



Acacia
Mining Operations

ACACIA MINE OPERATIONS GÖKIRMAK COPPER MINE

Environmental and Social Management and Monitoring Framework Plan

2017

Document Number

ACACIA-2017-E&S- PLN-208

Disclosure Date

29.09.2017

Prepared By

Environment & Social Department

ENVIRONMENTAL AND SOCIAL MANAGEMENT AND MONITORING FRAMEWORK PLAN

(29 September 2017)

Table 1. Environment Management and Monitoring Framework Plan

The ESMMFP is prepared as part of the Environmental and Social Impact Assessment package (ESIA) carried out by Acacia Mine to supplement the local EIA with additional studies in line with EBRD requirements for Category A projects. The ESMMFP was developed to reflect mitigation measures addressing identified environmental and social impacts respectively in Volume I (EIA) and Volume II (SIA) by AECOM and SRM consultants and to outline overall approach to these impacts monitoring. This is a framework plan which is a summary of and is implemented jointly with individual environmental and social management plans that are prepared for specific issues. Management plans are disclosed as part of the ESIA Disclosure Package Volume IV, but are living documents that are subject to changes and amendments as they are implemented under the Company's Environmental and Social Management System of the life of the project.

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
Visual					
Impacts on visual receptors due to changes in the existing visual setting as a result of construction and operation of mine units (open pit, Waste Rock Dump (WRD) site, Tailings Storage Facilities (TSF), pipelines, etc.) and associated facilities (river diversion, access and haulage roads, Electric Transmission Line (ETL), etc.)	<ul style="list-style-type: none"> Following a review of the existing Preliminary Mine Closure and Rehabilitation Plan a site-specific Mine Closure and Rehabilitation Plan will be developed before decommissioning of Project components (considering progressive closure provisions of certain components such as WRD) taking the visual impacts into account. This plan will be implemented in the decommissioning of Project components. Site-specific Mine Closure and Rehabilitation Plan will ensure that restoration processes will commence as soon as possible following completion of mining or storage activities within particular areas. Rehabilitated landform profile will emulate pre-operation landforms to the greatest extent possible using naturally flowing contours that integrate smoothly into undisturbed areas. Where pre-operation landforms cannot be achieved, character of landforms observed in the wider landscape will be aimed to be emulated. A Reforestation Plan will be developed and implemented. Erosion and Sediment Control Plan will be implemented. 	Construction, operation and closure	AMI	<p>Closure Plan, Reforestation Plan, Erosion and Sediment Control Plan developed and implemented</p> <p>Successful vegetative growth achieved at revegetated sites</p> <p>Grievance records</p>	<ul style="list-style-type: none"> Mine Closure and Rehabilitation Plan Reforestation Plan Erosion and Sediment Control Plan

Commented [AA1]: Add to each of the impacts references to the chapters/sections from the ESIA Vol I and Vol II

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
	<ul style="list-style-type: none"> Top soil management measures will be implemented. Fences adjacent to the neighboring properties will be kept in good condition throughout the Project life. The number of lights during night time works will be kept to a minimum, insofar as is consistent with maintaining operations and health and safety requirements. Light spill will be contained to the greatest extent possible e.g. by using directional lighting wherever possible. If required based on feedback of affected people an additional shielding might need to be installed. Regular monitoring of the affected people's feedback with regards to visual impacts. 				
Land Use and Soil					
Loss of forests and shrubs (415.2 ha)	<ul style="list-style-type: none"> A reforestation plan will be developed and implemented Erosion and Sediment Control Plan will be implemented 	Construction , operation and closure	AMI	Reforestation Plan, Erosion and Sediment Control Plan developed and implemented	<ul style="list-style-type: none"> Reforestation Plan Erosion and Sediment Control Plan
Loss of agricultural land (72 ha)	<ul style="list-style-type: none"> Measures to be taken to mitigate social and economic impacts of agricultural land loss are described in the SIA Report (ESIA Volume II) Vehicle movements will be restricted to designated roads to avoid disturbance of soils adjacent to the roads. Erosion and Sediment Control Plan will be implemented 	Construction , operation and closure	AMI	Erosion and Sediment Control Plan developed and implemented Grievance records	<ul style="list-style-type: none"> Erosion and Sediment Control Plan
Loss of pasturelands (8,900 m ²)	<ul style="list-style-type: none"> Measures to be taken to mitigate social and economic impacts of pasture land loss (e.g. signing pasture agreements between the Project Owner and the affected settlements administration) Implement the Erosion and Sediment Control Plan 	Construction , operation and closure	AMI	Pasture agreement in place Erosion and Sediment Control Plan	<ul style="list-style-type: none"> Erosion and Sediment Control Plan

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
				developed and implemented	
Diversion of Gökırmak River section corresponding to the open pit (along 1.5 km river section that is diverted via two 700 m long tunnels and river diversion system)	<ul style="list-style-type: none"> A River Diversion System has been constructed to allow continuity of Gökırmak River's flow in the stretch that crossed the open pit area Erosion and Sediment Control Plan will be implemented Aquatic biodiversity impacts addressed via implementation of the Biodiversity Management Plan Reinstatement of the river flow through the pit lake after the mine closure in line with the site-specific Mine Closure and Rehabilitation Plan 	Construction , operation and closure	AMI in consultation with environmental authorities and DSI	<p>River flow monitoring results</p> <p>Erosion and Sediment Control Plan developed and implemented</p>	<ul style="list-style-type: none"> Erosion and Sediment Control Plan Biodiversity Management Plan Mine Closure and Rehabilitation Plan
Top soil stripping and management (565,613 m³)	<ul style="list-style-type: none"> Top soil stripping and excavation activities will be performed in compliance with the Regulation on Control of Excavated Soil, Construction and Demolition Wastes, EBRD performance Requirement 3 and other good international practice. Unnecessary soil stripping will not be carried out during construction activities to minimize disturbance to vegetation, ground species and soils. Soil loss will be minimized with suitable equipment, procedure, and work schedule (windy and rainy periods should be avoided for activities that cause soil disturbance such as soil stripping, etc.). The topsoil will be carefully stripped up to its full depth and stored at topsoil storage areas to be used for the rehabilitation activities. The stockpiles will have a maximum height of 2 m to avoid the occurrence of anaerobic conditions and will be drained with open channels. To avoid wind and rain erosion of the stockpiles, measures such as light compacting of the stockpile surfaces to reduce rain penetration, moisturizing the stockpile surfaces, covering the surfaces 	Construction and operation	AMI	<p>Amount of stripped and stored topsoil</p> <p>Topsoil storage integrity and stability conditions</p> <p>Vegetative properties of topsoil (moist, vegetation etc.)</p>	<ul style="list-style-type: none"> Erosion and Sediment Control Plan Mine Closure and Rehabilitation Plan

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	<p>with a plastic cover, or grain-sized gravel will be taken, where applicable.</p> <ul style="list-style-type: none"> • Soil conservation measures such placement, location, design, duration, coverage and reuse will be considered in top soil storage. Storage areas will be protected to prevent erosion. • Vegetative soil will not be used as fill material under any circumstances (prohibition of backfilling practice). • Topsoil will be placed back after the closure of the Project units such as WRDs and TSFs. • Erosion and Sediment Control Plan will be implemented. • Mine Closure and Rehabilitation Plan will be implemented. 				
Erosion of soils	<ul style="list-style-type: none"> • Erosion and Sediment Control Plan will be implemented and updated as necessary to prevent/minimize the landslide and erosion impacts that might potentially arise as a result of Project activities. • Natural vegetation will be preserved in non-exposed ground areas for effective sediment and erosion control. • Disturbance to existing areas of site vegetation will be limited, especially along the Gökırmak River and its tributaries to minimize littoral erosion and landslides. • All required and effective drainage and construction procedures will be applied in order to minimize the impacts on soil hydrology and to benefit soil infiltration. Interception channels around the Open Pit, WRDs and TSFs will be built to divert runoff waters and to prevent/minimize erosion caused by water. • Limiting activities (particularly for Open Pit and WRDs) during adverse weather conditions to reduce potential wind and water erosion will be considered. • Erosion and Sediment Control Plan will be implemented. • Monitoring of the walls stability in the open pit 	Construction , operation and closure	AMI	<p>Sediment Control Plan developed and implemented</p> <p>Interception and drainage channels constructed and maintained in good order</p> <p>Successful vegetative growth achieved at revegetated sites</p>	<ul style="list-style-type: none"> • Erosion and Sediment Control Plan

