

Social Impact Assessment (SIA) Worksheet

Project name: Marulan Solar Farm

Date: 10/05/2022

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				
				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.	Has this impact previously been investigated (on this or other projects)?	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?		
									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
health and wellbeing	Development projects can create stress and anxiety in people who oppose the project and/or are directly impacted. Evidence from the field suggests that this is the case for one neighbour in particular (R67), related to the access handle that they had thought formed part of their property. They are feeling anxious about how the fencing along the access road will change the look and feel of their property. Both this and another adjacent landholder are worried about impacts on their property value and this is causing them stress.	Negative	Yes - other project	Brewongle Solar Farm; Giamire Solar Farm; Lismore BESS	Unknown		No	Yes	No	No	Yes	Detailed assessment of the impact	Required	Broad consultation	Targeted research	Discussion with neighbours adjacent to the access handle has occurred to provide details around enhanced screening of the access handle, the use of dust suppressing materials in the construction and the adoption of rural style fencing, to limit the change in the character of the locality.	Recommend to implement robust community engagement as per the Community and Stakeholder Engagement Plan (CSEP). For affected adjacent landholders, recommend targeted and ongoing consultation providing with clear information to address concerns and reduce uncertainty, and discuss possible mitigation/enhancement measures. To date, this has included engaging a surveyor to provide findings to the affected landholder regarding property boundaries along the access handle. At the time of this SIA, further discussions have been planned with these landholders regarding fencing and screening options along the access handle.			
decision-making systems	Feedback from targeted SIA consultation indicates that adjacent landholders, many of the residents along Munro Rd (who don't permanently live there), and the local community, e.g. Marulan, feel that they have not properly informed about the solar farm, making it difficult to make informed decisions, influence project design, and participate in the assessment process. The targeted consultation also indicates that broader community sentiment is not being heard. Feedback was received that the Community open session on 15 December was not well advertised across platforms that locals use to access information and was too close to Christmas. Some neighbouring landholders found out about the community consultation session in February from other residents rather than broader project communication materials. There was also some confusion about who the Proponent was, as there had been a previous solar farm proposal (Carrick Solar Farm, Photon Energy) on the same site. Targeted consultation highlighted that if people don't know about the project, they will not be aware of the website, or the Proponent's contact details to request one-on-one meetings or further information.	Negative	Yes - other project	Brewongle Solar Farm; Lismore BESS	Unknown		Unknown	No	No	No	Yes	Standard assessment of the impact	Required	Targeted consultation	Potentially targeted research	Yes	Recommend to implement robust community engagement as per the CSEP. Recommend to provide clear and accessible project information on all aspects of the project, including the Proponent, location, proposed access route, design detail, operating size/structure etc. To address this, tailored information was provided in second community newsletter. Provide clear communications going into the EIS lodgement on the process, opportunities to make submissions, and timeframes.			
livelihoods	Employment and labour impacts - During construction, which is expected to take approximately 18 months (including a 3 month shoulder either side), the project will directly generate employment, with a peak construction workforce of around 300 FTE jobs. Construction of this project will lean on the local and regional trades and services sectors. The main contractor during construction will likely be looking to a number of different skills and suppliers including: earthworks and plant operators, labourers, mechanical and electrical engineers, building contractors, heavy vehicle operators, welding and fitting, accommodation, mechanics and maintenance, equipment hire, freight, fencing, and waste management. This may include specific opportunities for local residents, Aboriginal people, young people, apprentices, trainees, including the potential for scholarships. During construction, the project will also create employment and labour opportunities across its supply chains. During operations, the project is expected to employ around 5 FTE workers.	Positive	Yes - other project	Blind Creek Solar Farm EIS	Yes	Gunlake Quarry Continuation Project EIS; Marulan Quarry proposal	Yes	No	Unknown	No	Yes	Detailed assessment of the impact	Required	Broad consultation	Targeted research	Local opportunities will be investigated and prioritised over non-local resources.	Recommend to develop a Local Industry Participation Plan , which will focus on maximising the involvement of local people and businesses in the project. It will include specific focus on people and businesses within the Goulburn Mulwaree LGA, and potentially the wider region. It will also consider opportunities for Aboriginal people and businesses, and young people. This will be developed through consultation with the local community and the key local economic development stakeholders. The Local Industry Participation Plan will take into account local labour and supply demands, and consider the potential negative impact of the Project in this context. This will include updating website material when details are available on sub-contracting opportunities. Recommend that during the construction and operational phases, contractors will work with the local Aboriginal Land Council and local Indigenous organisations to provide increased opportunities for local indigenous populations.			
