



Environmental & Social Management System

Conceptual Closure Framework

Conceptual Closure Framework		
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1 INTRODUCTION

1.1 Document Number

This document is the Conceptual Closure Framework for the Öksüt Gold Project. The document reference number for this Framework is OMAS-ESMS-CP-PLN-001.

1.2 Purpose

The purpose of this Framework is to:

- define the scope of the Framework and set out applicable management interfaces;
- define roles and responsibilities;
- outline the applicable Project Standards relevant to this Framework;
- define the process and timeframe for the development of a detailed closure plan;
- set out initial objectives for closure;
- set out procedures for closure cost estimation and financial provisioning;
- set out procedures for managing unexpected or temporary closure.

The Framework has been prepared to set out the key objectives, requirements and commitments which will be developed further in a more detailed Conceptual Closure Plan and then a Detailed Closure Plan and once additional information has been collected and detailed management actions have been defined.

1.3 Application

The requirements set out in this Conceptual Closure Framework apply to all OMAS activities throughout the lifecycle of the Öksüt Gold Project, including those carried out by contractors.

This Framework is based on the OMAS Environmental & Social Management System Framework (OMAS-ESMS-001), which is owned by the OMAS General Manager. Any subsequent changes to the OMAS Environmental & Social Management System Framework (ESMS) may result in changes to this Framework.

1.4 Commencement

This Framework applies from 1 April 2016.

1.5 Authority and Management

The OMAS General Manager approved this Framework on 1 March 2016.

This Framework is owned by the OMAS Director, External Affairs and Sustainability. This Framework will be reviewed on a two-yearly basis to determine whether any changes or updates are required to the document unless a more frequent update is required to reflect changing project design or procedures.

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Any requests for changes to this Framework must be addressed to the owner of this Framework and will be subject to appropriate review and approval processes as outlined in the Management of Change (MOC) procedure set out in the ESMS Framework.

2 SCOPE

2.1 Scope of this Framework

This Framework covers the process for closure planning for the Öksüt Gold Project. At the appropriate time, this will supersede operational management plans and provide the basis for closure planning, decommissioning, demobilisation, rehabilitation, and post-closure after-care and monitoring.

2.2 Overlaps with other Management Plans

This Framework is part of the overall suite of Management Plans developed for the OMAS Project and as described in the ESMS Framework (OMAS-ESMS-001).

This Framework has overlaps and cross-linkages to a number of other Management Plans which have community health safety and security implications, including:

- the Air Emissions Management Plan (OMAS-ESMS-AQ-PLN-001), particularly in relation to management of community exposure to dust generated by OMAS activities.
- the Noise & Vibration Management Plan (OMAS-ESMS-NV-PLN-001), particularly in relation to management of community exposure to noise generated by OMAS activities.
- the Non-Mineral Waste Management Plan (OMAS-ESMS-NMW-PLN-0001), particularly in relation to the protection of local communities from exposure to hazardous waste materials.
- the Water Resources Management Plan (OMAS-ESMS-WR-PLN-0001), particularly in relation to the protection of potable drinking water supplies.
- the Community Health Safety and Security Plan (OMAS-ESMS-CHSS-PLN-0001), particularly in relation to protection of local communities from physical hazards remaining once the mine has stopped operating.
- the Community Development Plan (OMAS-ESMS-CD-PLN-001), particularly in relation to minimising local social and economic dislocation related to the closure of the Project.
- the Labour Management Plan (OMAS-ESMS-LM-PLN-001), particularly in relation to the demobilisation of OMAS workers.
- The Stakeholder Engagement Plan (OMAS-ESMS-SEP-PLN-001), particularly in relation to community consultation requirements.

3 ROLES AND RESPONSIBILITIES

3.1 Key Roles and Responsibilities for Framework Implementation

Principal roles and responsibilities for the implementation of this Framework are outlined below.

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Table 1: Key Roles and Responsibilities

Role	Responsibilities
OMAS General Manager	<ul style="list-style-type: none"> Approval of this Framework and resources required for implementation.
OMAS Director External Affairs & Sustainability	<ul style="list-style-type: none"> Ensure compliance with the Project Standards and other requirements set out in this Framework. Overall responsibility for Framework scope and implementation. Development, monitoring and revision of this Framework.
OMAS HSE & Training Manager	<ul style="list-style-type: none"> Timely implementation of this Framework in relation to health, safety and environmental matters
OMAS Community Relations Manager	<ul style="list-style-type: none"> Timely implementation of this Framework, in relation to community security, and coordination with implementing organisations and other stakeholders.

