scoping Report was prepared by EMM Consulting Pty Limited (EMM) on behalf of Hillview Energy. It addresses the scoping requirements of the *Social Impact Assessment Guideline for State Significant Projects* (SIA Guideline) (DPE 2023a) and the *Technical Supplement: Social Impact Assessment Guideline for State Significant Projects* (SIA Technical Supplement) (DPE 2023b).

The SIA Scoping Report supports Hillview Energy's request to the Department of Planning, Housing and Infrastructure (DPHI) for Secretary's Environmental Assessment Requirements (SEARs) and preparation of an Environmental Impact Statement for the project.

1.1 The applicant

The applicant is Hillview Energy Hub Pty Ltd as trustee for Hillview Energy Hub Trust, which is a subsidiary of Ace Power. Applicant details are provided in Table 1.1.

Backed by finance partner Pelion Green Future, a leading clean energy and sustainability investment holding, ACE Power operate across the entire lifecycle of renewable energy projects. Working alongside communities to develop projects, ACE Power is accelerating the transition of the Australian electricity network.

Table 1.1 Applicant details

Requirement	Detail
Applicant	HILLVIEW ENERGY HUB PTY LTD ATF HILLVIEW ENERGY HUB TRUST
ACN	669-016-193
Applicant address	Suite 402, 39 East Esplanade Manly, NSW 2095

1.2 The project

1.2.1 Overview

Hillview Energy Hub Pty Ltd as trustee for Hillview Energy Hub Trust (Hillview Energy) proposes to develop the Hillview Wind Farm (the project). The project will be located 11 km west of the Uralla township and lies within the Uralla local government area (LGA) in New South Wales (NSW). The project is within the New England Renewable Energy Zone (New England REZ)

The regional context of the project is shown in Figure 1.1.

The project includes the installation, operation, maintenance and decommissioning of up to approximately 55 wind turbine generators (WTG) and associated infrastructure.

A project investigation area of approximately 6,124 hectares (ha) has been established with preliminary environmental and constraints investigations focussed on a 2,069-ha development corridor within the project investigation area. The indicative project layout has been designed to minimise impact where practicable and will be further refined through community consultation and completion of technical impact assessments.

The project is State significant development (SSD) pursuant to Schedule 1 of State Environmental Planning Policy (Planning Systems) 2021 (planning Systems SEPP) and approval for the project is required under Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

An overview of key aspects of the project is provided in Table 1.2.

Table 1.2 Project overview

Project element	Details
Overview	
Project investigation area	Approximately 6, 124 ha
Indicative Development corridor	Approximately 2, 069 ha
Wind farm	
Number of wind turbines	55 WTGs (indicative)
Generation capacity	Approximately 200–300 MWac
Ancillary development/activities	
Site access	• Hillview Road – shared access with Eastern Hub Firming Battery (primary) • Carlon Menzies Road • Gostwyck Road
Connection infrastructure	• Transformers, and electrical control and safety equipment to support the connection of the project
Construction	
Construction period	Approximately 30 months
Construction workforce peak	Approximately 210 full time equivalent (FTE) personnel
Workforce accommodation	Non-local staff will be accommodated within an accommodation facility to be constructed within the project investigation area or an in purpose-built construction camp within the Uralla Shire Council area.
Operations	
Project lifespan	35 years
Operations workforce	Approximately 17 FTE
Decommissioning	
Decommissioning period	24 months
Decommissioning workforce	Approximately 210 full time equivalent (FTE) personnel
Workforce accommodation	Non-local staff will be accommodated either within an accommodation facility to be constructed within the project investigation area.

1.2.2 The project investigation area

The project investigation area is the maximum area considered for the project based on the extent of land where Hillview Energy holds landowner agreements. The development footprint (i.e. the area within which project infrastructure will be located) will be confirmed during the preparation of the environmental impact statement (EIS).

The project is proposed for development on cleared land, situated within the NSW Government's New England Renewable Energy Zone The project site is in north-eastern NSW, approximately 450 kilometres (km) north-west of Sydney. The New England Highway is approximately 12 km west of the project investigation area and connects the region to major population centres along the east coast.

The township of Uralla, home to 2,385 people, is the closest service centre to the project investigation area. Uralla is also connected to the New England Highway via Gostwyck Rd.

Land use in the project investigation area is zoned RU1 Primary Production under the Uralla Local Environmental Plan 2012 (Uralla LEP). It has been modified by historical land use practices and past disturbances associated with land clearing, cropping and livestock grazing. Cattle and sheep grazing for wool, breeding stock and meat are the dominant agricultural activities within the project investigation area, with small amounts of broadacre cropping also undertaken.

1.2.3 Physical layout and design

It is anticipated that the physical layout and design of the project will comprise the following key infrastructure elements:

- wind turbines – approximately 55 (3 blade) WTGs with a height of up to 270 m (uppermost blade tip)
- substation and transmission connection – on-site collector substations and overhead powerlines to connect the wind farm to the electricity transmission network via the proposed Eastern Hub substation
- electrical connections – a combination of underground cables and overhead powerlines connecting WTGs to the on-site collector substations
- operations and maintenance (O&M) facility – including site offices, O&M buildings, amenities, equipment sheds, storage and parking areas
- site access and internal access roads – including access points from Hillview Road (primary access), Carlon Menzies Road, and Gostwyck Road; wind turbines will be connected via a network of internal access tracks
- temporary construction infrastructure – to facilitate construction and likely to include on-site concrete batching plant, rock crushing facility, laydown and storage areas and site offices. Each turbine location will also include a hard stand area and a turbine laydown area for assembly
- temporary and permanent meteorological masts.

An indicative project layout is provided in Figure 1.1. The layout and design will be refined further through the preparation of the EIS for the project. The following sections describe the project design and layout considerations for key infrastructure elements.

KEY

- Development corridor
- Project investigation area
- Wind turbine generator

Existing environment

- Rail line
- 66 kV transmission line
- 330 kV transmission line
- Major road
- Minor road
- Vehicular track
- Named watercourse
- Named waterbody
- NPWS reserve

INSET KEY

- NPWS reserve
- State forest

Indicative project layout

Hillview Wind Farm
Social Impact Assessment Scoping Report
Figure 1.1

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Source: EMM (2024); ABS (2021); DCSSS (2023); ESRI (2024); GA (2009)

\\emm.local\xdrive\2023\E231229_Hillview_Wind_Farm_Scoping_Report\GIS\02_Maps_SR\SR001_ProjectLayout\SR001_ProjectLayout_20240922_04.aprx 24/09/2024

1.2.4 Wind turbines

Indicative dimensions for the WTGs and associated infrastructure are:

- maximum height (uppermost blade tip): approximately 270 m
- lowermost blade tip: approximately 50 m
- rotor diameter (including nacelle): approximately 185 m

WTGs will be installed at locations which accord with the micro-siting restrictions identified in the EIS and will depend on a range of factors including WTG technology, available grid capacity, economies of scale, and environmental constraints.

1.2.5 Electrical collection system and substation

A network of underground and overhead powerlines will be installed across the development corridor and will connect WTGs to the on-site collector substation.

Cabling may be underground or aboveground depending on geotechnical conditions.

The on-site collector substation will be constructed within the development corridor to convert the on-site AC reticulated electricity to 330 kV for export to the grid.

Electricity generated by the project will be exported to the grid via a high voltage overhead line network connection.

1.2.6 Network connection

A high voltage overhead transmission line will connect the on-site collector substation to EnergyCo's proposed Eastern Hub substation. The precise location of the overhead transmission line to connect the project to the Eastern Hub substation has not been determined as this will be confirmed as part of further design works during the preparation of the EIS and following detailed design of the Eastern Hub substation.

1.2.7 Accommodation facility

The non-local construction workforce will be accommodated in a temporary accommodation facility, which will be to be constructed within the project investigation area. The accommodation facility will be developed to accommodate up to approximately 100 construction workers.

The facility would comprise prefabricated modular structures and single-storey demountable accommodation buildings; various buildings for supporting facilities including dining, amenities, gymnasium, administration; modular sewage treatment plant and associated on-site effluent irrigation area; on-site fuel storage and a car park.

While approval is sought for a facility with the capacity to accommodate up to 100 people, it is noted that the accommodation facility may have the potential to expand, enabling capacity for up to 500 people, subject to future approvals. This is to accommodate the construction workforce associated with other ACE Power developments within the New England REZ. However, if other options are available prior to construction commencing, they will be properly considered.

1.2.8 Site access

Access to the project investigation area will primarily be via Hillview Road with secondary access provided via Carlon Menzies Road, and Gostwyck Road. The transport route to the project will be finalised during the EIS phase but is anticipated to be via the New England Highway to Uralla, then Gostwyck Road and Hillview Road.

Internal access tracks will be subject to detailed design and will provide access for servicing and maintaining project infrastructure and any required buffers/fire trails.

Over-size, over-mass (OSOM) vehicles will require access to the development corridor and the preferred route is the subject of ongoing route analysis. It is expected that the Energy Corporation of NSW (EnergyCo), through its Memorandum of Understanding (MOU) with Transport for NSW (TfNSW) will be coordinating and facilitating necessary upgrades to the classified road network from NSW ports to REZs, where TfNSW is the roads authority.

If further construction planning identifies a preferred port of origin for OSOM vehicles that is not within NSW, consultation on routes would be undertaken with the relevant State based roads authorities, and planning authorities as required.

1.2.9 Supporting infrastructure

Supporting infrastructure will be required during the construction and operation phases (see Table 1.3).

Table 1.3 Supporting infrastructure

Stage	Infrastructure
Construction	Site office and amenities, construction compound, laydown areas, concrete batching plant, rock crushing facility, soil stockpiles access tracks and temporary storage areas, security fencing and lighting and drainage works.
Operations	A site office and O&M buildings (including offices, amenities and equipment storage sheds) with parking, hardstands, permanent meteorological monitoring masts, new access tracks, upgrades to existing access tracks, security fencing and lighting.

1.3 Activities and uses

1.3.1 Construction

i Overview

Construction is expected to be completed over a 30-month period. Construction will be undertaken during standard day time construction hours (i.e. 7:00 am to 6:00 pm Monday to Friday and 8:00 am to 1:00 pm on Saturdays).

Earthworks will be required for the preparation of the final development corridor, including turbine foundation excavation, hardstands, access track formation and drainage works.

Where required, additional or improved drainage channels, sediment control ponds and dust control measures will be implemented.

Laydown areas, waste handling, fuel and chemical storage areas will be strategically placed to minimise potential environmental impacts during construction.

ii Workforce

It is anticipated that the construction workforce will peak at approximately 210 FTE workers during the peak of construction activities.

The construction workforce will be sourced locally where possible, though it is anticipated that a large portion of the workforce will be from outside the region. The project includes the construction of an on-site accommodation facility with 100 beds to accommodate the non-local workforce.

Potential impacts to accommodation, infrastructure, and services in the region will be considered in the social impact assessment for the project.

1.3.2 Operations

The operational lifespan of the project is expected to be 35 years, depending on the nature of WTG technology and energy market demands.

Operational activities will require an estimated 17 FTE employees to undertake regular maintenance of project infrastructure, vegetation, weed and pest management, cleaning, equipment calibration and internal road maintenance.

Regular maintenance will be required throughout operations, including for internal roads, drainage, fencing and vegetation as well as service, repair, or replacement of WTGs.

Light vehicle access will be required throughout operations and occasional heavy vehicle movements may also be required for maintenance works.

Agricultural activities will continue throughout operations, and co-existence of agriculture with the wind farm a key design consideration.

1.3.3 Decommissioning

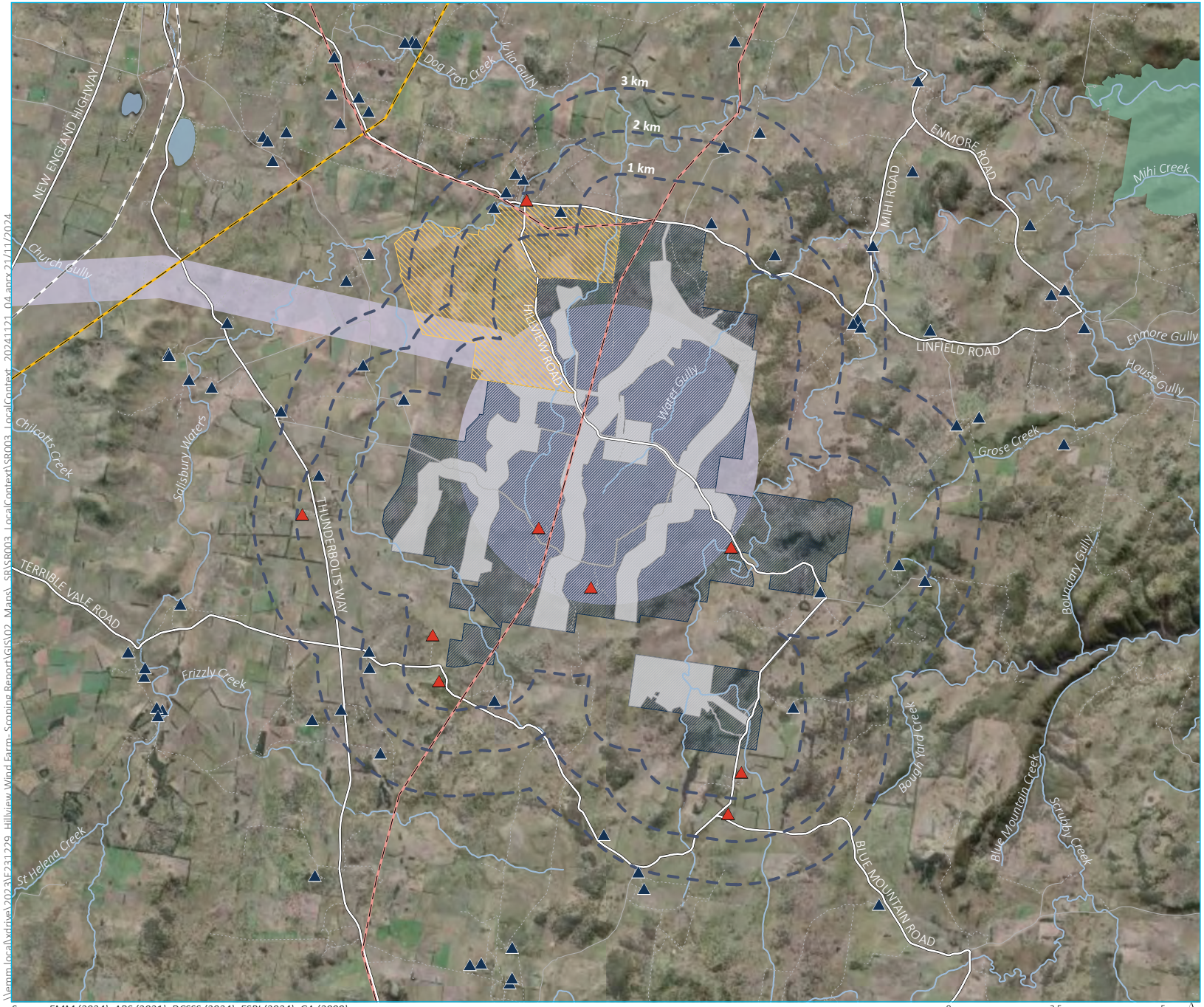
At the end of the project's operational life, the project will enter a 24-month decommissioning and rehabilitation phase. During the decommissioning phase, all above ground structures built as part of the project will be removed and the site rehabilitated generally to its pre-existing land use, as far as practicable.

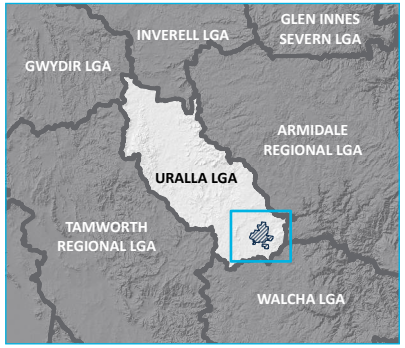
The aim of the decommissioning stage is to ensure the site is safe, stable and non-polluting and that the visual impact of above ground ancillary infrastructure is minimised. The EIS will describe how vegetation will be restored. The land capability is unlikely to change during operations and the pre-existing use will be maintained.

1.4 Timing

The project is expected to commence construction in 2026, subject to relevant approvals, and will take approximately 30 months to complete. It is anticipated that the project will be constructed in stages. The timing of each stage and the duration of the overlap between stages will be determined during detailed design following project approval. A conservative breakdown of timing for each of the project phases is as detailed below:

- construction phase – 30 months
- testing and commissioning phase – 6 to 12 months
- operational lifespan – 35 years
- decommissioning phase – 24 months.





KEY

- Development corridor
- Project investigation area
- New England REZ transmission corridor
- Deeargee solar farm
- Project buffer

Sensitive receiver

- Project associated
- Non-associated

Existing environment

- Rail line
- 66 kV transmission line
- 330 kV transmission line
- Major road
- Minor road
- Vehicular track
- Named watercourse
- Named waterbody
- NPWS reserve

INSET KEY

- Local government area
- Project investigation area

Source: EMM (2024); ABS (2021); DCSSS (2024); ESRI (2024); GA (2009)

0 2.5 5 km

GDA2020 MGA Zone 56

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Local context

Hillview Wind Farm
Social Impact Assessment Scoping Report
Figure 1.2

EMM
creating opportunities

2 Methodology

This section describes the methodology that has been used to complete SIA scoping and initial assessment, in accordance with the SIA Guideline 2023, and the International Association for Impact Assessment's *SIA guidance for assessing and managing the social impacts of projects* (Vanclay, et al. 2015).

SIA is a process for analysing, monitoring, and managing the social consequences of a development. Social impact scoping is an exercise to determine the main issues of concern and the interested affected parties for a particular planned intervention (Vanclay, et al. 2015).

As outlined in the SIA Guideline 2023 (DPE 2023a), the SIA process involves three distinct but iterative phases:

- phase 1: social impact scoping and initial assessment
- phase 2: social impact assessment
- phase 3: social impact management and monitoring.

Each phase is underpinned with objectives and key tasks to generate deliverables as detailed in Table 2.1.

Table 2.1 Phases of the SIA process

	Phase 1: social impact scoping and initial assessment	Phase 2: social impact assessment	Phase 3: social impact management and monitoring
Objective	Ensure that proportionate depth and scope is given to the potentially significant social impacts of the project	Identify, describe and assess the social impacts which may occur in local and regional communities as a result of the project and propose responses to the identified social impacts	Outline how social impacts associated with the project will be managed, monitored and adapted
Key tasks/elements	• Defining the project's social locality • Initial analysis of social baseline • Preliminary identification and evaluation of social impacts • Considering and articulating project refinement • Community and stakeholder engagement	• Summarising outcomes of scoping • Detailed social baseline analysis • Predict and analyse the extent and nature of likely social impacts • Develop responses (avoidance, mitigation and enhancement measures) to social impacts • Identify and explain residual social impacts • Community and stakeholder engagement	• Program to monitor predicted social impacts against actual impacts • Program for the ongoing analysis of social risks and opportunities • Process to release monitoring results • Ongoing community and stakeholder engagement
Deliverable	Social impact scoping report (including SIA Scoping Worksheet)	Social impact assessment report	Social impact management plan (if required)

As shown in Table 2.1, scoping forms an essential element of the SIA process and has been informed by the following key tasks:

- defining the project's social locality
- initial analysis of social baseline
- preliminary identification and evaluation of social impacts

- considering and articulating project refinement
- community and stakeholder engagement.

These key tasks are described below.

2.1 Defining the social locality

Factors considered in defining the project's social locality include:

- the nature and scale of the project and its associated activities
- the characteristics of the project site, existing and historical land use, nearby built or natural features, and levels of access and connectivity
- the characteristics of surrounding communities, including relevant demographic or social trends, cultural values, and community assets including key stakeholder interests likely to be affected by the project
- the project's development in the context of regional development objectives and cumulative project developments.

2.2 Initial social baseline analysis

Initial analysis of the social baseline serves to build an understanding of the socio-economic characteristics of the communities within the project's social locality. It draws on a range of primary and secondary information sources to obtain both qualitative and quantitative data.

Quantitative data sources included:

- ABS Census
- Department of Planning and Environment population projections
- Australian Government's Labour Market Portal unemployment and labour force participation data
- Australian Institute of Health and Welfare, including health and wellbeing data.

Qualitative data sources included:

- thematic analysis of stakeholder and community engagement, for qualitative data on community values, capacities and challenges associated with social infrastructure and community facilities, and to verify quantitative data
- local planning and policy documents, to be used as indicators of community sentiment
- review of literature such as:
    - government policy and publications relevant to the investigation area
    - peer-reviewed academic journal articles relevant to the proposed project
    - industry-commissioned surveys and research reports

- desktop review for asset and service mapping, including:
  - areas and elements of social interest.
  - the location of social infrastructure.
  - other major projects.

The initial social baseline analysis for the project is provided in Section 4 and will be refined during Phase 2 social impact assessment, as outlined in Table 2.1.

2.3 Community and stakeholder engagement

Best practice SIA is participatory and involves understanding impacts from the perspective of those affected by a project activity. SIA scoping involves drawing upon community and stakeholder input to identify potential social impacts. This facilitates consideration of the concerns of potentially affected communities and stakeholders early in the EIS process.

Section 5 of this report summarises the key stakeholder and community engagement carried out by ACE Power during the scoping phase of the project.

No independent engagement was conducted specifically as part of the preparation for the SIA scoping report, as broader project engagement was able to capture key themes and considerations relevant to scoping. Further, given the high number of projects being advanced in the region, strategic and targeted engagement to reduce consultation fatigue is a key part of managing cumulative impacts.

The feedback generated through community and stakeholder engagement directly informed preparation of the initial social baseline analysis and the preliminary identification of social impacts and benefits.

2.4 Preliminary identification and evaluation of social impacts

The initial identification and evaluation of social impacts included completion of the SIA scoping worksheet (DPE 2023a). This decision support tool is used to demonstrate how issues from scoping informs the level of assessment undertaken for each identified impact in the SIA (Phase 2).

Table 2.2 presents the categories of social impacts considered during scoping phase, in accordance with the SIA Guideline 2023 (DPE 2023a).

Table 2.2 Social impact categories

Impact category	Description
Way of life	How people live, how they get around, how they work, how they play, and how they interact each day
Community	Composition, cohesion, character, how the community functions, resilience and people's sense of place
Accessibility	How people access and use infrastructure, services and facilities, whether provided by a public, private, or not-for-profit organisation
Culture	Both Aboriginal and non-Aboriginal, including shared beliefs, customs, practices, obligations, values and stories, and connections to Country, land, waterways, places and buildings
Health and wellbeing	Physical and mental health especially for people vulnerable to social exclusion or substantial change, psychological stress resulting from financial or other pressures, access to open space and effects on public health
Surroundings	Ecosystem services such as shade, pollution control, erosion control, public safety and security, access to and use of the natural and built environment, and aesthetic value and amenity

Impact category	Description
Livelihoods	People's capacity to sustain themselves through employment or business
Decision-making systems	Extent to which people can have a say in decisions that affect their lives, and have access to complaint, remedy and grievance mechanisms

The project was assessed according to its potential to impact on people, whether previous investigations of the impact have been undertaken, the potential for cumulative impacts, and possible mitigation or enhancement measures to reduce negative impacts and enhance positive impacts.

Based on the assessment of these impact characteristics, the likelihood and magnitude of the potential impact (positive or negative) and their occurrence across differing stakeholder groups was determined through application of the impact significance matrix provided in the SIA Guideline 2023 (DPE 2023a). The ascribed significance of social impact determines the required level of assessment, as follows:

- **Detailed:** the project may result in significant social impacts, including cumulative impacts.
- **Standard:** the project is unlikely to result in significant social impacts, including cumulative impacts.
- **Minor:** the project may result in minor social impacts.
- **Not relevant:** the project will have no social impact, or the social impacts of the project will not be so small that they do not warrant consideration.

The assessment levels have been used to determine the scope and detail required for the SIA (Phase 2).

2.5 Assumptions and limitations

This SIA Scoping Report has been based on currently available information for the project investigation area and development area, including preliminary information, including the current project design. The design will be refined during preparation of the SIA and EIS, which will also include consideration of workforce accommodation and road upgrade requirements, as noted in Section 1.2.

Regarding the 2021 ABS Census, SAL classifications replaced the State Suburb Classification (SSC) classification, however, remain comparable. This report refers to SALs when discussing the 2021 ABS Census data and, where relevant, refers to SSCs when citing ABS Census data from previous years.

Engagement feedback drawn upon for the SIA Scoping Phase has not been undertaken directly by the author of this SIA Scoping Report. Engagement data within this SIA Scoping Report are referred to as a secondary data source.

3 The social locality

3.1 Social locality

The project's social locality is shown in Figure 3.1 and has been informed by consideration of key project activities, stakeholders likely to be affected by the project, and the sub-regional and local development context.

To enable social baseline data collection and analysis, the Australian Bureau of Statistics (ABS) Australian Statistical Geography Standard (ASGS) has been used to help define the social locality.

The ASGS statistical areas applied to define the social locality included:

- Suburbs and Localities (SALs) – approximate representation of the officially recognised boundaries of suburbs and localities as defined by the State and Territory governments of Australia
- Urban Centres and Localities (UCLs) – representation of areas of concentrated urban development
- Significant Urban Areas (SUAs) – representation of significant towns and cities of 10,000 persons or more
- Local Government Areas (LGAs) – approximate representation of gazetted local government boundaries as defined by each state and territory
- State/Territory- represents the state to compare regional data and analyse labour market trends.

Details of the social locality are provided in Table 3.1.The social locality will be further refined as required during the assessment phase including consideration of cumulative regional development.

Table 3.1 Project social locality mapped to ASGS

Social locality	Geographic area	ASGS statistical area code	Description/relevance to Project
Local area	Gostwyck	(SAL 2021) 11730	The Project site is located within Gostwyck and Sailsbury Plains, and adjoins Mihi. Residents of the local area are expected to experience project impacts including changes to local traffic conditions during construction. Landowners and nearby neighbours are also expected to experience direct amenity impacts such as increased noise, vibration and dust during construction and operation, and visual impacts.
	Salisbury Plains	(SAL 2021) 13480	
	Mihi	(SAL 2021) 12621	
	Kentucky	(SAL 2021) 12110	
	Kentucky South	(SAL 2021) 12111	
	Enmore	(SAL 2021) 11427	
	Walcha	(SAL 2021) 14111	
	Uralla	(SAL 2021) 14069	
Key urban areas	Uralla	UCL 115143	The project is located 11 km south-west of the Uralla township, approximately 15 km (15 min) drive from the project site.
	Armidale	SUA 1002	Armidale is the nearest regional city to the project, approximately 21 km north of the project.

Social locality	Geographic area	ASGS statistical area code	Description/relevance to Project
Sub Regional area	Uralla Shire	LGA 17650	The project site is located within the Uralla Shire, Armidale Regional and Walcha local government areas (LGAs).
	Armidale Regional	LGA 10180	
	Walcha	LGA 17850	
Regional area (New England REZ)	Tenterfield Shire	LGA 17400	The project is located within the New England REZ. The New England REZ spans seven LGAs: Tenterfield Shire, Glen Innes Severn, Inverell, Armidale Regional, Uralla Shire, Tamworth Regional and Walcha.
	Glen Innes Severn	LGA 13010	
	Inverell Shire	LGA 14220	
	Armidale Regional	LGA 10180	
	Uralla Shire	LGA 17650	
	Tamworth Regional	LGA 17310	
	Walcha	LGA 17850	
Area of reference	New South Wales	S/T 1	The project is located within the state of NSW. Where appropriate, NSW data has been referred to as a basis for comparison.