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
				Walls stability measurements	
Soil contamination	<ul style="list-style-type: none"> Waste rock material potentially generating Acid Rock Drainage and Metal Leachate will be encapsulated within the WRDs to minimize any impact on underlying soil and groundwater. Mineralized vein waste will be placed randomly within the WRD to allow access to neutralization potential. Closure capping will be implemented with a capillary break layer of 0.15m of gravel, an impermeable clay layer of 0.5m and an upper erosion/desiccation protection layer of 0.1 m of gravel. Contouring and closure capping of the WRD to be completed as rapidly as possible after the end of WRD construction. TSFs bed will be lined with high density polyethylene (HDPE) liner to prevent any leakage to soil and groundwater. The non-mining waste storage areas will be constructed on hard surface and with other relevant measures that prevent soil as well as surface and groundwater pollution. Non-mining waste management at the Project Area will be done in line with Turkish legislation, international legislation/guidance documents, the Waste Management and Pollution Prevention Plan, and good international industry practices. Hazardous waste will be temporarily stored on-site in an area designated just for this purpose, appropriately enclosed and with concrete paved surface and managed in line with the Hazardous Materials and Chemical Usage Management Plan. The water accumulated at the open-pit due to groundwater leakage and precipitation will be pumped out to sedimentation ponds to prevent soil and groundwater contamination. Run-off waters from undisturbed areas around disturbed areas will be diverted including areas that have been graded, seeded 	Operation phase	AMI	<p>ARD management measures implemented</p> <p>Spillage/leakage sites and records</p> <p>Composite liner system installed</p> <p>Impervious sedimentation ponds constructed</p> <p>Presence of proper waste storage areas</p>	<ul style="list-style-type: none"> Waste Management and Pollution Prevention Plan Emergency Action Plan Oil and Chemicals Spill Response Plan Hazardous Materials and Chemical Usage Management Plan Emergency Preparedness Plan for Kepezkaya TSF

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
	<p>or planted. Such drainages will be diverted to sedimentation ponds to be treated for sediment removal.</p> <ul style="list-style-type: none"> Waste storage out of the designated storage areas will be prohibited. Oil changes, refueling, or lubrication of vehicles will be conducted in a dedicated area with hard surface. Storage tanks and refueling stations will be equipped with drip trays and spill control equipment. All measures will be taken into consideration for possible leakage in line with the Emergency Action Plan. When spills or leakages of any type of hazardous materials occur, the contamination will be controlled by using absorbents. The contaminated soil (if any) will be stripped to the adequate depth and disposed as hazardous waste in compliance with the provisions of "Regulation on Hazardous Waste Control" and the Oil and Chemicals Spill Response Plan and Hazardous Materials and Chemical Usage Management Plan No wastewater discharges of any type to land will be allowed. Hazardous Materials and Chemical Usage Management Plan will be implemented. Waste Management and Pollution Prevention Plan will be implemented Oil and Chemicals Spill Response Plan will be implemented Emergency Preparedness Plan for Kepezkaya Tailings Storage Facility will be implemented. 				
Air Quality					
	<ul style="list-style-type: none"> 				<ul style="list-style-type: none">
Dust emissions from Construction	<ul style="list-style-type: none"> Implement Air Quality Management Plan, Conduct water sprinkling for dust suppression for at least 5 times a day during dry season on unpaved roads; 	Construction	AMI	Monitoring results	<ul style="list-style-type: none"> Air Quality Management Plan

Commented [AA2]: Same as other construction dust – identical item – no need to repeat and dust suppression should be done for all elements not only TSF site

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
	<ul style="list-style-type: none"> Surfaces in inactive/decommissioned Project areas should be re-vegetated or otherwise rendered non-dust forming, Monitor emission according to air quality monitoring program. 		External Expert/Consultant	Grievance records	
Dust Emissions from Operation Period	<ul style="list-style-type: none"> Implement Air Quality Management Plan, Monitor emission according to air quality monitoring program, Based on the air quality model results, water sprinkling will initially be conducted for at least 5 times a day during dry season. Frequency will be increased in the case monitoring results require so, Re-vegetation or otherwise rendering non-dust forming of surfaces in inactive/decommissioned Project areas Construction of wind fences and/or vegetative barriers on one side or both sides of ore transport road (if required, depending on the assessment of monitoring results), Cover material transported by trucks. Fitting stockpiles with sprinkler systems or dust caps (if required depending on monitoring results), 	Operation	AMI External Expert/Consultant	Monitoring results Grievance records	<ul style="list-style-type: none"> Air Quality Management Plan
Emissions from Blasting	<ul style="list-style-type: none"> Wetting down the entire blasting area prior to initiating the blast, Use of an air-water fogger spray prior to, during, and after initiating the blast. Monitor emission according to air quality monitoring program, 	Construction and operation	AMI External Expert/Consultant	Monitoring results Grievance records	Air Quality Management Plan
Dust emissions from Stockpiles And Open Areas (Wind Erosion)	<ul style="list-style-type: none"> Implement Air Quality Management Plan, Fitting stockpiles with sprinkler systems or dust caps (if required depending on monitoring results) 	Construction and operation	AMI External Expert/Consultant	Monitoring results Grievance records	Air Quality Management Plan

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
Exhaust and Stationary Emissions	<ul style="list-style-type: none"> Implement Air Quality Management Plan Monitor emission according to air quality monitoring program, Burning of waste materials, foliage etc, must be avoided, Use of heavy oil and diesel fuel for the mine activities should be minimized whenever possible; Vehicles and equipment should not emit black smoke from exhaust systems except during ignition at start-up 	Construction and operation	AMI External Expert/Consultant	Monitoring results Grievance records	Air Quality Management Plan
Greenhouse Gas Emission					
Lifetime GHG emissions due to carbon stock change, combustion of diesel oil, combustion of coal, purchased electricity and blasting operations	<ul style="list-style-type: none"> Minimizing the haulage distances in movement of material Uphill movements will be avoided as far as possible Vehicle and equipment movements will be scheduled to minimize idle time and distances travelled Keeping land clearance during construction to the minimum necessary for the works Rehabilitating cleared areas as soon as possible after completion of construction Perform regular maintenance of the transport fleet Optimizing ore and waste handling processes to minimize the need for multiple handling; Undertaking progressive rehabilitation of land during operations so that land is revegetated as soon as possible after mining and waste disposal operations are completed. Keeping records of regular GHG calculations and publishing annual data. If required, additional training of the staff on carbon saving plans. 	Construction and operation	AMI	Staff Training records GHG estimates and publication records	
Noise and Vibration					
	<ul style="list-style-type: none"> 				

Commented [AA3]: No need to separate TSF construction – identical issues with the rest of the construction activities

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
Noise from Construction	<ul style="list-style-type: none"> Implement Noise and Vibration Management Plan, Reschedule construction activities based on monitoring results to ensure compliance with set limits for daytime and night-time works (e.g. avoid night time activities near sensitive receptors if recorded noise levels are above 50 dB) 	Construction	AMI External Expert/Consultant	Monitoring results Grievance records	Noise and Vibration Management Plan
Noise from Operation	<ul style="list-style-type: none"> Implement Noise and Vibration Management Plan, Reschedule operation activities based on monitoring results to ensure compliance with the set limits for daytime and night-time works (e.g. avoid night time activities near sensitive receptors if recorded noise levels are above 50 dB) 	Operation	AMI External Expert/Consultant	Monitoring results Grievance records	Noise and Vibration Management Plan
Noise from Ore haulage, Unpaved roads and/or trucks	<ul style="list-style-type: none"> Implement Noise and Vibration Management Plan Use the ore transfer road only during the daytime Maintain the surface of haul roads in good condition and impose a speed limit for vehicle traffic. Implement maintenance and operation procedures to minimise nuisance noise emissions from equipment, including servicing and maintenance of exhaust systems on mine equipment. 	Construction and operation	AMI External Expert/Consultant	Monitoring results Grievance records	Noise and Vibration Management Plan
Noise from Blasting	<ul style="list-style-type: none"> Implement Noise and Vibration Management Plan Take applicable safety measures prior to blasting, such as warning signs and siren alarm Careful control of blasting to reduce noise and vibration, e.g. timing and proximity to receptors Provide personnel training on explosives handling and safety management. Only certified blasters or explosives experts shall conduct blasting activities Conduct blasting only during the daytime period (between 08:00 and 18:00) 	Construction and operation	AMI External Expert/Consultant	Monitoring results Grievance records	Noise and Vibration Management Plan

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
	<ul style="list-style-type: none"> Plan to blast during the middle of the day when background noise levels are higher than at other times of day 				
Vibration	<ul style="list-style-type: none"> Implement Noise and Vibration Management Plan Use specific blasting plans, correct charging procedures and blasting ratios, delayed / microdelayed or electronic detonators, and specific in-situ blasting tests (the use of downhole initiation with short-delay detonators improves fragmentation and reduces ground vibrations) Develop a blast design, including a blasting-surfaces survey, to avoid overconfined charges, and a drill-hole survey to check for deviation and consequent blasting recalculations Monitor vibration level at Sepetcioglu while blasting. Baseline conditions of the houses located in the blasting impact area (approximately 150 m radius area around the explosion point in open pit; Sepetcioglu village is located in the blasting impact area) will be established before the start of operation phase. 	Construction and operation	AMI	<p>Monitoring results</p> <p>Grievance records</p>	Noise and Vibration Management Plan
Water Resources					
Impact on water supply resources (wells) of the local communities due to open pit dewatering during operation phase	<p>Implement Water Resources Management Plan</p> <p>Below measures are given for Sepetcioglu village, Küpeli and Aşağıküreçay villages</p> <ul style="list-style-type: none"> Alternative Water Supply Plan will be developed for Sepetcioglu, Küpeli and Aşağıküreçay settlements based on the results of a Water Supply Study to be conducted. Ongoing monitoring on groundwater levels, discharge rates and water quality (open pit monitoring wells, village springs and village water depots/fountains) will be continued during the operation. Ongoing monitoring on mine water use for operational activities will be performed to maintain an up-to-date mine water balance. 	Operation	AMI External Expert/Consultant	<p>Water Resources MP developed and implemented</p> <p>Water Supply Plan for 3 villages implemented</p> <p>Monitoring results</p>	<ul style="list-style-type: none"> Water Resources Management Plan