livelihoods	An increase in economic activity within the local and regional areas is expected. The project will directly and indirectly (through its supply chains) create demand for goods and services such as accommodation, construction materials, freight and local labour. The increased income and spending of the construction workers and others across the supply chains, will also add to the stimulation of the local economies more broadly.	Positive	Yes - other project	Gunlake Quarry Continuation Project EIS;	Yes	As above	Yes	No	Unknown	No	Yes	Detailed assessment of the impact	Required	Broad consultation	Targeted research	As above	Recommend to develop a Local Industry Participation Plan , which will focus on maximising the involvement of local people and businesses in the project. It will include specific focus on people and businesses in the Goulburn Mulwaree LGA, and also the wider regional area. It will also consider opportunities for Aboriginal people and businesses, and young people. This will be developed through consultation with the local community and the key local economic development stakeholders. Recommend to develop a Local Procurement Policy , which will outline the proponent's commitment to providing local and regional businesses the opportunity to supply goods and services to meet project needs during all phases of the project. This will be developed through consultation with the local community and with key local economic development stakeholders.			
way of life	Even with the development of a Local Industry Participation Plan, it is expected that non-resident workers will come to work on the construction of this project. These workers will be housed in temporary accommodation and likely also in rental houses in Goulburn; less likely in Marulan or other small towns due to the lack of facilities and services. The rental housing market across region is very tight, and so this may further constrain the availability of rental housing/affordable housing for local residents. [Conversely, lack of long-term accommodation can also be implicated in regional resident skills shortages.] The population groups most at risk include low income households; renters; other temporary, transient or seasonal workforces; tourists or visitors. Cumulative impacts may also apply.	Negative	Yes - other project	Gunlake Quarry Continuation Project EIS;	Yes	As above	Unknown	No	No	Unknown	Unknown	Detailed assessment of the impact	Required	Broad consultation	Targeted research		Recommend to implement robust community engagement as per CSEP. Recommend to develop and implement an Accommodation and Employment Strategy , working closely with Goulburn Mulwaree Council and temporary accommodation providers/real estate agencies.			
access	An influx of construction workers staying in Goulburn and potentially other nearby towns may increase demand for local social and community infrastructure (e.g. health and community services). Given the short duration of the construction phase, this is unlikely to have significant impacts, however, cumulative impacts may apply. SEARS required a particular focus on this issue.	Negative	Yes - other project	As above	Yes	As above	Unknown	No	No	Unknown	Unknown	Standard assessment of the impact	Required	Broad consultation	Targeted research		As part of the CSEP, the Proponent will continue regular engagement with council to discuss and adaptively respond to any emerging community and business concerns.			
community	An influx of construction workers into the areas of Marulan, Towrang, Goulburn and surrounds may change the composition of the local community, and so change the local and community feel of the towns, during construction. Cumulative impacts may apply.	Negative	Yes - other project	As above	Yes	As above	Unknown	No	No	No	No	Minor assessment of the impact	Required	Limited - if required (e.g. local council)	Not required		As part of the CSEP, the proponent will continue regular engagement with council to discuss and adaptively respond to any emerging community and business concerns.			
