Maules Creek Solar Farm

Community Consultative Committee

Thursday 22nd August 2024

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About FRV Australia

- FRV entered Australia in **2011**.
- FRVAU has over **1 gigawatt (GW) of projects** built or under construction – enough to power around 300,000 Australian homes.
- Globally, FRV has 3.6 GW of projects built or in construction.
- FRVAU specialises in large-scale **solar photovoltaic** (PV) technology and **battery energy storage** systems (BESS). We were one of the first to use this technology in Australia.
- FRVAU has **one of the largest solar portfolios in Australia**, with over 7.2% market share of the National Energy Market.(1)
- FRVAU develops, constructs, owns and operates our assets - **we are a part of the communities in which we operate**.
- FRVAU operational projects **directly employ 28 people** in regional NSW, VIC and QLD.

(1) Based on 2023 Analysis of the National Energy Market (NEM) by Jacobs

10 projects

<1GW In construction /operation

<1GW In advanced development

+ 300,000 homes powered
+ 28 regional jobs created
+ 2 million tonnes of CO_2 avoided every year

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Our Experience

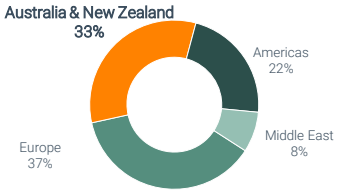
Active markets

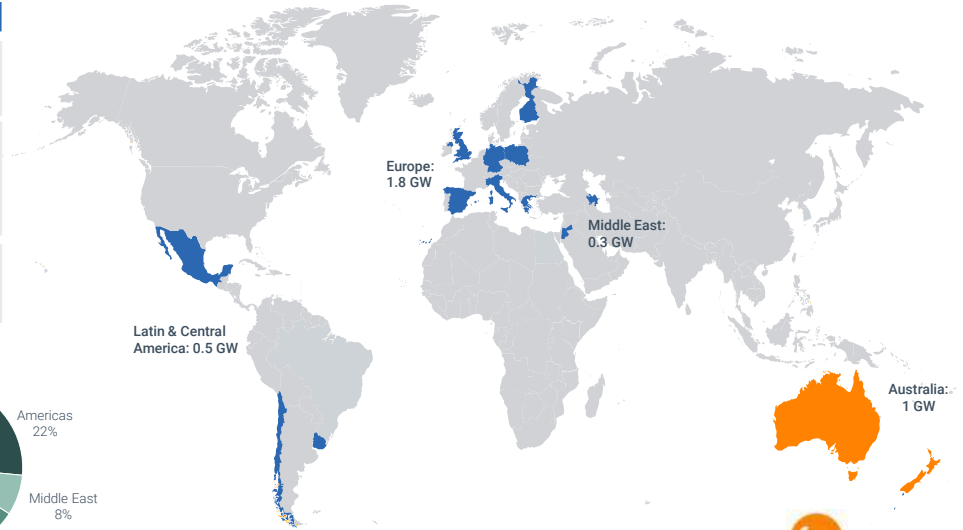
4 continents
4 continents

3.6 GW in operation and under construction*
31 assets

>20 GW
Total pipeline

* Including signed PPAs





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About FRV Australia

FRV Australia Shareholders

- FRVAU is backed by two strong, well respected, long-term investors.
- All of FRV's Australian investments are reviewed by the Foreign Investment Review Board (FIRB).

Abdul Latif Jameel

- Abdul Latif Jameel (ALJ) has a 51% stake in FRV Australia.
- ALJ operates across 31 countries and has over 17,000 employees worldwide.
- ALJ invests across many sectors including automotive, engineering, renewable energy, environmental services, financial services, consumer products, media services, healthcare, land and real estate development.
- ALJ invests significantly in initiatives and research combating poverty and improving food security.

OMERS

- OMERS Infrastructure (part of OMERS) acquired a 49% stake in FRV Australia in 2021.
- OMERS is one of Canada's largest pension funds, with assets of AU $140 billion (as at 2021) across 12 countries.
- OMERS other Australian Infrastructure assets include Port of Melbourne and Transgrid.
- OMERS has employees worldwide, including Australia, Canada, USA, UK, Continental Europe and Asia.