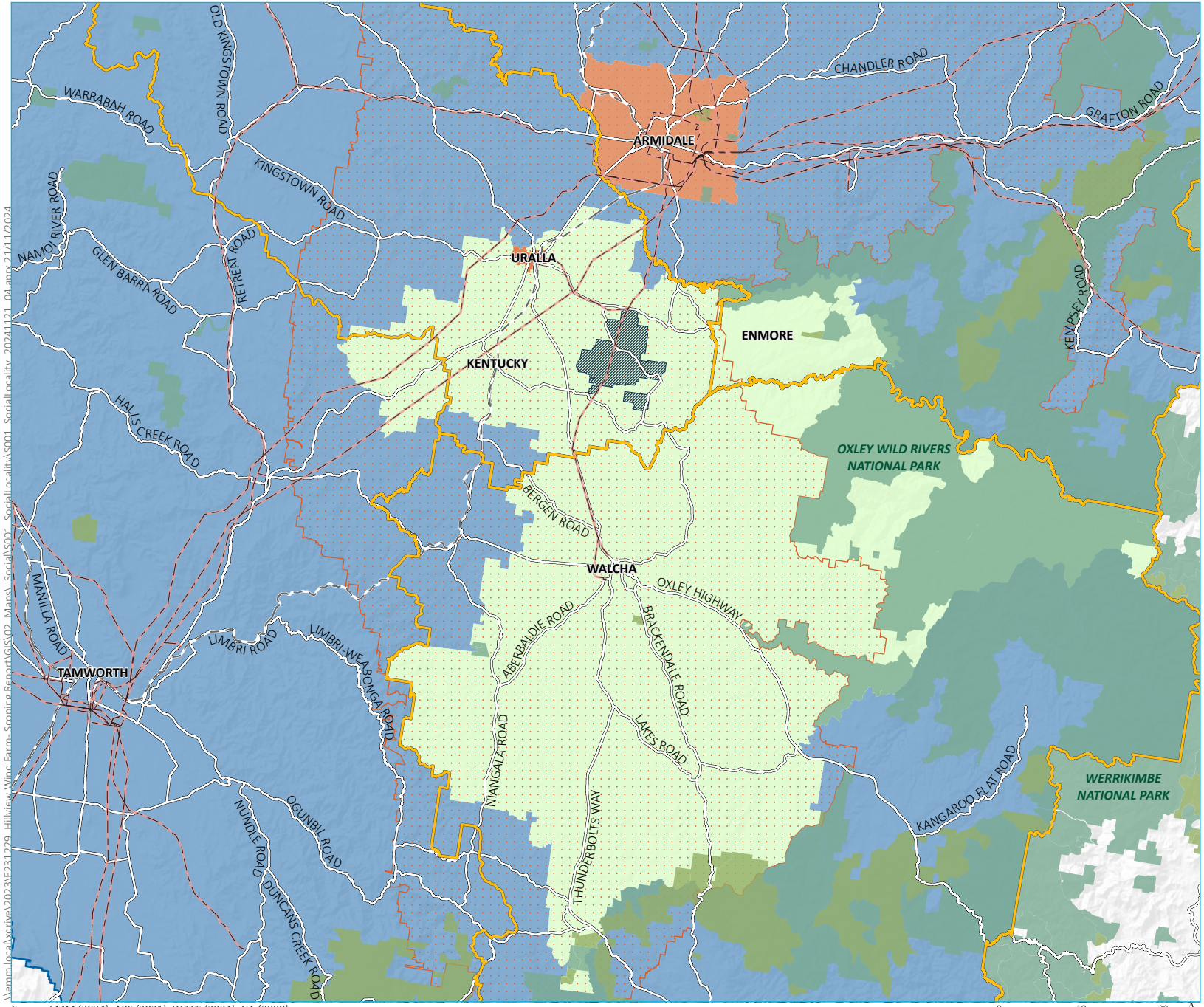
3.2 Key project activities informing social locality

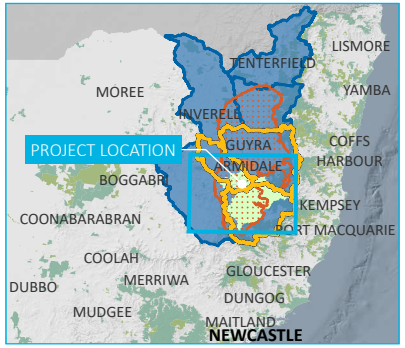
An overview of key project activities, the potential change to the social environment, the geographical extent of the social change, and relevant baseline indicators are outlined in Table 3.2.

Table 3.2 Key Project activities and potential change to social environment

Key Project activity	Potential change to social environment	Geographical extent of social change	Relevant baseline indicator
Generation of employment, supply, and business opportunities during construction	• Change in demand for goods and services	• Sub-regional	• Existing businesses and services • Economic activity, including major projects
	• Change in demand for labour	• Sub-regional	• Labour force participation • Unemployment rates • Key industries of employment • First Nations population size and proportion • Population trends and projections • Indices of economic resources (SEIFA) • Vulnerable cohorts
Payments to host landowners	• Change in landowner income stream	• Local	• Household income • Industry of employment
Neighbouring landowner agreements	• Change in landowner income stream	• Local	• Household income • Industry of employment

Key Project activity	Potential change to social environment	Geographical extent of social change	Relevant baseline indicator
Vegetation clearing during construction and operation	• Changes to landscape and wildlife habitat & ecosystem services	• Project area • Local	• Land use • Agricultural economic activity • Community perceptions • Community values • Environmental values
Construction of the project	• Change to traffic conditions in the local road network (increased usage)	• Local • Haulage route	• Access and connectivity • Community perceptions • Health and emergency services and infrastructure and capacity
	• Change to health and safety risk (perceived or actual)	• Local • Haulage route	• Private-car dependency (car ownership by household) • Community perceptions • Access and connectivity • Community health and wellbeing
	• Change to amenity (including visual, noise, vibration, and dust)	• Local • Haulage route	• Community values • Environmental values • Cultural values • Community perceptions • Community health and wellbeing
Operation of the project	• Change to amenity (including visual)	• Local • Haulage route	• Community values • Environmental values • Cultural values • Community perceptions • Community health and wellbeing
	• Change to property values of nearby properties (actual or perceived)	• Local	• Housing availability and affordability • Community perceptions • Community values
	• Disturbance or displacement of Aboriginal and non- Aboriginal heritage sites and/or items	• Project area • Local • Regional	• Community values • Cultural values
Decommissioning of the project	• Changes to amenity and community values	• Project area • Local • Regional	• Health and wellbeing • Land use Community values and perceptions, including: • Environmental values • Cultural values • Community perceptions
	• Employment and business	• Project area • Local • Regional	• Existing employment and business
	• Decision making	• Project area • Local • Regional	• Strategic context





KEY

- Project investigation area
- Local area
- Key town
- Sub regional area
- Surrounding regional area
- New England Renewable Energy Zone

Existing environment

- Transmission line
- Rail line
- Major road
- NPWS reserve
- State forest

INSET KEY

- NPWS reserve
- State forest

Source: EMM (2024); ABS (2021); DCSSS (2024); GA (2009)

0 10 20 km

GDA2020 MGA Zone 56

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Social locality

Hillview Wind Farm
Social Impact Assessment Scoping Report
Figure 3.1

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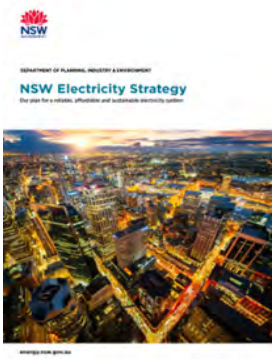
4 Initial social baseline analysis

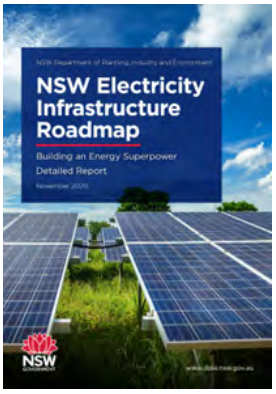
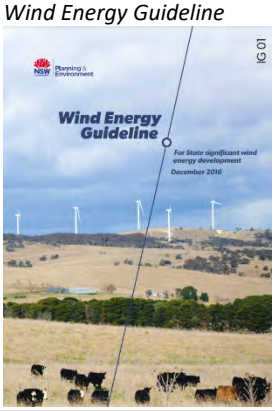
This section provides the initial social baseline analysis of the Project's social locality. As determined in Section 2.1, the project's social locality comprise the community of Gostwyck, Salisbury Plains, Mihi, Kentucky, Kentucky South, Enmore, Walcha, Uralla (local area), the key urban areas of Uralla and Armidale, and the Uralla Shire, Armidale Regional, and Walcha LGAs (sub-regional area). Relevant baseline indicators associated with key Project activities were outlined in Section 2.2 and in Table 3.2.

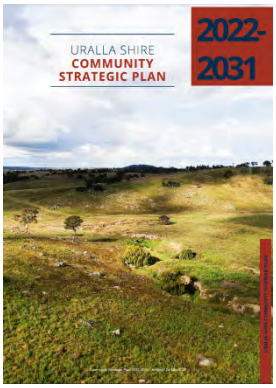
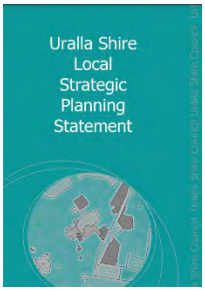
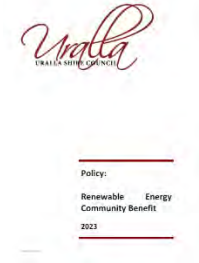
4.1 Policy and planning context

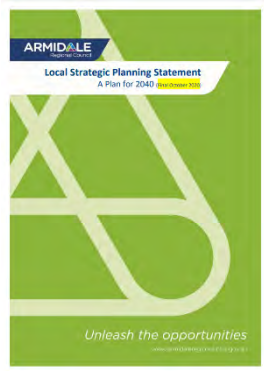
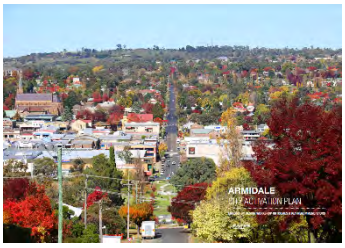
Table 4.1 provides an overview of the social and economic policies and strategies relevant to the project and describes how the project may contribute to, or support achievement of community goals, aspirations, or actions.

Table 4.1 Overview of policy and planning context

Plan, policy or strategy	Description and alignment with Project
State Government	
New England North West Regional Plan 2041 (NSW Government 2022) 	The *New England North West Regional Plan 2041* guides land use planning priorities and decision making in the New England North West region for the next two decades. The vision identifies the New England North West region as a leader for sustainable and cost-effective electricity production, as well as looking to support the agricultural industry and expand the food processing sector. The plan highlights the objectives of leading renewable energy technology and investment and leveraging new and upgraded infrastructure. The project is aligned with key objectives within the Plan as it will take advantage of existing infrastructure to provide more electricity capacity for new renewable energy projects.
NSW Electricity Strategy (DPIE 2019) 	The *NSW Electricity Strategy* is the NSW Government's plan for a reliable, affordable and sustainable electricity future that supports a growing economy and sets out an approach to respond to emerging challenges (DPIE 2019). The Strategy recognises that where variable generators are unable to satisfy demand, other technologies that can provide electricity on demand (such as storage) are required (DPIE 2019). Principle 1 of the *NSW Electricity Strategy* acknowledges that renewables are the lowest cost form of reliable electricity generation and calls upon investment into these technologies to reduce electricity prices and ensure network reliability (DPIE 2019). The project will contribute to the South West REZ with an intended generation capacity of 225 MW. The REZ will in turn meet the aims of the Electricity Strategy by ensuring a secure, reliable energy system. This region has been formally identified as an ideal location to play a key role in renewable energy generation due to excellent renewable energy resource potential.

Plan, policy or strategy	Description and alignment with Project
NSW Electricity Infrastructure Investment Roadmap (DPIE 2020) 	The *NSW Electricity Infrastructure Roadmap* (the Roadmap) completed in 2020 builds on the framework set out by the *NSW Electricity Strategy* (DPIE 2019) and sets out a rationale for the policies and programs that are specifically designed to attract and secure large-scale investment in new electricity infrastructure (DPIE 2020). There is an expected $32 billion in private investment by 2030, providing approximately 6,300 construction jobs and 2,800 ongoing jobs mostly in regional NSW (DPIE 2020). The Roadmap recognises the findings of AEMO's 2020 Integrated System Plan (ISP) which finds that by mid-2030, NSW could need up to 2.3 GW of storage with 4 to 12 hours of duration to maintain system reliability and security under most scenarios. The project will support the Roadmap by creating jobs for an estimated 210 full time equivalent staff during construction (for up to 30 months), and through providing additional generating and storage capacity as described above.
Community Engagement Review 	This report was prepared by the Australian Energy Infrastructure Commissioner (AEIC). Presented to the Minister for Climate Change and Energy, the report aims to promote best practice and improve community engagement surrounding renewable energy projects. The findings showed that engagement processes need to be refined to improve complaint handing processes, keep community informed, and ensure equitable share of renewable energy benefits. This report will be used throughout the project to inform community engagement. The report will be referred to, to ensure best practice.
Net Zero Plan Stage 1: 2020 – 2030 	The *Net Zero Plan Stage 1 2020– 2030* outlines the NSW Government's plan to grow the economy and create jobs while helping the state to deliver a 35% cut in emissions compared to 2005 levels. The project contributes to Priority 1 of the Net Zero Plan: "Drive uptake of proven emissions reduction technologies that grow the economy, create new jobs or reduce the cost of living." The project is within the New-England REZ. The region has been identified as an ideal location to play a key role in a renewable energy future for NSW due to its good renewable energy resources and opportunity to utilise electricity network infrastructure. The project will utilise these benefits to contribute to the NSW Net Zero Plan.
Wind Energy Guideline 	The Wind Energy Guideline provide the community, industry, and regulators with guidance on the planning framework for the assessment of large-scale wind energy development proposals that are SSD and identifies the key planning considerations relevant to wind energy development in NSW. This guideline will be used throughout the project to inform the projects site selection and impact assessment. This will continue to be used throughout the EIS.

Plan, policy or strategy	Description and alignment with Project
Local Government	
Uralla Shire Community Strategic Plan 2022–2031 (Uralla Shire Council 2022) 	The overarching aspiration of the *Uralla Shire Community Strategic Plan 2022–2031* is for the Shire is for a "community will be vibrant with a growing economy supporting a sustainable quality of life that values its heritage". Four community foundations underpin the Plan, with those relevant to the project being: economic prosperity; custodians of the natural environment; growing and diversifying employment, through growth in existing, and new businesses; and a community that is well serviced with essential infrastructure. The project will contribute to several strategies outlined in the Plan, such as through supporting local business development by prioritising local purchasing and working with the Council to develop programs that support the community's social and wellbeing needs.
Uralla Shire Local Strategic Planning Statement (LSPS) (Uralla Shire Council 2021) 	The Uralla shire LSPS outlines plans for the Uralla shire community's economic, social and environmental land use needs to 2040, and identifies the renewable energy industry as a high value industry opportunity for the region. Actions include "Identify potential solar and wind energy clusters to support the production of renewable energy in appropriate locations in proximity to TransGrid infrastructure." The project will contribute to the growth of renewable energy generation in the region.
Policy: Renewable Energy Benefit 	*The Renewable Energy Benefit Policy* outlines the ways that benefits from numerous renewable energy developments will be equally shared across the Uralla Shire LGA. This includes delivering net community benefit through provision of off-site benefits and ensuring the costs and benefits of the renewable energy developments are equally distributed across and LGA, as well as intergenerationally. The project presents an opportunity to align with the policy as the it will be used to form the basis of mitigations surrounding equal benefit throughout the community.
Armidale Plan 2040: Final Report (CM+ 2020) 	The *Armidale Plan 2040* (CM+ 2020) combines the strategies, precinct and master plans developed in recent years to set in place a coherent and holistic vision for the future of the Armidale Regional Council. Through the encouragement of considered growth, innovative business, and employment opportunities, the plan aims to empower the community, and acknowledge, support, and grow the existing capacity, assets, and resources within the region. The project will offer employment and business opportunities that will assist with the Council's aspirations to: provide opportunities for the younger generation to stay in Armidale; to ensure established businesses can grow; to create an environment that attracts new businesses and industries, and expands the employment base; and to adapt to climate change while achieving sustainability to embrace new and emerging technologies, and incorporate renewable energy initiatives.

Plan, policy or strategy	Description and alignment with Project
Armidale Regional Council Local Strategic Planning Statement (Armidale Regional Council 2020) 	The *Armidale Regional Council Local Strategic Planning Statement* sets out the 20-year vision for land use in the Armidale area, to meet social, economic and environmental needs. The statement identifies planning priorities including "investigate potential opportunities for development of renewable energy production facilities". The project will be a renewable energy production facility within the Armidale LGA.
Advancing our region: Your Community Plan 2022 – 2032 (Armidale Regional Council 2022) 	The Advancing Our Region Community Plan sets out the vision and goals for the Armidale region. It is a 10-year plan that aims to clearly identify the community's main priorities and future aspirations, and the strategies required to achieve them. Outcomes and recommendations of this SIA are proposed in alignment with the goals and strategies of the Plan, including: • Goal: A clean, green, and responsible region – Strategy: Promote and increase use of renewable resources and alternative energy sources – Strategy: Collect, handle, dispose, recycle and reuse waste responsibly and innovatively – Strategy: Create a cleaner, healthier environment with good air quality – Strategy: Ensure the community is provided with safe and accessible water that is sustainably managed now and into the future
Armidale City Activation Plan (McGregor Coxall 2018) 	This Activation Plan is the response of Armidale City to the New England North West Regional Plan 2036, where it is identified as a target area of growth. As such, the plan prioritises the frameworks for identifying and reinforcing future opportunities in these cities by adopting an Enquiry By Design (EBD) approach. This is a process of urban investigation and consultation with key stakeholders. Notably, while the plan focuses especially on protecting the community's cultural, recreational, and economic activity, it also stresses that increased activity may put pressure on existing infrastructure. It recognises the potential need for additional social amenities, and attention to its connectivity and access issues.
Draft Renewable Energy Community Benefit Framework 	*The Draft Renewable Energy Community Benefit Framework* is currently being developed by the Armidale Regional Council to promote benefit sharing derived from the development of numerous state and regionally significant renewable energy projects in the LGA. This draft statement includes requests to proponents for community benefit provision through planning agreements, including negotiations surrounding benefit sharing arrangements. The project presents an opportunity to utilise with the framework as the it will influence and inform mitigations surrounding equal benefits of the project.

4.2 Community profiles

Community profiles provide a qualitative description of an area or community, including a discussion of key trends and issues (Vanclay, et al. 2015). Section 4.2.1 provides a community profile for the localities within the local area and Section 4.2.2 provides a profile for each of the key townships. Key social trends and characteristics of each community are identified by comparing population, dwelling and labour force indicators to those for the New England REZ as a whole. Data on population, dwellings and labour force for the local area is provided in Table B.2 in Annexure B. Data on population, dwellings and labour force for the key urban areas is provided in Table B.1 in Annexure B.

4.2.1 Local area

The Anaiwan peoples are the Traditional Custodians of the land and waters situated within the local area. Part of the Djangadi tribe, the Anaiwan traditional territory spans the NSW Northern Tablelands and is part of the Armidale Local Aboriginal Land Council (LALC). Access to country was severely impacted in the 1800s with the onset of colonisation, leading to a rapid population decline due to illness, and the subsequent loss of the Anaiwan language (Clayton-Dixon 2020). The University of New England is now working on regenerating Anaiwan language through collaboration with the Anaiwan Language Revival Program and development of a dictionary (Nēwara Aboriginal Corporation 2024).

Predominant settlement features of the local area include cattle farming operations and rural homesteads. The local area borders the Macleay River and Oxley Wild Rivers National Park to the east. A small section of Oxley Wild Rivers National Park is within the local area, namely Enmore and Walcha. The eastern section includes Mount Hannah to the north, and Blue Nobby Mountain and Mount Crow to the east.

The local area takes in a number of sparsely populated localities including, Gostwyck, Salisbury Plains, Mihi, Enmore, Walcha, Uralla, Kentucky and Kentucky South, home to a collective population of 5,647 people. Relative to the New England REZ, the population of the local area is typically older with a high proportion of adults (people aged 25 to 64 years), fewer children and a relatively high rate of home ownership with 71.1% of households owning their home outright (ABS 2021a). Personal and household weekly incomes in the local area ($1,453) are lower than the NSW average ($1,829) (ABS 2021a).

The local area had a lower unemployment rate compared to the New England REZ (4.1% compared to 5.0%), whilst the labour force participation rate was similar (56.0% compared to 56.1%). Consistent with land use characteristics, the top industry of employment in the local area was agriculture, including sheep farming and beef cattle farming.

The local area also recorded a higher proportion of residents engaged in voluntary work, with over 24.2% of residents indicating that they volunteered in the year at the 2021 Census, compared with 17.8% recorded for the New England REZ (ABS 2021a). High rate of volunteering within a community can be an indicator of social cohesion and connectedness (AIHW 2021). Arthritis and asthma were the most common long-term health conditions in the local area, with 51.9% of the population reporting no long-term health conditions (ABS 2021a).

Accessibility in the local area is restricted to private vehicles as there are no public transport options. Recreational opportunities in the local area include several hiking tracks including Salisbury Waters walking track, and picnic areas.

i Gostwyck

Gostwyck is located 10 km south-east of the Uralla township. It is home to a small population of just 17 residents. Gostwyck Shire was formerly a LGA before its amalgamation with Uralla in 1948. Gostwyck Road traverses the locality from east to west and Hillview Road runs from Gostwyck Road to the south. Salisbury Waters creek runs through Gostwyck area.

There is no social infrastructure, medical facilities or social services available in Gostwyck with residents typically travelling to Uralla or Armidale to access services and facilities. Gostwyck recorded a relatively high number of residents with one or more long-term health condition (52.9%) including asthma, diabetes and arthritis, when compared to NSW (27.0%) and the New England REZ (32.7%) (ABS 2021a).

The predominant industry in Gostwyck is sheep farming. Deeargee Woolshed, formerly Gostwyck Station, a heritage site, was built in 1872 (Australias Guide 2020). The Deeargee Woolshed is still in use today as a shearing shed.

ii Salisbury Plains

Salisbury Plains is a small community of 61 residents located 16 km south of the Uralla township. The area is relatively flat with some waterways such as Jacks Creek, Mihi Creek, and Cook Station Creek. In terms of the road network, one of the main roads is Thunderbolts Way which connects Salisbury to Uralla and Walcha. Thunderbolt Way converges with two roads in Salisbury: Terrible Vale Road connecting to Terrible Vale and Kentucky; and Hillview Road.

There are no social infrastructure, medical facilities or services available in Salisbury Plains with residents typically travelling to Uralla, Walcha or Armidale to access services and facilities. Salisbury Plains has a relatively older population, with 42.6% of residents aged 65 and older (ABS 2021a). This is substantially higher than both NSW (17.6%) and the New England REZ (21.6%). There are no medical facilities in Salisbury Plains, with residents travelling to key townships to access healthcare services.

Family-owned dairy and tourism operation, Sunhill Dairy Goats Farm is located 10 km south of Uralla on the Gap Road, which was directly adjacent the former New England project's southern array component. The business also extends along Salisbury Plains Road.

iii Mihi

Mihi is located approximately 20 km south-east of the Uralla township. The area is relatively flat with some waterways such as Mihi Creek, which intersects with the Water Gully. Gostwyck Road is the main road to the Uralla township, which connects to Mihi Road and Enmore Road. Enmore road connects Mihi to Armidale City.

In 2021 Mihi recorded a population of 32 residents. Mihi has a similar proportion of adult (25-65 years) residents (43.8%) when compared to NSW (45.1%) and the New England REZ (41.6%), but a lower relative number of residents aged 65 and over (0%) (ABS 2021a). In spite of there being no residents aged 65 years and over, Mihi recorded a relatively high number of residents with long-term health conditions (31.3%) when compared to NSW (27%), but was comparable to the New England REZ (32.7%) (ABS 2021a).

There are no social infrastructure, medical facilities or services available in Mihi, with residents typically travelling to Uralla or Armidale to access services and facilities.

Family owned seedstock producer, Gates Performance Genetics is located 24 km south-east of Uralla township and is accessible via Gostwyck Road. Mihi Creek Vineyard is located on Enmore Road, 29 km south-east from the Uralla township.

iv Enmore

Enmore is located approximately 33 km east from Uralla township. The area is made up of mountainous terrain including the Oxley Wild Rivers National Park which extends to the east. At the 2021 census, the locality had a small population of 34 residents, with the population declining by 38.2% in the 5 years leading up to 2021 (ABS 2021a).

The locality has an aging population, with a median age of 50 at the 2021 census. This is due to there being no recorded youth and a relatively high number of residents aged over 65 (elderly) compared to the regional area (52.9% and 21.6% respectively). The labour force participation of rate was 46.4% and 0% unemployment, which suggests that majority of residents are retired. The proportion of residents with long-term health conditions was lower than the regional area (29.4% compared to 32.7%) but higher than NSW (27%) (ABS 2021a). For residents who reported having a long-term health condition, arthritis was the most common (23.5%), followed by asthma (8.8%).

There were no social services in Enmore, except for Enmore Rural Fire Station. Residents travel to Uralla township or Armidale city to access healthcare and other services.

v Walcha

Walcha is located approximately 41 km south of Uralla township and is accessible via Thunderbolts Way and Oxley Highway. Like Enmore, the locality is host to a portion of the Oxley Wild Rivers National Park. At the 2021 census, the locality had a population of 2,474 with a median age of 49 (ABS 2021a).

The locality had a labour force participation rate of 56%, similar to the regional area (56.1%). The top industry was agriculture, forestry and fishing (34.8%), followed by healthcare and social assistance (10%) and education and training (7.6%) (ABS 2021a). The proportion of residents with a long-term health condition was higher than the regional area and NSW. The highest conditions were arthritis (13.8%), asthma (8.7%) and mental health (7.0%) (ABS 2021a).

There were several services available in the locality, including a hospital, schools, museum, small airport, accommodation and the Walcha Bowling and Recreation Club.

vi Uralla

The locality of Uralla includes the Uralla township which provides a number of social services and infrastructure including a railway station, schools, parks and open spaces, Uralla showground, and medical facilities. Outside of the town centre, there are limited services, meaning that residents must travel into the township to access these services.

The locality recorded the highest population in the local area at the 2021 census, with a population of 2,728 (ABS 2021a). The population comprised a relatively high proportion of adults (aged 25–64) and elderly (aged 65+) and had the highest proportion of Indigenous residents in the local area (14.8%). Uralla had a slightly lower labour force participation rate of 54.3%, compared to the regional area. The top industry of employment was education and training (14.8%), followed by healthcare and social assistance (14.0%), and construction (12.2%) (ABS 2021a). The proportion of residents with a long-term health condition was higher than the regional area and the state. The highest conditions were arthritis (14.8%), mental health (12.6%), and asthma (11.3%) (ABS 2021a).

vii Kentucky and Kentucky South

Kentucky and Kentucky South are locations to the south of Uralla. Kentucky can be accessed via the New England Highway, which connects to Kentucky South via Kentucky Road and Neelima Avenue. Both localities are primarily farmlands, with Kentucky also providing limited social infrastructure and accommodation businesses.

Kentucky and Kentucky South had a combined population of 300 residents at the 2021 census, with a median age of 51 years (ABS 2021a). Kentucky had substantially higher labour force participation rate (72.8%) compared to Kentucky South (55%). The top industry of employment was agriculture, forestry and fishing in both localities. In Kentucky, the second highest industry of employment was education and training (11.5%), followed by professional, scientific, and technical services and accommodation and food services (6.7%). The second highest industry in Kentucky South was public administration and safety (8.6%), followed by rental, hiring and real estate services and healthcare and social assistance (ABS 2021a). The localities had a relatively high proportion of residents with long term health conditions, with both localities recording 14% of residents with arthritis which correlates with an older age demographic (ABS 2021a).

Key services are located in Kentucky including Kentucky Public School, Kentucky Rural Fire Station and general store. There are no medical services available in either locality.

4.2.2 Key urban areas

The township of Uralla and city of Armidale are the key urban areas within the SIA study area. Data on population, dwellings and labour force for the key urban areas is provided in Table B.1 in Annexure B.

i Uralla township

Uralla township is located at the intersection of New England Highway and Thunderbolts Way, between the regional cities of Armidale and Tamworth. Uralla had 2,385 residents at the 2021 Census (ABS 2021a), representing a decline in population of 1.5% from the 2016 Census. Over the last ten years, the population has not experienced significant decline or increase. The median age of Uralla residents is 46 years.

Relative to New England REZ, Uralla township is characterised by an older population with adults (25 to 65 year olds) making up 47% of the population, and more than one quarter of its residents aged 65 years or older. There are a significantly higher proportion of residents who identify as Aboriginal and/or Torres Strait Islander (15.8%) compared to the New England REZ (10.5%) (ABS 2021b).The township has a higher proportion of low income households (25.7%), a lower rate of labour force participation (52.9%), and a higher rate of unemployment (5.9%) (ABS 2021a).