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
	<ul style="list-style-type: none"> Water derived from pit dewatering will be used for dust suppression (if its quality is sufficient). A detailed Technical Study on Pit Dewatering will be conducted to determine the number of the dewatering wells and dewatering strategy. The findings of the numerical modeling study will be compared with the hydrogeological conditions in the open pit during the operation phase. The numerical groundwater flow model will be calibrated with the actual rates to be obtained during pit dewatering for successful water management of the open pit. 			<p>Grievance records</p> <p>Technical Study on Pit Dewatering in place</p> <p>Dewatering strategy developed and implemented</p>	
Impacts associated with pit lake formation	<ul style="list-style-type: none"> Taking into the account that the information on pit lake water quality is currently limited, three scenarios will be reevaluated during the operation phase of the Project. The optimal closure of the pit will be decided during the operational phase based on long term on-site data to be collected. Evaluation of the dewatering data throughout the operation phase will be done to improve the mine closure plan for detailed assessment of pit lake formation and strategy for open pit closure. Monitoring of Gökırmak River flow upstream and downstream of the open pit area will be carried out to improve the long term understanding of the flow rates and water quality during the closure phase of the Project. Ongoing monitoring on pit lake water level, groundwater levels in monitoring wells, and water quality will be performed following the closure for XX years. 	Operation and closure	AMI External Expert/Consultant	<p>Water Resources MP developed and implemented</p> <p>Mine Closure and Rehabilitation Plan developed and implemented</p> <p>Water Resources Management Plan in place and implemented</p> <p>Monitoring results</p>	<p>Water Resources Management Plan</p> <p>Mine Closure and rehabilitation Plan</p>

Commented [AA4]: when it is planned?

Commented [AA5]: Ongoing monitoring for how many years after the closure?

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
				Grievance records	
Impacts on the quality of nearby water resources due to seepage transport from the bottom of the TSFs due to a potential liner failure during the operation phase	<ul style="list-style-type: none"> Kepezkaya and Bağdere TSFs will be lined. The composite liner system design will include, from top to bottom, 50 cm gravel, 2 mm HDPE liner, 1 cm geosynthetic clay, and 50 cm gravel. An independent, specialized quality control consultant will be on site to ensure good contact conditions are achieved during the installation of liner system. A groundwater monitoring will need to be implemented to monitor groundwater quality on the critical flow paths. A modeling study for the characterization of geochemical interactions will be done for Bağdere TSF, once the operational approach for TSF is confirmed. 	Operation and closure	AMI External Expert/Consultant	<p>Composite liner system installed and approved by a specialized consultant</p> <p>Monitoring results</p> <p>Modelling study for Bağdere TSF developed</p>	Water Resources Management Plan
Impacts on the quality of surface water resources due to WRD drainage and leachate (during operation and post-operation phases)	<ul style="list-style-type: none"> Application of engineered WRD cover at the WRD site upon closure. Use of vegetation cover at the top to reduce infiltration. 	Operation and closure	AMI External Expert/Consultant	<p>Engineered WRD cover designed and implemented</p> <p>Monitoring results</p>	<ul style="list-style-type: none"> Water Resources Management Plan
Impacts on water quality (increased levels of total suspended solids and/or metals) due to discharge of mine waters (waters derived from pit dewatering and runoff waters that are in contact with Project Units) during operation phase	<ul style="list-style-type: none"> Interception channels will be constructed around the Open Pit, WRD, TSFs and Process Plant to divert runoff and prevent rain water interaction with Project units. This non-contact water will be drained to downstream surface waters. Impervious sedimentation ponds will be constructed in the Open Pit and Çorakoğlu WRD areas. Runoff that is in contact with waste rock and open pit walls will be 	Operation	AMI External Expert/Consultant	<p>Interception and drainage channels constructed</p> <p>Impervious sedimentation</p>	Water Resources Management Plan

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
	<p>captured and diverted to sedimentation ponds for further treatment prior to discharge.</p> <ul style="list-style-type: none"> Excess water derived from pit dewatering (including rainfall runoff component) will be used in dust suppression (if its quality is sufficient) or collected in downstream sedimentation ponds for further treatment prior to discharge. Water in sedimentation ponds will not be discharged unless its quality meets discharge criteria defined by IFC Effluent Discharge Criteria for mine waters and National Discharge Standards specified in Turkish Water Pollution and Control Regulation – Table 7.1. The strictest limit value will be used among these three criteria in comparison of the discharge water quality of mine waters. Sedimentation ponds will allow complete settling of precipitated ferrihydrite (for WRD and Open Pit contact waters) and total suspended solids. Quality data obtained from dewatering waters will be used to improve and update the mine closure plan for detailed evaluation of pit lake formation and strategy for part of the Project's mine water management. No discharge of settled effluent will be carried out to the Gökırmak River during low flow conditions. Periodic monitoring will be performed on quality of discharge waters. Rainfall runoff that is in contact with the Processing Plant will be captured and diverted to downstream sedimentation ponds for further treatment prior to discharge. Non-contact waters will directly be discharged to receiving surface waters as they will be isolated from the Processing Plant via perimeter ditches. 			<p>ponds constructed</p> <p>Amount of treated excess water from pit dewatering used for dust suppression</p> <p>Monitoring results</p>	
Impacts on water quality due to transport of uncontrolled sediments to downstream surface waters (during construction)	<ul style="list-style-type: none"> All required and effective drainage and construction procedures will be applied in order to minimize the impacts on soil hydrology and to benefit soil infiltration. Interception channels around the Open Pit, WRD, TSFs 	Construction and operation	AMI	Interception and drainage	<ul style="list-style-type: none"> Erosion and Sedimentation Control Plan

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
Impacts on water quality due to transport of uncontrolled sediments to downstream surface waters (during operation)	<p>and Processing Plant will be built to divert runoff waters and to prevent/minimize erosion caused by water.</p> <ul style="list-style-type: none"> Impacted runoff waters will be treated in compliance with the discharge limits specified in IFC Effluent Discharge Criteria for mine waters and National Discharge Standards specified in Turkish Water Pollution and Control Regulation – Table 7.1. The strictest limit value will be used among these three criteria in comparison of the discharge water quality of mine waters. Sedimentation ponds will allow complete settling of total suspended solids. Exposed ground and steeply inclined outer walls will be stabilized to minimize/prevent soil - river bank erosion and sediment load in accordance with the Erosion and Sedimentation Control Plan. Exposed ground that will be disturbed during the construction phase activities will be minimized (unnecessary soil stripping will not be carried out). Limiting construction activities during adverse weather conditions to reduce potential wind and water erosion will be considered. Natural vegetation along the local streams and the Gökırmak River will be preserved in non-exposed ground areas for effective sediment and erosion control. Re-vegetation or otherwise rendering non-dust forming of surfaces in inactive/decommissioned Project areas will be performed to minimize dust generation. Vehicle movements will be restricted to designated roads to avoid disturbance of soils adjacent to the roads. Water sprinkling will be implemented on ore transport, waste rock transport and access roads (initially, based on the air quality model results, water sprinkling will be conducted for at least 5 trips a day during dry season and the frequency will be increased if the monitoring results require so) . 		External Expert/Consultant	channels constructed	<ul style="list-style-type: none"> Water Resources Management Plan
Impacts on water quality due to construction of diversion tunnel on Gökırmak River				Monitoring results	

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
	<ul style="list-style-type: none"> An up-to-date Erosion and Sediment Control Plan will be maintained to prevent/minimize the impacts that might potentially arise due to increased turbidity and suspended solid load. Water Resources Management Plan will be implemented. 				
Domestic Wastewater Discharge					
Discharge of treated domestic wastewater to Gökırmak River both during construction and operation	-Maintenance/Improvement of process of treatment if the discharge parameter values are above limit values.	Construction and operation	AMI External Expert/Consultant	Monitoring results	
Non-mining Waste					
Potential negative impacts on soil and groundwater due to improper management of generated non-mining hazardous wastes	<ul style="list-style-type: none"> - Provision of appropriate storage areas including secondary containment where necessary - Segregation of hazardous and non-hazardous wastes at source, ensure proper storage conditions are in place including container types, labelling, classifying - Routine control of hazardous waste containers to ensure they are not damaged and no spill exists -Hazardous waste transportation and disposal by licensed companies -Implementation of the Waste Management and Pollution Prevention Plan - Training of staff on waste handling - Implementation of the Hazardous Materials and Chemical Usage Management Plan 	Construction and operation	AMI	Presence of proper waste storage areas Waste Disposal Records Training records	<ul style="list-style-type: none"> Waste Management and Pollution Prevention Plan Hazardous Materials and Chemical Usage Management Plan
Potential negative impacts on soil and groundwater due to improper management of generated non-mining non-hazardous wastes	<ul style="list-style-type: none"> - Provision of appropriate storage areas including secondary containment where necessary - Segregation of hazardous and non-hazardous wastes at source, ensure proper storage conditions are in place including container types, labelling, classifying 	Construction and operation	AMI	Presence of proper waste storage areas	<ul style="list-style-type: none"> Waste Management and Pollution Prevention Plan

Commented [AA6]: It was earlier stated that the domestic WW will be collected in septic tanks to be removed and treated outside of the project/ please amend the item respectively.