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Our experience

FRV's Australian Projects

Asset	Region	Status	Commenced Operation	Solar Peak (MWdc)	Storage (MWh)
Moree	NSW	Operational	2016	70	-
Lilyvale	QLD	Operational	2019	126	-
Goonumbla	NSW	Operational	2020	70	-
Winton	VIC	Operational	2021	100	-
Sebastopol	NSW	Operational	2022	111	-
Metz	NSW	Operational	2022	141	-
Dalby	QLD	Operational	2023	5	5
Walla Walla	NSW	Construction	est. 2024	353	-
Gnarwarre	VIC	Construction	est. 2025	-	550
Lauriston	NZ	Construction	est. 2025	63	-
Tieri	QLD	Approved	-	92	60
Terang	VIC	Approved	-		200
Fosterville	VIC	Approved	-	100	200
TOTAL				1,231	1,015

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Our projects

>1GW of Australian Solar Projects Developed

Moree

Location: NSW
Installed capacity: 70 MW dc

Goonumbla

Location: NSW
Installed capacity: 69.75 MW dc

Sebastopol

Location: NSW
Installed capacity: 109 MW dc

Metz

Location: NSW
Installed capacity: 141 MW dc

Winton

Location: Victoria
Installed capacity: 100 MW dc

Lilyvale

Location: Queensland
Installed capacity: 126 MW dc

Dalby

Location: Queensland
Installed capacity: 2.54 MW dc
Storage: 2.54 MW / 5 MWh

Gnarwarre (Construction)

Location: Victoria
Planned Storage: 100 MW (2-hr)

Walla Walla (Construction)

Location: NSW
Planned capacity: 353 MW dc

Lauriston (Construction)

Location: NZ
Planned capacity: 63 MW dc

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Achievements and Milestones

- First developer in Australia:
  - to use single-axis tracking technology in Australia.
  - to deliver a utility scale, project-financed solar farm in Australia.
- Moree Solar Farm recognised as the **highest performing solar farm** in the National Energy Market.
- FRV has signed agreements (PPAs) with organisations such as Victorian State Gov, Microsoft, Snowy Hydro, Origin Energy to provide reliable, clean energy.
- Over $9.5 million committed to regional communities to date:
  - *direct investment on community infrastructure, such as road upgrades and upgrades to assets like public swimming pools*
  - *funding traineeships for local young people.*
  - *sponsoring local community events, community groups, sport events and schools.*

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Maules Creek Solar Farm

Project Overview

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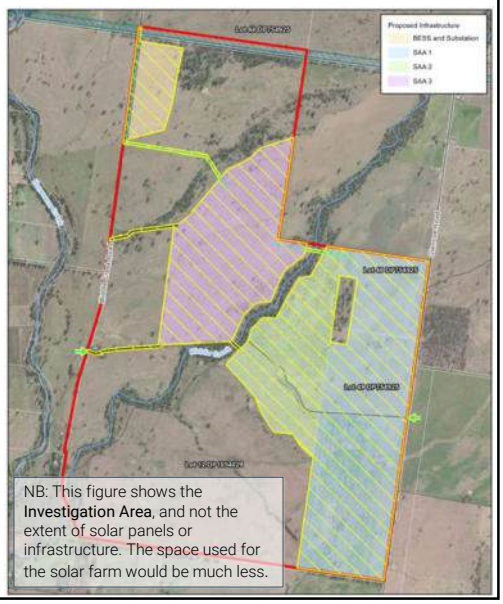
Project Overview

The proposed project would occupy an area of up to 270 hectares, and would include:

- a solar farm with a capacity of up to 120 MWac
- a 4-hr battery (BESS) with a capacity of up to 150 MWac
- a dedicated substation, connecting to the Tamworth-Narrabri 132 kV transmission line
- an on-site office and storage shed
- a primary site access on Middle Creek Road and a secondary access on Glencoe Road
- road improvements along Middle Creek Road, including widening
- at-grade creek crossings over Middle Creek (similar to the Horsearm Creek Crossing on Harparary Road)
- underground cabling (except for the network connection, or where prevented by environmental conditions.)



