Draft Environmental Management Plan

Project Number: 55340-001
March 2022

Azerbaijan: Alat Solar Power Project

Prepared by the Wood Group UK Limited.

Azerbaijan Solar PV Environmental and Social Management and Monitoring Plan (ESMMP)

Responsibilities

The Project is being implemented by The Company Azerbaijan Energy LLC (the Company). The Company has the overall responsibility for the delivery of the ESMMP during the pre-construction, construction and operational phases of the Project. The ESMMP will provide the framework of the Project Environmental and Social Management System (ESMS) The Company shall monitor the implementation of the ESMMP on a monthly basis and will undertake an annual review of the implementation of the ESMMP. Specific roles are set out in the table below. The Company will provide appropriate training for their staff in relation to implementing the ESMMP.

The EPC Contractor shall be responsible for management of the construction site and their activities in compliance with the ESMMP within the pre-construction and construction phases of the Project. The EPC must ensure compliance with all relevant laws and regulations and the international standards set out in the ESMMP, including taking the required precautions and actions to minimise environmental and social impacts that may occur during the construction of the Project. The EPC will be responsible for providing the required personnel and shall ensure that they are trained appropriately. Specific roles are set out in the table below.

The Operations and Maintenance (O&M) Contractor shall be responsible for ensuring that their activities on site are undertaken in compliance with the ESMMP during the operational phase of the Project. The O&M Contractor must ensure compliance with all relevant laws and regulations and the international standards set out in the ESMMP, including taking the required precautions, carrying out the necessary actions to minimise environmental and social impacts that may occur during the operation of Project. Specific roles are set out in the table below.

ESMMP Table

Component	Potential Impact	Project Phase	Mitigation / Enhancement	Key Performance Indicators	Management Plan	Monitoring	Frequency	Responsibility
Visual Amenity	Impacts relating to the Goturdagh mud volcano and Gobustan Rock Art Cultural Landscape tourist attractions from a visual perspective.	Construction Operation	The construction schedule will be developed considering key sensitive features within the landscape including cemeteries, rock art and nearby farm structures. Consultation will be undertaken with relevant stakeholders in relation to the construction schedule. As far as is practicable, the schedule will take into consideration any sensitive events to ensure work is not planned in close proximity to receptors at any sensitive times to reduce visual disturbance. Development of landscaping and planting protocols within the CEMP to provide further screening developed prior to the operational phase. Site rehabilitation and landscaping / planting where feasible, implemented in the first active growing season following construction.	Number of related grievances raised and closed. Number of consultations completed. Success of rehabilitation and planting.	Stakeholder Engagement Plan (SEP). Construction Environmental Management Plan (CEMP) (EPC Contractor). Operational EMP (OEMP) (O&M Contractor).	Site inspection reporting. Monthly ESHS reporting. Operational inspection reporting.	Weekly inspections. Monthly reporting. Quarterly site inspections (operations).	EPC Contractor. O&M Contractor.
Landscape.	Moderate indirect impacts to the landscape of the mud volcanoes touristic area.	Construction	Construction areas and roads kept to a minimum to limit soil damage. Strict adherence to designated tracks with no off-road driving permitted. Provision of adequate waste disposal facilities. Training of workforce in waste management. Reduction of waste as so far as possible. Collection of all solid waste and stored appropriately until transported to waste	No signs of off-road driving. Training records. Quantity of waste removed. Number of related toolbox talks.	Traffic and Transportation Management Plan (TTMP) (EPC Contractor). Hazardous Substances and Waste Management Plan (EPC Contractor).	Site inspection reporting. Monthly ESHS reporting.	Weekly inspections. Monthly reporting.	EPC Contractor.

