Maules Creek Solar Farm

Community Consultative Committee

Thursday 10th October 2024

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CCC Business

- Welcome and Acknowledgement of Country
- Introductions
- Conflicts of Interest and Declarations
- Confirmation of the Terms of Reference
- Actions from previous meeting

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CCC Business

Participation and Membership

- FRV sought advice on establishing a voluntary CCC in response to community request for **regular, open and transparent information**.
- The CCC was established as a means of **sharing information** - it is not a decision-making body.
- **Everyone who expressed an interest in the CCC was accepted** to the committee.
- We chose to allow all interested parties to participate in the CCC – **FRV won't prevent anyone from accessing information** about the solar farm.
- CCCs traditionally include community representatives with a **range of views** about the relevant project.
- The CCC is just one of many methods that FRV is using to gather feedback from members of the community.

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Project Status – Environmental Studies

Flood modelling and Water Use

- FRV's consultants are **currently completing detailed flood modelling** for the project.
- This modelling is being conducted to verify that:
  - the project infrastructure **won't alter stormwater and flooding conditions** on neighbouring properties.
  - The project **infrastructure won't be affected** 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 won't alter water flow** along Green Gully or affect surrounding landowners
  - **most vegetation will remain on site** (including groundcover), preventing changes to stormwater flows and flooding

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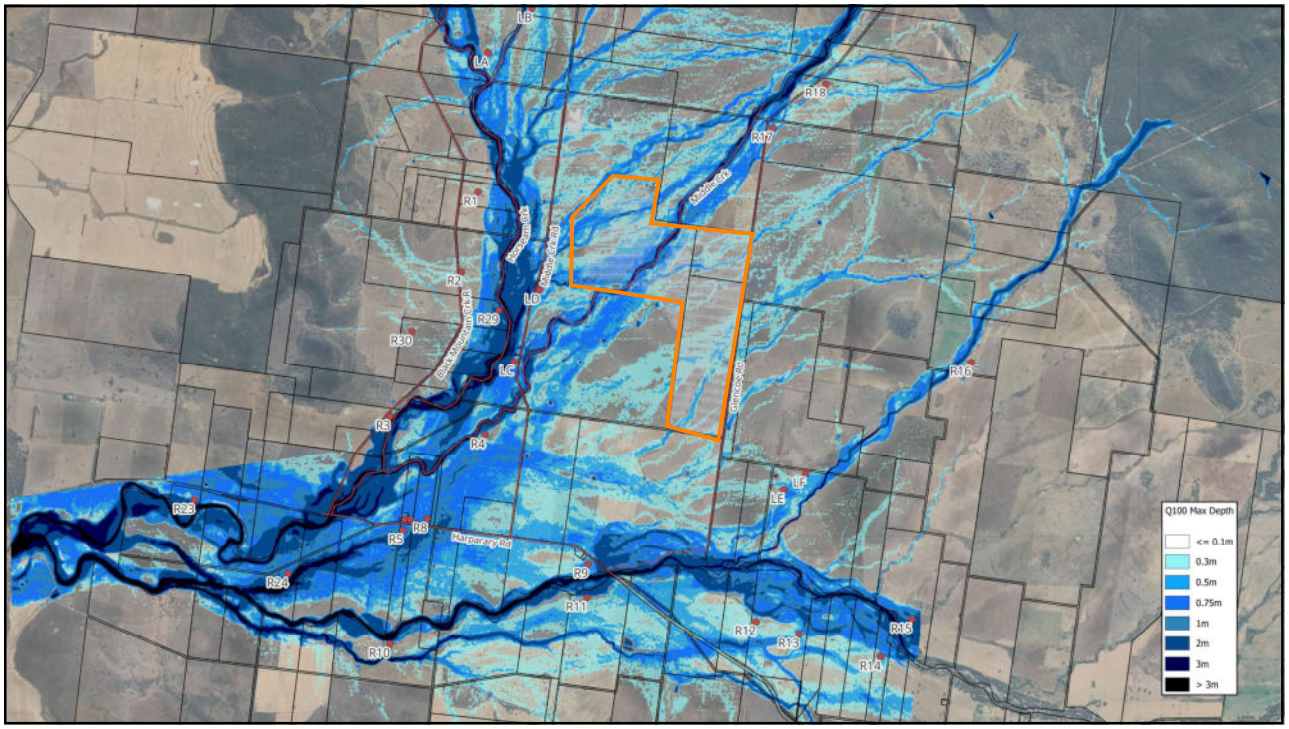