3.2 Key Interfaces

Key interfaces in the implementation of this Framework (i.e. roles with responsibility for delivering elements of this Framework) include:

- OMAS Mine Operations Manager, particularly in relation to the safe implementation of activities during the closure process;
- OMAS HSE and Training Manager, particularly in relation to health and safety;
- OMAS HR Manager, particularly in relation to labour management.

4 PROJECT STANDARDS

Applicable Standards must be complied with for all Project activities (the "Project Standards"). Project Standards comprise:

- applicable Turkish Standards;
- Turkish EIA requirements;
- other commitments to and requirements of Turkish Government authorities;
- applicable international standards and guidelines;
- applicable Centerra and OMAS standards, policies and procedures;
- other industry guidelines with which OMAS has committed to comply.

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4.1 Applicable Turkish National Standards

Mining Reclamation

The *Regulation on Regenerating the Lands destroyed by Mining Activities Back to Nature*, issued in 2010 and updated in 2012, covers reclamation responsibilities of mining companies during closure in terms of their EIA commitments, and how these are monitored by the Ministry of Environment and Urbanization. The Regulation requires a timetable for regeneration activities. There are no specific budget requirements¹ and no specific bond terms, however the regulation dictates legal fines and reactions if the mining companies do not comply with their EIA commitments. Monitoring is carried out by the Ministry of Environment and Urbanization yearly, and the company has to submit yearly monitoring reports. It requires that reclamation plans for mining projects be appended to the Environmental Impact Assessment (EIA) reports².

Rehabilitation of Forest Lands

Under Article 16 of the Forestry Law, it is a requirement to prepare a Forest Rehabilitation Plan for areas within forestry land. Regulation for Application of the Forestry Law Article 16. Number: 28976 Date: 18 April 2014 describes the format of the rehabilitation plan³.

Rehabilitation of Pastureland Land

Pastureland is state-owned land. Under Article 2 of the *Regulation on the Naturalization of Lands Degraded by Mining Operations*⁴, lands designated as forest, agricultural or meadow lands are excluded from the scope of the Regulation. However, OMAS will seek to ensure that where possible land is restored as closely as possible to its former land use (for features such as open pits, WRD of HLF, this will not be possible).

Rehabilitation of Waste Management Facilities

Current Turkish regulations do not set out guidelines for heap leach facilities. However at closure, the heap leach pad will be evaluated according to the Regulation for Landfill of Wastes as published in Gazette 27533 dated October 26, 2010, and as set out in the Circular on Landfill Waste and Technical Arrangements on Other Landfill Facilities dated October 11, 2011.

The Mine Waste Regulation published in Gazette 29417 dated July 15, 2015, provides guidelines for the closure of heap leach and waste rock dumps. The regulations set out the requirements for the bottom liner system for the heap leach pads and a cover system.

Current regulations in Turkey specify that waste rock dumps will be closed to limit and manage seepage from the dumps and to limit any acid rock drainage (ARD). The regulations anticipate that a mineral waste dump would have been operated in a manner to limit ARD and at closure the closure plan will address any ARD concerns. This would include a cover on the waste rock dump to limit infiltration and measures taken in operation to contain waste rock which has a potential to generate ARD. The regulations and applications are monitored by the Ministry of Environment and Urbanization.

¹ Ministry of Forestry and Agriculture have different rates per hectare as part of reclamation deposit

² Closure and Reclamation concepts are provided within the EIA report and a forest rehabilitation plan is presented in the EIA report Appendix 10. This was prepared by "Abon Ormanlık Trz. İnş. Taah. Tic. Ltd. Şti."

³ The Forest Rehabilitation Project is provided in Appendix 10 of the national EIA report.

⁴ Effective upon its publication in the Official Gazette no. 27471 on 23 January 2010

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4.2 Applicable International Standards and Guidelines

The international standards which OMAS will implement are those set by the European Bank for Reconstruction and Development (EBRD). The key requirements related to mine closure are set out in the EU Mine Waste Directive.