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			disposal facility. Organisation of clean-ups for existing waste.		Pollution prevention and control set out in the CEMP.			
Biodiversity	Minor to moderate impacts on terrestrial habitats and flora species due to areas of shrub and steppes affected as a result of the Project. Minor impacts relating to habitat loss / degradation, increased disturbance and injury / mortality to mammals, amphibians and reptiles.	Pre-Construction / Construction. Decommissioning.	Site preparation undertaken so as to discourage animals from using the Project area. Initial preparatory works to be carried out, where possible, outside of the breeding bird season. If works are required within the breeding season, preconstruction survey should be carried out to check for animals (reptiles and active bird nests). If any are identified, construction activities are to be programmed to avoid such features until they have been moved or natural cessation of breeding effort. The pre-construction survey will also include a re-check for plant species of conservation concern. In the unlikely event that species listed at IUCN Endangered or above are noted then works will cease until a plan to protect these species has been agreed. This will firstly look to use micro-siting and protective fencing during works to avoid any interference. Where this is not possible, translocation of individual plants to suitable habitat or seed gathering of other plants of the same species and sowing in the area (depending on which is most suitable for the species) will take place. In this scenario, monitoring of the species within the entire area will take place (including full re-survey of the site to	Number of environmental toolbox talks for workers. Number of erosion incidences. No signs of off-road driving. No of animals (reptiles and active bird nests) identified during pre-construction survey in breeding season. No. of tortoises found during pre-construction survey.	TTMP. Hazardous Substances and Waste Management Plan. CEMP.	Site inspection reports.	Weekly site inspections.	EPC Contractor (EHS Manager / Qualified Ecologist). The Company (verification).

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			look for other individuals of this species) critical habitat will need to be revisited and methods to protect the species, and enhance its population as appropriate, agreed with lenders. Although no tortoises were found in the Project site, there is the potential for the species to be present and therefore a pre-construction check will be undertaken and, if found to be present, the construction timetable will be designed so that excavation work will be focused around avoiding the most sensitive times (i.e. mid-October to March (or sooner if conditions allow) when tortoises may be hibernating below ground) as well as June and July during aestivation (unless the recent survey data confirms no presence of protected species or there are exceptional circumstances). Rehabilitation of any cleared areas outside of the footprint of the Project. Potential invasive flora species to be identified and action taken to clear these if they occur in or around areas designated for bush clearance. The potential establishment of invasive species will be monitored and should their numbers proliferate, measures to control this must be implemented. Measures to control the species will depend on the species noted and best international practice for this species removal. Cutting and removal of individuals will be in preference to					

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			poisoning of saplings which will only be used when this is the most appropriate possible control measure. Hydrocarbons stored in secured bunds to be located on impermeable surfaces with controlled drainage away from natural water courses. Bunds should be sufficient to contain 110% of the volume of liquids to be stored within. They will be fully contained to stop contamination of rainwater run-off. In addition, refuelling of vehicles and machinery should only occurs in designated areas. All hazardous materials must be correctly stored to limit chances of contamination of the area. Generally, it would be advisable to use biodegradable hydraulic oils, where possible. Any wetland areas and riverine systems outside of the Project area will be left undisturbed during construction. Project staff require environmental toolbox talks during construction to raise awareness, limit conflict and reduce additional disturbance to terrestrial fauna and avifauna. Staff should be briefed on risks of exposure to fauna inhabiting the area as well as on preventive measures to be undertaken. Workers in the field should wear protective clothing: long trousers, closed shoes, and leather gloves. Information regarding nearest location of treatment for any bites and stings should be made available. Any snakes encountered at the site must					

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			not be handled or harmed by Project workers. Animals must be relocated by appointed personnel. Any fauna (not including nests) directly threatened by construction activities will be relocated by relevant personnel. The collection, harvesting or hunting of any plants or animals must be strictly prohibited. A 'no tolerance' policy must be adopted with respect to construction and operations workers. Any culprits guilty of poaching must be apprehended. Fires must be controlled and only allowed in fire permitted areas. Staff training must be carried out in relation to fire safety and firefighting equipment such as fire extinguishers and sand buckets available at every site. A policy whereby the animals have "right of way" during construction would reduce incidents of conflict. Should any animals get trapped or be harmed in anyway, the relevant personnel must be informed. Access roads and substation site requires suitable drainage systems. Cleared areas no longer required for construction activities will be rehabilitated by reseeding with locally found grasses and shrubs (where appropriate) to increase soil stability. Construction vehicles must remain on the access roads and not drive in the un-					

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			cleared bush. Checks must be conducted upon construction completion, any areas showing signs of erosion should be immediately repaired. Any excavated areas must be temporarily demarcated and fenced off to bar access to animals; following the construction phase, those areas need to be re-filled and rehabilitated. Where not possible, tapered sides or a ramp must be in place to allow animals out and checks undertaken prior to filling in. Vehicle speed limits must be imposed and adhered to, with the aim of reducing vehicles' dust production and potential for collision with local biodiversity. Areas where excessive dust is produced will be watered periodically to reduce the amount of dust being thrown up in the air. Heavy construction machinery will be fitted with mufflers to reduce noise. Drivers operating in the area must be well briefed and must be aware of the dangers that vehicles pose to the local fauna.					
Biodiversity – fauna.	Restriction of movement of fauna as a result of fencing will displace fauna from the Project area.	Construction Operation.	Fencing around the Project site will be designed to allow small mammals and fauna to pass safely underneath the area during operations.	Number of fauna species noted during operations on the Project site.	OEMP.	Quarterly inspections.	Quarterly inspection reports.	O&M Contractor.
Biodiversity –	Pipeline right of way could contribute to	Construction	The responsibility for their management is collective, requiring individual actions to	As above.	Reflected in	Reflected in	Reflected in	Reflected in