NB: This figure shows the **Investigation Area**, and not the extent of solar panels or infrastructure. The space used for the solar farm would be much less.

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Project Overview

Site Suitability

- The Narrabri-Tamworth 132 kV line runs adjacent to the site, providing **access to the national electrical network**
- The transmission line has **existing capacity to support a renewable energy project** in this area
- Proximity to the line means the project **won't need significant overhead transmission lines**

- The area has **abundant sunlight** and favourable weather conditions, improving the reliability of the solar farm to produce **renewable energy at low cost**

- Renewable energy projects cannot be built in areas where there is significant impact to native vegetation and the environment
- As the site has already been extensively cleared, the project would result in a **low level of environmental impact**

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Project Overview

Site Suitability

- The landowners are interested in hosting a solar farm
- A solar farm is **permissible**, meaning that the NSW Government has decided that anyone with land zoned RU1 is allowed to request permission to build a solar farm, subject to conditions.

- Whilst we acknowledge that the site contains land suited to agriculture, the land doesn't have characteristics that the NSW Government considers require specific protection or consideration. The site:
  - is zoned Class 4 under the LSC Classification
  - The site is not mapped as *State Significant Agricultural Land*
  - is not *Biophysical Strategic Agricultural Land*
  - does not form part of a Critical Industry Cluster
  - Would continue to support grazing (sheep) during operation

- The land is largely flat, which:
  - reduces the extent of visual impacts on neighbours and public viewpoints; and
  - allows for cost-effective and faster construction.

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Project Benefits

Economic Benefits

- Up to **150 jobs during construction**
- Workers that could not be sourced locally, would stay in Narrabri and Boggabri, **supporting local businesses**
- Procurement of local contractors, materials and services, supporting additional, indirect employment
- **4 to 5 full-time local, permanent workers** during operations

Environmental Benefits

- enough renewable energy to **power up to 40,000 homes** (more than the combined total of Narrabri, Gunnedah, Tamworth and Liverpool Plains LGAs)
- Up to **194,000 tonnes of greenhouse gases avoided each year**.

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Project Benefits

Local Benefits

Local Benefits

- A **Benefit Sharing Program** is currently being developed to ensure that benefits are spread locally.
- Following community feedback, FRV is now proposing:
  - An initial one-off investment of **$450,000** at commencement of construction
  - Ongoing payments of **$25,000** per year during operations
- This equates to a spend of **$1.45 million** over the anticipated life of the project.
- The aim of the benefit sharing program is to spread benefits throughout the community, in ways that are tangible for locals and key stakeholders.

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Project Benefits

Local Benefits – Benefit Sharing Program

FRV wants to hear from Maules Creek Residents about ways that the Benefit Sharing Fund could have the most impact.

Some examples include:

- financial benefits to those that live closest to the solar farm, like rooftop solar, a home battery or other energy efficiency measures
- funding traineeships or scholarships for local or disadvantaged students
- updating equipment or facilities for the local hall or public school
- funding local community events to bring people together
- sponsorship of local sports groups, community groups or charities

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Project Status

Project Timeline

Target Date | Stage Requiring Approval to Proceed

Project Design

- Site Selection
- Department issues SEARS — 26/10/2023
- **FRV Prepares EIS** — We are Here
- Department Consults on EIS — Dec 2024

DA Process

- Public Submissions
- FRV Responds to Submissions — April 2025
- Department Assesses Project
- **Project Approved** — Dec 2025

Following DA Approval

- Grid Connection Agreement — Sep 2026
- Appoint Contractors — Dec 2026
- Management Plans — Mar 2027
- Commence Construction — Jun 2027