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Project Status – Environmental Studies

Flooding – Mitigating Risks

- Almost all FRV's sites experience **water impacts** to some extent - these **are common to solar farms,** which tend to be located on flatter lands or floodplains.
- Some FRV sites also currently experience infrequent flood events, where **controls** are put in place to **avoid damage to infrastructure and prevent off-site impacts**.
- The accepted approach is to let shallow flood waters travel unimpeded through the site. Sensitive infrastructure like inverter cabinets are raised on earthen pads to prevent inundation
- Our engineers are **designing the project to**:
  - **take local conditions** and flood levels **into consideration**
  - **avoiding development on sensitive areas** with deep or high velocity floodwaters (particularly more sensitive infrastructure such as inverters, substation and battery)
  - Enable **remote operations** via FRV's Central Control Room if road closures prevent access, **to enable monitoring** of equipment **or shutdown procedures** to be undertaken.

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Aquatic habitat

- Our ecologists have conducted surveys of Middle Creek.
- Common species such as frogs and yabbies were observed.
- Targeted surveys did not identify any threatened fish species. Fish habitat is limited due to the relative lack of permanent pools along the creek.
- FRV values the importance of Middle Creek and the habitat it provides. This will be protected. A buffer will be maintained between development for PV arrays and the creek.
- Two vehicle creek crossings are proposed to be upgraded – one along Middle Creek Road and the other an informal crossing within the development footprint. Both would be designed as at-grade, ford style crossings that would not change the level of the creek bed. This will minimise any change to creek flows and protect natural habitat for any fish species

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Project Status – Environmental Studies

Traffic and Transport

- In response to community concerns, FRV has committed to:
  - no more than **45 heavy vehicles per day** (down from 80) during the approximate **3-month peak construction period**
  - **A maximum of 8 heavy vehicle arrivals per hour**
  - The remaining construction period would see much lower numbers of heavy vehicles travelling to the site
  - **Reduced speed** for heavy vehicles **on local roads**
- most construction worker would be transported to site via mini-bus or coach, between 6:00 and 7:00am.
- Proposed Middle Creek Road widening to 6.0 metres (unsealed).
- The intersection of Harparary Road and Middle Creek Road will need improvement. A concept design has been prepared.
- Glencoe Road won't require upgrade as it can accommodate B-doubles at present.

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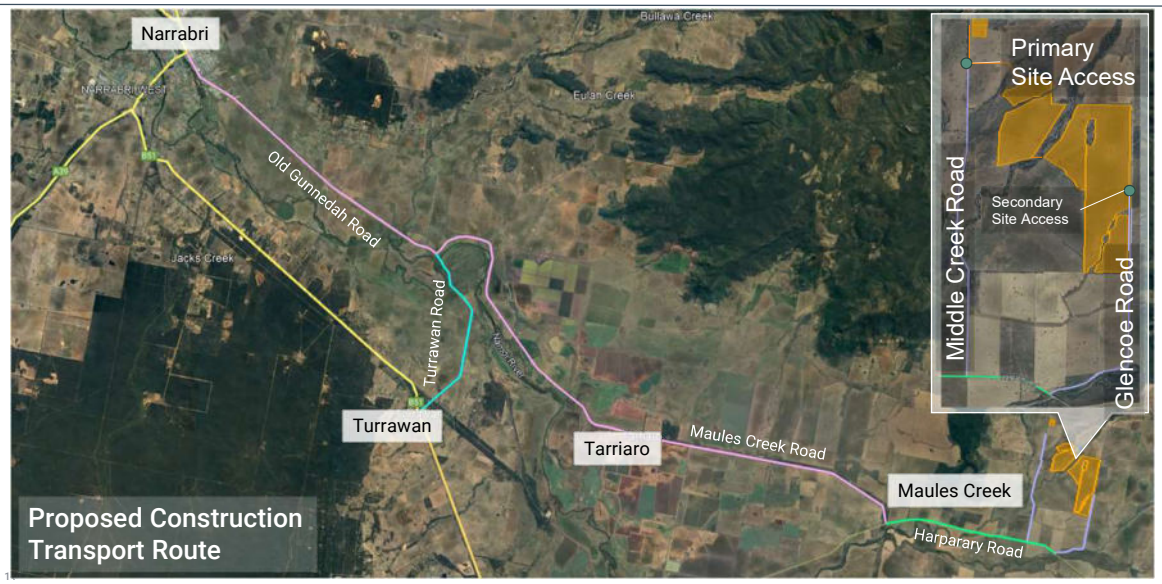
Project Status – Environmental Studies