EU Mine Waste Directive

The EU Mine Waste Directive⁵ applies to waste resulting from the extraction, treatment and storage of mineral resources and the working of quarries. While this directive is not directly applicable to OMAS, it does represent good practice. Requirements of the Directive which are relevant to OMAS are as follows:

Extractive industry waste facilities

When a new waste facility is built or an existing one modified, the [competent authority] must ensure that the following measures are taken:

- *the facility must be suitably located;*
- *its physical stability must be ensured and soil, air and water pollution prevented;*
- *it must be monitored and inspected by competent persons;*
- *arrangements must be made for the closure of the facility, the rehabilitation of the land and the after-closure phase.*

Waste facility operators must provide a financial guarantee before the beginning of operations so as to ensure that the Directive's obligations are covered and to ensure the existence and availability of funds to restore the site when the facility is closed.

A waste facility is regarded as finally closed when the competent authority has carried out a final inspection, assessed the reports submitted by the operator, confirmed that the site has been restored and given its approval. After closure, the operator must maintain and monitor the site for as long as the competent authority considers necessary. The costs of these measures are, in principle, borne by the operator.

The requirements of the EU Mine Waste Directive are covered under this *Mine Closure Framework*.

4.3 Applicable Centerra and OMAS Standards, Policies and Procedures

There are no additional applicable Centerra or OMAS standards, policies or procedures related to mine closure.

4.4 Other industry guidelines with which OMAS has committed to comply

OMAS will undertake its activities in line with the International Cyanide Management Code and will also take account of the International Council on Mining & Metals guidance set out in ICMM publication *Planning for Integrated Mine Closure: Toolkit*.

4.5 Summary of Applicable Project Standards

OMAS will comply with the more stringent of national standards and applicable lender standards, with the more stringent standards representing the Project Standards.

⁵ Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries

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Applicable Project Standards are summarised below.

Table 2: Applicable Project Standards

Standard	Scope
Regulation on Reclamation of Lands Disturbed by Mining Activities	<ul style="list-style-type: none"> Mine closure planning
Forestry Law	<ul style="list-style-type: none"> Forest Rehabilitation Project
EU Mine Waste Directive (Directive 2006/21/EC on the management of waste from the extractive industries)	<ul style="list-style-type: none"> Risk assessment and management mine waste management and mine closure planning
International Cyanide Management Code	<ul style="list-style-type: none"> Use and management of cyanide.

5 MINE CLOSURE COMMITMENTS IN THE TURKISH EIA

5.1 Commitments within the Turkish EIA

The Turkish EIA prepared for the Project contains a range of commitments related to mine closure. These will be integrated into mine closure planning and are set out below.

Table 3: Mine Closure Commitments within the Turkish EIA

Reference	EIA Commitment
Section 4.1.3.5 [Land use]	<ul style="list-style-type: none"> The lands where the project units are positioned will be used for mining activities. Therefore, they will be temporarily removed from the forest land status. The shallow surface soil on these lands will be scraped off and stored in a defined area for use in rehabilitation. Use of these lands as non-forest will be limited with the operation period. At the end of the operation period, all lands will be made ready for forestation and handed over to the Regional Directorate of Forestry. For these lands, a Forest Rehabilitation Project is prepared, which is presented in Appendix 10 of the Turkish EIA. Within the areas where project units will be positioned, necessary places will be enclosed with fence. Because of this, grazing of ovine livestock on these lands will not be possible. At the re-naturalization{rehabilitation} phase of the site after closure, the HLF and waste rock dump areas will be abandoned in compliance with the Pastureland Law, with the guidance of the Provincial Directorate of Food, Agriculture and Animal Husbandry
Section 4.1.3.5 [Topsoil]	<ul style="list-style-type: none"> Topsoil stripped within the EIA Permitted Area will be stored separately and used in mine rehabilitation (volume estimated a 100-400,000m³).