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Environmental Studies

- Biodiversity
- Aboriginal Cultural Heritage
- Land Use and Agriculture
- Traffic and Transport
- Landscape and Visual
- Water Use and Stormwater
- Noise (Construction and Operation)
- Safety and Fire

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Project Status – Environmental Studies

Biodiversity

- Ecologists undertook vegetation mapping of the entire site in December 2022
- As a result of the mapping, FRV spent nine months re-designing the project to significantly reduce the project's impacts on threatened ecological communities.
- Following this, ecologists visited the site on five separate occasions to survey for the presence of threatened species in different seasonal conditions - March 2023, May 2023, July 2023, September 2023 and March 2024.
- No threatened species were observed within the development footprint, meaning that the project is unlikely to impact threatened species.
- With the collected data, our ecologists are now preparing the Project's biodiversity report (BDAR).

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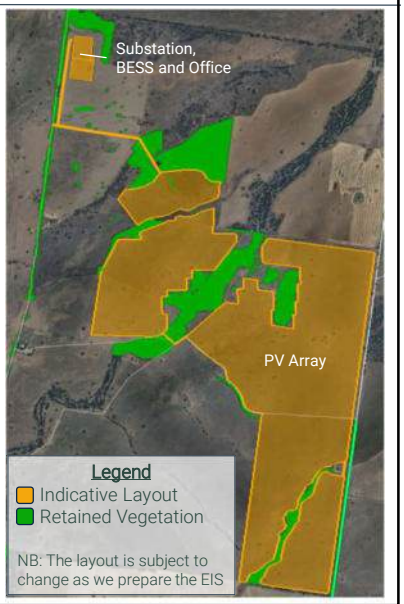
Project Status – Environmental Studies

Biodiversity

- We anticipate very limited removal of vegetation, associated with the following activities:
  - removal of isolated paddock trees within the solar array;
  - widening Middle Creek Road;
  - preparing an easement between the substation and the transmission line; and
  - potential widening of an internal crossing over Middle Creek.
- Any unavoidable vegetation removal will be offset in accordance with the *NSW Biodiversity Conservation Act* and the *NSW Biodiversity Offset Scheme*.



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Project Status – Environmental Studies

Aboriginal Cultural Heritage

- Advertisement – Narrabri Courier 20 Nov 2022
- 13 applicants registered to be consulted as RAPs
- Methodology developed using Heritage NSW guidelines, and in consultation with RAPs
- A site investigation took place from 16 – 18 January 2024 in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* and the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW*
- One stone artefact was identified, assessed as having low significance and suitable for salvage prior to construction.
- The project will setback 50 metres from Middle Creek to avoid potentially sensitive areas.
- Report is currently being prepared

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Project Status – Environmental Studies

Aboriginal Cultural Heritage

Left: Survey effort as part of the Aboriginal Cultural Heritage assessment.

Right: Location and photograph of the isolated stone artefact.

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Project Status – Environmental Studies

Land Use and Agriculture

- The entire site is mapped as **Class 4 Land** under the *NSW Land and Soil Capability Assessment Scheme*. Under this scheme, Class 4 Land is considered to have moderate to high limitations for agricultural land uses.
- The site is not BSAL, SSAL or part of a CIC.
- A **Level 2 – Reduced Agricultural Assessment** must be completed in accordance with the *NSW Large-scale Solar Guideline*. This report is currently being prepared.
- A Level 2 Assessment includes soil testing, consideration of historic land uses and providing regional context of agriculture in the area. A Land Use Conflict Risk Assessment (LUCRA) will also be completed.
- The site is currently used for grazing cattle. Once constructed, the solar farm would support sheep grazing.
- All infrastructure will be removed, and the site will be returned to agricultural productivity once solar farm operations cease.