Traffic and Transport



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Project Status – Environmental Studies

Traffic and Transport

- Traffic to and from the site during the peak construction period has been modelled for various scenarios including vehicles travelling from different locations based on worker accommodation and where heavy vehicles will travel to/ from.
- modelling shows:
  - all intersections are still expected to operate with minimal delays under each scenarios.
  - The road network can manage construction traffic volumes.
- FRV will repair any damage caused during construction.
- Upgrades are required at Middle Creek Road intersection to cater for swept paths of heavy vehicles.
- Middle Creek road will require widening to a 6 metres all weather pavement (unsealed). A concept design has been prepared that seeks to minimise disturbance to sensitive roadside vegetation.
- A Construction Traffic Management Plan including driver code of conduct will be completed prior to construction.

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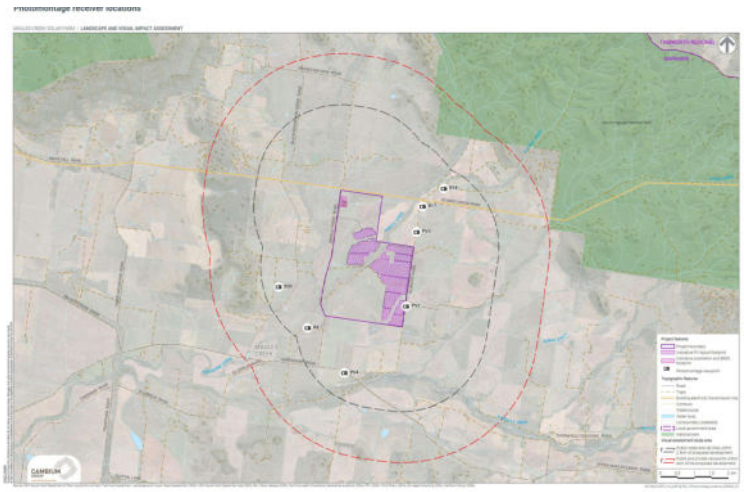
Project Status – Environmental Studies

Visual Amenity – Landscape and Visual Assessment (LVIA)

- Detailed assessment has been undertaken for 4 private viewpoints (rural residences) and 3 public viewpoints (Harparary Road and Glencoe Road)
- Potential for visual impacts assessed as Low for all surrounding residential viewpoints – this due to favourable topography (flat) and screening by vegetation.
- One public viewpoint (Glencoe Road – PV2) assessed as Moderate impact. Proposed mitigation (landscaping) reduces impact level to Low



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Example – Gunnedah Solar Farm from 700m