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
	<ul style="list-style-type: none"> -Solid wastes that can be recycled will be separated and stored temporarily on site for eventual recycling process. -Solid wastes that are non-recyclable and non-hazardous will be collected and properly disposed via the Municipality. - Training of staff on waste handling -Implementation of the Waste Management and Pollution Prevention Plan 			Waste Disposal Records Training records	
Loss of valuable material through improper waste management practices (losing recycling and reusing opportunities)	<ul style="list-style-type: none"> -Solid wastes that can be recycled will be separated and stored temporarily on site for eventual recycling process. -Implementation of the Waste Management and Pollution Prevention Plan 	Construction and operation	AMI	Presence of proper waste management on site Waste Disposal Records Training records	<ul style="list-style-type: none"> • Waste Management and Pollution Prevention Plan
Biodiversity					
Habitat loss / alteration / fragmentation	Avoidance <ul style="list-style-type: none"> • Avoidance of damage caused to natural vegetation and habitats if not absolutely required by Project activities. • Temporary facilities will be carefully sited. The design of the WRDs has been optimized and the area to be used has been decreased following the updated feasibility report dated June 2017 comparing to the previous Project unit alternatives. • Pre-construction checks (surveys) by a qualified biodiversity expert will be carried out immediately prior to ground disturbance of the possible future construction/excavation/ habitat alteration activities to confirm that the biodiversity baseline as reported in the ESIA (Volume I) has not changed significantly and that there are no additional features that should be avoided. 	Construction , operation and closure	AMI External Expert/Consultant Related authorities	BMP and BAP developed and implemented Animal rescue procedure in place Fencing in place Reforestation Plan	<ul style="list-style-type: none"> • Biodiversity Management Plan (BMP) • Biodiversity Action Plan (BAP) • Reforestation Plan • Mine Closure and Rehabilitation Plan

Commented [AA7]: Amend BMP in line with the comments/changes below to the mitigation measures here.

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
	<ul style="list-style-type: none"> Where applicable, fencing will be installed during the construction and operation areas to secure areas with priority biodiversity features. Currently, the open pit, closed ore stock area, downstream cofferdams and partially Çorakoğlu WRD are fenced following the topography lines. When necessary (during ore storage period) the active mining areas, WRDs, Process Plant, TSFs and where the heavy machinery will be operating will be fenced. AMI will ensure that the areas of construction/ excavation activities are unsuitable for nesting birds (for example by using bird repellent tape) ahead of the nesting season (around mid-end April). No further changes to the Gokimark riverbed introduced. Further disruption of the natural drainage systems will be avoided. <p>Minimisation</p> <ul style="list-style-type: none"> A Project specific Biodiversity Management Plan will be developed and implemented to address any potential impacts on priority biodiversity features. Tuff carnation and the endemic plant species that are present within 100 m from the Project facilities, and therefore potentially subject to indirect impacts, will be monitored and conservation actions detailed in the Biodiversity Management Plan will be taken to address any potential impacts on critical habitats.. There are 4 culverts planned to be built along the ore haulage road at the locations where the road coincides with the riverbed. Although the aim of the culverts is the surface run off, they are considered to be efficient also for the use of reptiles and small mammals to minimize the effects of habitat fragmentation. Direct impacts on the important habitats will be limited to the areas cleared during site preparation, corresponding to the mine facilities, roads, pipeline 			<p>developed and implemented</p> <p>Reforestation protocols with national authorities developed and implemented</p> <p>Number of trees planted</p> <p>Area reforested</p> <p>Staff training records</p> <p>Mine closure and rehabilitation works completed</p>	

Commented [AA8]: A repeat of the above item.

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
	<p>footprints and lay down areas temporary occupied during construction.</p> <ul style="list-style-type: none"> The fauna species with limited mobility that cannot move ahead of construction (such as Spur-thighed Tortoise) will be translocated to the closest undisturbed suitable areas by an assigned person(s) or sufficient time will be allowed for these species' mobility. Awareness training for relevant personnel in order to raise awareness of the critical habitats and priority biodiversity features will be conducted. It will include every possible wildlife-human conflicts in order to minimise the possible harm to both sides. An animal rescue procedure will be developed for the safe translocation of any faunal species found to be at risk from mining operations or posing a threat to mine operations especially since the Project Area covers a total of 37 CHFs and PBFs (details to be given in the Project Biodiversity Action Plan) If during pre-construction survey nests are observed, AMI will undertake their best efforts to preserve the vegetation in place; <p>Restoration</p> <ul style="list-style-type: none"> The seed collection will need to commence at least a year or two before the seed is actually used, so that the volumes needed and the collection sources can be identified. Wherever possible, local species will be used, and seed will be collected locally, because it will usually be best adapted to the conditions, and this will avoid introducing different genetic provenances. After collection, seed must be cleaned and stored under conditions that will maintain maximum viability over the period of storage and that minimize damage due to pests, fungi, and so on. Details are included in the Biodiversity Management Plan and Biodiversity Action Plan 				

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
	<ul style="list-style-type: none"> Effective site preparation will be implemented. (Effective site preparation refers to the procedures that take place prior to seeding or planting to help ensure that optimal conditions exist for the establishment of healthy, botanically diverse and sustainable vegetation. These procedures include soil and waste characterization, selective handling of materials, construction of stable landforms, topsoil handling, ripping, fertilizing and soil amendment and seed bed preparation, e.g. scarifying). A Reforestation Plan and a Mine Closure and Rehabilitation Plan will be developed and implemented <p>Biodiversity Offset</p> <ul style="list-style-type: none"> To be identified following the appropriate avoidance, minimisation and restoration measures are taken and following the further monitoring since off-set measures are to compensate for significant residual adverse biodiversity impacts arising from project development and persisting. 				
Impacts on Biodiversity due to Population Growth and Increased Vehicular Traffic	<p>Avoidance</p> <ul style="list-style-type: none"> The damage caused to natural vegetation will be avoided , if not absolutely required by Project activities. Trainings (including the possible wildlife human conflict) will be provided to relevant personnel in order to raise awareness of the PBFs and CHFs and endemics. Training records that will follow the training programme as suggested in the BMP will be kept. Hunting and collection of wildlife animals will be forbidden. Collection of wildlife plants and especially the endemic and protected ones will be forbidden. The construction areas will be properly marked up with banning off-road driving or banning waste disposal in undesignated areas, in order to avoid/reduce the impact outside the construction areas. 	Construction and operation	AMI External Expert/Consultant Related authorities	BMP and BAP developed and implemented Staff training records Fencing in place Animal rescue procedure in place Mine closure and	<ul style="list-style-type: none"> Biodiversity Management Plan (BMP) Biodiversity Action Plan (BAP) Reforestation Plan Mine Closure and Rehabilitation Plan

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
	<ul style="list-style-type: none"> All vehicles will drive on designated routes unless otherwise authorised; All vehicles will follow the installed speed limits <p>Minimisation</p> <ul style="list-style-type: none"> The activity that might affect the river conditions (such as oxygen deficiency due to turbidity) will be avoided when possible. The mitigations related to biodiversity due to changes on water resources, geological and hydrogeological impacts on surface water as given in detail in related sections of this report will be implemented. Waste rock seepage waters will be captured and controlled in sedimentation ponds and monitored prior to discharge, if any. Depending on its chemistry, seepage water will be treated in compliance with the discharge limit values specified by related national and EU legislation. Further disruption of the natural drainage systems will be avoided. Air quality measures specified in this report will be implemented. Animal crossing signs will be placed on the access roads. The fauna species with limited mobility that cannot move ahead of construction (such as Spur-thighed Tortoise) will be translocated to the closest undisturbed suitable areas by an assigned person(s) or sufficient time will be allowed for these species' mobility. There are 4 culverts planned to be built along the ore road at the locations where the road coincides with the riverbed. Although the aim of the culverts is the surface run off, they are considered to be efficient also for the use of reptiles and small mammals to minimize the effects of habitat fragmentation. Awareness training for relevant personnel in order to raise awareness of the critical habitats and priority 			rehabilitation works completed	

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
	<p>biodiversity features will be conducted. It will include every possible wildlife-human conflicts in order to minimise the possible harm to both sides.</p> <ul style="list-style-type: none"> An animal rescue procedure will be developed for the safe translocation of any faunal species found to be at risk from mining operations or posing a threat to mine operations especially since the Project Area covers a total of 37 CHF and PBFs (details to be given in the Project BAP). <p>Restoration</p> <ul style="list-style-type: none"> Effective site preparation will be implemented. (Effective site preparation refers to the procedures that take place prior to seeding or planting to help ensure that optimal conditions exist for the establishment of healthy, botanically diverse and sustainable vegetation. These procedures include soil and waste characterization, selective handling of materials, construction of stable landforms, topsoil handling, ripping, fertilizing and soil amendment and seed bed preparation, e.g. scarifying). A Reforestation Plan and a Mine Closure and Rehabilitation Plan will be developed and implemented (see Reforestation Section below for the fundamental requirements for the plan). <p>Biodiversity Offset</p> <ul style="list-style-type: none"> To be identified following the appropriate avoidance, minimisation and restoration measures are taken and following the further monitoring since off-set measures are to compensate for significant residual adverse biodiversity impacts arising from project development and persisting. 				
Impacts on biodiversity elements due to water pollution, reduced water quality, changes in morphology and hydrology	<p>Avoidance</p> <ul style="list-style-type: none"> Currently, the open pit, closed ore stock area, downstream cofferdams and partially Çorakoğlu WRD are fenced following the topography. When necessary 	Construction , operation and closure	AMI External Expert/Consultant	BMP and BAP developed and implemented	<ul style="list-style-type: none"> Biodiversity Management Plan (BMP)