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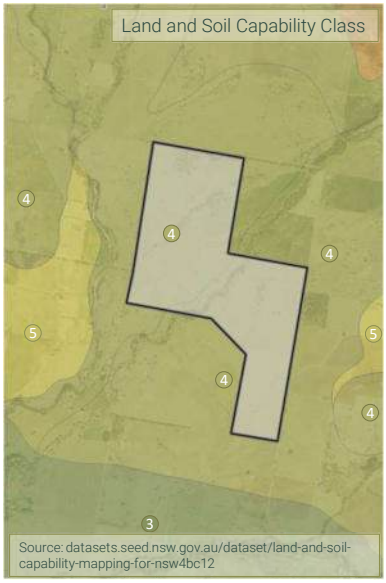

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Project Status – Environmental Studies

Land Use and Agriculture

Table 6: Requirements for level 2 assessment

Assessment required	Content and form
Project description Describe the nature, location, intensity and duration of the project and include a map of the project area.	• Project description • Location • Duration • Areas of the site that would be disturbed or temporarily removed from agricultural use
Regional context Describe the regional context.	• Zoning of the project site • Climate and rainfall • Regional landform • Regional land use including any significant agricultural industries and/or infrastructure
Site characteristics and land use description Describe the nature and location of agricultural land with the potential to be impacted by the development. Describe the current agricultural status and productivity of the proposed development area and surrounding locality including the land capability as per Office of Environment and Heritage's (OEH) Land and soil capability assessment scheme (PDF 1,390 KB).	• Describe the land subject to the project site • Describe existing agricultural land uses (i.e. orchards, vineyards, breeding paddocks, intensive livestock areas) • Describe the history of agricultural practices on the project site • Identify soil type, fertility, land and soil capability • Provide a map showing the verified LSC class of the project site • Provide a map showing topography of the site • Describe the agricultural productivity of the site
LUCRA assessment Conduct an assessment of potential land use conflicts, including completion of an assessment in accordance with the Department of Industries' Land Use Conflict Risk Assessment Guide (PDF 351 KB).	• Land use compatibility and conflicts • Discuss compatibility of the development with the existing land uses on the site and adjacent land (e.g. aerial spraying, dust generation and biosecurity risk) during operation and after decommissioning, with reference to the zoning provisions applying to the land
Impacts on agricultural land Identify and describe the nature, duration and consequence of any potential impacts on agricultural land subject to the project site and in the wider region.	• Describe project impacts on identified agricultural lands including, but not limited to, potential weeds, pests, dust, bushfire, livestock, crop production • Consider impacts to the agricultural productivity of the site • Consider project potential to permanently remove agricultural land and/or fragment or displace existing agricultural industries • Consider cumulative impacts of multiple solar energy projects on agriculture in the region
Mitigation strategies Outline strategies that may be adopted to mitigate potential impacts on agricultural land and minimise land use conflict.	• Outline and consider strategies to mitigate project impacts on agricultural land • Consider co-location with existing agricultural practices and investigate feasibility of agrisolar where it would result in a meaningful benefit (see Clean Energy Council's Australian Guide to Agrisolar for Large-Scale Solar).

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Class 4 land has moderate to severe limitations for high-impact land uses that must be managed to prevent degradation. These limitations can only be managed with high levels of knowledge, expertise and investment.

Class 4 land is generally used for grazing. It has cropping limitations due to erosion hazard, weak structure, salinity, acidification, shallowness of soils, climate, wetness, stoniness or a combination of these factors.

Source: NSW Government Soil and Capability Assessment Scheme

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Project Status – Environmental Studies

Traffic and Transport

- The Project's Traffic Impacts would largely be limited to the construction period, with a **peak period of 2-3 months**.
- Materials that cannot be sourced locally would travel to the site from Brisbane, Sydney or Newcastle via the State Road network.
- Other materials and trades would be sourced locally, such as concrete, road base, fencing and other trades.
- From the Kamilaroi or Newell Highway, Heavy Vehicles would then use **Old Gunnedah Road**, **Maules Creek Road**, **Turrawan Road** and **Harparary Road**.
- The Project's main access will be from Middle Creek Road, but there will be a secondary access on Glencoe Road.
- The SEARs require that a thorough **Traffic Impact Assessment (TIA)** is submitted with FRV's Development Application.
- Before construction can commence, a detailed **Traffic Management Plan (TMP)** must also be developed and approved by the Department of Planning.