access	Construction-related traffic may impact on local or major roads as a result of construction heavy vehicles increasing the volume of heavy vehicles on the public road network and construction workforce traffic movements. The Traffic impact assessment (TIA) has identified the need for only minor upgrades to Munro Road. Access to Munro Road by heavy vehicles during construction would be managed under traffic control to ensure impacts are minimised. Concerns have been expressed by neighbouring landholders, residents on Munro Rd, and in Marulan about the ability for this Council owned road to accommodate heavy vehicles and higher volumes of traffic. It is currently used as part of the local traffic network. Concerns have also been raised about public safety related to increased truck movements on the Hume Highway and the intersection with Munro Road, as well as noting ongoing Hume Highway upgrade works (Marulan bypass pavement rehabilitation). Both neighbouring landholders suggested sealing of the access handle and upgrade of Munro Rd.	Negative	Yes - other project	As above	Yes	Heavy vehicle movement and blasting associated with several nearby quarries, including existing Gunlake and Lynwood quarries and proposed Gunlake extension and Marulan quarry	Yes	No	Yes	Yes	Yes	Detailed assessment of the impact	Required	Broad consultation	Targeted research	Yes	Munro Road was selected as a result of further consultation with Goulburn Mulwaree Council and Towrang Progress Association between the Scoping Report and EIS stages, with both emphasising the unsuitability of Carrick Road. Munro Road has fewer affected landholders than other considered options and a direct connection to the Hume Highway. Recommend to implement robust community engagement as per the CSEP, and targeted consultation with affected residents on Munro Road. Implement and advise community and stakeholders of the recommended Driver Code of Conduct outlined in the TIA, including an accessible complaints process with a timely response protocol.			

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		
				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								What methods and data sources will be used to investigate this impact?					
				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?	Level of assessment for each social impact	Secondary data		Primary Data - Consultation	Primary Data - Research	Has the project been refined in response to preliminary impact evaluation or stakeholder feedback?		What mitigation / enhancement measures are being considered?	
health and wellbeing	During the construction period, there may be adverse health and wellbeing impacts associated with noise, air quality, and lighting for landholders/neighbours near the Project site and/or along the proposed haulage route.	Is the impact expected to be positive or negative	Yes - other project	As above	Yes	Heavy vehicle movement and blasting associated with several nearby quarries, including existing Gunlake and Lynwood quarries and proposed Gunlake extension and Marulan quarry	No	No	Yes	No	Yes	Detailed assessment of the impact	Required	Broad consultation	Targeted research	Standard measures would be implemented to control these impacts. Impacts are short-lived during construction and not ongoing.	Mitigation of construction noise levels as outlined in the Noise and Vibration impact assessment. This includes limiting the type and scale of concurrent activities undertaken close to sensitive receptors where possible; operating plant in quiet and efficient manner; regularly inspecting and maintaining equipment to ensure it is in good working order; and piling activities must only be undertaken during defined daytime working hours in continuous blocks of no more than three hours with a one-hour respite in-between blocks. Potential impacts from vibration from heavy vehicles and construction activities should also be mitigated appropriately. Mitigation of temporary and permanent lighting required during construction as outlined in the Visual impact assessment. This includes that selected lighting is designed and operated in accordance with AS4282-2019 Control of the obtrusive effects of outdoor lighting. Recommend ongoing targeted consultation with sensitive receptors and advise of accessible complaints process with a timely response protocol.