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cumulative.	further habitat loss and fragmentation. Potential for further oil and gas wells to be developed cannot be excluded so minor to moderate impacts predicted. Increase in potential disturbance and injury due to additional traffic.		eliminate or minimise individual development's contributions. Project specific on-site mitigations and monitoring programmes will be implemented in order to minimise potential impacts of the Project.		rows above.	rows above.	rows above.	rows above.
Biodiversity	Shadow effects caused by presence of solar PV panels can alter species composition and diversity and result in loss of habitat.	Operational	During routine maintenance any invasive flora species should be removed. Cutting of saplings is an effective control measure. Measures will be included within the OEMP to ensure that a set protocol is followed to avoid the risk of spread to other areas.	Invasive species numbers / species composition changes observations.	Operational EMP (OEMP) (O&M Contractor).	Monthly ESHS reporting.	Monthly.	O&M Contractor.
Biodiversity	Potential for collision, displacement or barrier effect to birds as a result of installation of the solar PV panels and overhead line (OHL).	Operational	OHL markers are proposed on the sections of line closest to the Project and will be discussed with Azerenergi. These would have the earth wire with 1 lit diverter at every 10m and marking conductors with a 1 lit diverter at 15 m in a staggered way, such that the OHL as a whole has at least one diverter every 5 to 6 m (Wildlife Institute of India 2018 Power-Line Mitigation Measures. Second edition (2020). Any potential bird collisions with the solar panels will be monitored and noted. A bird protection plan will be produced that will	Number of bird carcasses identified during inspections.	OEMP. Bird protection plan.	Monthly ESHS reporting.	Monthly.	O&M Contractor.

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			provide the protocol for monitoring (which will be standardised, to best international practice and appropriate for detailed analysis of data) will be adaptive so that it can react to changes in noted collisions.					
Hydrology & Hydrogeology	The Project will introduce impermeable surfaces to the site area, increasing run off and risk of flooding.	Construction	On site roads to avoid ephemeral drainage channels where possible. Installation of culverts or other drainage control features where crossings are unavoidable. Surface water will be controlled with appropriate drainage and bunded areas as appropriate. Infrastructure that is most vulnerable to flooding, will be located in areas of lowest flood risk (i.e. areas of solar PV panels will be situated outside of the main flood risk corridors). As far as possible, construction and access roads will be routed outside of areas of highest flood risk (noting that at some locations roads, will need to cross high flood risk corridors). Where this is not possible, flood mitigation measures will need to be defined as part of ongoing scheme design.	Number of flood incidences on site.	CEMP. Emergency Preparedness and Response Plan (EPRP) (EPC Contractor).	Site inspection reports. Monthly ESHS reporting.	Daily site inspections. Monthly.	EPC Contractor.
		Operation	Surface water will be controlled with appropriate drainage and bunded areas as appropriate.	Number of flood incidences on site.	OEMP.	Quarterly inspections..	Quarterly.	O&M Contractor.
Groundwater	Potential sources of pollution to groundwater during operation are	Construction	Supplies provided for cleanup of spills. Pollution prevention and control plan to be developed.	Number of training / toolbox talks for the	CEMP. Pollution and prevention	Site inspection reports.	Daily visual inspections. Monthly.	EPC Contractor.