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Reference	EIA Commitment
Section 4.3.5 [Design specifications]	<ul style="list-style-type: none"> The maximum design earthquake to be used for closure and long-term stability planning for the HLF will be an event with a 2% probability of occurrence within a 50 year period (the 1 in 2,475 year event).
Section 4.4.6 (A) Page 4-165 [Waste rock dump]	<ul style="list-style-type: none"> Contact of waste rock with water will be prevented and leachate generation will be controlled during the closure period. To minimise the entry of water into the WRD, the containment channels upstream of the WRD area will be maintained until the end of the rehabilitation period. The WRD will be covered with a cover layer to minimise infiltration of precipitation and minimise leachate generation. The cover layer will comprise an upper layer of soil to allow rehabilitation and planting. Detailed engineering design of the closure top cover will be undertaken as part of the final closure planning. Following the creation of the closure top cover and minimization of leachates originating from the WRD, the WRD leachate collection pond will be rehabilitated.
Section 4.4.6 (B) Page 4-166 [Open pits]	<ul style="list-style-type: none"> After closure of the open pits, the containment ditches [surface flow diversion channels] will be removed and rehabilitated. After closure of the open pits, each pit will be surrounded by an embankment of inert material to stop the accidental entrance of surface flows, people, animals and vehicles into the open pits. The embankments will be surrounded by wire mesh security fencing with warning signs. Observation wells downgradient of the open pits will be used to monitor groundwater quality.
Section 4.4.6 (C) Page 4-168-9 [Heap leach facility]	<ul style="list-style-type: none"> The heap leach will be washed [rinsed using recycled water] during the closure period and waste water will be sent through the process. After completion of the operation and washing of the HLF, a cover layer will be created to meet the specifications for a top cover required for Class I landfills as set out in the ADDDY Regulation. All of the waters originating from the washing [rinsing] process during the closure period will be treated as process water and added to the production process. In this way, discharge from the heap leach during the closure and rehabilitation will not occur. Since the top cover to be formed with mineral material on the heap after the washing will prevent contamination of precipitation waters falling onto the heap and then passing to the surface flow, no impact on the surface waters due to surface flows will occur. [the top cover will prevent leachate from

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Reference	EIA Commitment
	<p>impacting surface water quality]</p> <ul style="list-style-type: none"> With the closure top cover to be formed in accordance with the Class I criteria; generation of leachate within the heap will be minimized. In addition to this, the percolation calculations made with the HELP model developed by taking into account that the heap leaching site will be built in accordance with the criteria for the Class I landfill and with the Giraud - Bonaparte method by taking into account the potential damage to the lining layer showed that potential percolations through the lining layer would be at negligible level. Accordingly, no percolation or discharge from the floor of the heap leaching will occur during the closure period and the post-closure period as well. [the top cover will prevent leachate from impacting groundwater quality] With the monitoring program to be carried out during the construction, operation and post-closure periods, monitoring works will be carried out regularly in the observation wells and sub-lining drainage system at the heap leaching site, and in addition to this, an environmental monitoring program will be carried out after the closure. [monitoring will be conducted during operations and during the post-closure phase]
<p>Section 4.5.5.1 Page 4-219 [Surface water]</p>	<ul style="list-style-type: none"> For the purpose of preventing the impacts of sediment transport and erosion, erosion-prevention measures will be taken through rehabilitation works at the site; adequate plantation will be done across the site. After adequate plantation has been achieved and the impact of erosion has been minimized within the site, the containment ducts will be removed and the natural drainage conditions will be restored. [natural drainage conditions will be restored once the site has been stabilised so that erosion has been minimised] In order to determine the risk of ARD occurrence, samples were taken from the waste rock and subjected to geochemical analyses. Details of these analyses are presented in Section 4.4.6.1 [of the EIA]. In order to prevent ARD occurrence, a cover layer of which engineering design has been made to minimize infiltration in a manner that contact of the waste rock with water and air will be used.[a cover layer will be installed to minimise water percolation and oxidation with the air] With the closure cover laid on the compacted floor of the storage sites and rehabilitated during the closure period, contact of the surface flow with the heap will be prevented and water infiltration into the heap will be minimized. Appropriate drainage conditions will be ensured on the closure cover. After plantation of the closure cover, the containment ducts will be removed and the natural drainage conditions will be restored. As a precaution to leachate occurrence potential after the closure, the leachate collection pond with impermeable floor in the downstream will be rehabilitated as an evaporation cell with impermeable floor. [the heap leach will have a closure cover, once the surface is stabilised through re-vegetation the diversion channels will be removed to restore natural drainage. The leachate collection pond will be rehabilitated as an impermeable evaporation pond as a precaution] Formation of a pond within the open-pit after the closure is not possible. In

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Reference	EIA Commitment
	<p>addition to this, embankments will be built around the pits in place of the containment ducts which were rehabilitated during the closure period in a manner to prevent entry of surface flows originating from the upper basin into the open-pit. The surface flows originating from the upper basin will be directed by these embankments, which will have been rehabilitated in harmony with the natural landscape, to the natural drainage. [diversion ditches around the open pits will be rehabilitated and an impermeable safety berm installed instead]</p>
Section 4.5.5 Page 4-210 [Surface water]	<ul style="list-style-type: none"> • Leachates and surface flows will be directed through percolation drainage ducts formed on the floor of the waste rock site at the bottoms of the valley and temporary drainage ducts formed on the waste rock heap to the leachate collection pond with impermeable floor formed in the downstream. Leachates will be directed to the process [circuit as make up water] without discharge [and will not be discharged] • During the operation and until the end of the rehabilitation, surface waters will be transmitted through the containment ducts in the upstream of the waste rock dump area to the natural drainage in the downstream without contacting the waste rock. In order to prevent erosion and sediment transport in the containment ducts, measures such as plantation and/or use of rip-rap, etc. in the ducts will be taken, stability of outlet structures of these ducts will be ensured, and additional structures for sediment retaining will be built at the outlets if necessary. • After the closure, the closure top cover will be formed on the waste rock to prevent contact of precipitation waters falling on the waste rock and passing to the surface flow with the waste rock.