Uralla township supports sheep farming operations in the surrounding area, with the area renowned for its merino sheep. Uralla's proximity to the University of New England contributes to the highest employment industry being education and training (15.1%), which compared to a NSW rate of 8.7% (ABS 2021a). Other key industries of employment include health care and social assistance (14.6%) and construction (10.7%).

Buildings in Uralla have significant heritage value, with more than 50 buildings and sites heritage listed. Uralla hosts the popular Seasons of New England Expo, which is an annual celebration typically held in March showcasing the producers, makers, creators, and musicians of the New England region.

ii Armidale city

Armidale city is a key regional city of the New England region situated at the junction of the New England Highway and Waterfall Way on the banks of Dumaresq Creek.

The original inhabitants of the Armidale area were the Anaiwan people. European settlement of Armidale dates from the 1830s, with the township established in the late 1840s. Land was mainly used for agriculture, particularly grazing and broad hectare cropping. Armidale city's population increased from 2011 to 2016 by 3.8% (ABS 2011). At the 2021 Census, Armidale city had 23,967 residents, representing an increase of 2.6% from 2016 (ABS 2021a). The median age of Armidale city residents is 36 years.

Relative to New England REZ, Armidale city has a higher proportion of youth (16.6%), a higher proportion of residents who speak a language other than English at home (9.7%), a lower proportion of home ownership (32.8%), a higher proportion of social housing (14.9%) and a higher unemployment rate (5.7%) – including youth unemployment (12.0%) (ABS 2021a).

Armidale city is considered a key academic centre in the region and is home to a large number of primary, secondary, and tertiary education facilities. The University of New England (UNE) is based in Armidale. The university has strong links to the agricultural industry and is one of Armidale city's main employers. More than 20% of Armidale labour force are employed in the education and training industry, and 4.7% are employed in agriculture (ABS 2021a). Other key industries of employment include health care and social assistance (16.2%), and retail trade (9.4%). In 2021, the University of New England (UNE) reported 15.5% of the student population (26,136) were located on campus (UNE 2021), representing approximately 16% of Armidale's population students.

Key features of Armidale city include the New England Regional Art Museum; the Aboriginal Cultural Centre and Keeping Place; and St Peter's Cathedral. Armidale hosts a number of events and festivals including the New England Wool Expo and the Autumn Festival.

Armidale city is well connected to public transport options with Armidale Railway Station served by daily passenger trains to and from Sydney and Armidale Airport receiving an average of 3 daily flights to and from Sydney.

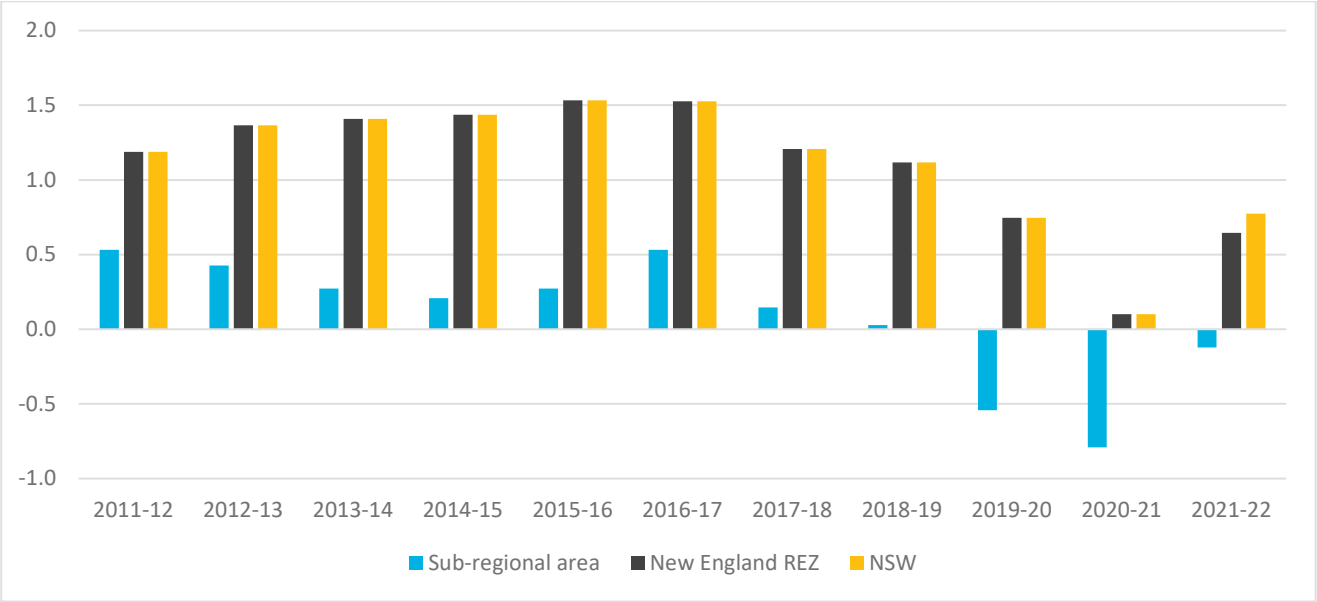
4.3 Key social trends

This section considers key trends and social characteristics as they relate to population, housing, labour force, business and industry, and access and connectivity. Key social trends are discussed within the sub-regional area (Uralla Shire LGA, Armidale LGA and Walcha LGA) and the New England REZ (regional area), with reference to trends in the local area and the key urban areas (Uralla township and Armidale city).

4.3.1 Population trends

Population trends from 2011 to 2022 across the sub-regional and regional study areas are presented in Figure 4.1. Population in the sub-regional area has been relatively stable with low rates of population increase recorded between 2011 and 2019, followed by population decline between 2019 and 2022.

Of the estimated 134,775 residents in the New England REZ, 4.4% were resident in Uralla LGA (ABS 2021a). Population growth in the New England REZ has slowed over the five years to 2021; however, this is comparable to population trends recorded for NSW. Within the New England REZ, population growth peaked in 2016 and 2017, with the population growing by 1.5% per annum up to then.



Source: Estimated resident population, regional population 2022, ABS.

Figure 4.1 Annual population change, 2010 to 2022

The NSW Government produces population projections though to year 2041. By 2041, the population of the sub-regional area is expected to increase by 374 people to 38,936 residents, representing a low rate of annual population growth of 0.9% from 2021 (DPE 2022b).

The population of the New England REZ is projected to increase by 5.9%, or 7,906 residents, by 2041. Uralla LGA is projected to experience significant population decline of 20.7% by 2041, and Walcha is expected to experience a decline of 4.6%.

4.3.2 Service availability and community challenges

Understanding service availability and level of community satisfaction can assist identification of gaps in service provision, areas of higher demand, and opportunities for community investment. It also provides insights into key challenges, values and opportunities within the community.

Uralla Shire Council's Community Strategic Plan (CSP) identified the following community needs:

- strengthening connections between villages through accessibility and digital connectivity
- supporting small businesses
- expanding NBN and mobile coverage
- providing opportunities for community transport.

Community engagement data from the Uralla Shire Local Strategic Planning Statement (LSPS) identified:

- support and manage rural landscapes
- preservation of heritage and character
- maintain the natural environment
- maintain access to transport networks

Community engagement data from the Armidale Regional Council Local Strategic Planning Statement (LSPS) also identified needs such as:

- community facilities, such as libraries, to foster education, culture and a sense of community
- improved access to transport
- infrastructure improvements, especially for roads
- improved recreational facilities for children and young people (Armidale Regional Council 2020).

Social services and infrastructure are limited in the local area to the All Saints Anglican Church in Gostwyck, Kentucky Public School, and Enmore Rural Fire Service. Uralla township and Armidale city are key regional service centres for many surrounding towns.

4.3.3 Community values

Community values are shared beliefs and elements collectively held as important to residents of the local and regional areas. Understanding of community values was informed by Uralla Shire Council planning strategies and relevant inputs from stakeholder consultation across two project scoping periods (2018 and 2023–2024).

The Uralla Shire Council CSP noted that the community values the outdoor lifestyle, in particular parks, gardens and open spaces throughout the Shire. As such, the community is "proudly rural" and invested in the preservation of the area's natural features (Uralla Shire Council 2022). The Uralla Shire Council's LSPS also noted key values and opportunities identified by the community including:

- the heritage and character of our towns and villages is part of the community's identity
- the area is a sunny and windy location which is good for renewables
- benefit sharing for renewables needs to be equitable distributed across the whole community, and inter-generationally, to ensure a net community benefit now and into the future
- accessible centres
- affordable alternatives (Uralla Shire Council 2021).

4.3.4 Access and connectivity

The primary road connections in the Uralla LGA include the New England Highway which connects to Tamworth and Armidale, and also serves as the main connecting road to localities in the local area, such as Kentucky. The highway connects with Oxley Highway, which is the main road to and from Walcha LGA. Other primary roads in the local area include Thunderbolts Way, Kingstown Road and Gostwyck Road. The Uralla Shire Council's CSP noted the difficulties with limited public transport in the region as well as the desire to upgrade road infrastructure and provide consistent road signage throughout the LGA (Uralla Shire Council 2022).

The primary road connections in Armidale LGA include the New England Highway and Waterfall Way. Waterfall Way provides access to natural features such as gorges, streams, and views in the region. These features attract tourists, particularly travelling from Armidale (Waterfall Way 2023). Overall, Armidale city is well connected to public transport options, with Armidale Railway Station served by daily passenger trains to and from Sydney, and Armidale Airport receiving daily flights to and from Sydney and Brisbane.

4.3.5 Local business and industry

Agriculture is the main driver of the economies of the New England REZ, with key agricultural activities including livestock, cereal cropping, cotton and wool production (Infrastructure Australia 2022). In 2020, agriculture made up 25% of the Gross Regional Product (GRP) within the New England REZ (Briggs 2022). Education is the second largest (13%) contributor to GRP, due in part to the University of New England in Armidale and related ancillary services, with construction the third highest contributor to GRP.

The ABS Counts of Australian Businesses register recorded 4,218 registered businesses in the sub-regional area (ABS 2023). The most prevalent industry for registered businesses was the agriculture, forestry, and fishing industry. Industries relevant to development of renewable energy projects include construction, electricity, gas, water and waste services, and transport, postal and warehousing. In 2022, Uralla LGA had 105 construction businesses, no electricity, gas, water and waste businesses, and 29 transport, postal and warehousing businesses (ABS 2023). There were an additional 366 construction businesses in the Armidale LGA, and 36 in the Walcha LGA (ABS 2023). Council operates local waste services and electricity, gas and water services are operated by other providers. In Armidale LGA, there were also 4 electricity, gas, water and waste services businesses and 122 transport, postal and warehousing businesses (ABS 2023). However, around 98.0% of registered businesses within both Uralla and Armidale LGA were considered 'small businesses' with less than 20 employees (ABS 2023)

The majority of businesses in the local area are related to the agriculture and farming. For example, there are several livestock businesses and businesses concerned with agricultural production, such as Gostwyck Merino, and local tourism businesses such as Sunhill Dairy Goats. Other businesses include rural industry and warehousing, plus other miscellaneous local businesses.

4.3.6 Regional development context

There are several operating, approved and proposed major projects in the project's local and regional study area. These have the potential to generate cumulative social impacts such as pressures on local housing and accommodation, increased traffic on road networks, changes to local character or safety, labour and skills shortages and changes to local landscape and environmental amenity.

The project site is located within the New England REZ, which is an area designated for development of its natural energy resources. With an intended capacity of eight gigawatts, development of the New England REZ is anticipated to deliver up to $10.7 billion in private sector investment (EnergyCo 2024).

There are several approved and proposed renewable energy developments and associated infrastructure within a 100 km radius of the project investigation area. The New England REZ will include infrastructure, such as transmission lines and energy hubs, which is crucial for the transfer of power generated by solar and wind farms (EnergyCo 2024).

Table A.1 (Annexure A) outlines the known details of other proposed major projects including project status and existing renewable projects within about 65 km of the project and the likely cumulative social impact considerations. Key projects identified within the project Scoping Report have been identified in Figure 4.2.

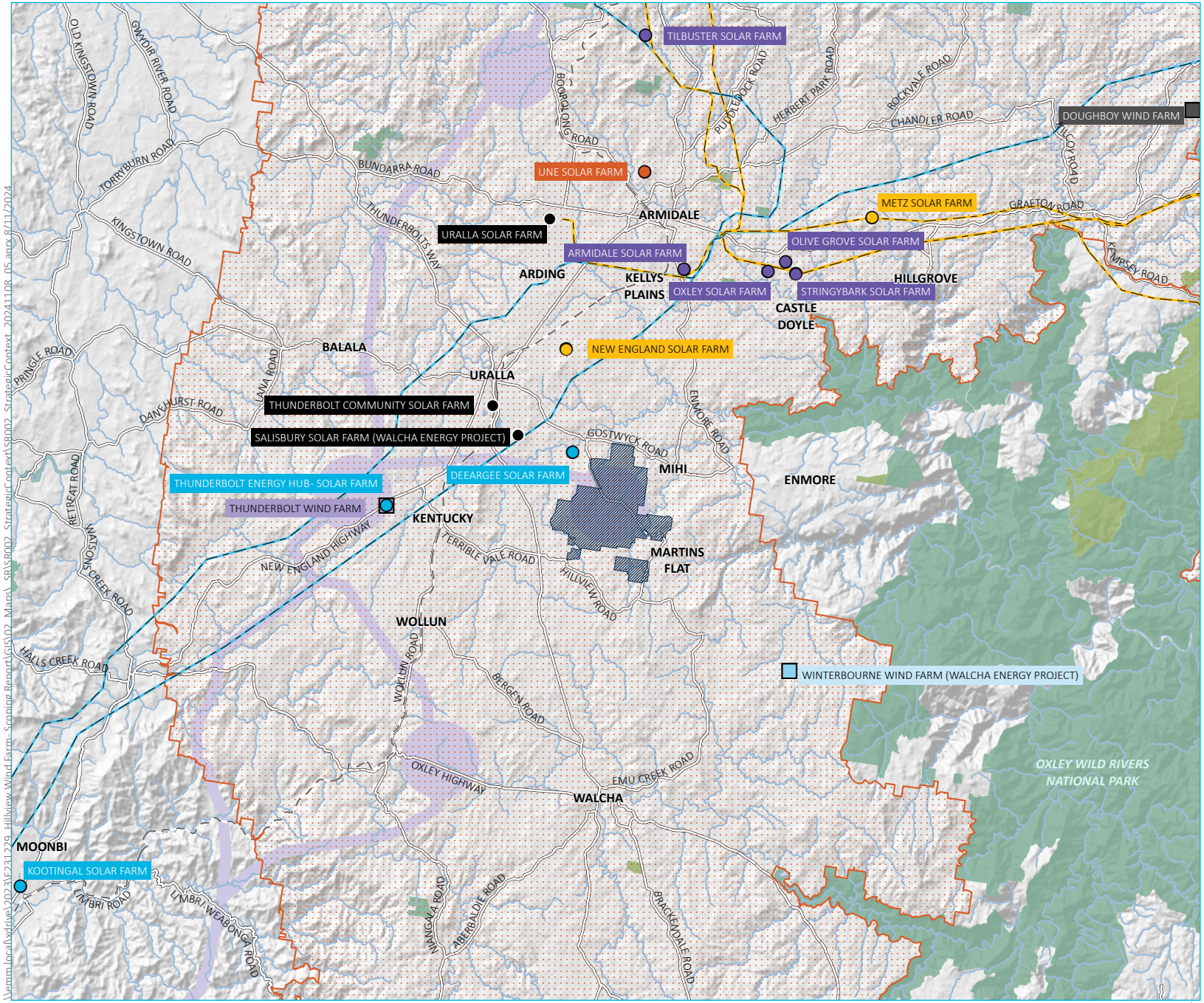
Table 4.2 provides a preliminary assessment of the projects most likely to contribute to cumulative social impacts.

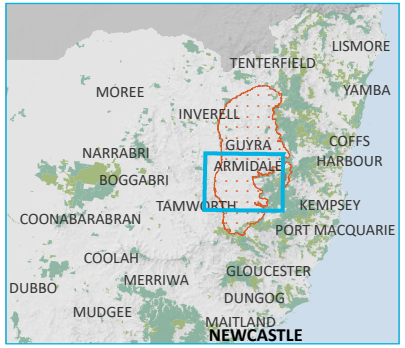
Table 4.2 Regional development context

Project name	Distance from Hillview Wind	Key characteristics
Hillview Solar Farm	Within project boundary	24-month construction timeframe 300 FTE peak during construction 15 FTE during operation

Project name	Distance from Hillview Wind	Key characteristics
Eastern Hub Firming Battery	Within project investigation area	18 month timeframe 200 FTE workers overlap likely (2027/2028).
New England REZ Transmission Project	Within project investigation area	18 month timeframe 200 FTE workers overlap likely (2027/2028).
Deeargee Solar Farm	Adjacent – north-western boundary	24 month timeframe, 400 FTE workers
New England Solar Farm	6 km north-west	360 month timeframe 700 FTE workers during construction
Winterbourne Wind Farm	12 km south	30-month timeframe 400 FTE workers during construction
Armidale Battery Energy Storage System	25 km north-east	9-month timeframe 80 FTE workers during construction
Eathorpe Battery Energy Storage System	45 km north-east	9-month timeframe 80 FTE workers during construction
Oxley Solar Farm	22 km north-east	2-year timeframe 300 FTE during construction
Thunderbolts Wind Farm	15 km -west	24-36 month timeframe 190 FTE during construction
Metz Solar Farm	55 km north-east	Operational phase will overlap

These proposed and existing projects within the region have potential to overlap with the operation of this project, thereby contributing to cumulative social impacts.





KEY

- Project investigation area
- New England REZ transmission corridor
- New England Renewable Enery Zone

Solar development

- Approved
- In planning
- Operational
- Under construction
- Withdrawn

Wind development

- Approved
- In planning
- Withdrawn

Operating system voltage

- 132 kV
- 330 kV

Existing environment

- Rail line
- Major road
- Named watercourse
- Named waterbody
- NPWS reserve
- State forest

Source: EMM (2024); ABS (2021); DCSSS (2023); GA (2009)

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Strategic context

Hillview Wind Farm
Social Impact Assessment Scoping Report
Figure 4.2

EMM creating opportunities

5 Community and stakeholder engagement

This section provides a summary of stakeholder and community engagement associated with the scoping phase of the project. It provides an overview of the engagement approach and a review of stakeholder identification and engagement activities undertaken to-date.

The feedback generated through community and stakeholder engagement directly informed preparation of the initial social baseline analysis and the preliminary identification of social impacts and benefits.

Scoping phase engagement activities and subsequent EIS phase engagement activities will be undertaken in accordance with the following guidelines:

- Undertaking Engagement Guidelines for State Significant Project (DPIE 2021c)
- Social Impact Assessment Guideline (DPE 2023a) and Technical Supplement (DPE 2023b)
- Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010a).

5.1 Engagement during the project scoping stage

Consultation undertaken from February 2024 for the Hillview Wind Farm has largely been undertaken by ACE Power, with further engagement to be conducted later in 2024 as part of the project EIS Phase.

Consultation activities to date have included:

- community drop-in session
- mail outs to nearby residences within 5 km of the project
- face-to-face meetings and briefings, telephone calls and emails
- establishment of a project website
- project briefing letters issued to elected representatives and key stakeholders

A summary of engagement undertaken during the scoping phase is provided in Table 5.1

Table 5.1 Engagement by ACE Power during Project scoping phase

Stakeholder group	Engagement method	Engagement Timeframes	Summary
Neighbors within 4 km of development corridor	Telephone calls, emails and invitations to face to face meetings	From February 2024	Provided a project overview, confirmation of approval process and indicative timeframes. Provided the opportunity for the receipt of feedback regarding concerns and opportunities.
All stakeholders	Project website launch	April 2024	Provision of a website with project information and channels for interaction with community stakeholders
Adjoining project neighbors, neighbors within 4 km of the development corridor, government and regulatory agencies	Project briefing letters	April 2024	Provided a project briefing, including high-level project and proponent information for key stakeholders

Stakeholder group	Engagement method	Engagement Timeframes	Summary
Neighbors within 4 km of development corridor	Door knock	May 2024	Provided a project briefing, including high-level project and proponent information for key stakeholders near the project that ACE had not been able to contact previously.
Local community groups and members	Community drop-in session	May 2024	Provide a project overview, confirm approval process and indicative timeframes. Receive feedback on key concerns and opportunities.
DPHI, Uralla Shire Council, Armidale Regional Council	Briefing meetings	April and May 2024	Provided an overview of Hillview Wind approval pathway and timeline, and to understand key concerns and opportunities with regulatory stakeholders.

5.1.1 Feedback from the community

ACE Power have a framework which guides the delivery of communication and engagement throughout the planning and assessment process for each phase of the project. This framework is dynamic in nature and evolves based on stakeholder and community feedback. Engagement for Hillview Wind Farm Scoping Phase commenced in February 2024 and a further comprehensive engagement program is planned for later in 2024 as part of the EIS phase.

Key Matters raised by community members included:

- community benefit sharing and infrastructure needs within the local/regional area
- traffic and construction transport routes, including impact to local roads
- biodiversity and environmental impacts; nature-positive approach and environmentally sensitive design
- technology impact on businesses, including dairy goat farming operations
- workforce accommodation and impacts on local housing.

A key outcome of the sessions was raising awareness with the community with some of those in attendance planning to discuss with their neighbours and encourage them to attend future consultation sessions.

Further detail is provided on planned engagement with community and regulatory stakeholders in the following sections.

5.2 EIS phase consultation

During the preparation of the EIS, ACE Power will consult with relevant Commonwealth, State and local government authorities, infrastructure and service providers, community groups, Traditional Owners, neighbours and affected landowners.

Aboriginal stakeholders will be identified and consulted with during the preparation of the EIS in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DEECCW 2010), and the recently released *First Nations Guidelines* (Office of Energy and Climate Change 2022).

EnergyCo. will continue to be engaged in relation to interlinkages with the proposed Eastern Hub substation, transmission line and other matters related to the REZ build-out.

Consultation during the development of the EIS will aim to:

- proactively inform, consult and involve stakeholders using clear and consistent key messages
- continue to collaborate with key stakeholders to identify potential issues, impacts, opportunities and benefits
- communicate the progress of the project and key findings or outcomes of assessments
- enable stakeholders to have input into the preparation of the EIS, project planning and refinement and opportunities for benefits sharing
- implement response and feedback strategies to address stakeholder concerns and use these to inform the evolution of the project.

A range of tools and methods will be used to communicate and engage with the community and other stakeholders during preparation of the EIS, with examples provided in Table 5.2. Issues raised during engagement will be documented by the project team to inform the project design, environmental assessment, and the preparation of the EIS.

Table 5.2 Engagement tools and methods during preparation of the EIS

Engagement methods	Detail
Advertising	Advertising in local media to advise of upcoming consultation opportunities and provide project updates.
Briefings	Formal letters or meetings with key stakeholders including landowners, MPs, Councillors and council staff to provide updates on the project.
Community contact cards	Business-size card provided to specialists and contractors to give to community stakeholders if approached.
Door-knocking	Project representatives go door to door to speak with impacted landowners and neighbours and/or provide them with project briefings and information.
Drop-in sessions	Multi-hour time periods when stakeholders can drop in to speak to the project team, view documents and plans and ask questions.
Email inbox	A dedicated project inbox (info@hillviewenergyhub.com) for managing community and stakeholder correspondence.
Letterbox drops or unaddressed mail	General information about the project delivered by the project team or Australia Post.
Letters	Addressed mail containing information, clarification, responses or requests to a particular household, business or individual.
Media releases/statements	Proactive or responsive media statements or announcements provided to the media and other key stakeholders to provide updates, address concerns and clarify information.
Meetings	One-on-one or small group meetings to discuss project issues and concerns in more detail.
Newsletters	Regular project information distributed by email or in hard copy to registered stakeholders.
Phone line	A dedicated number for stakeholders to contact ACE Power. The number is 1800 931 994
Photography	Photos, composites, concept and artist imagery can help illustrate processes and make technical information more accessible.

Engagement methods	Detail
Pop-up stalls	An engagement booth/stall set up at community events, shopping centres and key locations to intercept and engage stakeholders.
Presentations	Presentations about the project delivered to a group of interested persons, club or committee on request or by invitation.
Site tours	An escorted tour of the project investigation area to understand how the project is located geospatially and fits into the surrounding environment.
Surveys	Online or offline surveys to obtain input and feedback on project decision-making
Social media	Online social connection platforms used to share project information and interact with stakeholders.
Website	Updates to the existing websites including descriptions of the project, company information, frequently asked questions, plans, maps, media releases and contact information.
Workshops	A structured method working with groups of stakeholders to identify and suggest solutions for project issues and concerns.

5.3 Considerations for SIA engagement

As part of the EIS, a detailed SIA will be prepared in accordance with the SIA Guideline (2023). The SIA will:

- build upon the scoping report and engagement undertaken with stakeholders to affirm that stakeholder views have been fairly represented throughout the SIA process
- engage with the community and project stakeholders in a targeted manner which collaborates with existing ACE Power opportunities and approaches. Engagement opportunities should be provided with flexible time, style and place offerings so that community stakeholders are provided access to Project information, engagement opportunities and involvement in decision making.

Details on possible targeted engagement requirements are provided in the SIA Scoping Worksheet in Annexure C, and engagement options will include:

- in-depth interviews offered in person, online and over the phone with:
  - impacted residents, service providers and businesses in the local area
  - key stakeholders, such as Local Council, Business Chambers, service providers and businesses in the study area
  - environmental and recreational interest groups in the regional area
  - key Indigenous stakeholders, in a manner aligned with the Aboriginal Cultural Heritage Assessment (ACHA) and the proposed Aboriginal Participation Plan for the Project.
- online surveys, used to targeted tourism and recreation as well as to capture the views of the regional community; these will be advertised using project communications and engagement mediums and in local media and the surveys will aim to deliver a representative proportion of responses
- attendance at engagement events offered by the project, including any further community information sessions during the EIS completion timeframes.

The detailed engagement methodology for the Social Impact Assessment will be informed by further assessment of primary and secondary data to predict and analyse the potential direct and indirect impacts (positive and negative) of the project. This will include research and review of the existing social context through mechanisms consistent with the SIA Guideline (2023). Key tasks include:

- preparation of a detailed Social Baseline for the Project
- analysis of the regional planning context and associated community views and values
- further supporting research as required which may include the media context and contemporary social research
- consideration of the social consequences resulting from the findings of other technical investigations such as investigations into visual impact, biodiversity, surface water and Aboriginal heritage to identify potential amenity impacts as well as the outcomes of the economic assessment
- development of appropriate mitigation and enhancement strategies.

6 Preliminary social impact identification and evaluation

This section presents the preliminary identification and evaluation of social impacts and benefits associated with the Project. The preliminary evaluation determines the level at which these impacts need to be assessed by the SIA. The initial identification and evaluation of social impacts was facilitated through completion of the SIA scoping worksheet (DPE 2023a) provided as Annexure C.

6.1 Preliminary social impact identification and evaluation

The identification of potential social impacts and benefits was an iterative process informed by:

- the review of project activities and the social effects they could generate
- analysis of existing baseline socio-economic conditions across the social locality
- stakeholder mapping and analysis of the feedback generated through stakeholder engagement.

Preliminary identification and evaluation of social impacts was further guided through application of the SIA worksheet provided as part of the SIA Guideline. The SIA scoping worksheet is a decision support tool which assists in evaluating potential social impacts in order to determine the level of assessment and effort required to address the identified impact as part of the SIA (DPE 2023a).

As defined in the SIA Guideline 2023, the level of assessment for each social impact are:

- detailed assessment: the project may result in significant social impacts, including cumulative impacts
- standard assessment: the project is unlikely to result in significant social and cumulative impacts
- minor assessment: the project may result in minor social impacts
- not relevant: the project will have no social impacts, or the social impacts of the project will be so small that they do not warrant consideration.

To determine the level of assessment for each social impact, a preliminary impact significance evaluation is undertaken by determining the likelihood and magnitude of the potential impact. The significance levels of an impact are low, medium, high, and very high, with each impact significant rating applied to a level of assessment:

- impacts assigned a significance rating of High or Very High require a detailed assessment
- impacts assigned a significance rating of Medium require a standard assessment
- impacts assigned a significance rating of Low require a minor assessment.