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Project Status – Environmental Studies

Traffic and Transport

- In response to community concerns, FRV undertook a thorough review of construction scheduling to revise peak traffic estimates:
  - no more than **45 heavy vehicles per day** (down from 80) during the **3-month peak construction period**
  - The remaining 12 months of construction would see much lower numbers of heavy vehicles travelling to the site
- The peak construction period would see up to 150 construction workers, however most would be transported to site via mini-bus, between 6:00 and 7:00am.
- Middle Creek Road would be widened up to 6.5 metres.
- The intersection of Harparary Road and Middle Creek Road may need improvement, which will be confirmed in the TIA.
- It is unlikely that Glencoe Road requires upgrades, but this will be confirmed in the TIA.

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Project Status – Environmental Studies

Traffic and Transport

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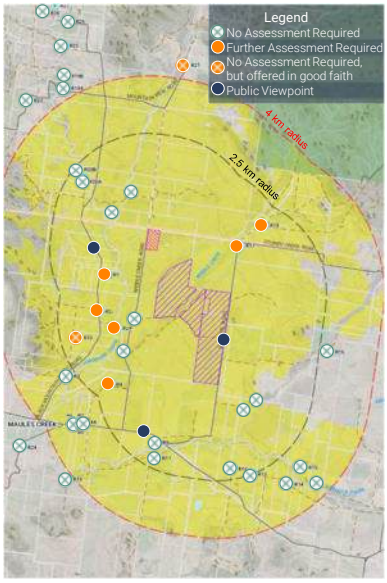
Project Status – Environmental Studies

Visual Amenity – Preliminary Assessment



- In accordance with the *NSW Large-Scale Solar Guideline*, a Preliminary Visual Assessment was prepared by a Landscape Architect, accompanying the Project's Scoping Report. It assessed:
  - all public viewpoints (i.e. roads) within 2.5 km
  - all private viewpoints (i.e. dwellings) within 4 km
- Preliminary Tools+ were used to produce a computer model demonstrating which receivers within 4 km would have **no visibility** of the project due to topography*.
- The results showed that 6 dwellings and 3 public viewpoints would require detailed assessment in the EIS under the Guideline.
- FRV has included an additional two concerned receivers in the detailed visual study. Whilst those receivers fell outside of the scope of the Guideline, an assessment has been offered in good faith.

* NB: preliminary mapping is based on topography and doesn't take vegetation, fences or buildings into account. This methodology is used to produce a much more conservative outcome.

\+ These are quantitative assessment tools prescribed by the NSW Large-Scale Solar Guideline.

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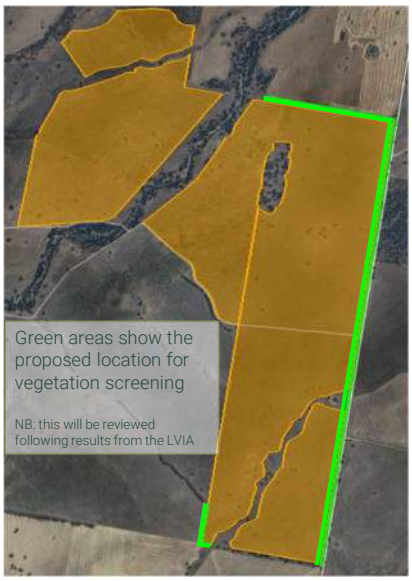
Project Status – Environmental Studies

Visual Amenity – Landscape and Visual Assessment (LVIA)



- The LVIA will be prepared by a qualified Landscape Architect and in accordance with the NSW Large-Scale Solar Guideline.
- The LVIA includes a detailed assessment of viewpoints within 4 km that were highlighted in the Preliminary Study. This involves:
  - attending the dwelling to take a 360-degree photo
  - If there are potential views of the solar farm, a **photomontage** is produced
  - A photomontage involves superimposing the project's infrastructure to show any potential visual impacts.
  - This can then be used to determine if mitigation is required, such as landscaping.
- FRV hopes to have the results of the photomontages before the next CCC meeting.
- Once prepared, face to face meetings will be offered with all neighbours to discuss the findings, and we will provide information on public viewpoints to the CCC.