5.2 Re-Naturalization Works and Rehabilitation Plan within the Turkish EIA

The Turkish EIA sets out key concepts for closure planning in line with Turkish legal requirements. As part of the EIA scoping process, the Regional Directorate of Forestry outlined the requirement for a Forest Rehabilitation Project Plan to be prepared during the EIA process, and this has been presented as Appendix 10 of the Turkish EIA.

The following is taken directly from the Turkish EIA (Chapter 5.6) and is in italics.

The Project will be closed at the end of the operation period, and the works of re-arrangement of the natural structure, re-establishment of the natural equilibrium and re-naturalization in a manner to ensure that the land has been restored to a state where the land can be used by human beings or other creatures with confidence will be completed. Although the post-operation re-naturalization operations will cover a period of 3 years, they will continue until the stabilization of environmental impacts, and the closure period, which may last longer, will be scrutinized through an environmental monitoring program (generally up to 30 years).

The Re-naturalization Work covers such works to be carried out in order to allow the use of the project land for multiple purposes after the closure of the operations. Goals of the Re-naturalization Work are listed below:

- *Re-arrangement of the degraded land structure in harmony with the natural environment structure and rectification of the landscape in a best manner as much as possible and*

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- *Restoration of the vegetation which is not contradictory with the purpose of use of the land after the closure period and which is in harmony with the natural environment.*

As the first step of the Re-naturalization Work, reformed areas will be covered with the top soil and re-planted with plant species which are deemed suitable according to the result of the evaluation of the top soil structure and the climate. Seeds of the plants existing in the region will be collected during the operation period for the rehabilitation works and such plant species which can grow under the conditions in the region will be identified.

In the course of construction of the project, the existing top soil, though it is in small amount, will be scraped and stored in designated areas for use in the Re-naturalization Work. The top soil to be stored in the storage area for longer than a couple of months will be planted in order that its micro flora, organic matter and nutrients are preserved. This temporarily created plant cover will prevent loss of productivity and erosion of the soil.

The top soil stored in the storage areas will also provide an environment suitable for growth of various plant species and the plants grown there will be used at necessary places during the closure period. In this regard, studies will be conducted within the scope of the research program during the operation period to determine the necessary optimum soil layer thickness and plant species. In this scope, seeds of the plants growing in the region will be collected.

The aim of the Re-naturalization Work is to eliminate or minimize the human health and environmental risks posed by the operations. In general, the Re-naturalization Work comprises measures such as land levelling and terracing. The following criteria are used to test the appropriateness of the Re-naturalization Work to be carried out at the Öksüt Gold Mine Operation for the intended purpose:

- **Physical Stability**
 - *Stability of the engineering structures, such as waste storage facility and non-economic rock dump site, in the long term;*
 - *Removal and disposal in a proper manner of the structures (buildings and equipment) which are no longer needed after the end of the mining operations;*
 - *Preservation of any erosion-prone material in the long term.*
- **Chemical Stability**
 - *Prevention, control and elimination of effects of acid rock drainage (ARD);*
 - *Preservation of the water quality within and in the downstream of the operation site in the long term.*
- **Human Health and Safety**

The Re-naturalization Work will cover the following units:

- *Mine site - Open pits and waste rock dump area,*
- *Process site,*
- *Heap leach facility,*
- *Operational buildings*
- *Infrastructures (roads, electricity, etc.)*

All tanks, fuel storage facilities, unused additives and lab chemicals will be disposed of in accordance with the regulations in effect. The pipelines on the surface will be removed. Embedded pipelines will be emptied, washed, and their ends will be closed, and they will be covered with soil.