The significance ratings identified are based on preliminary investigation and current understanding of the potential social impacts, prior to any mitigation measures being applied. The impact significance ratings will be revised in the SIA that will accompany the EIS.

A summary of outcomes of the SIA scoping worksheet (Annexure C) is provided in Table 6.1.

Table 6.1 Preliminary social impact evaluation

Social impact	Impact category	Project phase[1]	Affected stakeholder group	Preliminary impact significance			Existing and potential mitigation measures	Phase 2 assessment level
				Likelihood	Magnitude	Impact significance		
Negative impacts								
Construction of wind turbines changing the visual landscape	• Community • Surroundings	C, O	• Landowners (host and neighbouring) • Road users	Almost certain (A)	Moderate (3)	High (A3)	• Project site refinement in collaboration with host landowners • Ongoing engagement with landowner and neighbours about project development footprint. • Education and engagement with broader community and visitors about the need for the energy transition, and its benefits delivered to the whole community • Implement and advertise grievance mechanism, ideally including contact details of locally based project staff	Detailed
Potential disruption to agricultural operations due to establishment of project infrastructure, changes to land use and changes to access.	• Surroundings • Livelihoods	C	• Landowners (host)	Likely (B)	Moderate (3)	High (B3)	• Landowners reasonably compensated for disruptions to agricultural operations. • Neighbouring agreements reached as a mitigation and/or offset to anticipated impacts. • Regular updates for landowners on schedule and changes to access for landowner planning purposes.	Detailed

[1] PC: pre-construction. C: construction. O: operations. DC: decommissioning.

Social impact	Impact category	Project phase[1]	Affected stakeholder group	Preliminary impact significance			Existing and potential mitigation measures	Phase 2 assessment level
				Likelihood	Magnitude	Impact significance		
Reduced agricultural productivity due to increase in biosecurity risk from introduction of weeds.	• Livelihoods	C, O	• Landowners (host and neighbouring)	Possible (C)	Moderate (3)	Medium (C3)	• Complete a weed risk assessment and implement control measures such as vehicle wash down protocols and facilities. • Align management measures with those proposed in BDAR	Standard
Reduced rural lifestyle values due to land clearing and associated loss of fauna habitat.	• Community • Surroundings	C	• Landowners (host and neighbouring)	Possible (C)	Moderate (3)	Medium (C3)	• Changes to project design and layout to avoid known habitats based on feedback from early engagement with local landowners and biodiversity surveys. • Capacity-building or resourcing support for local environmental restoration and protection programs. • Implement and advertise grievance mechanism, ideally including contact details of locally based project staff.	Standard
Deterioration of residential amenity due to the generation of noise and dust.	• Health and wellbeing	C, DC	• Landowners (host and neighbouring) • Local communities	Likely (B)	Moderate (3)	High (B3)	• Ongoing engagement with local community and key stakeholders. • Changes to project design and layout to reduce noise levels at residences. • Ongoing monitoring and suppression of dust as required. • Implement and advertise grievance mechanism, ideally including direct mobile numbers and names of locally based project staff.	Detailed

Social impact	Impact category	Project phase[1]	Affected stakeholder group	Preliminary impact significance			Existing and potential mitigation measures	Phase 2 assessment level
				Likelihood	Magnitude	Impact significance		
Deterioration of residential amenity due to the generation of noise and dust.	• Health and wellbeing	O	• Landowners (host and neighbouring) • Local communities	Possible (C)	Minor (2)	Medium (C2)	• Ongoing engagement with local community and key stakeholders. • Changes to project design and layout to reduce noise levels at residences. • Ongoing monitoring and suppression of dust as required. • Implement and advertise grievance mechanism, ideally including direct mobile numbers and names of locally based project staff.	Standard
Increased competition for construction labour and services.	• Livelihoods	C	• Local communities • Sub-regional communities • Local government • Local economic and industry groups	Likely (B)	Major (4)	High (B4)	• Provision of employment and training opportunities for local people including young people and First Nations people. • Commitment to use local contractors and suppliers.	Detailed
Reduced community cohesion due to perceived inequitable distribution of project benefits.	• Community • Decision-making systems	PC, C, O	• Landowners • Local communities • Local government • Community groups	Possible (C)	Minor (2)	Medium (C2)	• Ongoing engagement with local community and key stakeholders as the project progresses. • Implementation of a First Nations participation strategy. • Support for community events which enable interaction between community members. • Implement and advertise grievance mechanism, ideally including direct mobile numbers and names of locally based project staff	Standard

Social impact	Impact category	Project phase[1]	Affected stakeholder group	Preliminary impact significance			Existing and potential mitigation measures	Phase 2 assessment level
				Likelihood	Magnitude	Impact significance		
Disruption to access and connectivity on local and sub-regional road networks from increased heavy vehicle and workforce traffic.	• Way of life • Accessibility • Surroundings	C	• Local communities • Sub-Regional communities	Almost certain (A)	Moderate (3)	High (A3)	• Provision of support for local road maintenance to Armidale and Uralla Councils through a Voluntary Planning Agreement (VPA). • Ongoing engagement with local community and key stakeholders. • notice advising of road closures or traffic disruptions, using locally preferred communication channels.	Detailed
Perceived or actual devaluation of adjacent or nearby properties.	• Way of life • Livelihoods	PC, C, O	• Landowners • Local communities	Possible (C)	Moderate (3)	High (A3)	• Negotiation of neighbouring landowner agreements. • Ongoing engagement with nearby landowners including provision of property valuation data from similar projects.	Detailed
Pressures on community cohesion due to influx of construction workers.	• Community	C	• Local communities • Local government • Community groups	Possible (C)	Moderate (3)	High (A3)	• Development and effective implementation of a Community Engagement Plan including initiatives which contribute to maintaining social cohesion in the local area. • Collaborate and engage with local councils and EnergyCo to develop a suitable housing and accommodation strategy for the construction workforce, including detailed design of, and facilities for, the proposed workforce accommodation. • Development and enforcement of a project code of conduct. • Implement and advertise grievance mechanism, ideally including direct mobile numbers and names of locally based project staff	Detailed

Social impact	Impact category	Project phase[1]	Affected stakeholder group	Preliminary impact significance			Existing and potential mitigation measures	Phase 2 assessment level
				Likelihood	Magnitude	Impact significance		
Increased demand for social and community infrastructure due to influx of construction workers.	• Community • Accessibility	C	• Social infrastructure providers and community services • Local government • Local communities • Local businesses • Sub-Regional communities	Possible (C)	Major (4)	High (B4)	• Establishment of a community benefit plan for the project that supports community infrastructure and service provision. • Procurement strategy that supports local businesses	Detailed
Increased demand for housing (rental) and short-term accommodation due to influx of construction workers.	• Way of life • Community • Accessibility	C	• Social infrastructure providers and community services • Local government • Local communities • Sub-Regional communities • Local economic and industry groups	Likely (B)	Moderate (3)	High (B3)	• Public commitment to identifying suitable accommodation solutions so as not to negatively impact on housing availability and affordability. • Collaborate and engage with local councils and EnergyCo to develop a suitable housing and accommodation strategy for the construction workforce, employing industry best practice mitigation measures. • Development of a workforce accommodation plan in collaboration with local Councils.	Detailed

Social impact	Impact category	Project phase[1]	Affected stakeholder group	Preliminary impact significance			Existing and potential mitigation measures	Phase 2 assessment level
				Likelihood	Magnitude	Impact significance		
Diminishment of First Nations cultural values due to disturbance or displacement of Aboriginal heritage sites and/or artefacts.	• Culture	C,	• Traditional Owners and Aboriginal communities	Likely (B)	Major (4)	High (B4)	• Map sub-regional Aboriginal cultural heritage and landscape values. • Avoid or minimise impacts to Aboriginal cultural heritage through project design. • The effective implementation of management measures recommended by the ACHA, which may include an Aboriginal cultural heritage management plan (ACHMP) to avoid or mitigate disturbance to culturally important places, sites or artefacts.	Detailed
Disruption to enjoyment of cultural landscapes	• Culture	C, O, DC	• Traditional Owners and Aboriginal communities	Likely (B)	Major (4)	High (B4)	• Avoid or minimise impacts to Aboriginal cultural landscapes through project design. • The effective implementation of management measures recommended by the ACHA, which may include an Aboriginal cultural heritage management plan (ACHMP) to avoid or mitigate disturbance to culturally significant elements of the landscape	Detailed
Increased uncertainty associated with decommissioning and infrastructure maintenance.	• Decision making • Community	DC	• Local, state and federal Governments • Local community • Regional community	Possible (C)	Moderate (3)	Medium (C3)	• Recycling throughout life of project • Recycling and decommissioning activities detailed in Section 3.3.3 of Scoping Report • Ongoing engagement with government and regulatory bodies.	Standard

Social impact	Impact category	Project phase[1]	Affected stakeholder group	Preliminary impact significance			Existing and potential mitigation measures	Phase 2 assessment level
				Likelihood	Magnitude	Impact significance		
Positive impacts								
Generation of employment opportunities for local and sub-regional workers, including First Nations people and young people.	• Way of life • Health and wellbeing • Livelihoods	C, O, DC	• Local communities • Sub-Regional communities • Local economic and industry groups • Traditional Owners and industry groups	Almost certain (A)	Major (4)	Very High (A4)	• Employment and training opportunities for the local and sub-regional community including young people and Aboriginal people. • Implementation of a First Nations participation strategy • Provide opportunities for local workers to specialise, re-skill or upskill in collaboration with local training organisations.	Detailed
Generation of supply and procurement opportunities for local and sub-regional businesses.	• Livelihoods	C, O, DC	• Local communities • Sub-Regional communities • Local economic and industry groups • Traditional Owners and industry groups	Almost certain (A)	Major (4)	Very High (A4)	• In conjunction with Uralla LGA and Armidale LGA economic development planning teams, develop a locally focussed procurement strategy, with the following elements: – Commitment to use local contractors and suppliers. – Engagement with local industry for planning and readiness purposes. • Strategically target opportunities for local businesses and service providers in supplying to the project. • Where feasible, align delivery of opportunities across local projects to maximise benefits for service providers	Detailed
Enhanced opportunity for economic diversification for agricultural operations.	• Livelihoods	O	• Landowners	Possible (C)	Moderate (3)	Medium (C3)	• Agreements with host landowners confirming payment details. • Landowner education for investment opportunities.	Standard

Social impact	Impact category	Project phase[1]	Affected stakeholder group	Preliminary impact significance			Existing and potential mitigation measures	Phase 2 assessment level
				Likelihood	Magnitude	Impact significance		
Contribution to intergenerational equity through reducing reliance on fossil fuels.	• Livelihoods • Surroundings	O	• Local communities	Almost certain (A)	Minimal (1)	Low (A1)	• N/A	Minor
Enhanced community wellbeing and cohesion through community grants supporting community initiatives and improvements to social services.	• Community • Health and wellbeing • Decision-making systems	C, O	• Local communities • Sub-Regional communities • Local government • Social infrastructure providers and community services • Community groups	Likely (B)	Major (4)	High (B4)	• Under the Community Benefit establishment of a Community Sponsorship Program. • Proactive support and establishment of a community benefit plan that supports infrastructure and service provision improvements such as local roads and community facilities.	Detailed

6.2 Cumulative impacts

As has been identified in Section 4.3.6 and Annexure A, there are several operating, approved and proposed major projects in the Uralla LGA and surrounds. Potential cumulative social impacts may include pressures on local housing and accommodation markets, changed traffic conditions due increased traffic on road networks, labour and skills shortages and the loss of landscape and environmental amenity.

6.3 Project refinement and preliminary mitigation and enhancement measures

As per the SIA Guideline, SIA is an iterative and adaptive process throughout a project's lifecycle. An important consideration at the scoping phase of project development is how initial assessment and feedback from stakeholders influences refinement of the Project. The proponent is committed to engaging with affected community stakeholders to understand their concerns and avoid and minimise ultimate impacts through refining locational and other aspects of the Project.

In addition to ongoing project refinement processes, Hillview has committed to a wide range of measures to ensure social impacts are avoided or mitigated to every extent possible. Table 6.2 outlines the preliminary measures proposed to mitigate potential project impacts and enhance potential benefits.

Recommendations for additional measures to effectively manage potentially significant impacts and/ or opportunities are also included in Table 6.2, which will be further refined through the SIA process.

Table 6.2 Potential and existing enhancement and mitigation measures

Existing mitigation and enhancement measures	Potential mitigation and enhancement measures
• Ongoing refinements to project design and layout based on the findings of technical studies and feedback generated through stakeholder engagement. • Neighbour agreements so that eligible properties receive a direct benefit from the project's energy generation. • Building upon the $200 k already invested through the New England Solar Uralla Grants program to community groups, businesses and organisations through the stewardship of a Community Reference Group. • Commitment to responsibly decommission project infrastructure at the end of project life. • Commitment to prioritise the participation of Small to Medium Enterprises (SMEs) to deliver goods and services • Careful consideration of suitable accommodation solutions for the project construction workforce so as not to negatively impact on housing availability and affordability. • Commitment to First Nations participation through areas such as contracting, employment, training and business innovation. • Commitment to Learning Worker participation through areas such as traineeships and apprenticeships. • Commitment to using local content for construction materials from Australia or New Zealand. • Through the payment of Access Fees allowing connection into the New England REZ infrastructure, the proponent will make significant financial contributions to the NSW Government to be directly invested into communities within the REZ	• Collaborate and engage with local governments and Energy Co to identify strategies for the housing and accommodation needs of a temporary workforce, including matters relating to the detailed design and operation of the proposed workforce accommodation. • Capacity-building or resourcing support for local environmental restoration and protection programs, including weed control and restoration works. • Provide opportunities for local workers to specialise, re-skill or upskill in collaboration with local training organisations. • Strategically target opportunities to local businesses and service providers in supply and servicing of the project. • Establish programs and engagement strategies that support collaboration across the sub-region to address impacts and priorities. • Development of a workforce accommodation plan in collaboration with local Councils. • Development and effective implementation of initiatives that contribute to maintaining social cohesion in the local area. • Collaborate with Energy Co and other renewable energy developers across the REZ to ensure that cumulative negative impacts associated with concurrent ongoing and planned developments are identified and effectively mitigated. • Ongoing review and application of adaptive management strategies. • Co-design of a shared benefit framework with community • A separate engagement stream/corp investment for Traditional Owners and the wider First Nations community • Local procurement strategy

Existing mitigation and enhancement measures	Potential mitigation and enhancement measures
• The effective implementation of an Aboriginal Cultural Heritage Management Plan (ACHMP) to avoid or mitigate disturbance to culturally important places, sites or artefacts.	• Implementation and promotion of a locally tailored grievance mechanism, ideally including direct mobile numbers and names of locally based project staff • Provide opportunities for local workers to specialise, re-skill or upskill in collaboration with local training organisations • Development and enforcement of a project code of conduct

7 Conclusion

This report has documented the SIA scoping process for the project as part of the Scoping Report that will inform the SEARs. This report has provided an initial social baseline analysis including community profiles for the local study area, a summary of engagement, and preliminary social impact identification, evaluation, and mitigation.

This SIA scoping process identified 20 potential social impacts across the impact categories outlined in the SIA Guideline, of which more than half will require a detailed assessment during the EIS phase of the project's development.

A detailed assessment will focus on the following potentially adverse social impacts:

- turbines and construction processes causing changes to visual landscape
- potential disruption to agricultural operations due to establishment of project infrastructure, changes to land use and changes to access
- deterioration of residential amenity due to the generation of noise and dust
- increased competition for construction labour and services in local and regional areas due to increased demand generated by the project
- disruption to access and connectivity on local and sub- regional road network from increased heavy vehicle and workforce traffic
- reduced community cohesion due to influx of construction workers
- increased demand for social and community infrastructure and small local businesses due to influx of construction workers
- increased demand for housing (rental) and short-term accommodation due to influx of construction workers.
- diminishment of First Nations cultural values due to disturbance or displacement of Aboriginal heritage sites and/or artefacts and changes to visual landscape.

Anticipated benefits and opportunities that will require detailed assessment include:

- generation of employment opportunities for local and sub-regional workers, including First Nations people and young people
- generation of supply and procurement opportunities for local and sub-regional businesses
- enhanced community wellbeing and cohesion due to project-provided community grants supporting community initiatives and improvements to social services
- strengthened community cohesion due to increased interaction with neighbours as a result of the project.

The purpose of this SIA Scoping study was to inform the SEARs and the scale and scope of the SIA which is to be prepared as part of the EIS. The SIA will be completed in accordance with the requirements outlined in the SIA Guideline 2023 (DPE 2023a) and SIA Technical Supplement 2023 (DPE 2023b) and will involve the following key activities:

- an update of the baseline social profile to ensure that any further data relevant to the impacts identified are obtained
- further identification of, and consultation with, affected communities and vulnerable groups
- a comprehensive assessment and evaluation of social impacts against existing baseline conditions
- refinement of enhancement and mitigation measures
- consideration of cumulative impacts in the context of projects within the region.

Acronyms and abbreviations

Table 7.1 Acronyms and abbreviations

Acronym/abbreviation	Meaning
ABS	Australian Bureau of Statistics
ACHMP	Aboriginal Cultural Heritage Management Plan
ASGS	Australian Statistical Georgraphy Standard
BCD	Biodiversity Conservation Service Division
BESS	battery energy storage system
CASA	Civil Aviation Safety Authority
CSP	Community Strategic Plan
DPE	Department of Planning and Environment
EIS	Environmental Impact Statement
EMM	EMM Consulting Pty Ltd
EP&A Act	*Environmental Planning and Assessment Act 1979*
FTE	full time equivalent
GW	gigawatt
GWh	gigawatt hour
ha	hectare
IAIA	International Association for Impact Assessment
IEO	Index of Education and Occupation
IER	Index of Economic Resources
IRSAD	Index of Relative Socio-Economic Advantage and Disadvantage
IRSD	Index of Relative Socio-Economic Disadvantage
kV	kilovolt
km	kilometre
LGA	Local Government Area
LSPS	Local Strategic Planning Statement
NSW	New South Wales
m	metres
PV	photovoltaic
REZ	Renewable Energy Zone
SAL	Suburb and Localities
SEARs	Secretary's Environmental Assessment Requirements

Acronym/abbreviation	Meaning
SEIFA	Socio-Economic Indexes for Areas
SIA	Social Impact Assessment
SIA Guideline 2023	Social Impact Assessment Guideline for State Significant Projects
SIA Technical Supplement 2023	Technical Supplement: Social Impact Assessment Guideline for State Significant Projects
the project	Hillview Wind Farm
WTG	Wind Turbine Generators

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Annexure A

Proximal project review

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A.1 Proximal cumulative impacts

Table A.1 Other projects in Uralla LGA and Armidale LGA with potential for cumulative impacts

Project	Distance from Project site	Status	Known workforce requirements		Social impact considerations	Likely contribution to Project cumulative social impacts
			Construction	Operation		
Hillview Solar Farm	Within project investigation area	Proposed – EIS preparation	24 months construction 300 FTE workers Overlap likely (2027/2028).	30-40 years Operations will overlap if this project is developed	• Housing demand • Labour demand • Access to and availability of health services • Visual amenity • Biodiversity • Heritage • Noise and vibration • Traffic and transport • Local character	Likely to contribute to cumulative impacts relating to visual and noise impacts as well as traffic along the common haulage routes
Eastern Hub Firming Battery	Within project investigation area	Proposed – EIS preparation	18 month timeframe 200 FTE workers overlap likely (2027/2028).	Operations will overlap if this project is developed	• Housing demand • Labour demand • Access to and availability of health services • Visual amenity • Biodiversity • Heritage • Noise and vibration • Traffic and transport • Local character	Likely to contribute to cumulative impacts relating to visual and noise impacts as well as traffic along the common haulage routes

Project	Distance from Project site	Status	Known workforce requirements		Social impact considerations	Likely contribution to Project cumulative social impacts
			Construction	Operation		
New England REZ Transmission Project	Within project investigation area	Proposed – SEARs requested	construction – likely to overlap.	Operations will overlap if this project is developed	• Housing demand • Labour demand • Access to and availability of health services • Visual amenity • Biodiversity • Heritage • Noise and vibration • Traffic and transport • Local character	Likely to contribute to cumulative impacts relating to visual and noise impacts as well as traffic along the common haulage routes
Deeargee Solar Farm	Adjacent – north-western boundary	Proposed – EIS preparation stage	24 month timeframe, 400 FTE workers		• Housing demand • Labour demand • Access to and availability of health services • Visual amenity • Biodiversity • Heritage • Noise and vibration • Traffic and transport • Local character	Likely to contribute to cumulative impacts relating to visual and noise impacts as well as traffic along the common haulage routes
New England Solar Farm	6 km north-west	Stage 1 – Operational Stage 2 - Under construction to be operational by 2026	36-month timeframe 700 FTE workers	30-year lifespan 15 FTE workers	• Housing demand • Labour demand • Access to and availability of health services • Visual amenity • Traffic and transport	Likely to contribute to cumulative impacts relating to visual and noise impacts as well as traffic along the common haulage routes, including Thunderbolts Way.

Project	Distance from Project site	Status	Known workforce requirements		Social impact considerations	Likely contribution to Project cumulative social impacts
			Construction	Operation		
Winterbourne Wind Farm	12 km south-west	Response to submissions	30-month timeframe 400 FTE workers	30-year lifespan 39 FTE workers	• Housing demand • Labour demand • Access to and availability of health services • Traffic and transport	Likely to contribute to cumulative impacts relating to housing and labour demand impacts as well as traffic along the common haulage routes, including Thunderbolts Way.
Thunderbolt Wind Farm	15 km west	In progress (IPC)	18-24 month timeframe 190 FTE workers	30-year lifespan 9 FTE workers	• Housing demand • Labour demand • Access to and availability of health services • Traffic and transport	Likely to contribute to cumulative impacts relating to housing and labour demand impacts as well as traffic along the common haulage routes, including Thunderbolts Way.
Eathorpe Battery Energy Storage System	45 km north-east	Preparing EIS	12-18-month timeframe (2025/2016) 100 FTE workers	20-year lifespan 3 FTE workers	• Housing demand • Labour demand • Access to and availability of health services	Potential to contribute to cumulative social impacts relating to access to housing and services
Armidale Battery Energy Storage System	25 km north-east	Response to submissions	12-month timeframe (2025/2026) 80 FTE workers	20-year lifespan No FTE workers	• Housing demand • Labour demand • Access to and availability of health services	Potential to contribute to cumulative social impacts relating to access to housing and services
Oxley Solar Farm	50 km north-east	Under construction	2-year timeframe 300 FTE	30-year lifespan 5 FTE workers	• Housing demand • Labour demand • Access to and availability of health services	Unlikely to contribute to significant Project cumulative social impacts as Oxley Solar Farm is anticipated to be operational prior to Project construction.
Olive Grove Solar Farm	21 km north-east	Under construction	9-month timeframe	28-year lifespan	• Housing demand • Labour demand • Access to and availability of health services	Unlikely to contribute to significant Project cumulative social impacts as Olive Grove Solar Farm is anticipated to be operational prior to Project construction.

Project	Distance from Project site	Status	Known workforce requirements		Social impact considerations	Likely contribution to Project cumulative social impacts
			Construction	Operation		
Armidale East Battery Storage System	40 km north-east	Preparing EIS	18-month timeframe	40-year lifespan 5 FTE	• Housing demand • Labour demand • Access to and availability of health services	Potential to contribute to cumulative social impacts relating to access to housing and services
Bendemeer Solar Farm	40 km south-west of project investigation area.	Proposed – at response to submissions stage	18-month timeframe	30 year lifespan	Cumulative: • Traffic • Labour demand • Regional character • Economic opportunities	Low risk of cumulative social impacts due to distance from the project (limited to cumulative use of available workforce and accommodation in regional centres).
Oven Mountain Pumped Hydro Energy Storage Project (OMPS)	50 km east	Response to submissions	5-year timeframe 822 FTE workers	100+-year lifespan 30-50 FTE workers	• Housing demand • Labour demand • Access to and availability of health services	Potential to contribute to cumulative social impacts relating to access to housing and services
Metz Solar Farm	55 km north-east	Approved – Operational	Operational phase will overlap.	30 year lifespan	Cumulative: • Traffic • Labour demand • Regional character • Economic opportunities	Potential to contribute to cumulative social impacts relating to project operation.
Tilibuster Solar Farm	Solar Farm and BESS	55 km north-east of the project investigation area.	Approved – yet to be constructed	50 year lifespan	Cumulative: • Traffic • Labour demand • Regional character • Economic opportunities	Potential to contribute to cumulative social impacts relating to project operation.

Annexure B

Detailed baseline data

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B.1 Baseline indicators for community profiles

Table B.1 Population, dwelling and labour force indicators – local area

Indicator	Year and data source	Local Area	Regional Area (New England REZ)	Comparison of rates with New England REZ
Population and socio-cultural indicators				
Population (#)	2021, ABS	5,647	134,775	-
Identify as Aboriginal and/or Torres Strait Islander (#)	2021, ABS	581	14,173	-
Identify as Aboriginal and/or Torres Strait Islander (%)	2021, ABS	10.3%	10.5%	v
Males (%)	2021, ABS	48.2%	48.8%	^
Females (%)	2021, ABS	51.7%	51.2%	^
Median age (#)	2021, ABS	51	-	-
Aged 14 years or younger (children) (%)	2021, ABS	17.4%	18.7%	v
Aged 15 to 24 years (youth) (%)	2021, ABS	9.1%	12.1%	v
Aged 25 to 64 years (adults) (%)	2021, ABS	40.9%	41.6%	v
Aged 65 years or older (elderly) (%)	2021, ABS	26.9%	21.6%	^
Number of families (#)	2021, ABS	1,549	34,609	-
Has a need for assistance (%)	2021, ABS	6.6%	6.5%	^
Has a health condition (%)	2021, ABS	35.7%	32.7%	^
Engaged in voluntary work (%)	2021, ABS	24.2%	17.8%	^
Median weekly household income ($)	2021, ABS	1,453	-	-
Completed Year 12 or equivalent (%)	2021, ABS	45.5%	47.3%	v
Households earning less than $650 per week (%)	2021, ABS	23.5%	20.8%	^

Indicator	Year and data source	Local Area	Regional Area (New England REZ)	Comparison of rates with New England REZ
Lone person households (%)	2021, ABS	30.8%	30.2%	^
Speaks other language at home (%)	2021, ABS	2.2%	5.2%	v
Housing indicators				
Number of private dwellings (#)	2021, ABS	2,647	57,268	-
Unoccupied dwellings (%)	2021, ABS	14.7%	11.2%	^
Separate house (%)	2021, ABS	93.0%	88.8%	^
Owned outright or with a mortgage (%)	2021, ABS	71.1%	58.5%	^
Rented (%)	2021, ABS	22.3%	29.3%	v
Median rent ($)	2021, ABS	-	-	-
Social housing (%)	2021, ABS	10.7%	12.7%	v
Labour force indicators				
Participates in labour force (#)	2021, ABS	2,604	61,396	-
Labour force participation rate (%)	2021, ABS	56.0%	56.1%	v
Unemployed persons (#)	2021, ABS	108	3,093	-
Unemployment rate (%)	2021, ABS	4.1%	5.0%	v
Youth unemployment rate (%)	2021, ABS	11.4%	10.0%	^

Table B.2 Population, dwelling and labour force indicators – key urban areas

Indicator	Year and data source	Uralla UCL	Armidale SUA	Regional Area (New England REZ)	Comparison of rates with New England REZ	
					Uralla UCL	Armidale SUA
Population and socio-cultural indicators						
Population (#)	2021, ABS	2,385	23,967	134,775	-	-
	2016, ABS	2,421	23,352	130,199	-	-
Population change over 5 years to 2021 (%)	2016 and 2021, ABS	-1.5%	2.6%	3.5%	v	v
Identify as Aboriginal and/or Torres Strait Islander (#)	2021, ABS	378	1,896	14,173	-	-
Identify as Aboriginal and/or Torres Strait Islander (%)	2021, ABS	15.8%	7.9%	10.5%	^	v
Males (%)	2021, ABS	46.8%	47.4%	48.8%	v	v
Females (%)	2021, ABS	53.5%	52.6%	51.2%	^	^
Median age (#)	2021, ABS	46	36	-	-	-
	2016, ABS	44	34	-	-	-
Aged 14 years or younger (children) (%)	2021, ABS	18.2%	17.8%	18.7%	v	v
Aged 15 to 24 years (youth) (%)	2021, ABS	9.5%	17.3%	12.1%	v	^
Aged 25 to 64 years (adults) (%)	2021, ABS	41.4%	40.1%	41.6%	v	v
Aged 65 years or older (elderly) (%)	2021, ABS	25.3%	18.4%	21.6%	^	v
Number of families (#)	2021, ABS	650	5,594	34,609	-	-
Has a need for assistance (%)	2021, ABS	9.1%	5.4%	6.5%	^	v
Has a long-term health condition (%)	2021, ABS	38.4%	29.9%	32.7%	^	v

Indicator	Year and data source	Uralla UCL	Armidale SUA	Regional Area (New England REZ)	Comparison of rates with New England REZ	
					Uralla UCL	Armidale SUA
Engaged in voluntary work (%)	2021, ABS	20.9%	20.0%	14.2%	^	^
Median weekly household income ($)	2021, ABS	1,106	1,432	1,411	v	^
Completed Year 12 or equivalent (%)	2021, ABS	44.7%	64.1%	46.3%	v	^
Households earning less than $650 per week (%)	2021, ABS	25.7%	18.8%	18.4%	^	^
Lone person households (%)	2021, ABS	33.1%	32.8%	30.1%	^	^
Speaks other language at home (%)	2021, ABS	2.5%	10.4%	6.3%	v	^
Housing indicators						
Number of private dwellings (#)	2021, ABS	1,125	9,828	17,996	-	-
Unoccupied dwellings (%)	2021, ABS	12.1%	10.5%	8.0%	^	^
Separate house (%)	2021, ABS	89.7%	81.8%	84.2%	^	v
Owned outright or with a mortgage (%)	2021, ABS	61.8%	52.9%	54.1%	^	^
Rented (%)	2021, ABS	27.0%	37.7%	37.5%	v	^
Median rent ($)	2021, ABS	250	290	300	v	v
Social housing (%)	2021, ABS	9.7%	15.3%	13.8%	v	^
Labour force indicators						
Participates in labour force (#)	2021, ABS	1,029	11,030	20,564	-	-
Labour force participation rate (%)	2021, ABS	52.9%	56.0%	59.0%	v	v
Unemployed persons (#)	2021, ABS	61	631	1,046	-	-

Indicator	Year and data source	Uralla UCL	Armidale SUA	Regional Area (New England REZ)	Comparison of rates with New England REZ	
					Uralla UCL	Armidale SUA
Unemployment rate (%)	2021, ABS	5.9%	5.7%	5.1%	^	^
Youth unemployment rate (%)	2021, ABS	12.1%	12.0%	9.9%	^	^

[23] ^ - Greater than

v - less than

- Not relevant

B.2 Baseline indicators for key social trends

Table B.3 Population projections, 2021 to 2041

Locality	2021	2041	Change (#)	Change (%)
Sub- regional Area				
Uralla LGA	5,902	4,680	-1,223	-20.7
Walcha LGA	3,046	2,904	-142	-4.6
Armidale LGA	29,612	31,352	1,739	5.8
New England REZ				
Tenterfield Shire LGA	6,397	4,834	-1,563	-24.4
Glen Innes Severn	8,880	8,963	83	0.9
Inverell	17,756	17,581	-175	-1.0
Armidale LGA	29,612	31,352	1,739	5.9
Uralla LGA	5,902	4,680	-1,223	-20.7
Tamworth Regional LGA	62,769	71,956	9,187	14.6
Walcha LGA	3,046	2,904	-142	-4.7
Total New England REZ	*134,362*	*142,270*	*7906*	*5.9*
State				
NSW	8,166,757	9,872,934	1,706,176	20.9

Source: DPE (2022b).