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	mainly related to leaks and spills.		Establish a designated storage area is established with an impervious base and impermeable walls. All fuel, oil and chemical storage is stored in a designated secure area. Hoses and valves are checked regularly for signs of wear and ensure that they are turned off and securely locked when not in use. Diesel pumps and similar items are placed on drip trays to collect minor spillages. Trays will be checked regularly, and accumulated oil removed.	workforce. Number of spills / clean up required.	measures (in the OEMP). Hazardous Substances and Waste Management Plan.	Monthly ESHS reporting.		
		Operation.		Number of training / toolbox talks for the workforce. Number of spills / clean up required.	OEMP. Pollution and prevention measures (in the OEMP). Hazardous Substances and Waste Management Plan.	Monthly ESHS reporting.	Monthly.	O&M Contractor.
Soils & geology	Minor impacts relating to soil erosion and loss of soil resource.	Construction. Decommissioning.	Clearly demarcate storage and staging areas and store all materials, equipment and vehicles in demarcated area to reduce soil damage. Furthermore, vehicles should be confined to demarcated roadways. Establish native grasses (where appropriate) in erosion control channels and in other areas immediately after final disturbance. Salvage and store topsoil and subsoil before areas are excavated, with topsoil stripped and stockpiled separately. Segregate excavated soils into stockpiles dependent on material type and provide erosion control while stockpiled.	Evidence of off-road driving. Visual inspections of erosion incidents. No. of broken / redundant panel with materials recycled.	CEMP. Pollution and prevention measures (in the CEMP). Hazardous Substances and Waste Management Plan. Emergency Preparedness and Response Plan (EPRP) (EPC Contractor).	Site inspection reports. Monthly ESHS reporting.	Daily site inspections. Monthly.	EPC Contractor.

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			On completion of earthworks, backfill material in the same stratigraphic sequence. Placement and compaction of gravel where needed, excavation of a drainage ditch along uphill sides where appropriate, and placement of low berms on downhill sides where necessary. If narrowing access roads following construction, scarify compacted areas and establish native grasses, where possible given the conditions, in any soil-based channels that are constructed alongside the road. Once construction and road-building are complete, scarify all areas compacted by off-road vehicle / equipment movements and establish native grasses. Store all materials within designated areas of temporary storage facilities and provide supplies to clean-up of minor spills. Confine all vehicles and equipment to the roadway and, to extent possible, minimize activities during wet conditions. When activities must occur in wet conditions, control storm water by using fabric, straw bales or other measures to impede storm water flow and prevent erosion. When damage to wet soil occurs, repair once dry conditions return. For storage of oil, establish a designated storage area, with impervious base and impermeable bund walls. Capacity must be sufficient to contain full volume within a					

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			bund and secured area. Check hoses and valves regularly for signs of wear and ensure they are turned off and securely locked when not in use. Place diesel pumps and similar items on drip trays to collect minor spillages. Check trays regularly and remove any accumulated oil. Reduce the amount of waste to the maximum extent possible. Collect all solid waste and store until transported to the designated disposal site. Any redundant / broken panels and / or supports will be dismantled or replaced with new ones. Steel and other useful materials will be recycled. Inert materials which cannot be recycled will be taken to a suitable disposal site. Procedures will be in place for handling and storing redundant/broken PV panels on the Project site (for example, ensuing these are bunded or stored in a covered area of the site).					
Soils	Potential contamination due to chemical or oil spills in addition to incorrect storage of waste.	Construction	As above.	Number of spill records and clean-ups required.	As above.	Site inspection reports. Monthly ESHS reporting.	Daily site inspections. Monthly.	EPC Contractor.
Soils	Erosion and degradation of soils related to vehicle	Operation.	Confine all vehicles to roadways. Monitor road condition regularly; then repair damaged and rutted roads rather	Evidence of off-road driving recorded.	OEMP. Pollution prevention and	Site inspection reports.	Quarterly operational inspections.	O&M Contractor.

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	traffic and potential contamination of soils.		than bypassing damaged sections. Monitor erosion controls and repair as needed. Where possible, maintain grass cover on berms and ditches. Prohibit use of vehicles and equipment off prepared roads. Re-stabilize existing eroded tracks and restore grass cover as needed. Do not collect firewood from the site. Reduce wastes to the extent possible and maximise re-use of materials with recycling opportunities investigated by the O&M Contractor. Collect, segregate and store all waste and garbage before disposal at the designated site. Clean up and store oily and chemical waste and contaminated material before transport to the designated disposal site to reduce risk of soil and groundwater contamination. Establish a designated storage area with an impervious base and impermeable bund walls and protected from precipitation. Capacity must be sufficient to contain full volume within a bund and secured area. Store all fuel, oil and chemical storage in the designated secure area. The panels and supports will be dismantled or replaced with new ones and steel and other useful materials will be recycled. Inert materials which cannot be recycled will be taken to a suitable disposal site. However	Number of erosion incidents. Quantity of waste removal. Number of training / toolbox talks for the workforce. Number of spills / clean up required. No. of broken / redundant panel with materials recycled.	control within the OEMP. Hazardous Substances and Waste Management Plan (O&M Contractor). EPRP (O&M Contractor).	Quarterly ESHS reporting.		