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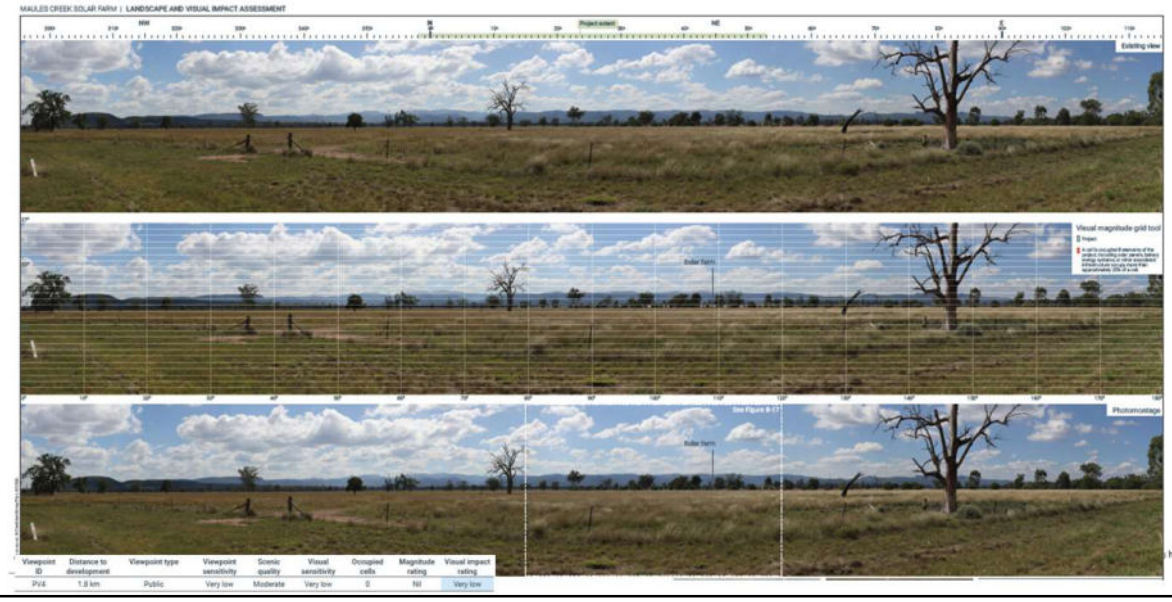
Visual Amenity

Harparary Road – without Vegetation Buffer



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Visual Amenity

Harparary Road – Without Vegetation Buffer

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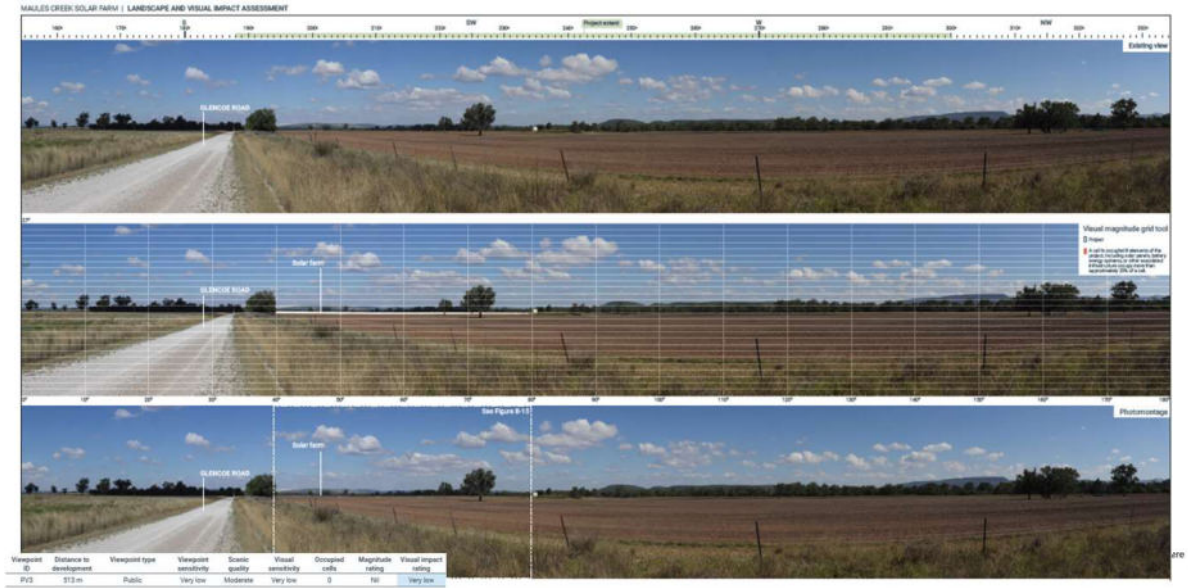
Visual Amenity