way of life	During the construction period, there may be adverse impacts on people's commuting/travelling time, their experience of travel, and their ability to move around freely. There may also be impacts on privacy, peace, and quiet enjoyment, especially if affected by increased noise for landholders/neighbours near the Project site and/or along the proposed haulage route. Munro Road is generally only used by local traffic (it terminates at Graham Lane, a no-through road) and is usually very quiet.	Negative	Yes - other project	As above	Yes	Heavy vehicle movement and blasting associated with several nearby quarries, including existing Gunlake and Lynwood quarries and proposed Gunlake extension and Marulan quarry	No	No	Yes	Yes	Yes	Detailed assessment of the impact	Required	Broad consultation	Targeted research	Munro Road has been selected in preference to other local roads as a result of discussions with Council, community members and Holcim. Operational noise is generally non-intrusive off site and is unlikely to lead to cumulative impacts with nearby land uses by reference to the NVIA.	The Traffic Impact Assessment outlines mitigation measures such as a Driver Code of Conduct, including measures addressing courteous behaviour and safety. Noise impacts are addressed in the Noise and Vibration Impact Assessment. Recommended to implement and advise of accessible complaints process with a timely response protocol. Recommend ongoing stakeholder and community engagement to provide concerned neighbours with clear information and documentation to directly address concerns and reduce uncertainties. Throughout construction, regular consultation with sensitive receptors is also recommended.
surroundings	Some concerns have been raised about glare and reflectivity impacts. Visual Impact Assessment has been undertaken as part of compliance with Solar Farm guidelines. A risk of glare was identified for 18 dwellings; of these, 8 would have a potential view to the solar array and 1 (R43) has the potential for moderate glare impact. A negligible amenity risk was identified for both Munro and Carrick Rds.	Negative	Yes - other project	Brewongle Solar Farm; Glamire Solar Farm	No	Not required	No	Yes	No	No	Yes	Detailed assessment of the impact	Required	Broad consultation	Targeted research	Refinement of the project footprint, exclusion of sensitive areas and offsetting as required.	Proposed screening vegetation may provide screening of the central areas of the site from R43, reducing the number of glare minutes and level of glare effect. Recommend providing tailored and detailed information for each resident potentially affected.
surroundings	Some concerns have been raised regarding the impact of the solar farm infrastructure on visual amenity, including boundary fencing along the access road bordering neighbouring properties. Some local residents were concerned that there hasn't been enough information on the proposed infrastructure on site and how their sight lines will be impacted from their property. Visual assessment shows that most nearby properties are shielded by the natural topography. Only one landholder will overlook the site. A neighbourhood agreement was requested for those who are going to be most impacted by the solar farm in terms of visual amenity.	Negative	Yes - other project	Brewongle Solar Farm; Glamire Solar Farm	No	Not required	No	Yes	No	No	Unknown	Detailed assessment of the impact	Required	Targeted consultation	Potentially targeted research	Yes	Further consultation with neighbouring landholders about the visual amenity assessment findings and methodology used to undertake this assessment and consideration of further mitigation, including during the EIS exhibition phase. Proposed screening vegetation around the perimeter of the site and in the vicinity of the grid connection infrastructure would reduce visual amenity impacts from most sight-lines to low and negligible over time. Specific screening has also been proposed along the access handle to reduce visual amenity impacts for the two affected adjacent landholders.
way of life	Impacts on people's experience of privacy, peace, and quiet enjoyment resulting from an operational solar farm and BESS and associated maintenance activities.	Negative	Yes - other project	Blind Creek Solar Farm EIS	Yes	Heavy vehicle movement and blasting associated with several nearby quarries, including existing Gunlake and Lynwood quarries and proposed Gunlake extension and Marulan quarry	No	Yes	No	No	No	Minor assessment of the impact	Required	Limited - if required (e.g. local council)	Not required	Construction noise would be short lived and managed through effective implementation of construction management plans and strategies, and through engagement with neighbours.	Ongoing consultation with sensitive receptors into the operational phase.