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
	<p>(during ore storage period), the active mining areas, WRDs, Process Plant, TSFs and where the heavy machinery will be operating will be fenced.</p> <ul style="list-style-type: none"> Where applicable, fencing will be implemented during the construction and operation areas and especially where these features exist in order to reduce the risk of footprint. Avoidance of damage caused to natural vegetation, if not absolutely required by Project activities The remaining riverbed will not be altered and no siltation will be allowed for the period of the water flow. The activity that might affect the river conditions (such as oxygen deficiency due to turbidity) will be avoided whenever possible. The mitigation measures related to biodiversity due to changes in water resources, geological and hydrogeological impacts on surface water as given in detail in related sections of the ESIA report will be implemented. Waste rock seepage waters will be captured and stored in sedimentation ponds and monitored prior to discharge, if any. Depending on its chemistry, seepage water will be treated in compliance with the discharge limit values specified by related national and EU legislation. <p>Minimisation</p> <ul style="list-style-type: none"> A Project specific BAP will be developed and implemented. There are 4 culverts planned to be built along the ore road at the locations where the road coincides with the riverbed. Although the aim of the culverts is the surface run off, they are considered to be efficient also for the use of reptiles and small mammals to minimize the effects of habitat fragmentation. Collection of wildlife plants and especially the endemic and protected ones will be forbidden. 			<p>Fencing in place</p> <p>Animal rescue procedure in place</p> <p>Staff training records</p> <p>Mine closure and rehabilitation works completed</p>	<ul style="list-style-type: none"> Biodiversity Action Plan Reforestation Plan Mine Closure and Rehabilitation Plan

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
	<ul style="list-style-type: none"> Direct impacts on the important habitats will be limited to the areas cleared during site preparation, corresponding to the mine facilities, roads, pipeline footprints and lay down areas temporary occupied during construction. The water flow in the tunnel should be no less than 25 cm/s in order to ensure the suitable flow rate of the original river environment for the fish species living in the river. Changes in the riverbed were done only within a limited area with slope stability measures in place that should be maintained. <p>Restoration</p> <ul style="list-style-type: none"> Effective site preparation will be implemented. (Effective site preparation refers to the procedures that take place prior to seeding or planting to help ensure that optimal conditions exist for the establishment of healthy, botanically diverse and sustainable vegetation. These procedures include soil and waste characterization, selective handling of materials, construction of stable landforms, topsoil handling, ripping, fertilizing and soil amendment and seed bed preparation, e.g. scarifying). A Reforestation Plan and a Mine Closure and Rehabilitation Plan will be developed and implemented <p>Biodiversity Offset</p> <ul style="list-style-type: none"> To be identified following the appropriate avoidance, minimisation and restoration measures are taken and following the further monitoring since off-set measures are to compensate for significant residual adverse biodiversity impacts arising from project development and persisting. 				
Impacts on biodiversity elements due to emission of gaseous pollutants and dust	<p>Avoidance</p> <ul style="list-style-type: none"> Dust management control measures specified in this report will be implemented. 	Construction and operation	AMI External Expert/Consultant	BMP and BAP developed and implemented	<ul style="list-style-type: none"> Biodiversity Management Plan (BMP)

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
	<ul style="list-style-type: none"> The remaining riverbed will not be altered and no siltation will be allowed for the period of the water flow. The activity that might affect the river conditions (such as oxygen deficiency due to turbidity) will be avoided when possible. <p>Minimisation</p> <ul style="list-style-type: none"> A Project specific BMP and BAP will be developed and implemented. The controlled blasting operation uses delayed (ms) detonators method is selected resulting in smaller ground vibrations, noise and dust impacts compared to other methods. All vehicles will drive on designated routes unless otherwise authorised. 			Monitoring results	<ul style="list-style-type: none"> Biodiversity Action Plan Air Quality Management Plan
Impacts on biodiversity elements due to noise, vibration and lighting	<p>Avoidance</p> <ul style="list-style-type: none"> AMI will ensure that the areas of construction/ excavation activities are unsuitable for nesting birds (for example by using bird repellent tape) ahead of the nesting season (around mid-end April) in order to avoid damages on these animals. Activities resulting in disturbing amount of noise, vibration and lighting (such as blasting and activities of the large vehicles) will be limited at night and measures will be in place as discussed in relevant sections within respective sections of the ESIA reports. <p>Minimisation</p> <ul style="list-style-type: none"> The controlled blasting operation uses delayed (ms) detonators method is selected resulting in smaller ground vibrations, noise and dust impacts compared to other methods. 	Construction and operation	AMI External Expert/Consultant	<p>BMP and BAP developed and implemented</p> <p>Monitoring results</p>	<ul style="list-style-type: none"> Biodiversity Management Plan (BMP) Biodiversity Action Plan Noise Management Plan
Introduction of invasive alien species	<p>Avoidance</p> <ul style="list-style-type: none"> Avoidance of damage caused to natural vegetation and habitats if not absolutely required by Project activities. Temporary facilities will be carefully sited. 	Construction, operation and closure	AMI	BMP and BAP developed and implemented	<ul style="list-style-type: none"> Biodiversity Management Plan (BMP)

Commented [AA9]: Why these measures are here if related to dust and air emissions?

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
	<ul style="list-style-type: none"> Trainings (including the possible wildlife human conflict) will be provided to relevant personnel in order to raise awareness of the PBFs and CHF and endemics. Training records that will follow the training programme as suggested in the BMP will be kept. Collection of wildlife plants and especially the endemic and protected ones will be forbidden. As the Project activities are intense and in a relatively large scale, site surveys should be conducted in order to monitor the Project area for the possible existence of invasive alien species every 2 year in suitable seasons for terrestrial flora and fauna and aquatic life (ideally in spring season) as outlined in the BMP 			Training records	<ul style="list-style-type: none"> Biodiversity Action Plan
Bird and bat collisions with ETL	<p>Since the ETL has already been built, the measures start from the minimisation step.</p> <p>Minimisation</p> <ul style="list-style-type: none"> Bird and bat monitoring surveys should be conducted following international standards in order to define the relevant mitigation measures within the monitoring reports following the results of the surveys detailed in the BMP and BAP. Carry out collision monitoring during important seasons for birds in the Project Area (winter, spring and summer) and bats (spring, summer and autumn), and introduce bird and bat repellent devices if required based on monitoring results. 	Construction and operation	AMI External Expert/Consultant	<p>BMP and BAP developed and implemented</p> <p>Monitoring results</p>	<ul style="list-style-type: none"> Biodiversity Management Plan (BMP) Biodiversity Action Plan
Occupational Health and Safety					
OHS/ Hazards due to Accidents and Incidents (e.g. Ergonomic injuries, falls from height, slips and falls, collisions with objects, exposure to sun, etc.)	<ul style="list-style-type: none"> Implementation of the OHS Plan Implementation of the Contractor Control Management Plan Implementation of the Emergency Action Plan Implementation of the Fire Prevention and Fire Protection Plan 	Construction and operation	AMI	<p>Accident/incident statistics</p> <p>Plans and procedures</p>	<ul style="list-style-type: none"> OHS Plan Contractor Control Management Plan

Commented [AA10]: Is it only AMI responsibility or TEIAS also has its management plans on bird collision?