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			redundant foundations and other inert belowground materials will be buried. Procedures will be in place for handling and storing redundant/broken PV panels on the Project site (for example, ensuing these are bunded or stored in a covered area of the site).					
Archaeology & cultural heritage.	Potential for moderate impacts relating to disturbance to local cultural heritage aspects and intangible assets.	Construction	Construction planning in relation to archaeology and the chance finds procedure will be detailed in the Construction Environmental Management Plan (CEMP). Chance finds procedure to be developed for the construction phase. All the Project Company and the contractors' personnel will be informed about the implementation of the Chance Finds Procedure and related trainings will be provided. Recommended that Developer maintains communications with the Ministry of Culture, the Gobustan National Historical-Artistic Reserve together with the Institute of Archaeology and Ethnography of Azerbaijan National Academy of Sciences (ANAS) before and throughout construction phase. Detailed and regular information to local community members should be provided about Project activity to mitigate community concerns as a result of misinformation. The Project Company will consider scheduling construction activities to minimise the effects on local	Number of toolbox talks undertaken. Number of chance finds.	CEMP Chance finds procedure.	Change finds procedure (EPC).	Site inspection reports.	EPC Contractor.

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			communities and farmers and to reduce impacts on the nearby cemeteries in case of rituals.					
Archaeology & cultural heritage – cumulative.	Presence of additional facilities and increased traffic may impact visual character and sense of place. Increased potential for disturbance to local touristic values and historical archaeological landscape of Gobustan region.	Construction	The responsibility for their management is collective, requiring individual actions to eliminate or minimise individual development's contributions. Project specific on-site mitigations and monitoring programmes will be implemented in order to minimise potential impacts of the Project.	Number of grievances raised and closed relating to impacts on the historical archaeological landscape received.	As above.	As above.	As above.	As above.
Noise	Ground preparation works have the potential to result in increased noise levels at 300 m distance with an exceedance 13.9 dB over the national limits (residential area). National limits are met at a distance of 800 m (39.5 dB(A)) from the sound source. It should be considered however that ground preparation works are considered to be short term,	Construction	Best practicable means followed to ensure quietest available and construction techniques will be used to limit noise as far as possible. Construction only undertaken during daylight hours. All machinery will be regularly maintained. Project construction traffic routing through community areas outside the Project access road will be avoided. Project grievance mechanism developed under IFC PS 1 will be implemented. This will be utilised to record, monitor and respond to / mitigate any noise related impacts raised by nearby farmers and ensure compliance with noise limits is achieved at Noise Sensitive Receptors	Number of noise-related grievances raised and closed. Number of exceedances in construction noise levels (in event of a compliant). Number of exceedances in construction noise levels at worker accommodation. Number of exceedances in speed limits. .	TTMP Grievance mechanism. Noise management procedures within CEMP (EPC).	Monthly reporting.	Monthly monitoring or in the event of a complaint.	EPC Contractor (EHS Manager). The Company Community Liaison Officer (CLO)

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	temporary and intermittent in nature.		(NSRs). Adherence to low-speed limits and regular maintenance of vehicles utilising the road during construction. Monitoring will be in place to ensure adherence to these measures. If accommodation is required on the Project site, it will be located away from noisy locations as so far as possible. Monitoring of noise levels at worker accommodation will be conducted if any construction activities take place at night or during resting hours.					
Noise	While the Project will only be operational during daylight hours, as the transformers are permanently energised, they may emit some noise by way of magnetostriction hum during night-time. The distance between the substation and the nearest receptor (farming area) is approximately 1 km.	Operation	Should additional mitigation be required during operation – the following would be considered: • Installation of acoustic enclosures for equipment causing radiating noise (this would typically give 3 dB attenuation). • Installing acoustic barriers without gaps and with a continuous minimum surface density of 10 kg/m2 in order to minimize the transmission of sound through the barrier. Barriers should be located as close to the source or to the receptor location to be effective. • Periodical maintenance of plant components such as inverters, transformers and other equipment and vehicles used for transportation to and from the site will be carried out to ensure their good working conditions. In addition, the Project grievance	Number of grievances raised and closed. Compliance with sound levels in Leq dBA for day-time and night-time.	Community grievance mechanism. SEP (The Company).	Monthly reporting.	Monthly monitoring or in the event of a complaint (grievance)	O&M Contractor The Company CLO. EHS Manager.