Glencoe Road (North) – Without Vegetation Buffer



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Visual Amenity

Glencoe Road (North) - Without Vegetation Buffer

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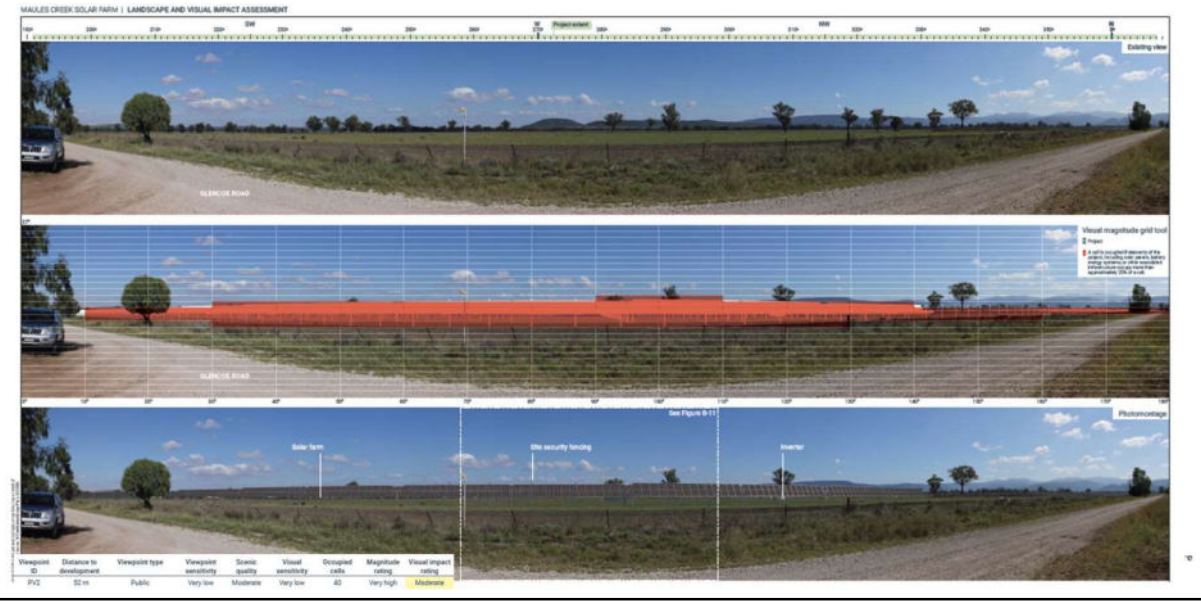
Visual Amenity