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
	<ul style="list-style-type: none"> Implementation of related procedures Provision of general and specialized OHS trainings Use of related PPEs and encouragement of other protective means such as sunblockers Implementation of limits on manual lifting/handling Installation of guard rails, signs Ensuring sufficient illumination Allowing only competent personnel to conduct works at height Regular visual checks and maintenance/cleanup of excavation debris and other potential risk sources such as cables and ropes Restricting operation of heavy machinery to those that are trained and competent (licensed if required) Ensuring sufficient illumination Periodic medical checks 			<p>developed and implemented</p> <p>Preventive measures implemented</p> <p>Proper signage in place</p> <p>Inventory of PPEs</p> <p>Training records</p> <p>Medical records</p> <p>Grievance records</p>	<ul style="list-style-type: none"> Emergency Action Plan Fire Prevention and Fire Protection Plan
OHS/ Air Quality: -Health impacts caused by exposure of personnel to dust and other emissions generated by construction activities	<ul style="list-style-type: none"> Implement Air Quality Management Plan Use related PPEs Monitor personal dust exposure and ambient dust measurements, based on Time Weighted Average Limit Value, Short Term Exposure Limit (STEL) Value 	Construction and operation	AMI	<p>Monitoring results</p> <p>Grievance records</p>	Air Quality MP
OHS/ Noise and Vibration: -Exposure to excessive levels of noise and vibration generated by construction activities	<ul style="list-style-type: none"> Use of related PPEs (where noise monitoring results are in excess of required limits or where grievances are received) Periodic medical checks Considering changing equipment or implementing time limits in case of a grievance regarding vibration 	Construction and operation	AMI	<p>Training records</p> <p>Medical records</p>	Health and Safety MP

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
OHS/ Site Traffic: -Accidents that may potentially be sourced from improper traffic management	<ul style="list-style-type: none"> • Implementation of the Traffic Management Plan • Providing traffic trainings for all personnel and providing specialized trainings to personnel that will operate industrial vehicles and workers • Inclusion of traffic issues for trainings that site visitors will receive and limiting site visitors' mobility on construction sites • Restricting operation of industrial vehicles to those that are trained and competent (licensed if required) • Conducting periodic medical checks of drivers • Installation and maintenance of signage and other traffic regulating means • Setting speed limits, right of way practices, periodic vehicle maintenance and other traffic management practices where required • Implementation of the Procedure on Road Safety and Driving • Information dissemination about traffic and safety to be given in schools and other community facilities. 	Construction and operation	AMI	Accident/incident statistics Plans and procedures developed and implemented	<ul style="list-style-type: none"> • Traffic Management Plan
OHS/ Diseases: -Heightened risk of exposure to diseases in both the workforce and the local communities	<ul style="list-style-type: none"> • Adequate accommodation arrangements • Periodic medical checks for personnel and provision of vaccination and/or other mitigating measures when required • Implementation of appropriate waste management practices and the Waste Management Plan • Keeping a suitable patient transport vehicle on site • Awareness raising for workers on communicable diseases • Training for workers on appropriate interaction within the local community. • Health awareness raising of community • 	Construction and operation	AMI	Worker accommodation provided in line with IFC/EBRD standards Grievance records Training records	<ul style="list-style-type: none"> • Waste Management Plan • Health and Safety MP • Labour MP

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
				Medical records	
Community Health and Safety					
Community HS/Blasting -Use of ANFO above 2,500 t/yr upper tier	<ul style="list-style-type: none"> • Ensure compliance with the requirements of SEVESO III Directive • Ensure all sections of the community are informed in advance about the programme for blasting. • See entry under noise and blasting and vibration 	Construction and operation	AMI	Documentation and implementation of SEVESO III requirements	Community HS Plan Noise and vibration MP
Community HS/ Air Quality: -Emissions effective on community health, sourced from construction phase activities	<ul style="list-style-type: none"> • Implement Air Quality Management Plan. • Monitor emissions and air quality in different parts of the community. • See entry under noise and blasting and vibration. 	Construction	AMI	Plans and procedures developed and implemented Grievance records	Air Quality MP Community HS Plan
Community HS/ Traffic and Road Safety: -Accidents that may potentially be sourced from improper traffic management -Increase in traffic load	<ul style="list-style-type: none"> • Implement Traffic Management Plan. • Ensure appropriate signage and other traffic control measures especially around areas of high community activity and also sensitive areas such as schools and hospitals. • Carry out regular checks to ensure that drivers are aware of and implementing safety measures. • Training Acacia Mining and subcontractor employees on traffic, defensive driving techniques etc., • Checking whether speed limits are abided by, • Design protocols regarding the haulage of mine concentrate and hazardous substances, and • Building escape ramps on the haul road between the open pit mine and mining facility, • Placing traffic warning signs within the facility and surrounding areas, 	Construction and operation	AMI	<ul style="list-style-type: none"> • Plans and procedures developed and implemented • Grievance records • Monthly activity reports, • Impact monitoring & 	Traffic MP Community HS Plan Hazardous substances storage and transportation procedure

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
	<ul style="list-style-type: none"> Building two underpasses on the entrance and exit of the same road and bringing them into service of local residents, . 			evaluation reports, <ul style="list-style-type: none"> Performance monitoring & evaluation reports, Grievance notifications, Recorded open and closed grievances , Number of companies and drivers trained, Traffic warning signs, Number of vehicles and drivers checked for speed limit and traffic rules Traffic tickets, 	

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
				<ul style="list-style-type: none"> Traffic accidents, 	
Community HS/ Diseases: -Increased risk of exposure to diseases in the local communities -Increased work load of local healthcare services	<ul style="list-style-type: none"> See SOCIAL MANAGEMENT AND MONITORING FRAMEWORK PLAN Table 1 below. Community awareness raising on health issues including communicable disease Review demand and capacity of health care facilities as a part of influx management plan. 	Construction and operation	See SOCIAL MANAGEMENT AND MONITORING FRAMEWORK PLAN Table 1 below.	See SOCIAL MANAGEMENT AND MONITORING FRAMEWORK PLAN Table 1 below.	Community HS Plan Influx Management Plan
Cultural Heritage					
Damage to existing cultural heritage due to construction and operation activities (noise, dust, vibration)	<ul style="list-style-type: none"> Ensure drawings and pictures of identified civil architecture examples (identified houses) be prepared and submitted to the Ankara Regional Board No: 1 for Conservation of Cultural Assets for their archive at least by the end of 2018. Before these activities are completed, any application that may cause vibration such as use of explosives, drilling and rock crushing with heavy machines should be avoided in the site and its close vicinity. 	Construction and operation	AMI Related authorities	Submission of identified civil architecture examples to related authorities	Cultural Heritage MP
Damage to cultural heritage	<ul style="list-style-type: none"> Implement the Chance Finds Procedure Provide cultural heritage and its conservation trainings to AMI, contractor and sub-contractor personnel be conducted by the E&S teams of the Project owner. In case of a chance find, stop all activities that may potentially harm the archaeological find and record the chance find. Depending on the categorization of the chance find, take related measures and contact the Museum Directorate immediately for further actions. In case of a chance find, and if deemed necessary by the representative of the museum archaeologist, provide an 	Construction and operation	AMI Related authorities	Chance Finds Procedure implemented Records of chance finds Training records Grievance records	Chance Finds Procedure Cultural Heritage MP

Impact Description and Reference to ESIA reports' sections with assessment	Proposed Mitigation Measures	Stage of project	Responsibility	Monitoring/ KPIs	Implementation Plan
	<p>archaeological study team for the chance find to be investigated under the supervision of the museum archaeologist. Prepare a report based on the archaeological study, including any additional actions and mitigation measures to be taken regarding the chance find.</p> <ul style="list-style-type: none"> • Ensure consultations with local communities in case of a chance find. • Include any chance finds within the scope of ongoing information disclosure to be conducted in the extent of stakeholder engagement. • If required, conduct awareness raising activities for cultural heritage, such as the case of multiple chance finds in the area. • Implement the grievance mechanism. In case of any grievance regarding immovable cultural heritage or intangible cultural heritage, the grievance will be responded to appropriately in compliance with the grievance procedure and additional measures will be developed to ensure that impacts on immovable or intangible cultural heritage is prevented. 				
Loss of Intangible Cultural Heritage	<ul style="list-style-type: none"> • Implement the Influx Management Plan • Implement the Stakeholder Engagement Plan • Implement the Livelihood Restoration Plan • Implement Cumulative Impact Management Plan <p>Ensure that the project does not unduly impact on local practices and skills</p>	Construction and operation	AMI	<p>Plans and procedures implemented</p> <p>Grievance records</p> <p>Number and ratio of local workers</p> <p>SEP and LRP implementation records</p>	<ul style="list-style-type: none"> • Influx Management Plan • Stakeholder Engagement Plan • Livelihood Restoration Plan • Cumulative Impact MP

SOCIAL MANAGEMENT AND MONITORING FRAMEWORK PLAN

Table 1. Social Management and Monitoring Framework Plan

Main Topics	Impacts	Proposed Measures	Time Interval	Responsibility	Monitoring	Implementation Plan
Effective stakeholder engagement and protection of vulnerable groups ESIA Volume II Section 3.9, 3.6	Preventing Community Based Tensions Ensure that the community is well informed about the Project Ensure that the community has the opportunity to make its views know the Project i.e. Enable meaningful consultation Ensure that all sections of the community including vulnerable people/groups have equal opportunity to engage with the Project.	<ul style="list-style-type: none"> Employing planned number of experts in the Public Relations Unit, Implement Stakeholder Engagement Plan Implement Livelihood Restoration Plan Ensure comprehensive identification of stakeholders and their interest in the Project. Develop a programme of keeping stakeholders informed about the Project Develop mechanisms to ensure that there is an understanding of the needs of vulnerable groups in the community. Develop engagement mechanisms and procedures that are responsive to different stakeholders approach to receiving information. Ensure that all stakeholders are aware of the grievance mechanism. Employees of Acacia and its contractors aware of human rights. 	Construction and operation phase	<ul style="list-style-type: none"> Acacia Mining Contractors External Expert/Consultant 	<ul style="list-style-type: none"> Monthly activity reports, Impact monitoring & evaluation reports, Performance monitoring & evaluation reports, Grievance logs, Recorded open and closed grievances, News published in local, regional and national media, Number of stakeholders consulted and visited, and frequency of visits, Protests against the project, Number of complaints received through internal grievance system, Percentage of complaints resolved in a timely manner as a percentage of total complaints received. Publicity and communication tools and materials, Members taking part in Community Advisory 	<ul style="list-style-type: none"> Definition of the Public Relations team and its organization chart, Stakeholder Engagement Plan, Grievance System Monitoring & evaluation system, Community Development Plan, Community Advisory Panel procedure, Orientation and toolbox trainings, Local Employment Policy, Human Rights Policy, Work Force Mobilization Plan