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			mechanism will be implemented. This will be utilised to record, monitor and respond to / mitigate any noise related impacts raised by nearby farmers and ensure compliance with noise limits is achieved at NSRs. Adherence to low-speed limits and regular maintenance of vehicles utilising the road during operation.					
Transport & access.	Potential moderate effects on Oobustan road and negligible effects for M2 Highway.	Construction Decommissioning	Vehicles only permitted to use designated routes with no off-road driving permitted. Speed limits adhered to for all construction traffic. Regular maintenance of vehicles and use of manufacturer-approved parts. Maintain / repair of access roads as required. Temporary site compound to have appropriate parking, HGV manoeuvring space and holding and unloading areas. Training program conducted before site activities commence for all drivers. Procedure for check of licences and permits for all drivers with suitable training conducted. Measures to control delivery / departure of all HGVs to reduce conflict with other road users. Consultation with affected communities to make aware of schedule prior to HGV movements. Construction times to avoid local peak	Number of road safety complaints (raised and closed) received via grievances. Number of accidents / near misses recorded.	TTMP	Inspection reports. Records of accidents & near misses. Grievance mechanism.	Prior to the start of construction. Mitigation as and when identified. In the event of a grievance.	EPC Contractor. The Company CLO.
Transport & access.	Minor increase in traffic accidents possible to both the local access road and highway.	Construction		Number of road safety complaints (raised and closed) received via grievances. Number of accidents / near misses recorded.	TTMP	Inspection reports. Records of accidents & near misses. Grievance mechanism.	Prior to the start of construction. Mitigation as and when identified. In the event of a grievance.	EPC Contractor. The Company CLO.

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			times and routing arrangements, particularly for HGVs. Traffic movements in settlement areas to be limited to daytime only. All drivers will be made aware of sensitive receptors potentially identified en-route.					
Socio-economics	Potential negative impact on the ability of local people to maintain same level of income and access. There is a total of 11 farmer and 14 herder households, in total 25 project affected households present.	Construction & Operation.	Appointment of Community Liaison Officer (CLO) to communicate with stakeholders and all herders using the Project site. On-going communications with land users in accordance with the Project's SEP. Farmers and herders who experience a loss of livelihood shall be compensated in accordance with EBRD and ADB policy requirements and they shall be eligible for livelihood restoration measures. Implementation of LRP. Establishment and implementation of community grievance mechanism. Reclamation of the land will be conducted to backfill and restore native vegetation (where appropriate).	Number of related grievances raised and closed. Overall spending by each LRP budget category. Distribution of spending by: • Livelihood restoration assistance • Special assistance measures being provided to vulnerable people • Other types of assistance measures provided Number of SPV personnel dedicated to land access and livelihood restoration, broken down by	LRP (The Company). SEP (The Company). Community grievance mechanism. Community Development Plan	ESHS reporting (prepared by EPC Contractor).	Prior to construction. Monthly. Quarterly during operations. In the event of receipt of grievance(s).	EPC Contractor. O&M Contractor. The Company CLO.

				gender. Number of times the LRP Committee has met since start of implementation. Number of engagement events completed, broken down by stakeholder category: • Farmers • Herders • Garadagh and Absheron District • Women-only engagements • Engagements with vulnerable people Numbers of employment roles offered to the household of farmers and herders, and the percentage of those accepting a position (broken down by gender). Numbers of specific measures being implemented to assist vulnerable				

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				people.				
Socio-economics.	Potential positive impacts relating to employment and job creation with indirect employment creation, particularly in service sectors.	Pre-construction Construction. Operation.	Development of local hiring plans for inclusion within Labour and Working Conditions Management Plan to include provision of support for people applying for positions, especially women. Communicate employment estimates, timeframes and skills requirements clearly to the stakeholders on a continuous basis. Expectations associated with local employment will be managed through provision of timely and accurate information and provided to local communities via engagement specified in the SEP. Prohibition of forced labour for Project and its supply chain. Skills training to enable greater employment of local people. Prior to construction, women from affected farmer and herder households will be specifically encouraged to apply for a temporary employment positions and additional support shall be provided to encourage the application of females. Support includes use of a female Company representative to engage with local women to inform them that the workplace will be suitable for the presence of women and additional support measures will be in place. Equal opportunities will be provided to	Breakdown of employment numbers. Number of worker grievances raised and closed. Supply chain records. Training records. Gender Management Plan.	Local hiring details within Labour and Working Conditions Management Plan (EPC Contractor) Contractor and Supplier Management Plan. Workers' grievance mechanism within Occupational Health and Safety Plan (OHSP). SEP.	ESHS reporting (prepared by EPC Contractor).	Prior to construction. Monthly. Monitoring during weekly site inspections. In the event of receipt of grievance(s).	EPC Contractor. The Company CLO (and female Company representative as required).