Table B.4 Housing affordability, 2016 and 2021

LGA	Median weekly rent			Renter households with rent payments greater than 30% of household income (%)		Owner with mortgage households with mortgage repayments greater than 30% of household income (%)	
	2016	2021	Change, 2016 to 2021	2016	2021	2016	2021
Sub-regional area							
Uralla LGA	$190	$250	$60	7.1%	29.0%	6.5%	10.3%
Walcha LGA	$148	$200	$52	5.8%	26.0%	3.3%	16.3%
Armidale LGA	$250	$285	$35	14.0%	35.3%	4.1%	10.7%
New England REZ							
Tenterfield Shire LGA	$180	$240	$60	8.6%	36.5%	4.4%	15.5%
Glen Innes Severn LGA	$200	$220	$20	10.5%	37.8%	5.1%	13.9%
Inverell Shire LGA	$210	$260	$50	10.8%	31.9%	4.9%	11.1%
Armidale Regional LGA	$250	$285	$35	14.0%	35.3%	4.1%	10.7%
Uralla LGA	$190	$250	$60	7.1%	29.0%	6.5%	10.3%
Tamworth LGA	$260	$300	$40	11.1%	32.8%	5.3%	10.7%
Walcha LGA	$148	$200	$32	5.8%	26.0%	3.3%	16.3%
State							
NSW	$380	$420	$40	12.9%	35.5%	7.4%	17.3%

Source: ABS (2016); ABS (2021b).

Table B.5 Top three industries of employment, 2021

Area	First	%	Second	%	Third	%
Local area						
Local area	Agriculture, forestry and fishing	22.7%	Health care and social assistance	11.6%	Education and training	10.8%
Key urban areas						
Uralla UCL	Education and training	15.1%	Health care and social assistance	14.6%	Construction	10.7%
Armidale SUA	Education and training	21.6%	Health care and social assistance	16.2%	Retail trade	9.4%
Sub-regional area						
Uralla LGA	Agriculture, forestry and fishing	15.2%	Education and training	14.4%	Health care and social assistance	13.6%
Walcha LGA	Agriculture, forestry and fishing	40.0%	Health care and social assistance	8.8%	Education and training	7.6%
Armidale LGA	Education and training	19.5%	Health care and social assistance	15.0%	Agriculture, forestry and fishing	10.7%
Total sub-regional area	Education and training	17.7%	Health care and social assistance	14.2%	Agriculture, forestry and fishing	13.8%
Regional Area						
New England REZ	Health care and social assistance	15.5%	Education and training	11.8%	Agriculture, forestry and fishing	10.3%

Notes: 1. The multiple industries include professional, scientific and technical services, public administration and safety, and health care and social assistance

Table B.6 Population, dwelling and labour force indicators – sub-regional area

Indicator	Year and data source	Sub-regional area (Uralla LGA + Walcha LGA + Armidale LGA)	New England REZ	Comparison of rates with New England REZ
				Sub-regional area
Population and socio-cultural indicators				
Population (#)	2021, ABS	38,111	134,775	-
	2016, ABS	38,589	130,199	-
Population change over 5 years to 2021 (%)	2016 and 2021, ABS	-1.2%	3.5%	v
Identify as Aboriginal and/or Torres Strait Islander (#)	2021, ABS	2,975	14,173	-
Identify as Aboriginal and/or Torres Strait Islander (%)	2021, ABS	7.8%	10.5%	v
Males (%)	2021, ABS	48.3%	48.8%	v
Females (%)	2021, ABS	51.7%	51.2%	^
Median age (#)	2021, ABS	47	-	-
	2016, ABS	46	-	-
Aged 14 years or younger (children) (%)	2021, ABS	17.9%	18.7%	v
Aged 15 to 24 years (youth) (%)	2021, ABS	14.5%	12.1%	^
Aged 25 to 64 years (adults) (%)	2021, ABS	41.4%	41.6%	v
Aged 65 years or older (elderly) (%)	2021, ABS	20.4%	21.6%	v
Number of families (#)	2021, ABS	9,382	34,609	-
Has a need for assistance (%)	2021, ABS	5.5%	6.5%	v
Has a long-term health condition	2021, ABS	30.6%	32.7%	v
Engaged in voluntary work (%)	2021, ABS	21.0%	17.8%	^

Indicator	Year and data source	Sub-regional area (Uralla LGA + Walcha LGA + Armidale LGA)	New England REZ	Comparison of rates with New England REZ
				Sub-regional area
Median weekly household income ($)	2021, ABS	690	-	-
Completed Year 12 or equivalent (%)	2021, ABS	58.2%	47.3%	^
Households earning less than $650 per week (%)	2021, ABS	19.5%	20.8%	v
Lone person households (%)	2021, ABS	30.9%	30.2%	^
Speaks other language at home (%)	2021, ABS	7.5%	5.2%	^
Housing indicators				
Number of private dwellings (#)	2021, ABS	16,142	57,268	-
Unoccupied dwellings (%)	2021, ABS	12.7%	11.2%	^
Separate house (%)	2021, ABS	87.0%	88.8%	v
Owned outright or with a mortgage (%)	2021, ABS	67.4%	58.5%	^
Rented (%)	2021, ABS	30.7%	29.3%	^
Median rent	2021, ABS	250	-	-
Social housing (%)	2021, ABS	13.5%	12.7%	^
Labour force indicators				
Participates in labour force (#)	2021, ABS	17,707	61,396	-
Labour force participation rate (%)	2021, ABS	56.6%	56.1%	^
Unemployed persons (#)	2021, ABS	873	3,093	-
Unemployment rate (%)	2021, ABS	4.9%	5.0%	v
Youth unemployment rate (%)	2021, ABS	11.1%	10.0%	^

Table B.7 Population, dwelling and labour force indicators – New England REZ

Indicator	Year and data source	Tenterfield LGA	Glen Innes Severn LGA	Inverell Shire LGA	Armidale Regional LGA	Uralla LGA	Tamworth Regional LGA	Walcha LGA	Total New England REZ	New South Wales
Population and socio-cultural indicators										
Population (#)	2021, ABS	6,810	8,931	17,853	29,124	5,971	63,070	3,016	6,810	8,072,163
	2016, ABS	6,628	8,836	16,483	29,449	6,048	59,663	3,092	6,628	7,480,228
Population change over 5 years to 2021 (%)	2016 and 2021, ABS	2.7%	1.1%	8.3%	-1.1%	-1.3%	5.7%	-2.5%	2.7%	7.9%
Identify as Aboriginal and/or Torres Strait Islander (#)	2021, ABS	514	677	1,975	2,205	569	8,032	201	514	278,043
Identify as Aboriginal and/or Torres Strait Islander (%)	2021, ABS	7.5%	7.6%	11.1%	7.6%	9.5%	12.7%	6.7%	7.5%	3.4%
Males (%)	2021, ABS	49.0%	49.4%	49.2%	48.1%	48.3%	49.0%	50.3%	49.0%	49.4%
Females (%)	2021, ABS	51.1%	50.6%	50.8%	51.9%	51.7%	51.0%	49.8%	51.1%	50.6%
Median age (#)	2021, ABS	55	50	43	37	47	39	50	55	39
	2016, ABS	53	47	42	36	46	40	48	53	38
Aged 14 years or younger (children) (%)	2021, ABS	14.0%	15.3%	19.2%	18.0%	17.6%	20.1%	16.9%	14.0%	18.2%
Aged 15 to 24 years (youth) (%)	2021, ABS	8.1%	9.5%	11.3%	16.0%	10.1%	11.8%	8.8%	8.1%	11.8%
Aged 25 to 64 years (adults) (%)	2021, ABS	41.3%	42.4%	41.2%	40.9%	44.3%	41.8%	40.4%	41.3%	52.3%
Aged 65 years or older (elderly) (%)	2021, ABS	32.8%	28.3%	22.8%	19.0%	23.1%	19.9%	29.3%	32.8%	17.6%
Number of families (#)	2021, ABS	1,800	2,271	4,607	6,896	1,666	16,549	820	1,800	2,135,964
Has a need for assistance (%)	2021, ABS	8.1%	8.0%	7.0%	5.2%	6.7%	6.7%	5.3%	8.1%	5.8%
Has a long-term health condition	2021, ABS	36.9%	35.7%	31.9%	29.6%	34.6%	33.3%	32.5%	36.9%	27.0%
Engaged in voluntary work (%)	2021, ABS	22.2%	19.3%	16.5%	20.0%	23.3%	15.5%	26.1%	22.2%	13.0%

Indicator	Year and data source	Tenterfield LGA	Glen Innes Severn LGA	Inverell Shire LGA	Armidale Regional LGA	Uralla LGA	Tamworth Regional LGA	Walcha LGA	Total New England REZ	New South Wales
Median weekly household income ($)	2021, ABS	885	934	1,163	1,404	1,346	1,416	1,224	885	1829%
Completed Year 12 or equivalent (%)	2021, ABS	39.4%	38.7%	39.7%	61.6%	49.4%	45.0%	43.7%	39.4%	63.3%
Households earning less than $650 per week (%)	2021, ABS	32.1%	29.2%	22.7%	19.0%	19.8%	18.4%	23.8%	32.1%	15.3%
Lone person households (%)	2021, ABS	35.6%	35.6%	29.2%	32.0%	26.4%	28.5%	30.3%	35.6%	25.0%
Speaks other language at home (%)	2021, ABS	3.0%	2.4%	3.4%	9.1%	2.4%	5.0%	2.2%	3.0%	26.8%
Housing indicators										
Number of private dwellings (#)	2021, ABS	3,591	4,207	7,414	12,055	2,586	25,914	1,501	3,591	3,199,988
Unoccupied dwellings (%)	2021, ABS	19.9%	13.8%	10.6%	11.8%	11.6%	8.9%	21.4%	19.9%	9.4%
Separate house (%)	2021, ABS	94.7%	92.3%	90.7%	84.3%	95.4%	88.1%	94.8%	94.7%	65.6%
Owned outright or with a mortgage (%)	2021, ABS	59.5%	60.4%	60.0%	54.0%	67.9%	59.1%	54.9%	59.5%	64.0%
Rented (%)	2021, ABS	18.2%	24.5%	27.3%	34.7%	17.6%	31.1%	19.9%	18.2%	32.6%
Median rent ($)	2021, ABS	240	220	260	285	250	300	200	240	-
Social housing (%)	2021, ABS	15.5%	11.0%	14.2%	14.3%	6.9%	11.9%	12.8%	15.5%	12.8%
Labour force indicators										
Participates in labour force (#)	2021, ABS	2,611	3,564	7,534	13,482	2,806	29,980	1,419	61,396	3,874,012
Labour force participation rate (%)	2021, ABS	44.6%	47.1%	52.2%	56.5%	57.1%	59.5%	56.6%	56.1%	58.7%
Unemployed persons (#)	2021, ABS	183	227	469	715	115	1,341	43	3,093	189,852

Indicator	Year and data source	Tenterfield LGA	Glen Innes Severn LGA	Inverell Shire LGA	Armidale Regional LGA	Uralla LGA	Tamworth Regional LGA	Walcha LGA	Total New England REZ	New South Wales
Unemployment rate (%)	2021, ABS	7.0%	6.4%	6.2%	5.3%	4.1%	4.5%	3.0%	5.0%	4.9%
Unemployment rate (%)	Sept qtr 2022, LMIP	-	-	-	-	-	-	-	6.5%	3.3%
Youth unemployment rate (%)	2021, ABS	7.2%	10.6%	11.7%	11.5%	9.1%	9.1%	9.6%	10.0%	9.8%

Annexure C

SIA scoping worksheet

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	Social Impact Assessment (SIA) Worksheet					Project name: Hillview Wind Farm															
PROJECT ACTIVITIES	**CATEGORIES OF SOCIAL IMPACTS**	**POTENTIAL IMPACTS ON PEOPLE**		**PREVIOUS INVESTIGATION OF IMPACT**		**CUMULATIVE IMPACTS**		**ELEMENTS OF IMPACTS - Based on preliminary investigation**					**ASSESSMENT LEVEL FOR EACH IMPACT**				**PROJECT REFINEMENT**	**MITIGATION / ENHANCEMENT MEASURES**	
Which **project activity / activities** could produce social impacts ?	what **social impact categories** could be affected by the project activities	What impacts are likely, and what concerns/aspirations have people expressed about the impact? Summarise how each relevant stakeholder group might experience the impact. NB. Where there are multiple stakeholder groups affected differently by an impact, or more than one impact from the activity, please add an additional row.	Is the impact expected to be **positive or negative**	Has this impact previously been investigated (on this or other project/s)?	If "yes - this project," briefly describe the previous investigation. If "yes - other project," identify the other project and investigation	Will this impact combine with others from this project (think about when and where), and/or with impacts from other projects (cumulative)?	If yes, identify which other impacts and/or projects	Will the project activity (without mitigation or enhancement) cause a material social impact in terms of its: You can also consider the various magnitudes of these characteristics					Level of assessment for each social impact	What methods and data sources will be used to investigate this impact?			Has the project been refined in response to preliminary impact evaluation or stakeholder feedback?	What **mitigation / enhancement measures** are being considered?	
								extent i.e. number of people potentially affected?	**duration** of expected impacts? (**i.e.** construction vs operational phase)	**intensity** of expected impacts i.e. scale or degree of change?	**sensitivity** or vulnerability of people potentially affected?	**level of concern/interest** of people potentially affected?		Secondary data	Primary Data - Consultation	Primary Data - Research			
Construction, Operation	Community; Surroundings	**Turbines and construction processes causing changes to the visual landscape**	Negative	**Yes - other project**	Winterbourne Wind Farm SIA, Thunderbolt Wind Farm SIA,	Yes	Increased presence of in renewable energy projects in REZ is likely to exacerbate perceptions of risk to the visual landscape. Nearby projects include New England Solar, Winterbourne Wind Farm and Thunderbolt Wind Farm. Visual impact assessment.	Yes	Yes	Yes	Yes	Yes	Detailed	Required - Visual Amenity Assessment	Targeted SIA consultation	Targeted research	Yes	Project site refinement to host landowner Ongoing engagement with landowner and neighbours about project development footprint. Education and engagement with broader community and visitors about the need for the energy transition, and its benefits to the whole community Implement and advertise grievance mechanism, ideally including direct mobile numbers and names of locally based project staff	
Construction	Surroundings; Livelihoods	Potential disruption to agricultural operations due to establishment of project infrastructure, changes to land use and changes to access	Negative	**Yes - other project**	New England Solar, Winterbourne Wind Farm SIA, Thunderbolt Wind Farm SIA,	No	New England Solar, visual impact assessment, noise impact assessment	No	Yes	No	Yes	Yes	Detailed	Required	Targeted SIA consultation	Targeted research	No	Landowners reasonably compensated for disruptions to agricultural operations. Neighbour agreements reached as a mitigation and/or offset to anticipated impacts. Regular updates on schedule and changes to access for landowner planning purposes.	
Construction, Operation	Livelihoods	Reduced agricultural productivity for landholders and neighbours due to increase in biosecurity risk from introduction of weeds	Negative	**Yes - other project**	New England Solar SIA,	No	Visual impact assessment, noise impact assessment	No	Yes	No	No	No	Standard	Required	Broad EIS consultation	Targeted research	No	Complete a weed risk assessment and implement control measures such as vehicle wash down protocols and facilities. Align management measures with those proposed in BDAR	
Construction, Operation	Community; Surroundings	Reduced rural lifestyle values due to land clearing and associated loss of fauna habitat	Negative	**Yes - other project**	Winterbourne Wind Farm SIA, Thunderbolt Wind Farm SIA,	No	Project biodiversity, surface water and groundwater and noise impact assessments	Yes	Yes	Yes	Yes	Yes	Standard	Required	Broad EIS consultation	Targeted research	No	Changes to project design and layout to avoid known habitats based on feedback from early engagement with local landowners and biodiversity surveys. Capacity-building or resourcing support for local environmental restoration and protection programs Implement and advertise grievance mechanism, ideally including direct mobile numbers and names of locally based project staff.	
Construction, Decommis	Health and wellbeing	Deterioration of residential amenity due to the generation of noise and dust	Negative	**Yes - other project**	Winterbourne Wind Farm SIA, Thunderbolt Wind Farm SIA,	Yes	An increased presence of in renewable energy projects in REZ is likely to exacerbate perceptions of risk to health. . Nearby projects include New England Solar, Winterbourne Wind Farm, Thunderbolt Wind Farm, Eathorpe BESS	Unknown	No	No	**Unknown**	**Unknown**	Detailed	Required	Broad EIS consultation	Targeted research	No	Ongoing engagement with local community and key stakeholders. Changes to project design and layout to reduce noise levels at residences. Ongoing monitoring and suppression of dust as required. Implement and advertise grievance mechanism, ideally including direct mobile numbers and names of locally based project staff.	
Operation	Health and wellbeing	Deterioration of residential amenity due to the generation of noise and dust	Negative	**Yes - other project**	Winterbourne Wind Farm SIA, Thunderbolt Wind Farm SIA,	Yes	An increased presence of in renewable energy projects in REZ is likely to exacerbate perceptions of risk to health. . Nearby projects include New England Solar, Winterbourne Wind Farm, Thunderbolt Wind Farm, Eathorpe BESS	Unknown	No	No	**Unknown**	**Unknown**	Standard	Required	Broad EIS consultation	Targeted research	No	Ongoing engagement with local community and key stakeholders. Changes to project design and layout to reduce noise levels at residences. Ongoing monitoring and suppression of dust as required. Implement and advertise grievance mechanism, ideally including direct mobile numbers and names of locally based project staff.	
Construction	Livelihoods	Increased competition for construction labour and services in local and regional areas due to increased demand generated by the project	Negative	**Yes - other project**	New England Solar, Winterbourne Wind Farm,	Yes	Numerous projects are anticipated to be constructed over next 10 years. . Nearby projects include New England Solar, Winterbourne Wind Farm, Thunderbolt Wind Farm, Eathorpe BESS	Yes	Yes	Yes	**Yes**	**Yes**	Detailed	Required	Targeted SIA consultation	Targeted research	No	Provision of employment and training opportunities for local people including young people and First Nations peoples. Commitment to use local contractors and suppliers.	
Pre-construction, Constru	Community; Decision-making systems	Reduced community cohesion due to perceived inequitable distribution of project benefits	Negative	**Yes - other project**	New England Solar	Yes	Numerous projects are anticipated to be constructed over next 10 years.	Yes	Yes	No	**Yes**	**Yes**	Standard	Required	Broad EIS consultation	Targeted research	No	Ongoing engagement with local community and key stakeholders as the project progresses. Implementation of a First Nations participation strategy or similar. Support for community events which enable interaction between community members. Implement and advertise grievance mechanism, ideally including direct mobile numbers and names of locally based project staff.	
Construction, Decommis	Way of life; Accessibility; Surroundings	Disruption to access and connectivity on local and sub- regional road network from increased heavy vehicle and workforce traffic.	Negative	**Yes - other project**	New England Solar, Winterbourne Wind Farm, Thunderbolt Wind Farm SIA,	Yes	Numerous projects are anticipated to be constructed over next 10 years. Nearby projects include New England Solar, Winterbourne Wind Farm, Thunderbolt Wind Farm,	Yes	Yes	**Unknown**	**Unknown**	**Unknown**	Detailed	Required	Targeted SIA consultation	Targeted research	No	Provision of support for local road maintenance to Armidale and Uralla Councils through a Voluntary Planning Agreement (VPA). Ongoing engagement with local community and key stakeholders. Notice advising of road closures or traffic disruptions, using locally preferred communication channels.	
Pre-construction, Constru	Way of life; Livelihoods	Perceived or actual devaluation of adjacent or nearby properties	Negative	**Yes - other project**	Thunderbolt Wind Farm SIA,	No		No	Unknown	Unknown	**Unknown**	**Unknown**	Minor	Required	Broad EIS consultation	Targeted research	No	Neighbour agreements reached as a mitigation and/or offset to anticipated impacts. Ongoing engagement with nearby landowners including provision of property valuation data from similar projects.	
Construction	Community	Reduced community cohesion due to influx of construction workers.	Negative	**Yes - other project**	Winterbourne Wind Farm SIA	Yes	Numerous projects are anticipated to be constructed over next 10 years. nearby projects include New England Solar, Winterbourne Wind Farm, Thunderbolt Wind Farm, Eathorpe BESS,	Yes	Yes	Yes	**Yes**	**Unknown**	Detailed	Required	Broad EIS consultation	Targeted research	No	Development and effective implementation of a Community Engagement Plan including initiatives which contribute to maintaining social cohesion in the local area. Collaborate and engage with local councils and EnergyCo to develop a suitable housing and accommodation strategy for the construction workforce. Target equitable and inclusive employment for women Development and enforcement of a project code of conduct. Implement and advertise grievance mechanism, ideally including direct mobile numbers and names of locally based project staff	
Construction	Community; Accessibility	Increased demand for social and community infrastructure and small local businesses due to influx of construction workers	Negative	**Yes - other project**	SIAs for New England Solar, Winterbourne Wind Farm, Thunderbolt Wind Farm, Eathorpe BESS, Armidale BESS , Oxley Solar Farm, Olive Grove Solar Farm , Armidale East BESS, Oven Mountain Pumped Hydro	Yes	Numerous projects are anticipated to be constructed over next 10 years. Nearby projects include New England Solar, Winterbourne Wind Farm, Thunderbolt Wind Farm, Eathorpe BESS, Armidale BESS, Oxley Solar Farm, Olive Grove Solar Farm , Armidale East	Yes	Yes	Yes	**Yes**	**Unknown**	Detailed	Required	Broad EIS consultation	Targeted research	No	Establishment of a community benefit plan for the project that supports community infrastructure and service provision. Procurement strategy that supports local businesses Development of a workforce accommodation plan in collaboration with local Councils	
Construction	Way of life; community; accessibility	Increased demand for housing (rental) and short-term accommodation due to influx of construction workers	Negative	**Yes - other project**	New England Solar, Winterbourne Wind Farm, Thunderbolt Wind Farm, Eathorpe BESS, Armidale BESS, Oxley Solar Farm, Olive Grove Solar Farm , Armidale East BESS, Oven Mountain Pumped Hydro	Yes	Numerous projects are anticipated to be constructed over next 10 years. Nearby projects include New England Solar, Winterbourne Wind Farm, Thunderbolt Wind Farm, Eathorpe Battery Energy Storage System, Armidale Battery Energy Storage System , Oxley	Yes	Yes	Yes	**Yes**	**Yes**	Detailed	Required	Targeted SIA consultation	Targeted research	No	Public commitment to identifying suitable accommodation solutions so as not to negatively impact on housing availability and affordability. Collaborate and engage with local councils and EnergyCo to develop a suitable housing and accommodation strategy for the construction workforce, employing industry best practice mitigation measures.	
Construction	Culture	Diminishment of First Nations cultural values due to disturbance or displacement of Aboriginal heritage sites	Negative	**No**	Winterbourne Wind Farm SIA	No	Hillview Solar Farm, Eastern Hub Firming Battery, New England REZ Transmission Project, Deeargee Solar Farm. The New England Solar Farm did not identify this matter as a social consideration. Project ACHA will provide further information enabling assessment	No	Yes	Unknown	**Unknown**	**Unknown**	Detailed	Required	Targeted SIA consultation	Targeted research	No	Map regional sub-Aboriginal cultural heritage values. Avoid or minimise impacts to Aboriginal cultural heritage through project design. Effective implementation of management measures recommended by the ACHA, which may include an Aboriginal cultural heritage management plan (ACHMP) to avoid or mitigate disturbance to culturally important places, sites or artefacts	
Construction, Operation,	Culture	Disruption to enjoyment of cultural landscapes	Negative	**No**		Yes	Hillview Solar Farm, Eastern Hub Firming Battery, New England REZ Transmission Project, Deeargee Solar Farm. The New England Solar Farm did not identify this matter as a social consideration. Project ACHA will provide further information enabling assessment	No	Yes	Unknown	**Unknown**	**Unknown**	Detailed	Required	Targeted SIA consultation	Targeted research	No	Avoid or minimise impacts to Aboriginal cultural landscapes through project design The effective implementation of management measures recommended by the ACHA, which may include an Aboriginal cultural heritage management plan (ACHMP) to avoid or mitigate disturbance to culturally significant elements of the landscape	