Main Topics	Impacts	Proposed Measures	Time Interval	Responsibility	Monitoring	Implementation Plan
					<p>Panel (CAP) and CAP activities,</p> <ul style="list-style-type: none"> • Number of employees in the Public Relations Department, • Monthly activity reports of subcontractors, 	

Main Topics	Impacts	Proposed Measures	Time Interval	Responsibility	Monitoring	Implementation Plan
Improving Local Economy and Livelihoods ESIA Vol II Section 3.2	Employing local work force and skills trainings	<ul style="list-style-type: none"> Preparing an employment policy, Local employment policy binding also for subcontractors, Giving priority to Project affected areas and Hanönü district in employment, Supporting vocational training courses to be offered by relevant institutions, Organizing on-the-job training programs for local employees, Setting KPI targets for local employment Organizing mining training programs, A wage policy balanced between employees from other regions and local employees, Maintaining adequate provision of local facilities such as schools and hospitals for the growth in population as a result of the Project. Working with local authorities and other Projects to manage cumulative impact. Creating opportunities for local economic development through programmes social programmes supported by 	Construction and operation phase	<ul style="list-style-type: none"> Acacia Mining Contractors External Expert/Consultant 	<ul style="list-style-type: none"> Monthly activity reports, Impact monitoring & evaluation reports, Performance monitoring & evaluation reports, Number of local employees, Vocational training courses organized and number of trainees, Number of recruitment among trainees who participated in vocational training courses, Number of trainees who were provided miner trainings, Number of institutions and persons informed, Number of university students awarded scholarship, Number of employees from outside the area of influence who have been able to find housing in the local area. Incidence of human rights affront 	<ul style="list-style-type: none"> Stakeholder Engagement Plan, Grievance System Monitoring & evaluation system, Local employment policy, On-the-job training programs, Miner training program, Scholarship program Labour Management Plan Influx Management Plan Cumulative Impact Assessment and Management Plan Contractor Management Plans Security Management Plan

Main Topics	Impacts	Proposed Measures	Time Interval	Responsibility	Monitoring	Implementation Plan
		<p>the Community Development and Investment Programme (this is something being developed by the Company which and is over and above risk management.</p> <ul style="list-style-type: none"> Human rights as a concept and how it should be expedited is well understood by all employees of the Project both the client and its contractors. 				

Main Topics	Impacts	Proposed Measures	Time Interval	Responsibility	Monitoring	Implementation Plan
	Supporting the Local Economy and Local Procurement	<ul style="list-style-type: none"> • Setting a local procurement policy, • Providing advantages to local companies in procurements, • Specifying which goods and services (food, shuttle service etc.) will be locally procured, • Informing suppliers, their representatives and key stakeholders in the district on procurements and realizations, • Supporting local companies to meet the standards necessary to be considered for the supply chain of the Project. • Establishing a community development program, • Supporting social responsibility projects which will contribute to the development of local economy, • Organizing a workshop to create a Hanönü Residents Platform, • Creating a Community Advisory Panel (CAP) as a result of this workshop and electing its members, • Evaluating the requests received and informing the stakeholders through CAP, 	Construction and operation phase	<ul style="list-style-type: none"> • Acacia Mining • Contractors • External Expert/Consultant 	<ul style="list-style-type: none"> • Monthly activity reports, • Impact monitoring & evaluation reports, • Performance monitoring & evaluation reports, • Size of procurements made, • Number of companies from which local procurements were made, • Number of institutions and persons informed, • Members taking part in Community Advisory Panel (CAP) and CAP activities, • Number of members and vehicles of the service cooperative established/supported, • Hanönü workshop and Hanönü Platform established, • Number of beneficiaries of supported social responsibility projects, • Proportion of employees accommodating in public houses and guesthouses, 	<ul style="list-style-type: none"> • Stakeholder Engagement Plan, • Grievance System • Monitoring & evaluation system, • Setting a local procurement policy, • Corporate social responsibility policy, • Community Advisory Panel procedure, • Transportation services job definition, • Hanönü workshop outcomes, • Number of employees residing/living in the district • Supply Chain Management Plan • Local Procurement Plan

Main Topics	Impacts	Proposed Measures	Time Interval	Responsibility	Monitoring	Implementation Plan
		<ul style="list-style-type: none"> Establishing a service cooperative for the workers transportation, Supporting an/or promoting public house, guesthouse and other accommodation investments for company employees in the district 				

Main Topics	Impacts	Proposed Measures	Time Interval	Responsibility	Monitoring	Implementation Plan
	Improving Local Economy and livelihoods	<ul style="list-style-type: none"> • Conducting a household based impact assessment study for Livelihood Restoration Plan, • Designing a participatory Livelihood Restoration Plan, • Preparing a community development program in the framework of this plan, <ul style="list-style-type: none"> ○ Supporting income generating forestry activities, agricultural activities intended for getting more efficiency from unit area, ○ Preparing income generating programs targeted for women, ○ Introducing trainings for youth on mine specific areas to ensure guaranteed long term employment ○ Supporting the procurement of the agricultural products from Project affected settlement by establishing marketing channels • Establishing a monitoring & evaluation system, 	Construction and operation phase	<ul style="list-style-type: none"> • Acacia Mining • External Expert/Consultant 	<ul style="list-style-type: none"> • Monthly activity reports, • Impact monitoring & evaluation reports, • Performance monitoring & evaluation reports, • Number of PAPs receiving compensation in a timely manner • Number of PAPs achieving Livelihood Restoration • Number of vulnerable PAPs supported. • Number of land and economic displacement grievances received by category • Number and percentage of land economic displacement grievances resolved as a percentage of the total in that category received. • Number of PAPs employed by the project. • Number of incidences of affront of human rights 	<ul style="list-style-type: none"> • Stakeholder Engagement Plan, • Grievance System • Monitoring & evaluation system, • Setting a local procurement policy, • Livelihood Restoration Plan, • Community Development Work Schedule • Supply Chain Management Plan • Influx Management Plan • Cumulative Impact Assessment and Management Plan • Security Management Plan

Main Topics	Impacts	Proposed Measures	Time Interval	Responsibility	Monitoring	Implementation Plan
		<ul style="list-style-type: none"> Establishing a Grievance system, Taking occupational health and safety, and environmental measures regarding public health and safety, and infrastructure and quality of life issues, Cooperating with the District Directorate of Forestry to put out forest fires, 			<ul style="list-style-type: none"> Number of beneficiaries of community development works Number of drop-outs of the CDD programs Income generated by CDD beneficiaries from newly introduced programs 	
Effective Land Acquisition ESIA Vol II Section 3.3	Emphasizing importance of willing buyer seller agreements for land acquisition	<ul style="list-style-type: none"> Preparing a land acquisition procedure, Giving priority to the acquisition of land via willing buyer seller agreements, Using full replacement cost model for calculating the land compensations, Preparing a livelihood restoration plan for households whose private lands are affected (see above) 	Construction Phase	<ul style="list-style-type: none"> Acacia Mining External Expert/Consultant 	<ul style="list-style-type: none"> Monthly activity reports, Impact monitoring & evaluation reports, Performance monitoring & evaluation reports, Number of plots purchased consensually, Number of willing buyer seller agreements, Land compensation amounts 	<ul style="list-style-type: none"> Stakeholder Engagement Plan, Land acquisition transactions, Monitoring & evaluation system, Grievance system, Land acquisition procedure Security Management Plan

Main Topics	Impacts	Proposed Measures	Time Interval	Responsibility	Monitoring	Implementation Plan
Sustainability of access to Education and Healthcare services ESIA Volume II Section 3.4 ESIA Volume II Section 3.5	Ensuring the continuity of quality in education services	<ul style="list-style-type: none"> Taking necessary health and safety measures at tailings storage facility area, Designing and implementing measures to prevent dust and noise emission during activities, (see above on community health and safety as well as noise and blasting and vibration) Supporting community development projects related with the improvement of education services rendered in the district, Integrating students' and district education directorate in emergency preparedness plans of the tailings storage dam facility, Informing students and teachers on states of emergency and including them in drills and trainings Liaising with education facilities to manage the demand for places due to project related migration. Liaising with local authorities and other projects to anticipate and plan for increased demand due to cumulative impact 	Construction and operation phase	Acacia Mining Contractors Other Projects Local Authorities	<ul style="list-style-type: none"> Monthly activity reports, Impact monitoring & evaluation reports, Number of students supported, Number of education facilities and places available in the area Availability of student facilities compared to demand 	<ul style="list-style-type: none"> Monthly activity reports, Impact monitoring & evaluation reports, Performance monitoring & evaluation reports, Field security measures Influx Management Plan Cumulative Impact and Management Plan

