Mates Gully Solar Farm

Scoping Report Information: Context, Impacts & Mitigation

Spark Renewables is a leading developer and long-term owner of renewable energy generation. Our portfolio comprises the 100MW operational Bomen Solar Farm near Wagga Wagga as well as a development portfolio of wind, solar and storage projects in Australia.

We are proposing the Mates Gully Solar Farm, located approximately 30km east of Wagga Wagga, between Borambola and Tarcutta.

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Visual effects

Preliminary Assessment

The proposed solar farm is likely to affect visual amenity for neighbouring landholders, though there will be varied visual effects for individual landholders depending on location, topography, and viewpoint. 26 dwellings were identified within 3.25km of the proposed project site. A preliminary review of vegetation in the landscape indicates that many neighbours with theoretical views of the project (based on terrain) will have their view of the array reduced by existing vegetation.

Further Investigations

A detailed visual impact assessment will be undertaken within the Environmental Impact Statement (EIS) process to better understand the level and type of impacts. We will engage a qualified landscape architect to undertake a comprehensive assessment of potential visual impacts on landscape character and visual amenity from viewpoints. This process will include further refinement of potential viewpoints, generating photomontages, and establishing visual magnitude and sensitivity for receptors. The visual impact assessment will be undertaken prior to submission of the EIS.

Mitigation & Landholder input

We will work with communities and neighbours to understand local priorities and to mitigate impacts and ensure this proposal has the lowest impacts possible. Neighbouring landholders will have an opportunity to inform the visual impact assessment by providing information about specific sensitive viewpoints, and suggest mitigation options, such as:

- Appropriate species tree planting and plant screening.
- Possible refinement of the project footprint to mitigate highly sensitive views for neighbours.
- Individual mitigation strategies depending on the level and type of impact.

Visual amenity effects will also be considered in neighbour payment negotiations between Spark and neighbouring landholders. This will occur after the planning approval process has been completed.

Scoping Report Reference

Section 6.2.2. Pages 40-51.

Biodiversity

Preliminary Assessment

This site was partially chosen due to the majority of its vegetation being highly modified and consisting of cropped paddocks and exotic pastures. While these areas provide low biodiversity values, they can provide some habitat for foraging and habitat for fauna species. Preliminary investigations have detected the presence of Superb Parrots and hollow bearing Box Gum Woodland which are important for nesting and breeding ground of different native species.

Further Investigations

Detailed assessment of impacts to threatened entities will be undertaken as part of the Environmental Impact Statement (EIS). This will include species surveys and integrity plots undertaken as part of the Biodiversity Development Assessment Report to determine the condition of the native vegetation, threatened species habitat, and the impacts to threatened species.

Mitigation & Landholder input

We aim to minimise the impact on flora and fauna by designing projects to be constructed outside areas of high conservation significance and adopting control measures during the construction process. The development footprint for the solar farm will be further refined to avoid areas of threatened species, remnant vegetation and hollow bearing trees where possible.

Detailed design will allow for micro siting and avoidance of this fragmented vegetation. Other mitigation measures include preparing detailed management plans and conducting pre-clearance surveys. Biodiversity Offset requirements may be generated if biodiversity values cannot be avoided.

Neighbouring landholders will be able to provide input by sharing local knowledge of flora and fauna in the area and discussing mitigation options including making suggestions for species plantings and revegetation programs.

Scoping Report Reference

Section 6.2.1. Page 32.

Construction Impacts

Preliminary Assessment

If approved, the proposed project may be constructed over a period of 12-18 months. We have identified there may be the following short term impacts during construction, which are likely to vary widely depending on location and proximity:

- Noise
- Vibration
- Dust
- Access & traffic
- Increased workforce
- Cumulative impacts

Further Investigations

As part of the Environmental Impact Statement (EIS), specialist consultants will complete detailed impact assessments for each of the impacts above.

Detailed traffic assessments will be undertaken and transport routes into the site would be designed to minimise impacts on population centres and local residents.

Mitigation Strategies & Landholder Input

We will develop mitigation strategies for residual impacts with input from affected residents and specialists, and will revise construction methodology to take into account impacts.

We would time key component deliveries to avoid peak local road usage and would construct the project over time to reduce the level of impact and share the benefits of construction over a longer period. This will create a more sustained economic boost to the region over time, and increase community safety, reduce traffic impacts, and maintain work demand.

If the project is approved, we would have a detailed Traffic Management Plan in place to ensure safety and minimise noise and dust pollution. Any public road upgrades and/or repairs will be considered in the EIS. The preferred project access would be off Mates Gully Road.