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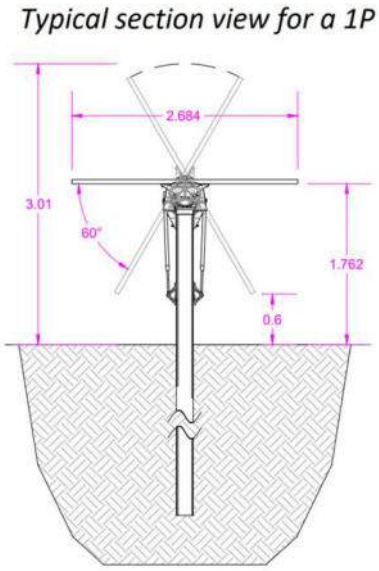
Project Status – Environmental Studies

Visual Amenity – Mitigation



- In response to concerns about visual impacts, FRV has reduced the maximum predicted height of panels from 5.5 metres to 3.01 metres.
- Proposed **vegetation buffers** within the site would:
  - be made up of a mix of large trees, small trees and large shrubs
  - be endemic/native, and include both fast-growing 'pioneer' species and slower growing, taller species
  - consist of at least two rows of trees and have a width of 10 metres
- Any dwellings that have views towards the solar farm will be offered **additional landscaping**, in addition to the vegetation buffers that would be planted surrounding the solar farm itself. This landscaping would be:
  - provided at FRV's cost
  - offered without obligation

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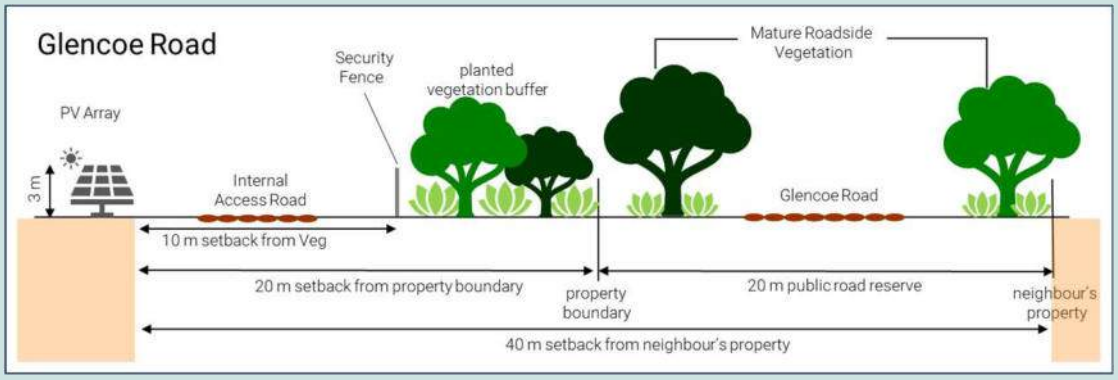
Project Status – Environmental Studies

Visual Amenity – Mitigation



Proposed cross-section of Glencoe Road and the planted vegetation buffer.
Final detail will be included in the project's EIS.

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Project Status – Environmental Studies

Water

- FRV's consultants are completing detailed flood modelling for the project.
- This modelling is being conducted to verify that:
  - the project infrastructure won't alter stormwater flowing to neighbouring properties.
  - The project infrastructure won't be impacted by floodwaters.
- The flood modelling assesses different scenarios, including 1 in 100-year flood and the maximum probable water level.
- FRV has committed that:
  - **on-site bores will not be used** by the solar farm - water will be sourced from Council's Bulk Water Dispensing Units
  - **road upgrades will not alter flow** along Green Gully
  - **most vegetation will remain** on site (including groundcover), preventing changes to stormwater flows

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Project Status – Environmental Studies