health and wellbeing	There are potential ongoing noise impacts related primarily to the BESS layouts as identified in the Noise and Vibration impact assessment. No community concerns have been raised for this project to date.	Negative	Unknown		Yes	Heavy vehicle movement and blasting associated with several nearby quarries, including existing Gunlake and Lynwood quarries and proposed Gunlake extension and Marulan quarry	No	Yes	No	No	No	Minor assessment of the impact	Required	Limited - if required (e.g. local council)	Not required	Detailed analysis has occurred to consider type and placement of infrastructure to ensure that offsite impacts are minimised and compliance with criteria can be achieved.	Enact recommended mitigation measures as outlined in the Noise impact assessment, especially for predicted nighttime noise levels in excess of intrusive noise criteria for several receptors. This includes consideration of localised noise mitigation by installing a U-shaped 5-metre barrier to ensure compliance to all receptors. Recommend to undertake noise modelling once the final layout of the development is approved to ensure noise mitigation is still applicable and that compliance with the assessment criteria is achieved, as per Noise impact assessment. Ongoing consultation with sensitive receptors into the operational phase.
surroundings	Impacts to landscape characteristics and values. The project will see a diversion of land use away from agriculture (primarily grazing and some cropping), to land being used to site the solar farm. The project will create a change to the visual and landscape character within this local area, i.e. local scenic values as perceived by the community. One community member commented on the increasing industrialisation of the area, and expressed concern about this being used as the rationale for further industrialisation. One stakeholder noted concern that it is quite a complex ecosystem that has provided a haven for wildlife and birds migrating in from bushfire-damaged areas. Concerns about the potential negative impacts of high site fencing on established fauna corridors. There were also questions raised about whether native plants will be selected for site hedging/screening. This includes impacts on people's values and cultural connections associated with the site or locality, and encompasses connection to country for First Nations.	Negative	Yes - other project	Brewongle Solar Farm; Glamire Solar Farm	Yes	Several existing and proposed quarries in proximity to the site.	No	Yes	No	No	Unknown	Standard assessment of the impact	Required	Targeted consultation	Potentially targeted research	The site has been the subject of detailed investigations from a biodiversity perspective, and areas of exclusion/protection identified to ensure that more sensitive areas are protected.	Native trees will be used for screening/hedging and selection is also based on bushfire resilience, with reference to Goulburn Mulwaree Council preferred planting guide. Implement mitigation strategies as outlined in the BDAR, and communicate strategies clearly to community as per CSEP.
surroundings	Impacts on safety. Parts of the site are on land mapped as bushfire prone. Concerns about Fire Hazard Management and fuel load management, access, and the need for consultation with the Rural Fire Service (RFS) brigade.	Negative	Yes - this project	Discussions with RFS in Sydney regarding requirements	Unknown	Several existing and proposed quarries in proximity to the site.	Yes	Yes	Yes	Yes	Yes	Standard assessment of the impact	Required	Broad consultation	Targeted research	APZ has been built into the design of the scheme and the intention is to provide internal access tracks that can accommodate fire appliances.	Development of a Bushfire Risk Management plan, pending bushfire assessment and required consultation with local RFS re requirements for access. This includes mitigation strategies outlined in the Biodiversity development assessment report (BDAR), i.e., regular grazing/slashing of grass around solar panels to reduce fuel loads and mitigate fire risk; no operation of machinery in long grass during the fire season. Communicate strategies clearly to community as per CSEP
access	Concerns about access road changes, i.e. not being maintained after the construction stage has ended, longer term changes to traffic patterns, that the road might be extended at some point and become a through-fare.	Negative	Unknown		Unknown		Unknown	Yes	Unknown	Unknown	Yes	Detailed assessment of the impact	Required	Broad consultation	Targeted research	The use of dust suppressing material for the access handle during the construction phase has been put forward. The preference is to minimise disruption to character, such as may occur with high security fencing and sealed access roads.	Recommended to implement and advise of accessible complaints process with a timely response protocol. Ongoing stakeholder and community engagement to specifically address the concerns of neighbours and provide them with clear information and documentation to directly address concerns and reduce uncertainties. Throughout construction, regular consultation with sensitive receptors is also recommended, and this should continue (albeit to a lesser extent) into the operational phase.