Scoping Report Reference

Section 6.3. Page 66.

Farm Production

Preliminary Assessment

Agricultural activity would continue on the site in the form of sheep grazing among the solar panels. In shifting from current cropping systems to sheep grazing, there will be a decline in economic output from agricultural activity on the site.

The transition from cropping to grazing is not expected to negatively effect neighbouring landholders and will have no material effect on the district's overall contribution to food production. There may be some minor effect on demand for agricultural inputs and services.

Concerns have been raised regarding potential increase of salinity in the groundwater due to potential removal of trees, however the site is presently almost completely devoid of trees and we will avoid removal wherever possible. We intend to integrate permanent pasture over the life of the project and plant deep rooted native species to promote stable salinity levels.

Further Investigations

A detailed Agricultural Impact Assessment will be undertaken to quantify any reduction in economic output from the transition to sheep grazing. This will compare returns on current cropping activities with an assessment of stocking capacity within a solar array, and the broader effects of altered demand for farm inputs and service providers.

We are working with research providers to gain a better understanding of optimal pasture species in a partially shaded environment, suitable layouts, managing trafficability issues, and assessing the comparative cost of increasing stock numbers versus mowing in wet seasons.

Mitigation & Landholder input

Prior to construction we would prepare the site for a grazing enterprise, including sowing pastures and establishing suitable paddock layouts and watering points.

Agronomic and livestock experts would advise on best practice management to ensure grazing can be feasibly incorporated into the development. Neighbouring landholders will be invited to inform the impact assessment via comment on the cropping and livestock capacity of the area.

Scoping Report Reference

Section 6.3. Page 67.

Erosion Control

Preliminary Assessment

The proposed project would involve earthworks as well as piling. This would be limited to the project site, access, and transmission lines. Impacts during construction would include:

- Ground disturbance and vegetation removal, which have the potential to cause soil erosion and sedimentation.
- Establishment of internal roads. Minimal disturbance would be required for other infrastructure due to the use of piling for panels.

Further Investigations

Investigations and benchmark data for rehabilitation following construction and decommissioning relating to the groundwater, surface water, creeks and soil will be undertaken. Impacts will be considered as part of the design process to ensure they are manageable. The Environmental Impact Statement (EIS) will include consideration of placement of infrastructure to minimise waterway crossings; protect hydrological function of waterways; and protect against soil erosion.

Mitigation & Landholder input

Rehabilitation of groundcover following construction, groundcover management during operation and restoration of the land capability following decommissioning would be recommended in the EIS.

Neighbouring landholders will be invited to inform the impact assessment for soil erosion, and share their local knowledge of the land during the EIS phase.

Scoping Report Reference

Section 6.3. Page 66.

Contamination

Preliminary Assessment

Earthworks during construction have potential to result in sediment laden runoff to enter creeks, with potential to affect water quality by preventing light penetration through the water.

Contamination of groundwater and surface water is unlikely given that chemicals and fuels will be appropriately stored, and spills procedures will be implemented.

Further Investigations

The EIS would assess the impacts to waterways and include appropriate mitigation measures, such as buffering these areas for avoidance where possible, micro siting of infrastructure to minimise waterway crossings and protect hydrological function of waterways, and adherence to best practice guidelines.

Investigations and benchmark data for rehabilitation following construction and decommissioning relating to the groundwater, surface water, creeks, and soil will also be undertaken. Impacts will be considered as part of the design process to ensure they are manageable.

Mitigation & Landholder input

Technology advancements, supply chain disclosure and best practice industry guidelines will be followed to ensure that toxic materials are reduced in the solar panel manufacturing process. We would partner with services providing solar panel validation programs and recycling programs. Strict procedures would be in place to remove, recycle & replace panels if damage to solar panels occurs.

Neighbouring landholders will be invited to inform the impact assessment for soil and water contamination, and share their local knowledge of the land during the EIS phase.

Scoping Report Reference

Section 6.3. Page 66, 70.

Fire Hazard Mitigation

Preliminary Assessment

Solar farms generally pose a low risk of starting bushfires compared to cropping harvest activities, and the project proposal would employ proven and mature technology for the solar panels and associated ancillary electrical infrastructure.

Further Investigations

A Preliminary Hazards Assessment will be undertaken as part of the Environmental Impact Statement (EIS). The potential of the project increasing risk of bushfire would be assessed in the EIS in accordance with the Planning for Bushfire Protection Guideline 2019 (RFS, 2019).