PROJECT ACTIVITIES	CATEGORIES OF SOCIAL IMPACTS	POTENTIAL IMPACTS ON PEOPLE		PREVIOUS INVESTIGATION OF IMPACT		CUMULATIVE IMPACTS		ELEMENTS OF IMPACTS - Based on preliminary investigation					ASSESSMENT LEVEL FOR EACH IMPACT				PROJECT REFINEMENT	MITIGATION / ENHANCEMENT MEASURES
Which **project activity / activities** could produce social impacts ?	what **social impact categories** could be affected by the project activities	What impacts are likely, and what concerns/aspirations have people expressed about the impact? Summarise how each relevant stakeholder group might experience the impact. NB. Where there are multiple stakeholder groups affected differently by an impact, or more than one impact from the activity, please add an additional row.	Is the impact expected to be **positive or negative**	Has this impact previously been investigated (on this or other project/s)?	If "yes - this project," briefly describe the previous investigation. If "yes - other project," identify the other project and investigation	Will this impact combine with others from this project (think about when and where), and/or with impacts from other projects (cumulative)?	If yes, identify which other impacts and/or projects	Will the project activity (without mitigation or enhancement) cause a material social impact in terms of its: You can also consider the various magnitudes of these characteristics					Level of assessment for each social impact	What methods and data sources will be used to investigate this impact?			Has the project been refined in response to preliminary impact evaluation or stakeholder feedback?	What **mitigation / enhancement measures** are being considered?
								extent i.e. number of people potentially affected?	**duration** of expected impacts? (i.e. construction vs operational phase)	**intensity** of expected impacts i.e. scale or degree of change?	**sensitivity** or vulnerability of people potentially affected?	**level of concern/interest** of people potentially affected?		Secondary data	Primary Data - Consultation	Primary Data - Research		
Decommissioning	Decision making, Community	Increased uncertainty associated with decommissioning and infrastructure maintenance	Negative	No		Yes	Numerous projects are anticipated to be constructed over next 10 years, and will operate along the same timeframes as the project. Nearby projects include New England Solar, Winterbourne Wind Farm, Thunderbolt Wind Farm, Eathorpe BESS	No	Yes	Yes	No	No	Standard	Required	Targeted SIA consultation	Targeted research	No	Recycling throughout life of project Recycling and decommissioning activities detailed in Section 3.3.3 of Scoping Report Ongoing engagement with government and regulatory bodies.
Construction, Operation,	Way of life; Health and wellbeing; Livelihoods	Generation of employment opportunities for local and sub-regional workers, including First Nations peoples and young people	Positive	Yes - other project	New England Solar, Winterbourne Wind Farm, Thunderbolt Wind Farm, Eathorpe BESS, Armidale BESS, Oxley Solar Farm, Olive Grove Solar Farm , Armidale East BESS, Oven Mountain Pumped Hydro	Yes	Numerous projects are anticipated to be constructed over next 10 years. Nearby projects include New England Solar, Winterbourne Wind Farm, Thunderbolt Wind Farm, Eathorpe BESS	Yes	Yes	Yes	Yes	Yes	Detailed	Required	Targeted SIA consultation	Targeted research	No	Employment and training opportunities for the local and regional community including young people and First Nations peoples. Implementation of a First Nations participation strategy or similar. Provide opportunities for local workers to specialise, re-skill or upskill in collaboration with local training organisations.
Construction, Operation,	Livelihoods	Generation of supply and procurement opportunities local and sub-regional businesses	Positive	Yes - other project	New England Solar, Winterbourne Wind Farm, Thunderbolt Wind Farm, Eathorpe BESS, Armidale BESS, Oxley Solar Farm, Olive Grove Solar Farm , Armidale East BESS, Oven Mountain Pumped Hydro Energy Storage Project, Doughboy Wind Farm,	Yes	Numerous projects are anticipated to be constructed over next 10 years. Nearby projects include New England Solar, Winterbourne Wind Farm, Thunderbolt Wind Farm, Eathorpe BESS	Yes	Yes	Yes	Yes	Yes	Detailed	Required	Targeted SIA consultation	Targeted research	No	In conjunction with Uralla LGA and Armidale LGA economic development planning teams, develop a locally focussed procurement strategy, with the following elements: –Commitment to use local contractors and suppliers. –Engagement with local industry for planning and readiness purposes. –Strategically target opportunities for local businesses and service providers in supplying to the project. Where feasible, align delivery of opportunities across local projects to maximise benefits for service providers
Operation	Livelihoods	Enhanced opportunity for economic diversification for agricultural operations.	Positive	No	New England Solar SIA, Winterbourne Wind Farm, SIA	No	New England Solar	No	Unknown	Unknown	Unknown	Yes	Standard	Required	Broad EIS consultation	Targeted research	No	Agreement with host landowners. Landowner education for investment opportunities.
Operation	Livelihoods, surroundings	Intergenerational equity as a result of sustainable energy generation	Positive	Yes - other project	Winterbourne Wind Farm	Yes	Numerous projects are anticipated to be constructed over next 10 years. Nearby projects include New England Solar, Winterbourne Wind Farm, Thunderbolt Wind Farm, Eathorpe BESS	No	No	Yes	No	No	Minor	Required	Not required	Targeted research	No	Not required
Construction, Operation	Community; Health and wellbeing; Decision-making systems	Enhanced community wellbeing and cohesion due to project-provided community grants supporting community initiatives and improvements to social services.	Positive	Yes - other project	Thunderbolt Wind Farm SIA	Yes	Numerous projects are anticipated to be constructed over next 10 years. Nearby projects include New England Solar, Winterbourne Wind Farm, Thunderbolt Wind Farm, Eathorpe BESS	Yes	Yes	Yes	Yes	Yes	Detailed	Required	Targeted SIA consultation	Targeted research	No	Under the Community Benefit establishment of a Community Sponsorship Program. Proactive support and establishment of a community benefit plan that supports infrastructure and service provision improvements such as local roads and community facilities.

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Appendix E

Preliminary noise impact assessment

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Hillview Wind Farm

Preliminary Noise Impact Assessment

Prepared for Hillview Energy Hub Pty Ltd

November 2024

Hillview Wind Farm

Preliminary Noise Impact Assessment

Hillview Energy Hub Pty Ltd

E231229 RP4

November 2024

Version	Date	Prepared by	Reviewed by	Comments
V1	25 July 2024	Will Tuck	Alex Dundon	Draft
V2	21 November 2024	Will Tuck	Alex Dundon	Final

Approved by

Alex Dundon
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21 November 2024

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This report has been prepared in accordance with the brief provided by Hillview Energy Hub Pty Ltd and, in its preparation, EMM has relied upon the information collected at the times and under the conditions specified in this report. All findings, conclusions or recommendations contained in this report are based on those aforementioned circumstances. This report is to only be used for the purpose for which it has been provided. Except as permitted by the Copyright Act 1968 (Cth) and only to the extent incapable of exclusion, any other use (including use or reproduction of this report for resale or other commercial purposes) is prohibited without EMM's prior written consent. Except where expressly agreed to by EMM in writing, and to the extent permitted by law, EMM will have no liability (and assumes no duty of care) to any person in relation to this document, other than to Hillview Energy Hub Pty Ltd (and subject to the terms of EMM's agreement with Hillview Energy Hub Pty Ltd).

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TABLE OF CONTENTS

1 Introduction **1**

1.1 Project overview 1

1.2 Purpose of this report 1

2 Modelling inputs **3**

2.1 Wind turbines 3

2.2 Modelling process 3

3 Noise criteria **4**

3.1 Noise Assessment Bulletin 4

3.2 Associated receivers 4

3.3 Draft guideline update 4

3.4 Ancillary infrastructure 5

4 Assessment results **6**

4.1 Predicted noise levels 6

4.2 Cumulative noise impacts 7

5 Detailed noise and vibration assessment **9**

6 Conclusion **10**

Glossary **11**

Annexures

Annexure A Tabulated receiver predicted values A.1

Tables

Table 2.1 Modelled turbine maximum sound power levels 3

Table 4.1 Predicted noise levels – non-associated receivers 6

Table 4.2 Predicted noise levels – associated receivers 6

Table G1 Key project terminology 11

Table A.1 Predicted noise levels – all receivers within 5 km A.2

Figures

Figure 1.1 Indicative Project layout 2

Figure 4.1 Operational noise contours 8

1 Introduction

Hillview Energy Hub Pty Ltd proposes to develop the Hillview Wind Farm (the project). The project includes the installation, operation, maintenance and decommissioning of a wind farm, comprising up to approximately 55 wind turbine generators (WTG) and associated infrastructure.

The project is located approximately 12 kilometres (km) south-west of Uralla and lies within the Uralla Shire Local Government Area (LGA) in New South Wales. The regional context of the project is shown in Figure 1.1.

1.1 Project overview

The Project is located within the New England Renewable Energy Zone (NE REZ) and will connect into The Energy Corporation of NSW (EnergyCo) proposed Eastern Hub substation. A project investigation area of approximately 6,124 hectares (ha) has been established with preliminary environmental and constraints investigations focussed on a 2,069-ha development corridor within the project investigation area.

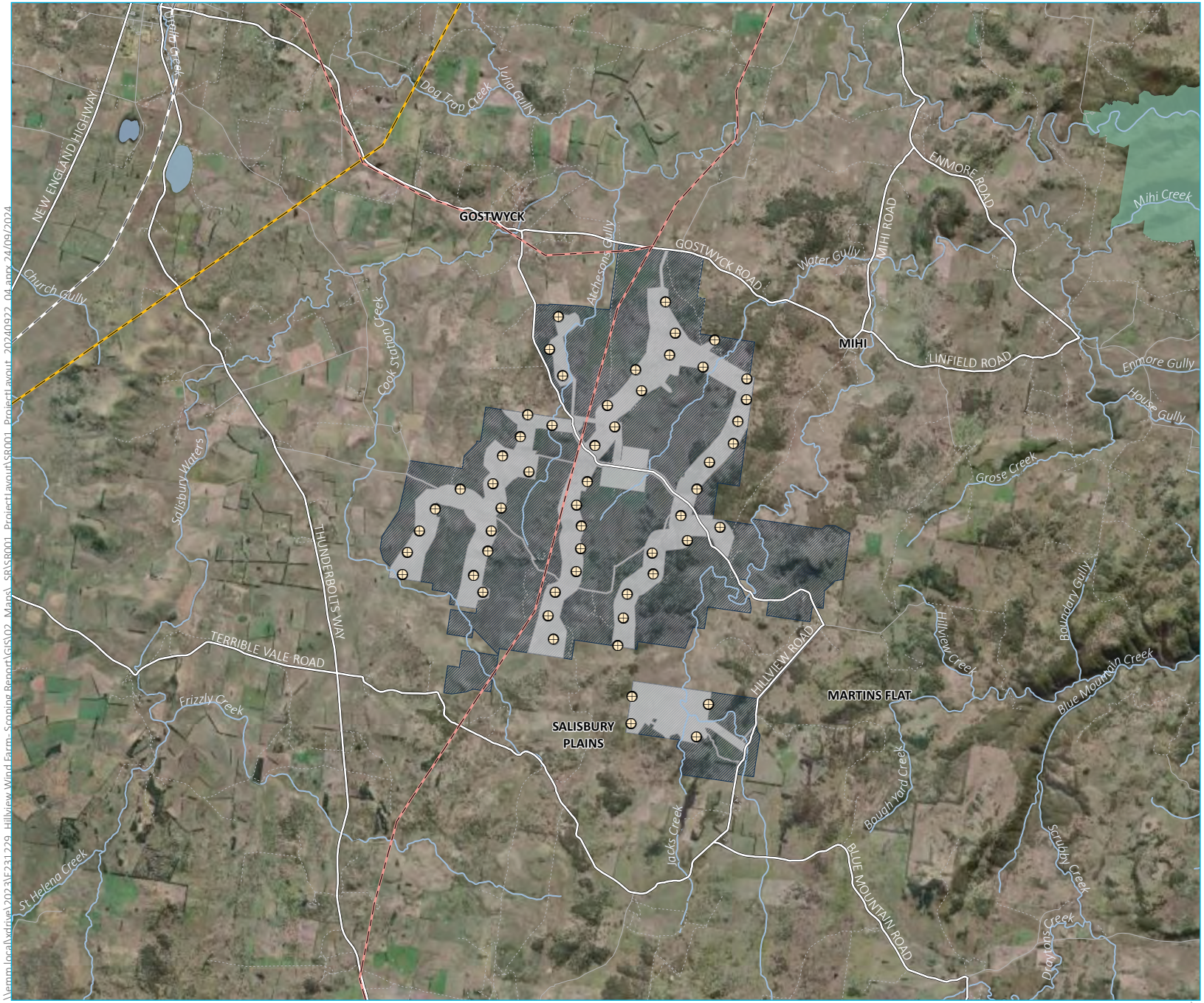
All the required Project infrastructure will be contained within the development corridor. An indicative Project layout is provided in Figure 1.1. The layout and design will be refined further through the preparation of the Environmental Impact Statement (EIS) for the Project.

The Project will consist of the following key components:

- wind turbines – approximately 55 (3 blade) WTGs with a height of up to 270 m (uppermost blade tip)
- substation and transmission connection – on-site collector substations and overhead powerlines to connect the wind farm to the electricity transmission network via the proposed Eastern Hub substation
- electrical connections – a combination of underground cables and overhead powerlines connecting WTGs to the on-site collector substations
- operations and maintenance (O&M) facility – including site offices, O&M buildings, amenities, equipment sheds, storage and parking areas
- site access and internal access roads – including access points from Hillview Road (primary access), Carlon Menzies Road, and Gostwyck Road. Wind turbines will be connected via a network of internal access tracks
- temporary construction infrastructure – to facilitate construction and likely to include on-site concrete batching plant, rock crushing facility, laydown and storage areas and site offices; each turbine location will also include a hard stand area and a turbine laydown area for assembly.
- temporary and permanent meteorological masts.

1.2 Purpose of this report

This Preliminary Noise Impact Assessment (PNIA) has been developed in accordance with the Noise Assessment Bulletin, For State significant wind energy development December 2016 (the Noise Assessment Bulletin), to provide an initial prediction of noise levels from the wind farm within the proposed development corridor at surrounding land uses. This initial assessment will be expanded on with a detail Noise and Vibration Impact Assessment (NVIA) in the Environmental Impact Statement (EIS) phase.



KEY

- Development corridor
- Project investigation area
- Wind turbine generator

Existing environment

- Rail line
- 66 kV transmission line
- 330 kV transmission line
- Major road
- Minor road
- Vehicular track
- Named watercourse
- Named waterbody
- NPWS reserve

INSET KEY

- NPWS reserve
- State forest

Indicative project layout

Hillview Wind Farm
Visual Assessment
Figure 1.1

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Source: EMM (2024); ABS (2021); DCSSS (2023); ESRI (2024); GA (2009)

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2 Modelling inputs

2.1 Wind turbines

Given the stage of the project, the wind turbine generator (WTG) model is not yet determined. Based on consultation with Hillview Energy Hub Pty Ltd, modelling has been undertaken based on a typical 6.2 MW WTG. The final selection of WTG candidate would include a range of agreed performance conditions, including sound power levels and compliance with noise limits and nearby sensitive receivers.

The proposed hub height for the wind turbines is approximately 166 metres, with a rotor diameter of up to 164 m. The sound power level (Lw) for the proposed WTG is 106.9 dBA.

Given the potential for wind turbine models to change, an adjustment for uncertainty was not incorporated into this assessment. As the design progresses into the EIS phase and the current candidate turbines are considered for this Project, the applicability of an adjustment to sound power levels to account for uncertainty will be considered. The results of this assessment will be incorporated into the Noise and Vibration Impact Assessment report, which will support the EIS.

Spectral data used in the modelling is shown in Table 2.1. Wind turbine noise increases with increased wind speed and, as such, the highest noise level is used in this assessment. Limited information on tonal audibility was provided at this stage. The need for adjustments to account for tonality will be considered in the Noise and Vibration Impact Assessment during EIS phase.

Table 2.1 Modelled turbine maximum sound power levels

A weighted octave band sound power level, dBA								Overall, dBA
63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	
90.4	98.0	101.3	101.5	99.9	95.4	87.9	77.2	106.9

2.2 Modelling process

At this preliminary stage of assessment, operational wind farm noise levels have been predicted using SoundPLAN version 8.2 software. The method used to predict A-weighted noise levels at nearby sensitive receivers is International Standard ISO 9613-2: 1996 *Acoustics—Attenuation of sound during propagation outdoors – Part 2: General method of calculation* (ISO 9613-2). This algorithm is consistent with the guidance provided by the South Australian *Wind Farm Environmental Noise Guidelines* referenced by the Noise Assessment Bulletin.

Adjustments to this methodology have been made on the basis of international research and guidance. These are contained in the UK Institute of Acoustics *A good practice guide to the application of ETSU-R-97 for the assessment and rating of wind turbine noise* (IOA Good Practice Guide). These adjustments include application of terrain screening and ground effects to ensure consistency with research findings regarding validity of modelling.

3 Noise criteria

3.1 Noise Assessment Bulletin

The Noise Assessment Bulletin provides guidance for how noise impacts should be assessed for large-scale wind energy development projects classified as State Significant Development. The Noise Assessment Bulletin adopts the South Australian EPA publication *Wind Farms Environmental Noise Guidelines* (Guidelines) to be used as the relevant assessment standard, subject to some variations applicable to assessment of projects within NSW. These variations are related to noise limits, special noise characteristics and noise monitoring.

While the Guidelines generally uses a 40 dB baseline criterion for most projects (except in areas zoned for Rural Living), the Noise Assessment Bulletin sets a baseline of 35 dB(A). Noise criteria are defined within the Noise Assessment Bulletin as follows:

> The predicted equivalent noise level (LAeq,10 minute) adjusted for tonality and low frequency noise in accordance with these guidelines, should not exceed 35 dB(A) or the background noise (LA90(10minute)) by more than 5 dB(A), whichever is the greater, at all relevant receivers for wind speed from cut-in to rated power of the wind turbine generator and each integer wind speed in between.

An outcome of this preliminary noise assessment is to identify locations at which the 35 dB(A) baseline limit may be exceeded, and therefore where background noise monitoring should be completed in order to determine background noise levels in accordance with the Noise Assessment Bulletin. The outcomes of this background noise monitoring will be used to derive wind farm noise criteria at each integer wind speed.

3.2 Associated receivers

The noise criteria above apply to noise sensitive locations that are non-associated residences (refer to Glossary for definition). The Noise Assessment Bulletin addresses associated receivers as follows:

> The criteria in this bulletin have been developed to address potential noise impacts on the amenity of residents and other relevant receivers in the vicinity of a proposed wind energy project. Wind energy proponents commonly negotiate agreements with private land owners where applicable noise limits may not be achievable at relevant receiver locations. A negotiated agreement will be considered as part of the assessment of a wind energy project, as will the requirements of SA 2009 and this Bulletin. The proponent's EIS should clearly identify the expected noise levels at all receiver locations including host properties to ensure that affected persons are appropriately informed regarding the development proposal.

The Guidelines suggest a level of 45 dB L_{Aeq} should be considered as a base criterion for financial stakeholders. However, this level is not considered a limit, and noise levels at these properties would generally be controlled through commercial agreement between the wind farm developer and property owners.

3.3 Draft guideline update

In November 2023, the Department of Planning, Housing and Infrastructure (DPHI) (formerly Department of Planning and Environment (DPE)), released the *Draft Energy Policy Framework* (DEPF). This includes updates to the noise impact assessment methodology to align with the updates to the South Australian wind farm noise guidelines (2021) (these updates do not change the noise criteria and would not materially change modelling results). Additionally, the policy adopts a new noise criterion of 50dBA for passive recreation areas within National Parks to minimise land use conflicts.

These updates to assessment methodology will need to be incorporated in the detailed noise impact assessment conducted as part of the EIS phase of works, should these changes be adopted by DPHI.

3.4 Ancillary infrastructure

Operational noise from ancillary infrastructure (transformers, inverters, cooling equipment, batteries) are to be assessed in accordance with the NSW EPA's *Noise Policy for Industry* (NPfI). Under the NPfI, project noise trigger levels (PNTLs) are derived as noise criteria for the Project. Derivation of PNTLs and a detailed assessment under NPfI will be completed as part of the Noise and Vibration Impact Assessment during the EIS phase.

4 Assessment results

4.1 Predicted noise levels

The noise model described in previous sections was used to predict resultant noise levels from the proposed WTG locations. In almost all scenarios, noise levels are rounded to the nearest whole integer. However, in the case of wind farm developments, it is routine to report predicted levels to the nearest tenth of a decibel.

These predictions were carried out based on a sound power level of 106.9 dBA, corresponding to a hub height wind speed of 15 m/s.

4.1.1 Non-associated receivers

Predicted noise levels at all non-associated receiver locations were below 35 dBA. Table 4.1 presents the predicted noise levels for the five most affected receivers. Tabulated values of all non-associated receivers within 5 km of the nearest wind turbine are provided in Annexure A.

Table 4.1 Predicted noise levels – non-associated receivers

Receiver ID	Easting	Northing	Distance to nearest turbine (m)	Predicted operational noise level	Minimum noise criteria, dB $L_{Aeq,10min}$
R012	361865	6598713	2015	34.9	35
R041	369031	6602825	1580	34.3	35
R114	370510	6602083	1911	33.6	35
R003	365518	6603092	1828	32.8	35
R129	363978	6591705	2500	32.4	35

All of the predicted non-associated receivers comply with the base limit of 35 dB. These predictions indicate that the Project can be designed and operated in compliance with the Bulletin. Predicted noise contours are presented in Figure 4.1.

4.1.2 Associated receivers

Table 4.2 provide the results for all associated receivers with predicted noise levels greater than 30 dBA. Tabulated values of associated receivers are provided in Annexure A.

Table 4.2 Predicted noise levels – associated receivers

Receiver ID	Easting	Northing	Distance to nearest turbine (m)	Predicted operational noise level
R011	366225	6594341	824	43.2
R010	365006	6595723	990	42.8
R009	369492	6595270	1102	38.4
R031	362539	6593227	2034	34.3
R030	362686	6592157	2898	31.8

Receiver ID	Easting	Northing	Distance to nearest turbine (m)	Predicted operational noise level
R022	369728	6590030	1747	31.5
R029	359502	6596038	2523	31.3
R001	364727	6603353	2238	31.2
R024	369420	6589064	2503	29

All of the predicted associated receivers comply with the recommended base criterion of 45 dBA.

4.2 Cumulative noise impacts

Cumulative noise impacts from the other components of the Hillview Wind Farm and other nearby developments will be addressed during the detailed EIS assessment, based on available public information.

KEY

- Project associated landowner
- Wind turbine generator

Sensitive receiver

- Project associated residence
- Non-associated residence

Operational noise contour (dB)

- 35 dB
- 37 dB
- 39 dB
- 41 dB
- 43 dB
- 45 dB

Existing environment

- Rail line
- 66 kV transmission line
- 330 kV transmission line
- Major road
- Minor road
- Vehicular track
- Named watercourse
- Named waterbody
- NPWS reserve

Source: EMM (2024); DCSSS (2023); ESRI (2024); GA (2009)

0 5 10 km

GDA2020 MGA Zone 56

N

Wind turbine generator operational noise contours

Hillview Wind Farm
Preliminary Noise Impact Assessment
Figure 4.1

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5 Detailed noise and vibration assessment

As part of the EIS for this Project, a detailed noise and vibration assessment will be conducted. This assessment will focus on:

- construction noise and vibration
- traffic noise assessment due to construction traffic
- operational wind farm noise
- operational noise from ancillary equipment.

At this stage of the Project design phase, there is insufficient detail to assess the above items. Construction noise and vibration impacts will be assessed against ICNG and *Assessing vibration*. Once construction schedules are developed and traffic impacts understood, an assessment of road traffic noise arising from haul routes and construction worker traffic will be conducted against the Road Noise Policy.

Ancillary equipment for the wind farm may include various size transformers, associated HVAC equipment and potentially battery storage. At this stage, there is no firm design information to conduct a detailed assessment. A detailed assessment will be conducted against environmental noise requirements of NPFI.

As more information becomes available during the design process, and turbine technology is selected, a detailed assessment at all hub height wind speeds will be conducted to confirm compliance with the NSW Noise Assessment Bulletin for the final design and selected technology. The results of these assessments will be incorporated into the Noise and Vibration Impact Assessment which will support the EIS for this Project.

6 Conclusion

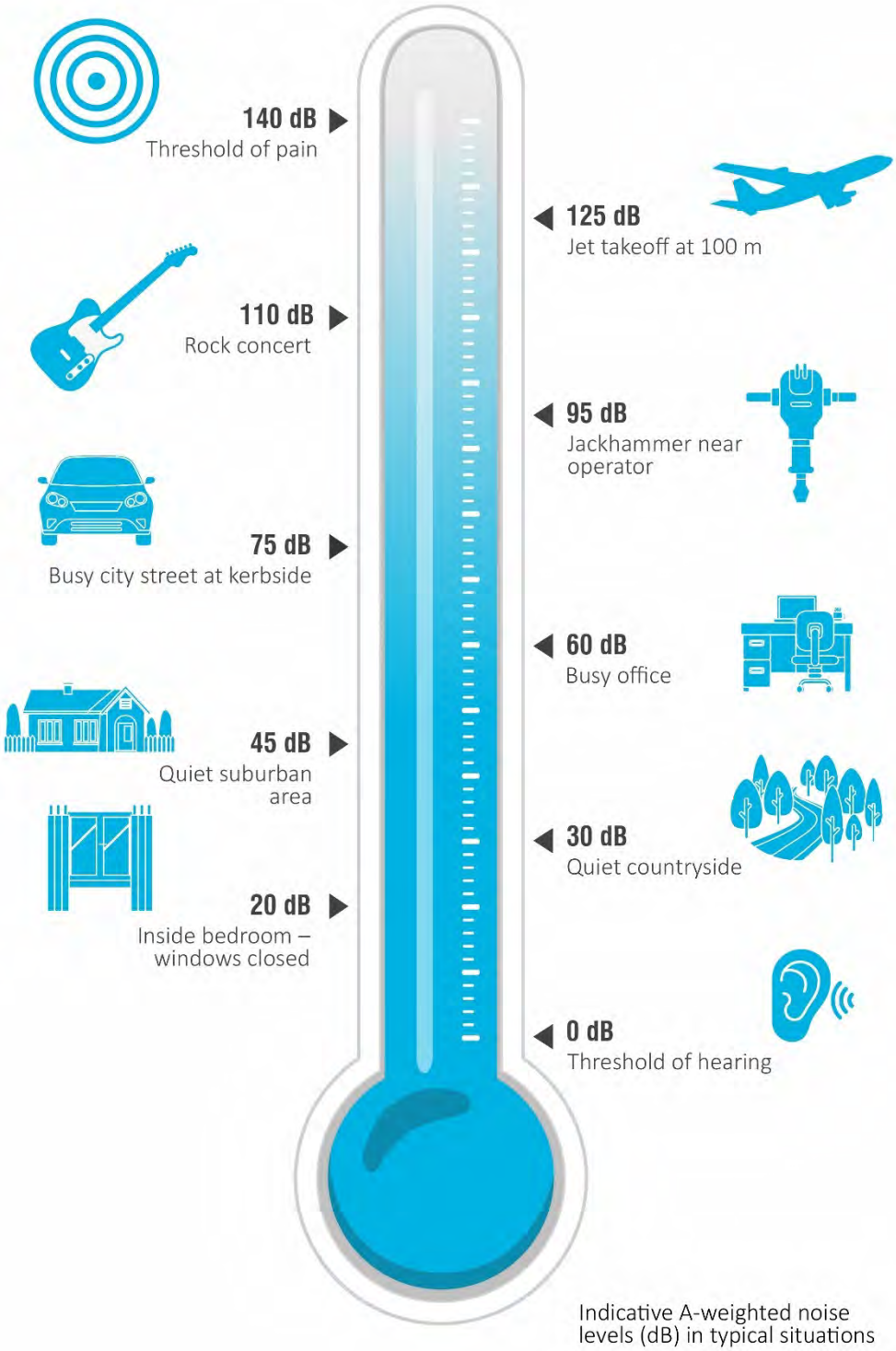
A preliminary assessment has been conducted for operational wind turbine noise for the Hillview Wind Farm project in accordance with the NSW Noise Assessment Bulletin demonstrating that for the proposed wind turbine technology and turbine locations, the minimum threshold target of 35 dBA would be achieved at all non-associated landowners under circumstances of maximum emissions.

Glossary

The key terminology used throughout this report is summarised in Table G1.