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In order to prevent sediment supply and erosion at the areas wherein the Project units are located, rehabilitation works will be carried out in the site and necessary measures will be taken against erosion. Moreover sufficient vegetation will be planted. After the planting and minimizing the effects of erosion, the interception channels will be removed, thus natural drainage conditions will be maintained. Rehabilitation works to be carried out in the site are explained below.

Pit Shells

According to the hydrological and hydrogeological works carried out for the Project, it is found that the pit shells remain above the groundwater level. After the closure of the mine, no pond formation is expected. Detailed information on these issues is presented in Section 4.4.6 and Section 4.5.5.

The interception channels around the pit shells will be removed and these areas will be rehabilitated. Banks will be built around the pit shells so as to minimize the inflow of the runoffs into the pit shells after the closure. The banks will prevent the inflow of the runoffs created by the upper basins and guide these runoffs into natural drainage. Due to the ARD and metal leach generation risk of the waste rock removed from the pit shells, the waste rock cannot be refilled into the pit shells. After the completion of the production in the pit shells, the pit shells will be encircled by barriers and/or fences, warning signs will be posted, thus preventing the entry of people and animals.

Waste Rock Dump Area

The ARD and metal leach generation potential of the waste rock removed from the pit shells is assessed and the detailed information on this issues is presented in Section 4.4.6. It is determined that the waste rock to be excavated from the pit shells has the risk of ARD. For this reason, in order to prevent the ARD generation, the waste rock will be prevented from contacting water during the closure phase and the possible seepage will be controlled.

After the topping layer is formed by rehabilitation works and providing permanent stability against erosion and the integrity of the topping layer is ensured, the interception channels at the downstream of the waste rock dump area and the area will be rehabilitated.

After minimizing the seepage that may be caused by the waste rock by creating the closure topping layer, the downstream seepage collection pond will be rehabilitated. The seepage collection pond will be converted into an evaporation cell with an impermeable base and be rehabilitated, thus in the event of a possible seepage that may be caused by the heap after the closure will be collected and evaporated.

Heap Leaching Facility

According to the calculations, the seepage amount that may occur from the HLF base is found negligible. The detailed information on this issue is presented in Section 4.4.6. After completion of the operation and washing of the heap leach, closure and rehabilitation of the heap leaching will be made with a cover layer to be formed in a manner to meet the specifications of the top cover required for the Class I landfills as set out in the Regulation ADDDY. The closure cover formed on the heap during the closure period will prevent contact of runoffs with the heap and thus prevent contamination of the runoffs. In this case, runoffs will have the quality of the rain water.

6 PREPARATION OF THE MINE CLOSURE PLAN

OMAS will adopt a staged approach to the development of a Mine Closure Plan. This is based around:

- An initial list of overall mine closure objectives based on commitments set out in the Turkish EIA, OMAS objectives and Centerra mine closure planning processes;
- A mine closure planning process that will refine the Mine Closure Plan over time based on increased knowledge and greater definition of circumstances at the time of mine closure.

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6.1 Overall Mine Closure Objectives

Based on the closure commitments set out in the Turkish EIA, OMAS objectives and Centerra closure planning processes, the following basic objectives will guide mine closure planning:

- Return as much land as possible back to its original state and usage;
- Minimise risks to the environment;
- Minimising safety risks to local communities
- Minimising economic disruption to local communities;
- Implement long-term post-closure monitoring to ensure that stable and safe land forms are left behind.

The following key approaches will be used to achieve the overall closure objectives.

Table 4: Mine Closure Objectives and Key Approaches

Objective	Key Approaches
Return as much land as possible back to its original state and usage	<ul style="list-style-type: none"> • Clean up of mine areas, re-contouring to match the surrounding topography • Rehabilitating disturbed areas with the aim to return land to conditions similar prior to construction • Replanting and reseeding disturbed areas as outlined in the Biodiversity Management Plan • Construction of engineered soil or growth media covers over the WRD and HLF to promote positive drainage and non-erosive run-off, minimize infiltration, minimize wind erosion and support the growth of vegetative cover
Minimise risks to the environment	<ul style="list-style-type: none"> • Capping the WRD to minimize ARD generation • Washing the HLF as part of the closure process to remove reagents and potential contaminants • Capping the HLF to minimize ARD generation
Minimising safety risks to local communities	<ul style="list-style-type: none"> • Removal and appropriate disposal of all wastes, chemicals, reagents and materials from the EIA Permitted Area • Demolition and removal of surface infrastructure • Disposal of all inert demolition materials and wastes • Construction of a safety berm and security fence around the open pits to limit to the greatest extent possible the potential for access by wildlife or the public
Minimising economic disruption to the workforce and local communities	<ul style="list-style-type: none"> • Demobilisation of the workforce and provision of support to employees in finding suitable new employment • Develop a long-term community development strategy focused on closure from the outset. The objective will be to ensure that