Glencoe Road (South) – Without Vegetation Buffer



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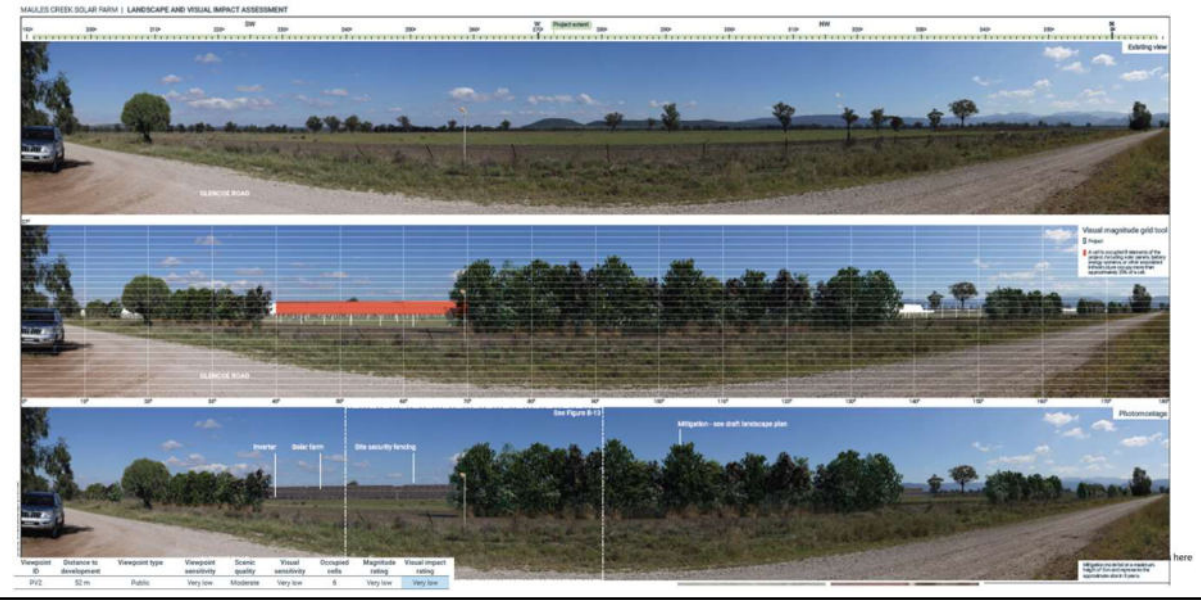
Visual Amenity

Glencoe Road (South) – with Vegetation Buffer



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Visual Amenity

Glencoe Road (South) – Without Vegetation Buffer

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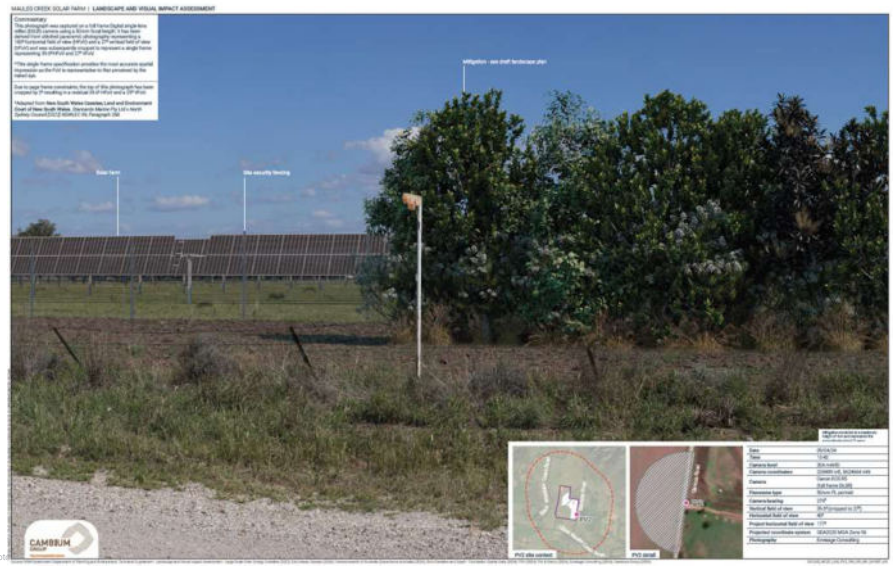
Visual Amenity

Glencoe Road (South) – With Vegetation Buffer



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Visual Amenity

Glint and Glare Assessment

- Modelling for solar farms is based on the following factors:
  - The tilt, orientation, and optical properties of the PV modules in the solar array;
  - Sun position over time, taking into account geographic location;
  - The location of sensitive receivers (dwellings, roads, rail, and aviation facilities); and
  - Screening potential of surrounding topography, vegetation and buildings.
- The only receiver to be potentially impacted by glare is the host landowner, and no other properties would be impacted.
- Existing and planted vegetation will further reduce any risks of glare.