Table G1 Key project terminology

Area	Meaning
Noise	
A-weighting	There are several different weightings utilised for describing noise, the most common being the 'A-weighting'. This attempts to closely approximate the frequency response of the human ear.
dB	Noise is measured in units called decibels (dB).
L_{A1}	The A-weighted noise level exceeded for 1% of the time.
L_{A10}	The A-weighted noise level which is exceeded 10% of the time. It is roughly equivalent to the average of maximum noise level.
L_{A90}	The A-weighted noise level that is exceeded 90% of the time. Commonly referred to as the background noise level.
L_{Aeq}	The A-weighted energy average noise level. This is the equivalent continuous sound pressure level over a given period. The $L_{Aeq,10min}$ descriptor refers to an LAeq noise level measured over a 10 minute period.
L_{Amax}	The maximum A-weighted sound pressure level received during a measurement interval.
Sound power level (Lw)	A measure of the total power radiated by a source. The sound power of a source is a fundamental property of the source and is independent of the surrounding environment.
Residences	
Associated residence	A residence on privately-owned land, in respect of which the owner has reached an agreement with the Applicant in relation to the development and management of impacts. Note, this includes rented residences that are owned by an associated landowner.
Non-associated residence	• a residence on privately-owned land, in respect of which the owner has not reached an agreement with the Applicant in relation to the development; or • a residence on privately-owned land, in respect of which the owner has reached an agreement with the Applicant in relation to the development, but the agreement does not cover the relevant impact; or • the performance measure for such impact under that agreement has been exceeded.



Source: Road Noise Policy (DECCW 2011)

Figure G1 Common sources of noise with levels

Annexure A

Tabulated receiver predicted values

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A.1 Predicted noise levels

Table A.1 Predicted noise levels – all receivers within 5 km

Receiver ID	Receiver type (associated or non-associated)	Easting	Northing	Distance to nearest turbine (m)	Predicted operational noise level
R001	Associated	364727	6603353	2238	31.2
R003	Non-associated	365518	6603092	1828	32.8
R005	Non-associated	364649	6603841	2723	29.9
R006	Non-associated	364466	6603971	2909	29.5
R007	Non-associated	363970	6603180	2471	30.7
R008	Non-associated	364251	6603546	2617	30.2
R009	Associated	369492	6595270	1102	38.4
R010	Associated	365006	6595723	990	42.8
R011	Associated	366225	6594341	824	43.2
R012	Non-associated	361865	6598713	2015	34.9
R015	Non-associated	373398	6594865	4365	30.1
R016	Non-associated	374128	6600327	4238	27.4
R018	Non-associated	374742	6598116	4980	28.6
R020	Non-associated	371567	6594230	3111	31
R022	Associated	369728	6590030	1747	31.5
R024	Associated	369420	6589064	2503	29
R026	Non-associated	370938	6591543	2031	30.6
R029	Associated	359502	6596038	2523	31.3
R030	Associated	362686	6592157	2898	31.8
R031	Associated	362539	6593227	2034	34.3
R034	Non-associated	360919	6599515	3244	31.3
R035	Non-associated	359007	6598441	3938	28.7
R036	Non-associated	359890	6596946	2427	32.1
R040	Non-associated	369319	6604587	3249	28.8
R041	Non-associated	369031	6602825	1580	34.3
R063	Non-associated	361052	6602111	4559	28.2
R064	Non-associated	360527	6601481	4897	28.2
R076	Non-associated	361320	6590478	4811	27.3
R113	Non-associated	370159	6604934	3953	27.5

Receiver ID	Receiver type (associated or non-associated)	Easting	Northing	Distance to nearest turbine (m)	Predicted operational noise level
R114	Non-associated	370510	6602083	1911	33.6
R116	Non-associated	372792	6602297	3796	26.9
R119	Non-associated	372437	6600585	2631	30.8
R120	Non-associated	372336	6600479	2505	30.9
R121	Non-associated	372510	6600397	2654	30.6
R125	Non-associated	361057	6592848	2550	30.9
R126	Non-associated	361070	6592468	2908	30.1
R127	Non-associated	360405	6591496	4045	27.7
R128	Non-associated	359733	6591260	4545	26.7
R129	Non-associated	363978	6591705	2500	32.4
R145	Non-associated	367330	6587708	4023	26.5
R146	Non-associated	367462	6587323	4345	25.8
R184	Non-associated	366525	6588580	3283	28.1

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Appendix F
Aboriginal cultural heritage assessment

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Hillview Wind Farm

Aboriginal Cultural Heritage Assessment

Prepared for Hillview Energy Hub Pty Ltd

November 2024

Hillview Wind Farm

Aboriginal Cultural Heritage Assessment

Hillview Energy Hub Pty Ltd

E231229 RP5

November 2024

Version	Date	Prepared by	Reviewed by	Comments
V1	24 September 2024	Pamela Chauvel	Stacey Kennedy	Draft
V2	21 November 2024	Pamela Chauvel	Stacey Kennedy	Final

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TABLE OF CONTENTS

1 Introduction **1**

2 Background **2**

2.1 Purpose of the assessment 2

2.2 Database searches 2

2.3 Authorship 2

3 Existing environment **3**

3.1 Topography and soil landscapes 3

3.2 Geology 4

3.3 Hydrology 4

3.4 Previous land use disturbance 5

3.5 Landscape features 5

3.6 Intangible heritage 5

3.7 Previous investigations 6

4 Scoping assessment **8**

4.1 AHIMS database search 8

4.2 Native title information 9

4.3 Implications for Aboriginal cultural heritage 9

4.4 Potential impacts 10

4.5 Assessment approach 10

References **11**

Tables

Table 3.1 Soil landscapes of project investigation area (DPE 2023) 3

Table 4.1 Frequency of site types identified in AHIMS search 8

Figures

Figure 3.1 AHIMS sites within proximity to the project investigation area 7

1 Introduction

Hillview Energy Hub Pty Ltd ATF Hillview Energy Hub Trust (Hillview Energy Hub Pty Ltd), wholly controlled by ACE Power Development 2 PTY LTD (ACE Power) is seeking to develop Hillview Wind Farm (the project). The project is located approximately 11 kilometres (km) west of Uralla and lies within the Uralla Shire Local Government Area (LGA) in New South Wales. The project is located within the New England Renewable Energy Zone (NE REZ) and will connect into The Energy Corporation of NSW (EnergyCo) proposed Eastern Hub substation.

The project includes the installation, operation, maintenance and decommissioning of a wind farm, comprising up to approximately 55 wind turbine generators (WTG) and associated infrastructure. A project investigation area of approximately 6,124 hectares (ha) has been established with preliminary environmental and constraints investigations focussed on a 2,069-ha development corridor within the project investigation area.

The project will be designed to avoid and minimise impacts where possible. The exact land area to be covered by the project components (i.e. development corridor) will be refined as the project design progresses and will be informed by the outcomes of community and stakeholder engagement and the findings of the environmental, social and economic assessments.

The project is consistent with NSW Government policy for development of renewable energy generation. It will assist in meeting Australian Government and NSW emissions reduction targets.

The project is State Significant Development (SSD) pursuant to Schedule 1 of the *State environmental Planning Policy (Planning Systems) 2021* (Planning Systems SEPP) and approval for the project is required under Part 4, Division 4.7 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).

EMM Consulting Pty Ltd (EMM) has been engaged to assist ACE Power in identifying key potential environmental issues that may be associated with the project.

The purpose of this assessment is to present a simplified application of Heritage NSW's *Due Diligence Code of Practice for the Protection of Aboriginal Objects* (DECCW 2010a) ('Due Diligence Code of Practice') for the proposed activity as part of the scoping report.

This includes a brief review of the proposed project investigation area to identify the presence of any significant Aboriginal objects and sensitive landforms that may constrain or affect the proposed activities. We then consider the risk of harm to Aboriginal objects and provide an assessment approval for the project.

While some attempts have been made to determine cultural places and/or values, this area of investigation remains limited in results, and should be considered a limitation of the report.

2 Background

2.1 Purpose of the assessment

The purpose of this assessment is as follows:

- Identify if any Aboriginal objects, or landforms likely to contain Aboriginal objects, are present within the project investigation area.
- Identify whether the proposed development is likely to have any direct or indirect impact to any Aboriginal objects.
- Provide recommendations on whether further assessment or consents are required under relevant legislative frameworks.

2.2 Database searches

The following searches were undertaken for this assessment:

- a review of Native Title Vision (NTV) found no native title applications or determinations over the project investigation area
- a search of the State Heritage Register found no Aboriginal Places are listed within the project investigation area
- a search of the National heritage register, including the register of national estate, found no places listed within the project investigation area
- a review of the Aboriginal Heritage Information Management System (AHIMS) was undertaken, see Section 4.1 for results.

Of these searches, only the AHIMS data returned information relevant to the project investigation area. These are discussed further below.

2.3 Authorship

This report was prepared by Pamela Chauvel (EMM Senior Archaeologist) and reviewed by Stacey Kennedy (EMM Associate, Team Lead – Aboriginal Heritage).

3 Existing environment

The environmental context is used to predict the spatial distribution, preservation and likelihood of identifying Aboriginal cultural heritage within a project investigation area. Landscape features and their associated resources were an important factor for the choice of camping, transitory and ceremonial areas used in the past by Aboriginal people. These resources are linked to the topography, hydrology, geology and soil types in the region. Natural and anthropogenic (human-made) site formation processes also influence the potential for Aboriginal cultural heritage to be present in an area.

3.1 Topography and soil landscapes

The project investigation area is situated within the New England Tablelands Bioregion and the Armidale Plateau subregion. The Armidale Plateau subregion is characterised by an undulating to hilly plateau at an elevation of 1,100 m and demonstrates a stepped landscape across broad valleys and basalt flows which steepen towards the east (EMM 2018). The project investigation area demonstrates the presence of several different soil landscapes Bald Knob (9236ba), Ironstone (9236ir), Kellys Plains (9236kp), MIHI (9236mi), Saumarez (9236sz), Whites Hill (9236wh), Powers Creek (po), McCanns Flat (mc) and Dwyers Range (dw). Additional detail on these landscapes is provided in Table 3.1 below.

Table 3.1 Soil landscapes of project investigation area (DPE 2023)

Soil landscape and type	Landform elements	Geology	Soil summary
Bald Knob (ba) erosional	Hill crests and steeper hill slopes and drainage depressions	Tertiary basalt and associated basalt colluvium. Crests are rocky with angular basalt rock outcrop from 20–50%. Some of the unit is also underlain by Armidale Beds which includes silcrete, ferricrete and ferruginous sandstones.	Shallow to moderately deep (<20–80 cm), moderately well drained, stony Haplic Eutrophic Red Ferrosols/Dermosols on crest and side slopes.
Ironstone (ir) erosional/transferral	Crests, spurs, hill slopes, foot slopes, drainage depressions characterised by ferricrete/ironstone outcrop	Tertiary ferricrete/ironstone which outcrop 10–20% as surface strewn cobble to stone sized nodules. Locally significant silcrete outcropping.	Moderately well-drained to well-drained Red Podzolic Soils and Chocolate Soils are most commonly encountered on hillslopes and especially footslopes.
Kellys Plains (kp) transferral	Gently undulating lower slopes, footslopes and colluvial fans on basalt	Tertiary basalt with occasional rock outcrop (<2%) or locally significant outcrop and/or surface strewn basalt/ironstone floaters.	Moderately deep, deep (>80 cm) to occasionally very deep (>150 cm) moderately well drained Haplic Eutrophic Black and Red Chromosols and Ferrosols (Chocolate Soils).
MIHI (mi) transferral/erosional	Footslopes (waxing and waning) located on Sandon Association metasediments	Devono-Carboniferous Sandon Association inclusive of Sandon Beds and Lochaber Greywacke. Greywacke, slate, chert, phyllite, schist, jasper, amphibolite, mudstone	Typically, moderately deep to deep soils (>120 cm), imperfectly drained Bleached and Bleached-Mottled Eutrophic and Mesotrophic Yellow Choromosols/Kurosols
Saumarez (sz) erosional/residual	Undulating plains and rises on Tertiary silcrete (greybilly)	Unweathered to faintly weathered Tertiary silcrete. Can appear like granite tor fields but also includes smaller cobbles.	Very shallow to shallow (<60 cm) rapidly drained Rudosols (Lithosols) on crests, upper slopes and in associate with rock outcrop.

Soil landscape and type	Landform elements	Geology	Soil summary
Whites Hill (wh) erosional/colluvial	Narrow crests and moderately inclined low hills and hills on greywackes, slates, cherts, phyllites.	Sandon Association of Devono-Caboniferous age inclusive of Sandon Beds and Lochaber Greywacke.	Yellow coloured subsoils (Yellow and Brown Kandosols; Yellow Chromosols to Yellow Earths/Yellow Podzolic Soils)
Powers Creek (po) alluvial	Alluvial channels, floodplains, terraces and footslopes on basalt alluvium/colluvium	Alluvium and colluvium derived from Tertiary basalt.	Generally deep to very deep (>120 cm) poorly to imperfectly drained Haplic Epipedal Brown and Grey Vertosols along drainage lines.
McCanns Flat (mc) alluvial/swamp	Flat to very gently inclined plains, drainage depressions and lower footslopes on largely sedimentary parent material	Devono-Carboniferous and Lochaber Greywacke including lithic sandstone, slate, chert, jasper, metabasalt.	Moderately deep to deep (>80 cm) well-drained Haplic, Bleached and Bleached-Mottled Yellow Kurosols and Yellow Podzolic soils on plains and footslopes.
Dwyers Range (dw) residual	Level to very gently inclined residual crests on tertiary basalts.	Tertiary olivine basalt and some associated Armidale Beds (mainly ferricrete, rarely silcrete and other siliceous rocks).	Very shallow < 20 cm) well drained Rudosols (Structured Loams) on crests associated with isolated areas with abundant rock outcrop and surface stones). Shallow to moderately deep (40–100 cm) well drained Ferrosols/Dermosols on most crests.

3.2 Geology

The 1:1,500,000 surface geology of the project investigation area comprises: Devonian-Carboniferous sedimentary rocks (DCs) and Cenozoic mafic volcanic rocks. Basalt lava flows are typical examples of mafic volcanic rocks resulting from volcanic eruption activity (over 65 million years). Devonian-Carboniferous sedimentary rocks include: “quartz-rich pebbly sandstone and conglomerate units deposited in fluvial (river) systems, and also siltstone, mudstone and sandstone with lithic fragments (wackes)” (NSW Government 2024).

There are various types of outcropping rock in the project investigation area that may have been suitable for quarrying, including basalt, chert, jasper, and silcrete. However, this is dependent on the quality of material and how it presents itself in the landscape.

3.3 Hydrology

The project investigation area is within the New England Tablelands Bioregion which includes the MacIntyre, Clarence, Gwydir, Macleay, Namoi and Manning River catchments (EMM 2018). Hydrological features are the most likely indicator of archaeological potential within the project investigation area. Access to water and the natural resources associated with it will have influenced the distribution of habitation throughout the area.

The main hydrological features of the project investigation area and its surrounds comprise:

- Atchesons Gully – a fourth order tributary of Salisbury Waters which bisects the most northern portion of the project investigation area
- Water Gully – a fourth order tributary of Mihi Creek which bisects the middle portion of the project investigation area

- Mihi Creek – a fifth order that runs south to north through the centre of the project investigation area, eventually joining Salisbury Waters, 10 km north-east of the project investigation area
- Jacks Creek – a third order tributary to Mihi Creek in the south of the project investigation area
- Bough Yard Creek – a fifth order tributary to Blue Mountain Creek to the east of the project investigation area
- Cook Station Creek – a fourth and fifth order tributary of Salisbury Waters which traverses the western boundary of the project investigation area.

In addition to the main streams discussed above, there is a network of associated 1st, 2nd and occasionally 3rd order tributaries which extend across the project investigation area (Figure 3.1). Aerial imagery indicates that several large waterbodies are also present and may be reflective of swampy areas, and/or dams associated with the ephemeral drainage lines.

3.4 Previous land use disturbance

The project investigation area falls within both areas of cleared pasture and remnant vegetated woodland. Assessment of previous land use disturbances was completed for the New England Solar Farm Aboriginal cultural Heritage Assessment (ACHA) (see Section 3.7). This assessment found that the area of investigation had been modified by land clearing, manual and machine rock-picking, agricultural activities such as cropping and intensive livestock grazing. Given the proximity of the New England Solar Farm project area (within approximately 3 km) these types of land use practices and disturbances may have also occurred across the project investigation area. The impacts from these activities may range from minor ground disturbance to extensive disturbances over 1 m in depth. Any Aboriginal heritage sites comprising culturally modified scarred trees are unlikely to be identified in areas that have been subject to extensive vegetation clearance. Nevertheless, any mature trees should not be discounted until inspected.

In areas subject to cut and fill (the location of dams etc.), any Aboriginal heritage sites once present are likely to have been completely removed from their original context.

3.5 Landscape features

Within the Due Diligence Code of Practice five landscape features are referred to as likely to indicate the presence of Aboriginal objects: (i) within 200 m of waterways; (ii) within a sand dune system; (iii) on a ridge top, ridge line or headland; (iv) within 200 m below or above a cliff face; and, (v) within 20 m of or in a cave, rock shelter, or a cave mouth.

The project investigation area contains land within 200 m of a waterway.

3.6 Intangible heritage

As well as places with tangible evidence of past human occupation (such as archaeological sites and historical buildings etc.), some places may have intangible heritage. Intangible heritage relates to any knowledge of or expression of Aboriginal tradition, other than cultural heritage and can include oral traditions, performing arts, stories, rituals, festivals, social practices, craft, visual arts, and environmental and ecological knowledge. This can include songlines or established tracks associated with the paths of the ancestors that have camping places along them. Songlines follow major rivers and ridge tops, where high places served as lookouts. Consultation with local Aboriginal knowledge holders may identify places that have intangible significance to Aboriginal people.

3.7 Previous investigations

i New England Solar Farm

An Aboriginal cultural heritage assessment report was completed by EMM (2018) as part of an environmental impact statement (EIS) for the New England Solar Farm; a proposed grid-connected solar farm and battery energy storage system (BESS) situated 6 km east of Uralla and approximately 3 km north-west of the current project investigation area.

Archaeological survey of the study area was completed over 19 days and identified a total of 96 sites – 95 Aboriginal sites and a historical dry-stone wall. The Aboriginal sites comprised: isolated stone artefacts (n=43), stone artefact scatters (n=16), stone artefact scatters with potential archaeological deposit (PAD) (n=9), grinding groove (n=1), grinding groove with artefact scatter/PAD (n=4), grinding groove with PAD (n=1), isolated find with PAD (n=3), scarred tree (n=13), and a quarry with artefact scatter and associated PAD (n=5).

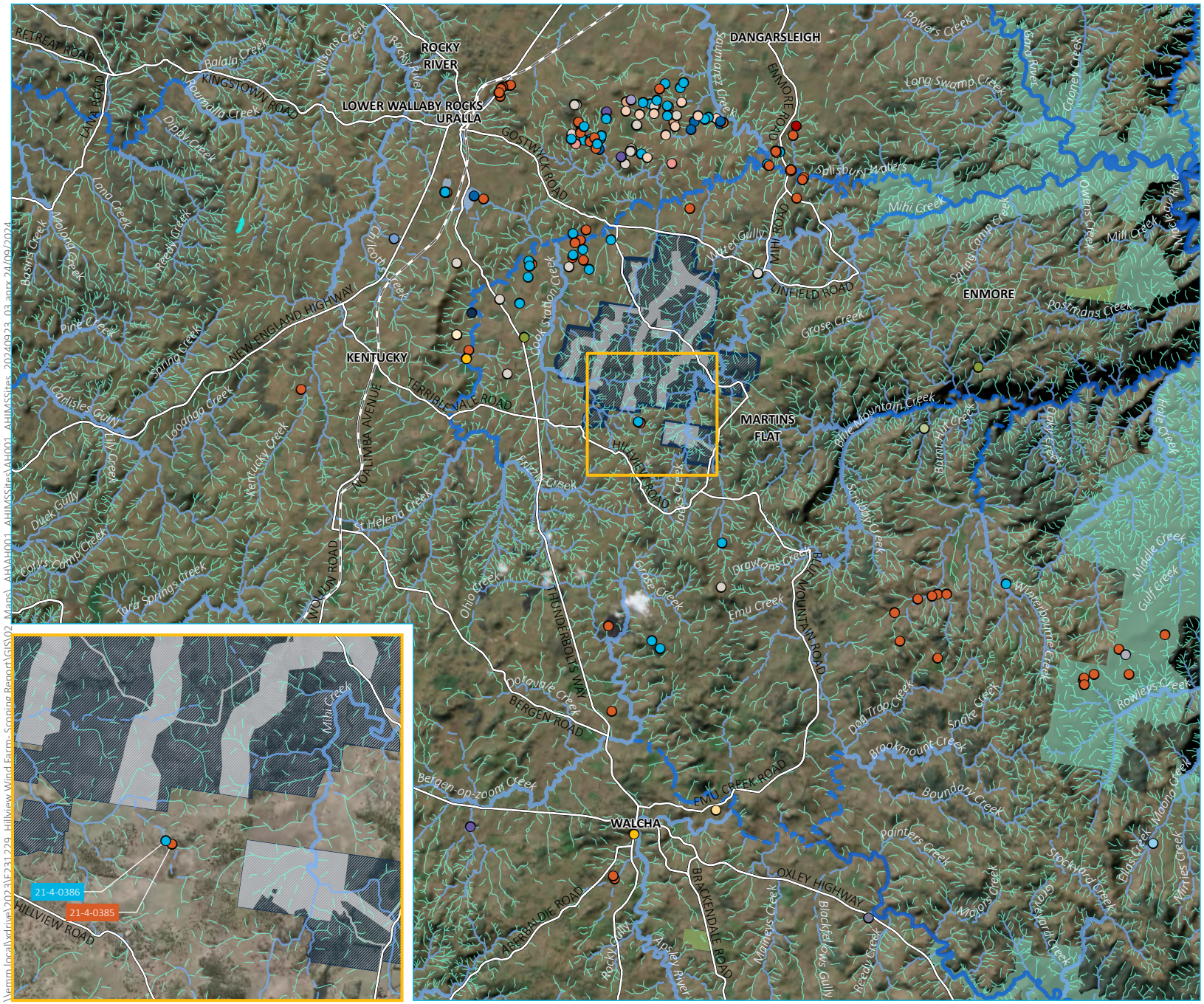
The survey identified four landform classes – crest, hillslope, flat, and watercourse. Aboriginal sites were identified within each defined landform class with the highest frequency of sites identified on crests (57%), followed by hill slopes (30%), flats (6%) and watercourses (6%). Of note, all site types were represented on crest landforms. This landform type also contained the most archaeologically significant sites, including all of the stone quarry sites, all open stone artefact sites with PAD and the most significant grinding groove site (NE09).

The frequent distribution of open camp sites on elevated crests near watercourses, along with grinding groove sites, quarries and scarred trees show that the survey area was part of the highly utilised landscape. The high frequency and variation in local raw material types (namely silcrete, basalt, greywacke and chert) would have allowed Aboriginal people to be relatively selective in what raw materials they used for stone tool manufacture, and this may be why stone quarries were relatively rare when compared to the extent of outcropping raw material encountered during survey.

However, historical disturbances may have impacted their current representation. Aboriginal grinding grooves were only found on outcropping silcrete boulders and pavements within an elevation range between 1,030–1,080 m AHD. They occurred within the Gostwyck, Powers Creek, Kellys Plains and Fairfield variant b soil landscapes. The variance in soil landscapes indicates that elevation is a more reliable indicator for the presence of grinding grooves than relying on soil landscapes information alone.

There is a clear indicator that Aboriginal people were targeting crests with outcropping material, not only for raw materials (e.g. quarries on silcrete and basalt), but for camping amongst areas of granite and/or silcrete boulders and granite tors. These locations represent relatively flat land in elevated areas with good outlook over the surrounding landscape.

Of the 95 Aboriginal sites identified four were assessed as having high significance, 31 sites were assessed as having moderate significance and 60 sites were assessed as having low significance. Sites assessed as having high significance comprised grinding groove sites. Those sites assessed as having moderate significance generally demonstrated potential archaeological deposits and therefore had additional research potential. Sites with low significance were generally represented by open stone artefact scatters or isolated finds in disturbed contexts.



\\emm.local\vdrive\2023\E231229_Hillview Wind Farm- Scoping Report\GIS\02_Maps\AH\AH001_AHIMSSites\AH001_AHIMSSites_20240923_03.aprx 24/09/2024

Source: EMM (2024); DCSSS (2023); ESRI (2024); GA (2009); DPI (2017)

AHIMS data

Hillview Wind Farm
Aboriginal Heritage
Figure 3.1

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4 Scoping assessment

4.1 AHIMS database search

Heritage NSW maintains the Aboriginal Heritage Information Management System (AHIMS), a database of registered Aboriginal heritage sites in NSW. An AHIMS search was undertaken by Pamela Chauvel on 4 June 2024 (AHIMS ID: 887799 and 887814) and searched the following area (from: lat/long -30.7637, 151.4511 to lat/long -30.6261, 151.6982; and from lat/long: -31.0352, 151.3999 to -30.7607, 151.8943) centred on the project investigation area. The results are summarised in Table 4.1 and shown in Figure 3.1.

A total of 154 sites were identified by the search, of which all are valid sites (i.e. have not been destroyed). These represent 22 different site types or categories as shown in Table 4.1. Stone artefact sites are the most prevalent site type in the region (62%) and may also be associated with other sites such as: potential archaeological deposit/s (PAD), grinding grooves, stone quarries and stone arrangements.

Two Aboriginal heritage sites are situated within the project investigation area, but are not within the development footprint:

- The Ranch IF-1 (#21-4-0386) – a single greywacke axe blank or scraper blank located within a rock crevice of a creek. The area has been subject to substantial water wash and erosion and in situ subsurface deposits are deemed unlikely.
- The Ranch OS-1 (#21-4-0385) – nine artefacts scattered over an area approximately 136 m x 69 m. The site is located around the edges of a dry creek bed surrounded by low lying hills on three sides while the eastern side opens into a larger valley. The dispersed artefacts of quartzite and basalt include flakes, a core and a blade.

The sites are situated on Mihi soil landscape associated with a third order (unnamed) tributary to Cook Station Creek which flows south to north along the western boundary of the project investigation area.

Modified trees (carved or scarred) are the second most prevalent site type with 19 identified within the search area (12.3%). Rarer site types for the area include Aboriginal ceremony and dreaming sites, an art site, two Bora/ceremonial rings, burial/stone arrangements, an ochre quarry and a massacre site. One restricted site was also identified in the search.

EMM contacted the AHIMS registrar on 4 June 2024 to verify if the restricted site (#21-4-0092) is in the project investigation area. A representative from Heritage NSW verified that the restricted site is not situated within the project investigation area and therefore will not be impacted. The massacre site is situated over 25 km to the south-east of the project investigation area and will not be impacted by the project.

There are no declared Aboriginal Places within the project investigation area or the larger search area.

Table 4.1 Frequency of site types identified in AHIMS search

Site type	Total	Percentage
Aboriginal Ceremony and Dreaming	2	1.3
Aboriginal Ceremony and Dreaming Burial	1	0.6
Aboriginal Resource and Gathering	1	0.6
Art	1	0.6
Artefact scatter	57	37.0
Artefact scatter/Grinding groove /PAD	2	1.3

Site type	Total	Percentage
Artefact scatter/PAD	8	5.2
Artefact scatter/PAD	1	0.6
Artefact scatter/PAD/Grinding groove	1	0.6
Artefact scatter/PAD/Quarry	2	1.3
Artefact scatter/Quarry	1	0.6
Artefact/Stone Arrangement/Quarry	1	0.6
Bora/Ceremonial	2	1.3
Burial/Stone Arrangement	1	0.6
Grinding groove	3	1.9
Grinding groove/PAD	1	0.6
Isolated find	39	25.3
Massacre site	1	0.6
Modified tree	19	12.3
Ochre quarry	1	0.6
PAD	6	3.9
Quarry	1	0.6
Shelter with deposit	1	0.6
Restricted site	1	0.6
TOTAL	**154**	**100.0**

4.2 Native title information

There are no native title registrations or applications applicable to the project investigation area.

4.3 Implications for Aboriginal cultural heritage

A review of the existing information suggests that limited investigation has occurred across the project investigation area. However, assessment for the New England Solar Farm across similar environments has been undertaken and revealed a rich cultural history. Cultural materials are dominated by surface and shallowly buried stone artefacts, which are common across the broader region and NSW more generally. However, a range of other less common and typically more significant site types have been documented, including grinding grooves, culturally modified trees, and quarries. Environmental characteristics of the project investigation area, especially east of Water Gully may be more conducive to these types of sites being present.