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Objective	Key Approaches
	<p>investment and support by OMAS is focused on building the economic resilience and diversity of local communities so that at mine closure there are not the significant dislocations in local economies that often accompany mine closure.</p> <ul style="list-style-type: none"> Developing a Social Closure Plan to ensure that activities under the Community Development Framework are maintained on a self-sustaining basis after mine closure and without ongoing support or involvement by OMAS
Implement long-term post-closure monitoring to ensure that stable and safe land forms are left behind.	<ul style="list-style-type: none"> Implementation of remedial measures to minimize long-term maintenance of the site Implementation of a post-closure monitoring programme that will ensure physical and chemical stability of the EIA Permitted Area and associated facilities that may remain

Mine closure objectives will be developed in more detail as part of ongoing mine closure planning and the objectives and approaches will evolve over time as greater knowledge is gained.

6.2 Mine Closure Planning Phases

Mine closure planning will be undertaken in successive phases:

- conceptual closure plan;
- detailed closure plan;
- final closure plan.

Each phase will bring greater detail to the plan, based on increased knowledge and information.

6.3 Schedule for Mine Closure Planning

Based on the current mine life, the following schedule will be used for mine closure planning:

- conceptual closure plan – 1 year after commencement of mining operations;
- closure plan – within 3 years of commencement of mining operations;
- final closure plan – 2 years prior to planned completion of mining operations.

Under the Turkish Mine Waste Regulation (2015) mine closure should be completed within 2 years of the cessation of mine site activities.

6.4 Process for Mine Closure Planning

OMAS will undertake a mine closure planning process in line with ICMM guidelines, this will include:

- issues identification and management planning;
- defining closure goals and outcomes;
- engaging stakeholders in the closure planning process;

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- developing actions plans for closure;
- defining post-cost monitoring and evaluation;
- defining and managing closure costs.

6.5 Risk identification and Management

A Closure Risk Assessment Workshop will be held at an early stage in closure planning to ensure that all issues related to closure are considered in an integrated manner.

6.5.1 Closure Risk Assessment Workshop

A Closure Risk Assessment Workshop will be held with key OMAS and Centerra staff to identify and assess key risks related to closure. This will be undertaken using a standard Centerra methodology for closure risk assessment.

Based on the Risk Assessment Workshop, an outline Closure Risk Management Programme will be developed to manage risks to acceptable levels based on the Centerra risk assessment framework.

6.5.2 Closure Goals and Outcomes

Based on the Risk Assessment Workshop and the outline Closure Risk Management Programme, closure goals and outcomes will also be developed. This will include:

- Environmental goals
- Safety goals
- Community goals

Based goals on the risk identification and management process will ensure that closure goals are achievable and address the key risks related to mine closure. Defining goals will also ensure that monitoring metrics can be developed to measure progress towards achieving the desired closure status.

6.6 Stakeholder Engagement

Due to the short planned mine-life, the Stakeholder Engagement Plan (OMAS-ESMS-SEP-PLN-001) will be updated following completion of the Risk Assessment Workshop.

OMAS will define principles & objectives of stakeholder engagement for closure planning and integrate these into the Stakeholder Engagement Plan. These will include:

- Commencing engagement on closure at an early stage in the operational life of the project;
- Soliciting views and opinions from relevant stakeholders on how best to manage and minimise closure impacts;
- Building closure planning into the Community Development Plan (OMAS-ESMS-CD-PLN-001) to ensure that dependence on OMAS is not built into community development activities.

6.7 Monitoring and Evaluation

Based on the identified closure goals, a monitoring and evaluation framework will be developed. This will be based on quantitative data and will be focused on measuring progress towards achievement of closure goals.

Social closure goals may also include qualitative goals.

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6.8 Closure Cost Estimation

OMAS (as a Centerra group company) will be using the *Standardized Reclamation Cost Estimator (SRCE)* developed by the State of Nevada for closure costs.

As part of the mine closure planning process a closure cost estimate will be developed. This will include the construction, demobilisation, demolition, removal and remediation of all plant facilities as well as all other ongoing remediation activities. The closure cost estimate will include direct and indirect costs and will be within a typical order of magnitude study cost range of -30/+30%. Cost categories will include:

- Site rehabilitation and restoration;
- Dismantling;
- Workforce retrenchment;
- Socio-economic activities;
- Post-closure management & monitoring;
- Administration;
- Other costs as defined by engineering studies;
- Contingency.