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			both genders, and therefore the risk of tensions rising in households over differences in opinion will therefore be reduced. Workers' grievance mechanism. During operation, in order for the businesses that have lost income or had to downsize due to the magnitude of supply decreasing in comparison to the construction phase to prepare for this situation, regular and continuous information will be provided. <u>Enhancement</u> Investigate local sourcing and procurement opportunities to promote sustainable small business development. Ensuring the procurement from local sources. This will be formalised through a Local Content Policy, which will identify measures to be taken to identify local suppliers and prioritise procurement from such parties. Work with local vocational training schools and active NGOs to develop curricula which will qualify local students to better meet the needs to the developing solar industry locally.					
Socio-economics	Potential for labour violations to occur within the supply chain.	Construction	The requirements of the Company's human resources policies and procedures (including the Worker Code of Conduct) shall be applied to all Tier 1 major suppliers. This includes specific measures to prevent gender-based violence and	ESMS. Number of Project suppliers. Number of risk assessments	Contractor and Supplier Management Plan Supply Chain Management	ESHS reporting (prepared by EPC Contractor).	Prior to construction. Monthly. Monitoring during weekly	EPC Contractor. The Company.

			harassment amongst the workforce. All primary (Tier 1) major suppliers will be pre-qualified by the Project Company before a contract is placed for the supply of materials and services. The process to become a pre-qualified supplier to the Project will include an assessment of the supplier's existing human resources policies and procedures (including those on child labour, forced labour, occupational health and safety, bullying and harassment in the workplace), management system controls and monitoring activities on their own workforce. A register of all Project suppliers will be maintained so that a central record is available of the companies involved, and the types of materials or services that they are providing. The Project Company will use this register and information provided during the pre-qualification process, to conduct a risk assessment of labour violations occurring within the supply chain. Using the results of the above risk assessment, additional actions (such as audits, review of supplier's audit and inspection records, etc.) may be undertaken to check the adequacy of existing controls and monitoring activities. For this purpose, a sub-contractor monitoring procedure shall be developed as an appendix to the Supply Chain Management Plan which includes a checklist that will be used on suppliers considered to be high-risk. The Project Company's Environmental and Social Management System will include details of the minimum specifications of	completed. Number of audits completed.	Plan		site inspections. In the event of receipt of grievance(s).	

Component	Potential Impact	Project Phase	Mitigation / Enhancement	Key Performance Indicators	Management Plan	Monitoring	Frequency	Responsibility
			working conditions and worker recruitment, including controls to avoid forced and child labour. The contracts between the Project Company and all suppliers will include legally binding obligations for them to undertake their contracted scope in accordance with the ESMS (this includes adherence to ADB standards/policy requirements).					
Socio-economics	Pressure on existing social infrastructure during the peak of construction activities.	Construction	Any workers accommodation provided is to be in accordance with the IFC and EBRD Guidelines on Worker Accommodation. A dedicated Worker Accommodation Management Plan will be developed prior to construction by the EPC contractor, following the EBRD / IFC guidance. Development of workers' health and safety procedures ensuring appropriate wash and sanitary facilities for workers with regular cleaning of workers accommodation and Project site facilities required. Provision of a dedicated medical professional to be employed by the Project. Provide a mobile medical centre nearby the site for the provision of first aid in line with the IFC / EBRD Guidance Note on Worker's Accommodation Standards. Implement measures to ensure access to local cemeteries around the Project site is not adversely affected by the fencing of the Project area. Such measures may include providing alternative routes, which can be accessed by pedestrians as well as vehicles.	Number of grievances raised and closed. Accidents recorded.	Worker accommodation management plan. Worker Code of Conduct (EPC). SEP. Grievance mechanism.	Weekly site inspection reports. Reported in monthly ESHS reports.	Communicated prior to construction. Weekly site inspections In the event of a grievance.	EPC Contractor. The Company CLO.