Mitigation Strategies & Landholder Input

Strategies for mitigation of fire risk will include the creation of a fire break around infrastructure, new and improved fire trails for the NSW Rural Fire Services, and the maintenance of vegetation overgrowth and dry debris. Access to the site and surrounding areas will be improved, reducing response times to local fires.

Integrated within the battery design will be an Asset Protection Zone serving as a fire break, as well as a heating, ventilation and air conditioning (HVAC) system.

Designing a fire risk management plan in consultation with NSW Rural Fire Service and the community will be a crucial part of the conditions of consent to project approval, if issued by the planning authority.

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Section 6.3. Page 70.

Decommissioning & Recycling

Preliminary Assessment

Once the proposed project reaches end of operational life (~30 years), it would either be repowered (once necessary approvals are obtained) or the solar farm infrastructure would be decommissioned and recycled. The site would be fully rehabilitated to support continuation of existing agricultural land uses following decommissioning. Decommissioning activities include:

- Disconnection from electrical grid.
- Solar panels and all ancillary equipment removed and materials recycled where possible.
- All above-ground components removed and site rehabilitated to former condition.
- Underground cabling and concrete turbine footings typically remain in the ground (below ploughing depth). This creates less environmental disturbance.
- Access roads, gates and fencing may be removed and land rehabilitated.

Further Investigations

Decommissioning of solar farm infrastructure and rehabilitation of the land is included in the landowner agreement and in Conditions of Consent to project approval, if the project is approved.

Research indicates up to 99% of materials from solar panels are recyclable (glass, plastic, copper, aluminium and silicon), and there is a huge need to reduce industry waste. We are working with local providers of 'circular economy solutions' to achieve zero landfill from each panel.

Mitigation & Landholder input

Neighbouring landholders will be invited to inform the impact assessment for decommissioning, make suggestions to impact mitigation, and provide feedback on the plan during the EIS phase.

Aboriginal Heritage

Preliminary Assessment

We are committed to the involvement of First Nations representatives in community benefit sharing, project design and planning, and guaranteed ongoing consultation and access to sites of cultural significance.

The proposed project site exists on the traditional lands of the Wiradjuri people. No Aboriginal Heritage Information Management System sites have been recorded within the project site to date from preliminary investigations. Two creeks crossing the proposed project site could retain higher potential to preserve items of Aboriginal heritage significance, which may include modified trees and scattered artefacts.

Further Investigations

An Aboriginal Cultural Heritage Assessment (ACHA) would be undertaken to investigate the potential impacts to Aboriginal cultural heritage, which would be undertaken by an archaeological specialist in accordance with the Code of Practice for the Archaeological Investigation of Aboriginal objects in NSW (DECCW 2010).

Consultation with the local Aboriginal community, Representatives of Aboriginal Parties and local caretakers of the land will be undertaken as part of the ACHA. We are undertaking recommended early commencement of consultation to ensure the custodians of the land to have input into the early stages of the project.

A Cultural Heritage Management Plan will be put in place to manage any impacts during each project stage.

Mitigation & Landholder input

Where there are items of historic significance, we would refine and micro site our project layout by applying recommended buffers around sites, and avoid development in these areas.

Detailed consultation with Traditional Custodians and caretakers of the land will be undertaken to understand the significance of any items found within the project site.

Scoping Report Reference

Section 6.2.5. Page 55.

Historic Heritage

Preliminary Assessment

A Preliminary Historical Heritage Assessment (PHHA) has been undertaken, which has identified that items of built heritage containing heritage values and areas of archaeological potential are present within the project site. This includes the Tarra Wingee and outbuildings located in the northern section of the site, likely built in the turn of the century.

There is high potential for historic features to be present which relate to the use of the study area as part of the Borambola run, which will be associated with sheep and other agricultural pursuits. This is most likely to be present in the form of dams, and remains of holding pens and fence lines.

There is high potential for the presence of archaeological remains, which relate to the train line and associated infrastructure, such as the station which was constructed within the study area.

Further Investigations

A full Heritage Assessment will be undertaken during the EIS phase to identify whether the proposed project would impact on any of the items or areas of archaeological potential, and to assess their level of historical significance.

Mitigation & Landholder input

Wherever possible, we would avoid any historic remains and refine our project layout based on this. If heritage items cannot be avoided, mitigation and management strategies would be developed as part of the Heritage Assessment.

Community and neighbouring landholder input will be important in assessing the significance of these historic items.

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Section 6.2.6. Page 59.

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