Closure costs will be accounted for in line with International Financial Reporting Standards. Closure costs will be included in successive updates of the Closure Plan.

The closure cost estimate, as reported in the Project financial statements, will be updated annually during the operation's life to reflect known developments, including scope changes, the effect of a further year's inflation, exchange rate differentials and new regulatory requirements. Closure cost estimation procedures will ensure that identified post-closure costs, whether ongoing or one-off, are realistically estimated and incorporated into the estimate.

6.9 Closure Cost Provisioning

OMAS has estimated mine closure costs throughout the operational life of the Project and will accrue mine closure cost provisions from operating cash flow on a quarterly basis and reviewed annually⁶. This will ensure that at all times the accrued closure provision will cover potential closure costs for temporary and permanent and planned and unplanned closure events. In the event of temporary and/or unplanned mine closure; OMAS will develop and agree with the relevant Turkish regulatory authorities a care and maintenance regime, the costs for which would be covered by OMAS's own cash reserves and cash-flows.

6.10 Unexpected Closure

OMAS will develop contingency plans for unexpected closure including:

- temporary closure/shut-downs;
- unexpected permanent closure prior to the planned end of mine-life.

⁶ On an annual basis, OMAS and Centerra will prepare and sign-off an Annual Decision Record on closure provisioning which will include an Asset Retirement Obligation estimate (the current estimated cost of closure and rehabilitation).

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This will include the retrenchment of workers, including provision for collective redundancy as outlined in the Labour Management Plan (OMAS-ESMS-LM-PLN-001).

6.11 Updates to the Closure Plan

The closure plan will be developed and updated in accordance with the schedule set out in *Section 5.1* of this Framework.

6.12 Scope of Issues Addressed by the Mine Closure Plan

The Mine Closure Plan will cover all facilities owned and operated by OMAS. This will include:

- Open pit mining:
 - Long-term use and security of the former open pit areas;
 - Long-term Slope stability;
 - Pit access and mining benches.
- Materials handling:
 - Crushers;
 - Conveyors;
 - Vehicles.
- Heap leach facility
- Processing facilities
- Buildings and surface infrastructure:
 - Buildings;
 - Site access roads;
 - On-site access roads;
 - On-site power lines;
 - Water supply wells and pipeline;
 - Borrow pits and quarries.
- On-site water management facilities:
 - Industrial water supply;
 - Potable water supply.
- Mine waste management:
 - Waste rock dumps;
 - Other stockpiles.
- Other potentially impacted areas
- Community initiatives
- Economic initiatives

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- Local and regional opportunities at closure

6.13 Post Closure Monitoring

The Mine Closure Plan will set out:

- Physical stability monitoring:
 - Open pits;
 - Mine site and disturbed areas;
 - Waste rock dumps;
 - Heap leach facility;
 - Site security features.
- Chemical stability:
 - Open pits;
 - Mine site and disturbed areas;
 - Waste rock dumps;
 - Heap leach facility.
- Environmental impacts and anticipated mitigation, management measures and associated monitoring
- Expected maintenance requirements
- Monitoring of community initiatives
- Monitoring of socio-economic activities

The duration of post-closure monitoring may be up to 30 years.

7 IMPLEMENTATION SCHEDULE

7.1 Review and Revision of this Framework and subsequent Plans

This Framework and the subsequent Closure Plan(s) will be reviewed as outlined in Section 5.1 and any necessary revisions made to reflect the changing circumstances or operational needs of OMAS. Revision of the document will be the responsibility of the OMAS Director External Affairs and Sustainability, who will be custodian of this Framework and subsequent Closure Plans.

If material changes to operating procedures are required (as identified through the Management of Change procedure contained within the OMAS ESMS Framework) this Framework may be updated on an “as required” basis.

Any revisions to this Framework will be uploaded to the OMAS Document Control Centre to ensure that all OMAS staff have access to the latest version of this document.

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8 AUDIT AND REPORTING

8.1 External Auditing

Conformance with this Framework will be subject to periodic assessment as part of the Centerra audit programme and by Project Lenders.

8.2 Record Keeping

Records of audits, inspections and incidents will be managed in accordance with OMAS procedures.

9 DOCUMENT CONTROL

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Annex A: Draft Table of Contents for Conceptual Mine Closure Plan



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