Water

Image: groundcover is largely unaffected during construction

Source: FRV's Walla Walla Solar Farm, 2023

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Project Status – Environmental Studies

Noise

- Solar Farms do not generate significant noise, however we acknowledge that construction can be disruptive for nearby residents.
- The EIS will include noise modelling to demonstrate that the project meets stringent noise criteria, both during operation and construction.
- The modelling assesses noise values from all nearby dwellings.
- Noise modelling has commenced. We hope to have the results of the noise modelling available by the next CCC meeting.
- Once finalised, FRV will offer face to face meetings with all neighbours to discuss the findings. We will also provide a summary to the CCC.

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Project Status – Environmental Studies

Noise

Construction Noise

- During construction, works would be limited to:
  - Monday to Friday: 7am – 6pm
  - Saturday: 8am – 1pm
  - Sunday/Public Hols No works
- Noisy works, such as piling, would be intermittent and completed in sections.
- At distances of over 1 km, we anticipate that the project will comply with relevant construction noise criteria.

Operational Noise

- Once operational, noise-generating equipment would include the substation transformer, battery cooling systems and inverters.
- The closest dwelling to the substation is over 1.2 km away, so it's unlikely the project will be audible to neighbours – this will be confirmed following detailed modelling.

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Engagement Efforts

START

Engagement has been in accordance with *Undertaking Engagement Guidelines for SSD Projects* and *NSW Large-Scale Solar Energy Guideline*

Oct 2022
- Determined suitability of the site and appointed consultants

Dec 2022
- Met with residents along Middle Creek Road and Glencoe Road to introduce project
- Commenced biodiversity surveys

Mar 2023
- Introductory flyer posted to all neighbours within 4 km introducing the project and advising that a Scoping Report would soon be lodged
- Contacted all neighbours within 2 km by post and telephone to introduce the project
- Launched project website

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Early Engagement Efforts

Introductory flyer

"FRV is proposing to submit a **Scoping Report**"

*"The **Scoping Report** is a document prepared early in a project's life by the proponent to introduce stakeholders to the proposed project and inform on potential impacts that will need to be assessed by the NSW state government."*

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Engagement Efforts

Between March and September 2023, FRV:

- made significant revisions to the site layout based on biodiversity surveys and feedback from neighbours
- Prepared its Scoping Report

Sep 2023

- Scoping Report Lodged with the Department of Planning

Jan 2024

- FRV undertook consultation with Registered Aboriginal Parties between October and January, and undertook a site visit for Aboriginal Cultural Heritage
- FRV reviewed the Department's SEARs and undertook detailed engagement with government agencies to understand their requirements

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Engagement Efforts

Mar 2024

- Additional meetings with neighbours within 3 km of the project
- Meetings with key community groups, council and stakeholders, including the Maules Creek Hall representatives and Fairfax Public School

Apr 2024

- Substantive commencement of the project's detailed studies
- meetings with 9 landowners to commence a visual assessment of the project
- Meetings with six other key stakeholders
- Letter box drop to properties along Harparary Rd, Glencoe Road, Black Mountain Rd and Timor Mountain Rd
- Newsletter #1 posted to all addresses in Maules Creek, Tarriaro, Turrawan and Harparary
- Advertisement published in the green Boggabri newsletter/Trading Post distributed in Maules Creek

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Engagement Efforts

May 2024

- Advertisement placed in the Narrabri Courier and an article discussing the project and advertising the community drop in session
- Data Collected for project's traffic and agricultural assessment
- Drop-in sessions arranged at Narrabri (outside Coles), Boggabri (outside IGA) and Maules Creek
- Meetings with key stakeholders and community groups, including Roy Butler's Office
- Presentation on different types of energy to Fairfax Public School

Jun - Date

- Ongoing updates to recipients of the mailing list
- Development of a Q&A responding to questions raised during the drop-in session
- Voluntary establishment of the Maules Creek Solar Farm CCC
- Commencement of other detailed studies required to accompany the EIS / DA

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