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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, project will comply with relevant construction noise criteria.
- Road traffic noise was assessed for worst case scenario of 8 truck trips per hour, and is compliant with guidelines

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. Based on modelling it is expected that noise emissions will be within acceptable limits under the relevant guidelines.

Table A2 Common Noise Sources and Their Typical Sound Pressure Levels (SPL), dBA

Source	Typical Sound Pressure Level
Threshold of pain	140
Jet engine	130
Hydraulic hammer	120
Chainsaw	110
Industrial workshop	100
Lawn-mower (operator position)	90
Heavy traffic (footpath)	80
Elevated speech	70
Typical conversation	60
Ambient suburban environment	40
Ambient rural environment	30
Bedroom (night with windows closed)	20
Threshold of hearing	0

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Fire and Hazard – Risk Assessment

- A Preliminary Hazard Analysis (PHA) has been undertaken by an experienced risk consultant
- The steps undertaken to prepare the PHA include:
  - Identification of BESS hazards. This analysed potential incident scenarios arising from these hazards and assessed the resulting consequences for people, property, and the environment
  - Estimation of likelihood of hazardous incidents that could have significant consequences
  - Recommendations for controls to mitigate the consequences and reduce the likelihood of potentially hazardous incidents.

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Fire and Hazard – Risk Assessment

- Hazards such as electrical, arc flash, EMF, fire, reaction, chemical and external factors have been considered.
- The PHA findings identified **no significant offsite consequences or societal risks**. The risk profile is tolerable under the principles of "So far as is reasonably practical"
- Most medium risk events relate to fire events. The primary exposure to fire events will be to the Projects construction and operations workforce, with minimal offsite impacts anticipated. The risk assessment concluded that there is no potential for offsite fatality or injury identified, thus meeting the land use planning criteria
- Design of the battery includes separation distances between individual units to prevent fire spreading from battery to battery. This means a multi module fire (i.e., fire propagating from battery container to battery container or battery unit to battery unit) is a non-credible event.

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Fire and Hazard – Risk Assessment

- Section 8.3.5 Wind and Solar Farms of the Planning for Bushfire Protection Guidelines identifies the following:
  - a minimum 10m APZ for the structures and associated buildings/infrastructure. It should be noted that Section 8.3.5 classifies infrastructure requiring an APZ as excluding road access to the site, as well as power or other services to the site and associated fencing.
  - the APZ must be maintained to the standard of an Inner Protection Area (IPA) for the life of the development. The PBP (2019, p. 106-107) defines an APZ as a fuel-reduced area surrounding a building or structure that separates the asset and bush fire hazard. An IPA is classified as the closest area to the asset where fuel-management can minimise direct flame contact and radiant heat on the asset and act as a defendable space.
  - A Bush Fire Emergency Management and Operations Plan to be developed if the projects is approved, should identify all relevant risks and mitigation measures associated with the construction and operation of the development.

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Project Status – Environmental Studies

Aboriginal Cultural Heritage

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

- A photo of a possible scar on a tree was presented to the committee. The location was not discussed though if available we can ask the specialists about this feature.
- Culturally modified trees are a feature considered in predictive assessments and in site surveys.
- The identification of scars as Aboriginal cultural heritage items can be difficult. Some forms of natural trauma and early colonial bark extraction create similar scars.
- A guide to scarring on trees and heritage potential is available online. https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Aboriginal-cultural-heritage/aboriginal-scarred-trees-in-new-south-wales-field-manual-050054.pdf