Main Topics	Impacts	Proposed Measures	Time Interval	Responsibility	Monitoring	Implementation Plan
	Ensuring continuity of quality in healthcare services	<ul style="list-style-type: none"> • Providing health trainings to employees, • Employing a workplace doctor and health personnel, • Establishing an infirmary to be used during construction and operation phases, • Keeping a patient transport vehicle available all the time on site • Liaising with health care facilities to manage demand as result of project related migration. • Liaising with local authorities and other projects to anticipate and plan for increased demand due to cumulative impact 	Construction and operation phase	Acacia Mining	<ul style="list-style-type: none"> • Monthly activity reports, • Impact monitoring & evaluation reports, • Performance monitoring & evaluation reports, • Healthcare personnel employed, • Health records, 	<ul style="list-style-type: none"> • Monthly activity • Community Health and Safety Plan • Influx Management Plan • Occupational Health and Safety Plan • Cumulative Impact and Management Plan
Mitigation of Impact on Fixed Community Structure ESIA Volume II Section 3.7	Mitigating negative impacts on fixed structures related with explosions	<ul style="list-style-type: none"> • Preparing an explosion procedure and timeline, • Keeping records of daily explosion noise level measurements • Preparing a baseline for housing conditions near mine site • Fulfilling the commitments in the EIA report, • Informing the mukhtars, the municipality and households before potential explosions, • No explosions at nights and on sundays, 	Construction and operation phase Construction and Operations	Acacia Mining Contractors External experts/consultants Acacia Mining External Expert/Consultant	<ul style="list-style-type: none"> • Monthly activity reports, • Impact monitoring & evaluation reports, • Performance monitoring & evaluation reports, • Grievance notifications, • Monthly activity reports, • Impact monitoring & evaluation reports, • Performance monitoring & evaluation reports, 	Community Health and Safety Management Plan Contractor control management plan/procedure Emergency Action Plan Fire Prevention and Fire Protection Plan

Main Topics	Impacts	Proposed Measures	Time Interval	Responsibility	Monitoring	Implementation Plan
	Taking measures against landslide and flood risk	<ul style="list-style-type: none"> Abiding by international standards, Monitoring the mine with georadar, Building the spillway on Gökırmak river according to Q10 thousand, Preparing construction survey reports for houses around the mine (Completed 			<ul style="list-style-type: none"> Grievance logs, Recorded open and closed grievances, Georadar measurements, Construction survey reports 	<p>Emergency Action Plan</p> <p>Community Health and Safety Stake holder Management Plan</p>
<p>Safeguarding public health and safety, improving quality of life</p> <p>ESIA Volume II Section 3.6, 3.7</p>	Protecting public health and safety, mitigating risks for potential safety issues	<ul style="list-style-type: none"> Preparing a Stakeholder Relations Management Plan, Establishing a monitoring & evaluation system, Grievance/claims management procedure, Preparing a Contingency Plan, Adopting and implementing international standards on public health and safety issues, Avoiding the disposal of wastes and chemical substances to nature and showing zero tolerance to such act, 	Construction and operation phase	<ul style="list-style-type: none"> Acacia Mining External Expert/Consultant 	<ul style="list-style-type: none"> Monthly activity reports, Impact monitoring & evaluation reports, Performance monitoring & evaluation reports, Grievance logs, Recorded open and closed grievances, Waste discharge system, Certified EIA Report, Number of institutions and persons informed, Accredited laboratory results, 	<ul style="list-style-type: none"> Stakeholder Engagement Plan, Grievance system Monitoring & evaluation system, Contingency Plans, EIA Report, Waste discharge system, Procedures drawn up in compliance with international standards

Main Topics	Impacts	Proposed Measures	Time Interval	Responsibility	Monitoring	Implementation Plan
		<ul style="list-style-type: none"> Acquisition of houses near the mine on a consenting basis in the long-run, Measuring and recording noise and dust emissions, and blastings, Implementing the Environmental Management Plan noise and dust measures, Conducting field visits related with the measures taken, Enclosing all areas within the project site with wire fences 			<ul style="list-style-type: none"> Ministry of Environment and Urbanization controls, Measurements and controls performed by third parties, 	
	Mitigating negative impacts related with explosions	<ul style="list-style-type: none"> Preparing an explosion procedure and timeline, Keeping records of daily explosion noise level measurements Preparing a baseline for housing conditions near mine site Fulfilling the commitments in the EIA report, Informing the mukhtars, the municipality and households before potential explosions, No explosions at nights and on sundays, Abiding by international standards, 	Construction and operation phase	Acacia Mining	<ul style="list-style-type: none"> Monthly activity reports, Impact monitoring & evaluation reports, Performance monitoring & evaluation reports, Grievance notifications, Recorded open and closed grievances, Number of institutions and persons informed, 	<ul style="list-style-type: none"> Grievance system Monitoring & evaluation system, Explosion procedure,

Main Topics	Impacts	Proposed Measures	Time Interval	Responsibility	Monitoring	Implementation Plan
	Mitigating negative impacts related with dust	<ul style="list-style-type: none"> Performing dust emission measurements, Fulfilling the commitments in the EIA report, Carrying out dust emission measurements inside and outside of the project area, Implementing the Enviromental Management Plan dust measures, Conducting dust collection studies, Covering the concentrate trucks beds with tarpaulin, Cleaning the wheels of vehicles while entering and exiting the facilities (concentrate processing plant, cargo handling area), Preventing dust generation by regularly watering with water trucks, Crushing and Screening will be in closed buildings Establishing grievence mechanism Establishing dust collection units 	Construction and operation phase	Acacia Mining	<ul style="list-style-type: none"> Monthly activity reports, Impact monitoring & evaluation reports, Performance monitoring & evaluation reports, Grievance logs, Recorded open and closed grievances, Dust measurements and controls, Reduction in the amount of dust after the dust measures, Sprinkled roads, Sprinkle systems, Indoor areas, Number of institutions and persons informed, 	<ul style="list-style-type: none"> Grievance/claims management procedure, Monitoring & evaluation system, The Enviromental Management Plan dust measures

Main Topics	Impacts	Proposed Measures	Time Interval	Responsibility	Monitoring	Implementation Plan
	Mitigating negative impacts related with noise	<ul style="list-style-type: none"> Establishing noise measurement system and monitoring Implementing the Environmental Management Plan noise measures 	Construction and operation phase	Acacia Mining	<ul style="list-style-type: none"> Monthly activity reports, Impact monitoring & evaluation reports, Performance monitoring & evaluation reports, Grievance logs, Recorded open and closed grievances, Fixed and mobile noise measurements, Reduction in noise level after the action plan, Number of institutions and persons informed, 	<ul style="list-style-type: none"> Grievance system, Monitoring & evaluation system, Noise Measurements
	Transportation and Storage of Chemical/Explosive Substances	<ul style="list-style-type: none"> Providing toolbox trainings to the personnel at intervals of not more than 12 months Avoiding to keep explosives in the explosives storage for more than a day Ensure that locations where hazardous materials are kept are well managed Designing protocols regarding the haulage of mine concentrate and hazardous substances. Hazardous material handlers should receive appropriate Hazardous Material Management Training. 	Construction and operation phase	Acacia Mining Contractors	<ul style="list-style-type: none"> Monthly activity reports, Impact monitoring & evaluation reports, Performance monitoring & evaluation reports, Number of employees who participated in the trainings, period of study. Number of incidences related to chemical /explosive substances 	<ul style="list-style-type: none"> Grievance system, Monitoring & evaluation system, Hazardous substances storage and transportation procedure, Training programs

Main Topics	Impacts	Proposed Measures	Time Interval	Responsibility	Monitoring	Implementation Plan
		<ul style="list-style-type: none"> • Ensure that personnel handling hazardous waste wear appropriate clothing. • Ensure that suppliers provide the appropriate Material Safety Data Sheet. • Ensure that the medical unit develops and establishes medical protocols for emergencies arising out of accidents caused by dangerous materials and chemicals. • Ensure that equipment used to transport hazardous material and chemicals are checked regularly. • Transportation of hazardous substance will follow national and international procedure. 				
	Preventing the reduction of and/or damage to water resources	<ul style="list-style-type: none"> • Completing hydrogeological surveys, • Monitoring & evaluation studies, • Consultations with local water boards and irrigation associations 	Construction and operation phase	Acacia Mining	<ul style="list-style-type: none"> • Monthly activity reports, • Impact monitoring & evaluation reports, • Performance monitoring & evaluation reports, • Grievance notifications, • Recorded open and closed grievances, • Water sample analyses, • Reduction in the amount of water used 	<ul style="list-style-type: none"> • Grievance system, • Monitoring & evaluation system, • Hydrology reports • Stakeholder Engagement Plan

Main Topics	Impacts	Proposed Measures	Time Interval	Responsibility	Monitoring	Implementation Plan
					in the company's operations, <ul style="list-style-type: none"> Monitoring the water resources of settlements, Number of institutions and persons informed, 	
	Improving the roads that are damaged	<ul style="list-style-type: none"> If roads are damaged because of the project, they need to be restored to original condition at the least or preferably improved. Building roads exclusively for the use of the facility if necessary, 	Construction and operation phase	Acacia Mining	<ul style="list-style-type: none"> Monthly activity reports, Impact monitoring & evaluation reports, Performance monitoring & evaluation reports, Grievance notifications, Recorded open and closed grievances, 	<ul style="list-style-type: none"> Grievance system, Monitoring & evaluation system, Livelihood Restoration Plan Stakeholder Engagement Plan