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			Enhancement Investing in local social infrastructure, including health care facilities, to meet the needs of the community in partnership with local government and in accordance with community demands as established from public consultation activities without seeking to supplant or replace the role of the government in providing social services.					
Socio-economics	Risks to community health from construction activities such as accidents, chemical releases etc.	Construction.	Community health and safety measures developed for construction within relevant management plans (including TTMP, Security and Human Rights Management Plan, elements of the OHSP and EPRP) and updated for operational phase. Development and implementation of EPRP. Communicate Project risk to local communities and address concerns accordingly. Monitor any complaints filed via grievance redress mechanism.	Number of related grievances raised and closed. Accidents recorded involving communities.	TTMP. Security and Human Rights Management Plan (EPC Contractor). OHSP. EPRP. Grievance mechanism. SEP.	Weekly site inspection reports. Reported in monthly ESHS reports.	Communicated prior to construction. Weekly site inspections In the event of a grievance.	EPC Contractor. The Company CLO.
Dust pollution.	Potential respiratory effects from dust generated by construction activities.	Construction.	Implement and comply with the TMP. Traffic safety training for all drivers as part of their induction and on an ongoing basis. Caution signs set up in the vicinity of entrance points from the M2 highway to Qobustan road up to the Project site. Flagmen available at the entry-exit points of the Project site.	Training records.	TTMP.	Weekly site inspection reports. Reported in monthly ESHS reports.	Communicated prior to construction. Weekly site inspections	EPC Contractor.
Human health.	Potential	Construction.	Local effluent collection and/or treatment	Waste removal	CEMP.	Weekly site	Communicated	EPC

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	contamination of groundwater or surface water with poor waste management potentially affecting livestock health.		system. Effluent will be stored in a septic tank or untreated storage tank and removed and disposed of periodically by a licenced contractor. Ensure all required licenses / permits are in place where third party wastewater/waste disposal & transport companies are to be utilized and that they facilities are audited to ensure that they are fit for purpose. Ensure there is proper and adequate sanitation facilities at the site during construction.	records. Permits in place for waste disposal. .	Hazardous Substances and Waste Management Plan. Worker accommodation management plan.	inspection reports. Reported in monthly ESHS reports.	prior to construction. Weekly site inspections Monthly.	Contractor.
Human health	Potential worker migration could increase risk of introducing spreadable communicable diseases.	Construction	Develop and implement Project-specific Covid-19 management measures for the Project site and workers' accommodation area. Ensure health screening is being conducted for employees and contractors before contracting workers and on a periodic basis throughout their employment/contract. As part of health and safety induction for workers, provide awareness training on communicable disease prevention. Provide this training on an ongoing basis. Identify opportunities to support local public health campaigns that focus on prevention of communicable diseases.	Number of reported health incidents. Training records.	Emergency response and preparedness plan. Worker Code of Conduct. Worker accommodation management plan. (Including COVID19 management measures). Occupational H&S Plan. Workers' grievance mechanism.	Weekly site inspection reports. Reported in monthly ESHS reports.	Communicated prior to construction. Weekly site inspections Monthly.	EPC Contractor.
Human health	Potential for	Construction	A Code of Conduct will be compiled to	Training records.	HR Policy.	Weekly site	Communicated	EPC

Component	Potential Impact	Project Phase	Mitigation / Enhancement	Key Performance Indicators	Management Plan	Monitoring	Frequency	Responsibility
/ rights.	security personnel to use excessive force that results in intimidation or even physical damage and may act as a trigger event to further potential conflicts and potential human rights risks.		govern the behaviour of Project personnel. Project Workers should be provided with training on Code of Conduct and internal HR policies as well as potential interactions, conflicts, the community's sensitivities, culture, local traditions, communication and behaviours to prevent any potential conflicts. Ensure that all potentially affected stakeholders know how to contact the company and to file grievances or concerns about security arrangements. Security arrangements at the Project site will be developed in accordance with relevant IFC Guidance.	Number of related grievances raised and closed.	Worker Code of Conduct. Security and Human Rights Management Plan. Labour and Working Conditions Management Plan Occupational H&S Plan. Workers' grievance mechanism.	inspection reports. Reported in monthly ESHS reports.	prior to construction. Weekly site inspections In the event of a grievance.	Contractor. The Company CLO.
Climate Change Considerations	A rise in air temperatures and irregular rainfall events could impact on water availability.	Construction	Water conservation measures should be implemented including recycling of water where possible (for example, use of grey water for dust-dampening measures as required).	Quantity of water used on site. Quantity of water reused on the Project site.	CEMP. Hazardous Substances and Waste Management Plan.	Weekly site inspection reports. Reported in monthly ESHS reports.	Communicated prior to construction. Weekly site inspections. Monthly. Quarterly operational reports.	EPC Contractor.