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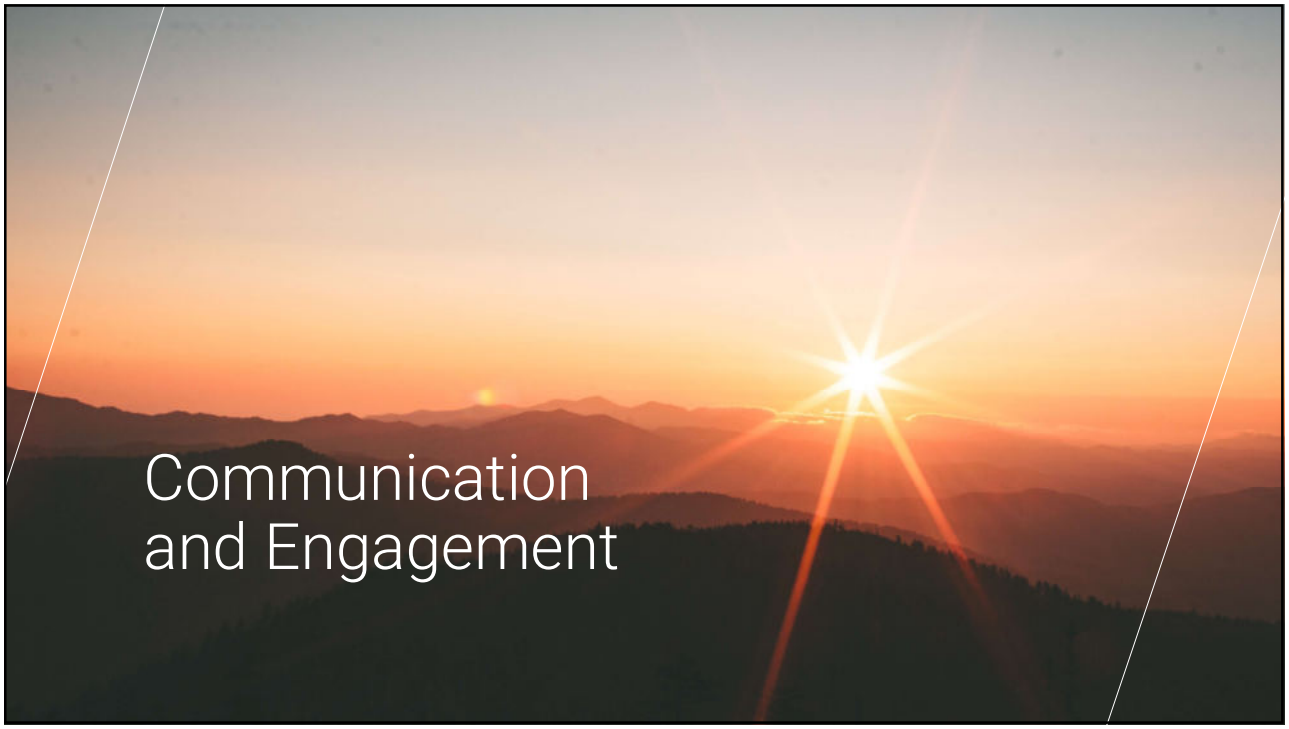

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Future engagement opportunities

- **Oct-Dec:** ongoing updates as new information arises, specifically:
  - Community Benefit Fund survey
    - What does the Maules Creek community need?
    - How can we ensure landowners closest to the site benefit?
  - Responses to issues raised
    - Feedback on any information gaps, provision of additional information
  - Status of Development Application submission
    - Timing and contact points
- **Jan-Feb:** Planning application
  - Opportunities to submit views during the exhibition period
  - Next steps and status of CCC (propose we meet again in early 2025)

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Early Engagement

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."*

Maules Creek Solar Farm

FRV is a solar energy company with a positive track record developing and operating solar energy assets in the state.

FRV is proposing to submit a Scoping Report for a 100 megawatt solar farm and a 200 megawatt hour Battery Energy Storage System (BESS) in preparation for a Development Application submission later in 2023.

The site would occupy around 300 hectares of private land, currently used for gazing.

The project is currently in the early planning stages. If the Report is approved, an Environmental Assessment and further consultation will be undertaken.

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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For further information and To provide feedback on the proposed Maules Creek Solar Farm, visit **maulescreeksolarfarm.com**

If you have any questions about the project or would like to chat to our team, please get in touch via the contact details below.

W www.maulescreeksolarfarm.com.au
E maulescreek@frv.com
P 0455 070 785

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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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