Open camp sites of stone artefact scatters, stone quarries and grinding groove sites have some potential to occur in the project investigation area, particularly in proximity to reliable water and on elevated ridges and knolls. Isolated artefacts or small artefact scatters are most likely to be identified on level to gently inclined terrain but not moderately inclined areas that would have been too steep for occupation or on low-lying floodplains where regular inundation would have prevented focussed activities. Grinding grooves may occur where crests with outcropping material are present especially where outcropping silcrete boulders and pavements are present.

Modified trees (scarred or carved) may occur across the project investigation area where native remnant vegetation remains. They are likely to occur within proximity to waterways or water bodies.

The two registered Aboriginal cultural heritage sites within the project investigation area are both artefact sites and indicative of the most common site type likely to be present within the project investigation area, especially within 200 m of watercourses. Crest landforms can also be areas where cultural materials (often of high value) may be present. Areas that are not in proximity to water sources and have been subject to disturbance activities are considered to be of lesser risk and are probably more appropriate locations for development in relation to Aboriginal heritage.

4.4 Potential impacts

The project includes the installation, operation, maintenance and decommissioning of a wind farm comprising approximately 50 WTGs and ancillary infrastructure including substations, underground cables, access roads and other operations facilities. While specific design details remain conceptual for the project, all these activities have the potential to cause ground disturbance resulting in result in localised impacts >0.5 m of the upper soil profile across portions of the project investigation area. As such, construction of the project has the potential to impact currently unidentified Aboriginal heritage sites.

Consultation with the local Aboriginal community would be needed to further understand any cultural or intangible places, values and/or stories that may intersect the project investigation area and therefore any potential impacts which may result from the proposed project.

4.5 Assessment approach

The project investigation area requires further investigation to characterise and assess potential cultural materials and provide suitable management and mitigation. This includes more detailed field survey, test excavation, and consultation with the local Aboriginal community.

As such, in accordance with Heritage NSW guidelines, further assessment would comprise an Aboriginal cultural heritage assessment (ACHA). The ACHA will be prepared with general consideration to the following guidelines:

- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011)
- *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010b)
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010c).

Given the cultural values of the region to the local Aboriginal community, the project should also consider a project-specific cultural values mapping study to supplement the ACHA and ensure intangible and cultural places, sites, and stories, etc, are identified and suitably managed.

References

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Appendix G
Historical heritage assessment

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Hillview Wind Farm

Historical Heritage Assessment

Prepared for Hillview Energy Hub Pty Ltd

November 2024

Hillview Wind Farm

Historical Heritage Assessment

Hillview Energy Hub Pty Ltd

E231229 RP6

November 2024

Version	Date	Prepared by	Reviewed by	Comments
V1	24 September 2024	Antonella Skepasianos	Susan Lampard	Draft
V2	21 November 2024	Antonella Skepasianos	Susan Lampard	Final

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TABLE OF CONTENTS

1 Introduction **1**

2 Background **2**

2.1 Purpose of the assessment 2

2.2 Database searches 2

2.3 Authorship 2

3 Existing environment **3**

3.1 Squatting 4

3.2 Early tenure in the project investigation area 4

3.3 Later tenure in the project investigation area 7

4 Potential impacts **9**

5 Assessment recommendations **10**

References **11**

Tables

Table 3.1 Register search for the project area 3

Plates

Plate 3.1 Overlay of proposed project areas across three pastoral run plans: Gostwych (Gostwyck), Salisbury, and Mihi Creek runs, n.d. 6

Plate 3.2 Overlay of proposed project area on historical parish plans: 1918 Parish of Salisbury, 1926 Parish of Mihi, 1924 Parish of Lawrence, and 1936 Parish of Eastlake 8

1 Introduction

Hillview Energy Hub Pty Ltd proposes to develop the Hillview Wind Farm (the project). The project includes the installation, operation, maintenance and decommissioning of a wind farm, comprising up to approximately 55 wind turbine generators (WTG) and associated infrastructure. The project is located approximately 11 kilometres (km) west of Uralla and lies within the Uralla Shire Local Government Area (LGA) in New South Wales. The project is located within the New England Renewable Energy Zone (NE REZ) and will connect into The Energy Corporation of NSW (EnergyCo) proposed Eastern Hub substation.

EMM Consulting Pty Ltd (EMM) has been engaged to assist in identifying key potential environmental issues that may be associated with the project.

The purpose of this report is to identify the potential for historical heritage values (also referred to as non-Aboriginal, or European values in external reports) to exist on site and to determine if further research and investigation is necessary to support the development application and to ensure that significance is not lost through development.

This report has been prepared with the relevant guidelines forming a framework with which to ask questions of the data; the relevant guidelines are included in Section 4 of this document.

2 Background

2.1 Purpose of the assessment

The purpose of this assessment is as follows:

- Prepare a summary history of the project investigation area to understand its context.
- Review documentary sources that may assist with historical uses and therefore with site predictions.
- Present recommendations to guide the historical investigation and ensure compliance with current legislation and regulations during the Environmental Impact Statement (EIS) preparation.

2.2 Database searches

The following searches were undertaken for this assessment:

- Australian Heritage Database, including the National and Commonwealth heritage lists, as well as the World Heritage List
- State Heritage Inventory, including the State Heritage Register, Section 170 registers, and local heritage items
- Schedule 5 of Uralla LEP
- Register of the National Estate (non-statutory).

2.3 Authorship

This report was prepared by Antonella Skepasianos (Archaeologist) and reviewed by Susan Lampard (Associate archaeologist).

3 Existing environment

The project investigation area falls within the Uralla LGA. An extensive search of National, State, and local heritage registers was conducted on 27 May 2024.

No heritage-listed sites are within the project investigation area. The nearest items of heritage significance listed on Schedule 5 of the Uralla LEP within a 5 km radius of the project investigation areas include the Deeargee Woolshed (LEP I11), which abuts the west boundary of the project investigation area, and the Gostwyck Memorial Chapel and Precinct (LEP I10), located approximately 1.3 km to the north. Additionally, Dangars Falls and Salisbury Waters Gorge (LEP I12) are situated approximately 4.6 km north of the project area, while Salisbury Court (LEP I14), approximately 4.2 km west, is also listed in the non-statutory Register of the National Estate as Salisbury Court (Place ID: 358) and Gardens (Place ID: 359). Table 3.1 provides a summary of the register search.

Table 3.1 Register search for the project area

Register	Register listing	Item number	Address	Distance to closest project boundary
WHL	None	N/A	N/A	N/A
NHL	None	N/A	N/A	N/A
CHL	None	N/A	N/A	N/A
SHR	None	N/A	N/A	N/A
S170	None	N/A	N/A	N/A
Uralla LEP	*Gostwyck Memorial Chapel and Precinct*	LEP #I10	979 Gostwyck Road, Gostwyck NSW 2358	~1.3 km north
	Deeargee Woolshed	LEP #I11	1081 Gostwyck Road, Gostwyck NSW 2358	Abuts west boundary of the project area
	Dangars Falls and Salisbury Waters Gorge	LEP #I12	Dangarsleigh Road, Mihi NSW 2350	~4.6 km north
	Salisbury Court	LEP #I14	3031 Thunderbolts Way, Salisbury Plains, NSW 2358	~4.2 km west
NT – Non-statutory	None	N/A	N/A	N/A
RNE – Non-statutory	*Salisbury Court*	358	3031 Thunderbolts Way, Salisbury Plains, NSW 2358	~4.2 km west
	Salisbury Court Garden	359		

The project investigation area is within the New England Tablelands bioregion. Historically, the higher tablelands region was claimed by squatters who raised Merino sheep for the domestic and international markets. The region remains largely pastoral serviced by towns including Uralla, Armidale, and Kentucky.

An initial desktop analysis of the project investigation area involved reviewing parish and pastoral maps, historical aerial imagery, and other historical assessments of the region.

3.1 Squatting

Squatting, a form of pastoral landholding, emerged in the 1820s, where illegal sheep and cattle farming occurred on Crown land beyond the defined limits of location in New South Wales. Governor Brisbane introduced the "ticket of occupancy" to offer security to squatters, allowing them to occupy lands outside settled districts for pastoral purposes (Starr and Nicholas 1978). By 1847, squatters secured leases with pre-emptive purchase rights and compensation (Stuart 1999).

In 1847, an Order in Council established pastoral leases, marking a unique Australian tenure (Esmaeili & Grigg, 2016). Premier John Robertson's 1861 Acts—*the Crown Lands Alienation Act 1861* and the *Crown Lands Occupation Act 1861*, colloquially known as the 'Robertson Land Acts'—transformed land ownership by permitting free selection of Crown land. This shift heightened conflict between squatters and selectors (Museum of Australian Democracy, n.d).

The process of creating squatting landscapes involved settlers' desire for land, responses to Lands Acts, and environmental considerations. Settlers complied with landscape improvement mandates, often using ring-barking to open land up and encourage grass coverage (Stuart 1999). Structures were built and modified, shaping landscapes under economic, political, and individual influences (Stuart 1999). The process was considered virtuous and productive, contributing to the progress of the colony.

3.2 Early tenure in the project investigation area

This analysis draws on the examination of historical documents, maps, and archival records to delineate the early tenure and evolution of the project investigation area. The project investigation area covers three significant early squatting runs: Mihi Creek Run, Gostwyck and Salisbury. A brief summary of each is provided in Section 3.2.1, Section 3.2.2 and Section 3.2.3, respectively.

3.2.1 Mihi Creek Run

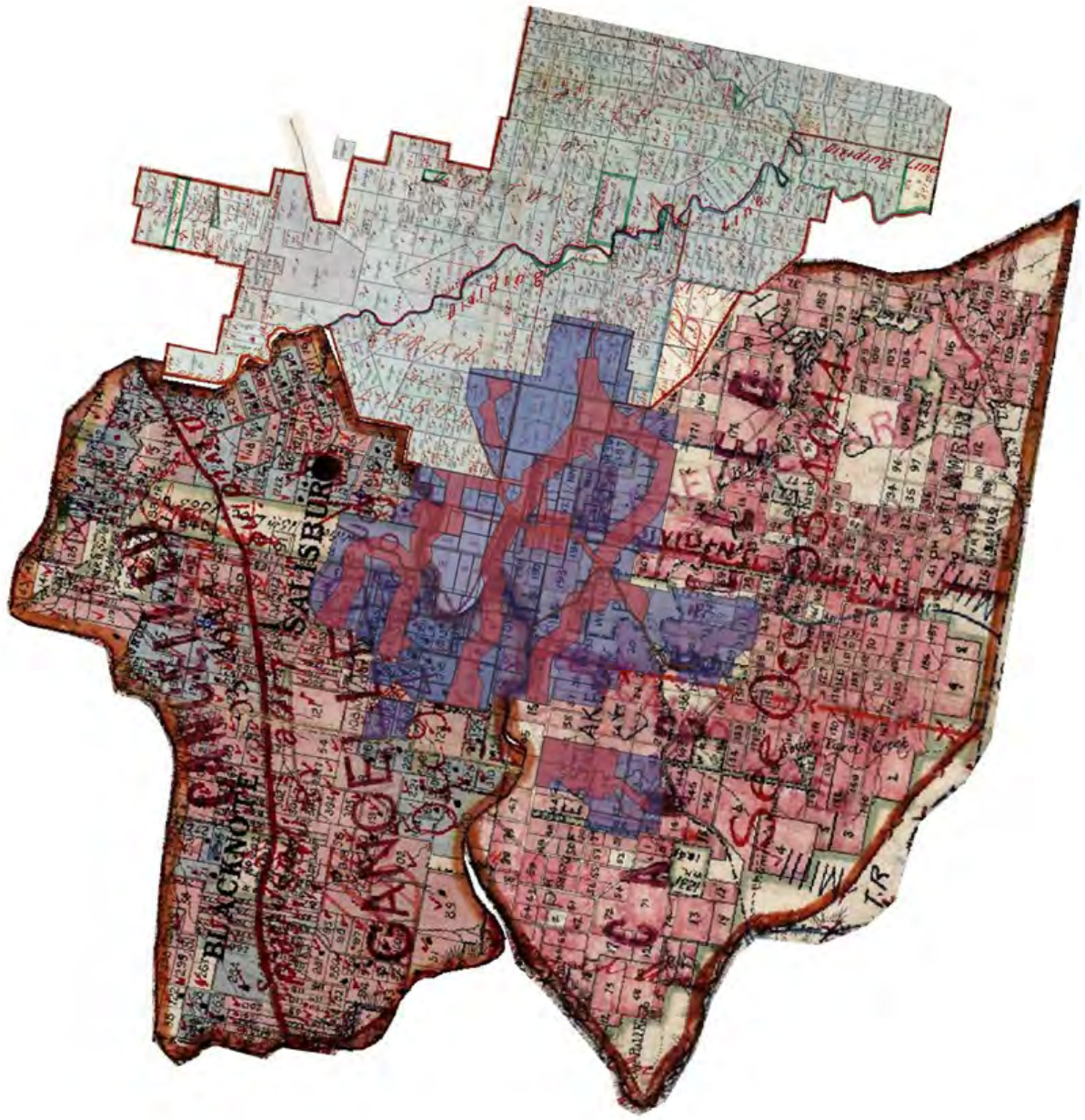
Mihi Creek Run was established in 1835 by pastoralist Frederick Cruickshank (spelled in other sources as 'Cruikshanks'). Frederick Cruickshank's name appears on the earliest official list of New England pioneer squatters, as indicated in the 1837 *Government Gazette* notices. Cruickshanks initially occupied the Mihi Creek valley and the upland region to the east (Enmore). Later, he formed a partnership with George Jenkins, which lasted until around 1843 when they divided the holding. In 1848, Cruickshanks declared insolvency (*NSW Government Gazette,* 5 December 1848, p.1772) and transferred his interests in the valley to creditors but retained Enmore, resulting in the tripart division of the original occupancy in that year.

The evolution of the squatting run into a pastoral run culminated in its division into two stations, Mihi Creek No. 1 Station (North), and Mihi Creek No. 2 Station (South). *Bailliere's New South Wales Gazetteer and Road Guide*, dated 1866, cites James Dickson as the occupant of both runs, encompassing 33,280 acres (13,468 hectares) with grazing capacity for 14,000 sheep (p.350). Subsequent records in 1889, under the publication *Pastoral Possessions in New South Wales*, designate Mihi Creek as pastoral holding No. 152, albeit a much-reduced area, with Frederick Robert White identified as the leaseholder (p.99).

An 1869 excerpt from the *Armidale Express and New England General Advertiser* provides a vivid description of the Mihi Creek Run, highlighting its strategic location in proximity to Armidale and Gostwyck, substantial land size, and agricultural endeavours:

> The head station of Mihi Creek is some 15 or 16 miles S. S.E. of Armidale, and 5 miles below the head station of Gostwyck, which property Mihi Creek adjoins. The latter is a ran of considerable size, and, although the soil generally is of but indifferent quality, the climate there seems to compensate in some measure for so important a defect… The homestead is situated in a picturesque spot, with the clear Mihi Creek in front, and there is a fine site on the hill above for the mansion to be erected, near which a small vineyard has already been trenched and planted. The dwelling house hitherto occupied is considerably lower, and a little above the creek.
>
> The large woolshed that was formerly used having been destroyed by fire, apparently by an incendiary-everything on the station is now insured-a wool store has been erected at the homestead, and on Monday a number of wagons were being loaded by Mr. Wiseman, the manager, with wool minutely classed. The shearing shed is large, and, although it is regarded by Mr. Higgins but as a temporary structure, it seems to be very well suited for its purpose. Another improvement near the homestead worthy of note is an excellent three-railed fence which, very unlike such fences in general, is both sheep and cattle proof.
>
> *The Armidale Express and New England General Advertiser*, 6 Feb 1869, p.2

Georeferencing of historical pastoral maps of Mihi Creek reveals that the project area is likely situated both above and below the adopted dividing line, which historically separated Mihi Creek North and Mihi Creek South runs (Plate 3.1).



The project investigation area is represented by the navy polygon, while the proposed development corridor is depicted by the red polygon.

Source: HLRV (top) 'Pastoral Run Gostwych', map # 572911, File name 10117401.jp2; (left) 'Pastoral Run Salisbury', map # 573133, File name 10155901.jp2 (right) 'Pastoral Run Mihi Creek', map # 572390, File name 10154301.jp2

Plate 3.1 Overlay of proposed project areas across three pastoral run plans: Gostwych (Gostwyck), Salisbury, and Mihi Creek runs, n.d.

3.2.2 Gostwyck

The area that would become known as Gostwyck Station was occupied by the pastoralist Edward Gostwyck Cory in 1832. Cory arrived in Australia as a free settler in 1823 along with his wife, Francis, and his father, John Cory.

By 1831, Cory was exploring the New England area and set up two camps on Salisbury Waters, a headstation also named 'Gostwyck', followed by an outstation at 'Terrible Vale' in the south-west of his run, encompassing Salisbury Plains (Campbell 1922, 235). Cory sold his interest in 'Gostwyck' to his partner William Dangar in 1834, who soon after sold it to his brother Henry Dangar. By 1836, Dangar was running sheep on the property (Arnold Wothers Architects; Heritage Research and Conservation Services 2000, 15).

A series of outstations were spread across the landscape. These outstations consisted of bark-roofed huts, stock pens, a garden and possibly a wheat field (Ferry 1999, 52). The stations were close to water, in good grazing land, where the shepherd could keep an eye on the large flocks under his care.

This was before the time of fences and the flocks were divided into manageable numbers of up to 1,000 sheep per flock (Ferry 1999, 52). It would also be safe to say that the huts were placed on relatively level ground, since, while the landscape rolls in hills and swales, there were plenty of flat crests or gently sloping ground on which to build.

These practices created a footprint of small outstations, in addition to the main homestead and associated station management buildings. The outstations consisted of smaller residential quarters that housed a permanent workforce, namely the shepherds who lived and worked on the stock runs.

These shepherds' huts and surrounding cultivated areas made up a network of dwellings, stock facilities and outbuildings spread over the property, which would have housed many of the shepherds employed on the property. The location of these small outstations was not always recorded on maps and plans.

From 1904, there were numerous subdivisions, with the project investigation area slowly being divided into smaller portions.

3.2.3 Salisbury

In 1840, shortly after Cory sold Gostwyck to Dangar, he sold Salisbury to Robert Ramsay McKenzie. Drought and low stock value forced McKenzie to sell to Mathew Henry Marsh in 1840. He retained the name of Salisbury and built a house (hut) at the headstation between 1845 and 1847 which he named Salisbury Court (Ferry 1999, p.3).

After 1855, the property was managed by Matthew's brother Charles. Matthew, who returned to England, was a member of the House of Commons and, as the agent of northern pastoralists, was instrumental in the separation of Queensland from NSW in 1859.

According to the 1841 census, there were 25 men and 26 shepherds and others employed in the care of sheep (Census 1841), 7 married women (one of whom may have been employed as a shepherd), and 11 children less than 14 years of age living on the Salisbury property (Oppenheimer 2020, 45). Marsh did not have any convicts in his care in 1841.

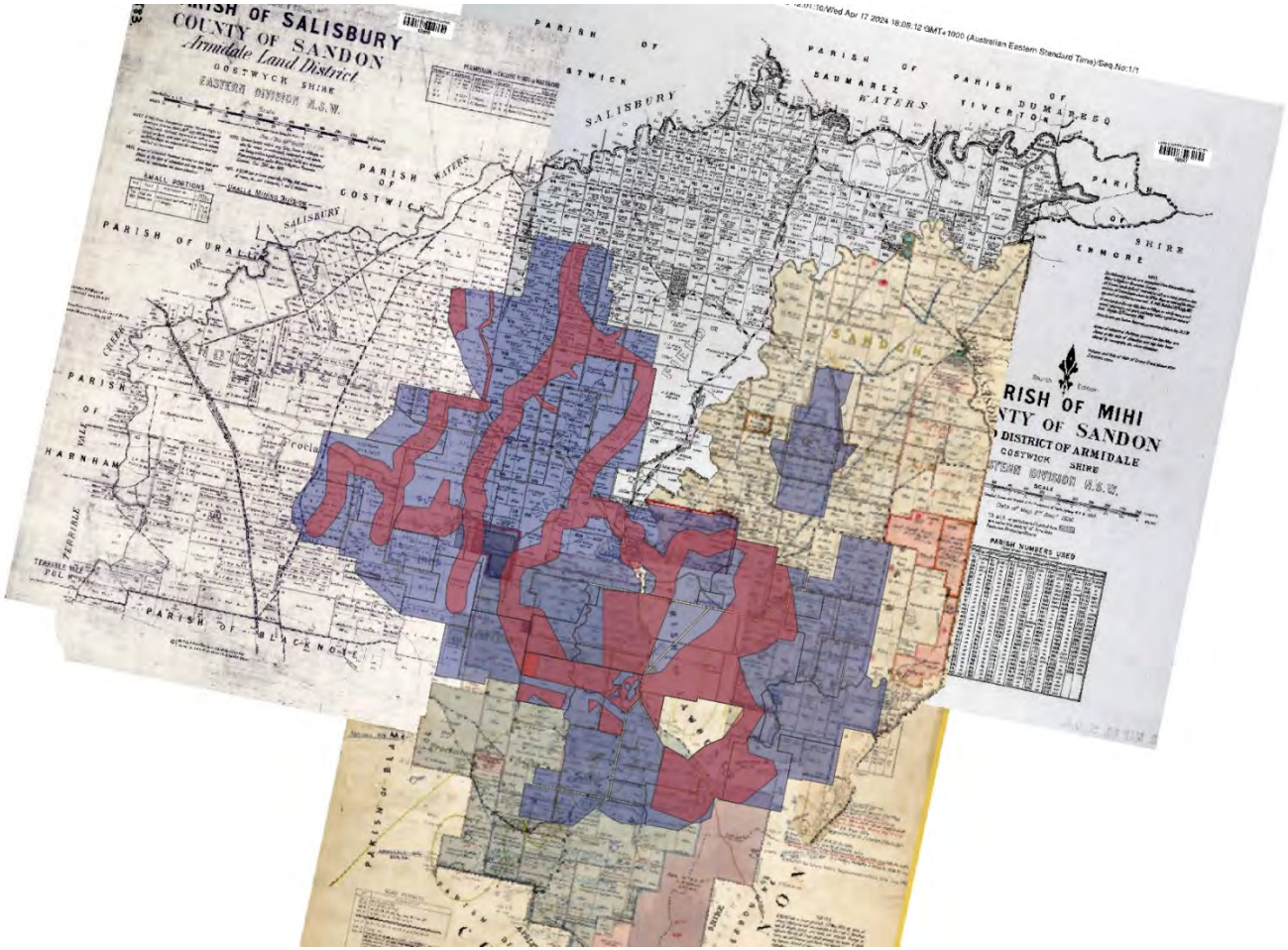
Salisbury remained in the hands of descendants until 1922 (Uralla Council 2012).

3.3 Later tenure in the project investigation area

In the 1920s, subsequent historical maps of the now Mihi, Salisbury, Lawerence and Eastlake Parishes depict the project investigation area as a composition of multiple 40 and 120-acre portions in the north portion of the project investigation area and 80-acre portions in the central section. The south portion of the project investigation area demonstrates a greater diversity of portion sizes. A public road, now known as Hillview Road, can be seen bisecting the project investigation area. The parish maps indicate that these portions were part of the Sandon Gold Field which was established in 1907 (Plate 3.2).

Extensive clearing of land in the project investigation area and its vicinity likely took place in the 1860s, driven by the landscape improvement requirements mandated by the Robertson Land Acts applicable to pastoral runs. Throughout the early twentieth century, continued clearing and maintenance of the land were probable, influenced by both pastoral and mining activities in the region.

Aerial photographs spanning 1965, 1979, 1987, and 1991 have been examined and reveal cleared sections of landscape, with the retention of vegetation in localised areas.



The project investigation area is represented by the navy polygon, while the proposed development corridor is depicted by the red polygon.

Source: HLRV, (left) 'Parish of Salisbury', File name 15094701.jp2; (middle) 'Parish of Mihi', File name 15094701.jp2; (right) 'Parish of Lawrence', File name 12304701.jp2 ; (bottom) 'Parish of Eastlake', File name 12315101.jp2

Plate 3.2 Overlay of proposed project area on historical parish plans: 1918 Parish of Salisbury, 1926 Parish of Mihi, 1924 Parish of Lawrence, and 1936 Parish of Eastlake

4 Potential impacts

The project investigation area is not identified within a heritage conservation area and is not identified as containing items of historical heritage; the Mihi Creek, Gostwyck and Salisbury headstations being located outside of the project investigation area. Construction and operation of the project are therefore expected to have no impact on heritage values that have been formalised through inclusion on statutory heritage registers. The nearest heritage-listed items are situated within a 5 km radius of the project area but are not expected to experience direct impacts from the project. There is, however, potential for indirect impacts, such as visual or vibrational effects, on heritage sites, particularly the Deeargee Woolshed (LEP I11), due to its immediate proximity to the western boundary of the project area.

Regardless, primary research reveals there is the potential for significant historical cultural heritage to survive in the project investigation area in material form and as a cultural landscape. Situated within the former Mihi Creek, Gostwyck and Sailsbury runs, as well as becoming part of the Sandon Gold Fields, the project investigation area has a rich pastoral and mining history.

Investigations for a previous project conducted by EMM, the New England Solar Farm, found that the former Gostwyck Squatting Run, including what is now Deeargee and other surrounding land holdings, retained substantial evidence of early cultural features such as shepherds' huts, stockyards, headstations, and plantings of ornamental and food trees, as well as their spatial relationships to each other (EMM 2018).

The archival research conducted to date suggests a **high** potential for discovering historical archaeological sites, early structures, and a cultural landscape within the project investigation area, with likely connections to the pastoral history of Mihi Creek, Gostwyck and Salisbury or the subsequent mining activities in the region. It is recommended that the physical evidence of these activities should be assessed for impacts in a technical report to be prepared to support the EIS for the project.

5 Assessment recommendations

Drawing insights from the initial desktop review, a predictive model can be developed to guide a targeted assessment approach for identifying potential historic sites within the project investigation area. Further examination of Crown Plans for the identified land portions and conducting additional archival research can offer insights into potential historic structures, refining the predictive model.

These structures are expected to range from ephemeral features such as shepherds' huts, cottages, fences, stockyards, gardens, and wells to more enduring edifices such as the remains of head stations, woolsheds, shearing sheds, storage sheds, and other permanent structures associated with Gostwyck, Mihi Creek and Salisbury pastoral activities. Considering the presence of a public road through the project area and its historical context, the likelihood of the remains of structures such as inns or stores associated with the mining phase of the project is less likely, but plausible.

Aerial imagery does indicate the presence of extant structures within the project investigation area. There is also the potential for historical archaeological sites, in the form of subsurface footings and features, existing as remnants not visible in aerial imagery. Therefore, a field survey, particularly in the area slated for disturbance, will be required to assist in determining the archaeological and built heritage sensitivities, and provide an understanding of the project investigation area's historical landscape.

The heritage assessment will be required to address archaeological, built and landscape values, and be prepared in accordance with current legislation and guidelines. At a minimum, reference to the following will be required:

- legislation
    - *Heritage Act 1977*
    - *National Parks and Wildlife Act 1974*
    - *Environmental Planning and Assessment Act 1979*
    - *Environment Protection and Biodiversity Conservation Act 1999*
- guidelines
    - *Guidelines for preparing a statement of heritage impact*, 2023, Department of Planning and Environment
    - *Archaeological Assessments,* 1996, Department of Urban Affairs and Planning
    - *Assessing Heritage Significance, 2023,* Department of Planning and Environment
    - *Assessing Significance for Historical Archaeological Sites and 'Relics',* 2009, Heritage Branch of the Department of Planning
    - *Historical Archaeology Code of Practice,* 2006, Department of Planning
    - *Levels of Heritage Significance,* 2008, Department of Planning
    - *Skeletal Remains, 1998,* NSW Heritage Office (republished 2023)
    - *Burra Charter* (and Practice Notes), ICOMOS, 2013.

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Guidelines

Guidelines 1–6 are available at: https://www.environment.nsw.gov.au/topics/heritage/apply-for-heritage-approvals-and-permits. Guideline 8 is available AT https://australia.icomos.org/publications/burra-charter-practice-notes/

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2. *Assessing Heritage Significance, 2023,* Department of Planning and Environment

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4. *Historical Archaeology Code of Practice,* 2006, Department of Planning

5. *Levels of Heritage Significance,* 2008, Department of Planning

6. *Skeletal Remains, 1998,* NSW Heritage Office (republished 2023)

7. *Burra Charter* (and Practice Notes), ICOMOS, 2017

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