

Appendix 8.5 ESIA Public Commitment Register

<i>Greenhouse Gas Emissions and Climate Change</i>
The Project will continue to seek to reduce its GHG emissions throughout its lifecycle.
The Carbon and Energy Management Plan will report emissions annually and the summary will be published on the website.
<i>Landscape and Visual Assessment</i>
Reclamation of exploration works (drilling pads, access roads) will be ongoing during the construction phase to restore and revegetate previously disturbed areas which will not be affected by the operations phase of the Project. This will include redundant access roads and drill sites, provided they are not within the planned mine facilities.
Native vegetation regeneration will be promoted in the locality, using fencing to encourage natural regeneration, alongside planting of transplanted native trees and shrubs, if appropriate.
Restoration of a range of vegetation types will be ensured, including woodland and scrub on the lower slopes, and meadow grasses and alpine communities across the higher area. Vegetation restoration/reinstatement will generally use native species of local provenance, ideally targeting pre-impact vegetation types.
Restoration will be managed and monitored so as to promote complete and successful regeneration (it will be appropriate to retain some areas as bare mineral/rock/scree surfaces as part of the mosaic). Ongoing specialist supervision of vegetation recovery will be required to ensure the efficiency and effectiveness of revegetation and enhancement planting.
<i>Air Quality</i>
A Primary Monitoring Station (PMS) will be established prior to commencement of construction and this will be used to continuously monitor particulates. The PMS will also monitor the concentrations of vehicle exhaust gases and dust deposition will be recorded and summarised on a monthly basis.
<i>Noise and Vibration</i>
A PMS will be established prior to commencement of construction and this will be used to monitor day and night time noise levels, air overpressure and ground vibration.
Information will be provided in advance to nearby residents on the timing and frequency of planned blasting.

During the early stages of operation ground vibration and air overpressure will be monitored at the nearest sensitive receptors to ensure compliance with the air overpressure and vibration criteria outlined in the ESIA. A record of the monitoring programme results, together with blast design and mine plan geometry at the time, will be maintained. This information will identify suitable monitoring locations and programmes in the event of a complaint at any stage of the operational life of the mine. Should the measured data indicate that the criteria are not being met, the blasting design will be modified to ensure compliance.

Prior to the start of the main construction activities, the Project will conduct a crack and damage survey of structures within the defined area of influence of blasting and heavy equipment traffic vibrations, to document baseline structural conditions for sensitive receptors. This survey is to be conducted by Lydian and independent surveyors during Q2 / Q3 2016.

Soils and Land Cover

Cultivation and establishment of natural and semi-natural vegetation will be challenging in the harsh mountain environments, and the availability of suitable soil and plant material is limited. Rehabilitation and restoration of soils and vegetation will therefore require early research and trials to determine the best approaches for ground reinstatement, creation and amelioration of soil-forming materials, and vegetation establishment and aftercare.

The soil restoration and revegetation programme will include aftercare for a minimum period of 5 years post-closure.

Surface Water Resources

River water quality will be monitored periodically (Arpa, Darb and Vorotan).

Abstraction schedules will be imposed to ensure that water abstractions do not adversely impact rivers.

Biodiversity

The Project mitigation strategy for biodiversity is based on the objective of achieving “no net loss” for biodiversity as reflected in Lydian’s Environment Policy, and net gain for critical habitat as per the IFC Performance Standards and EBRD Performance Requirements.

The precise boundary of the Arshak set-aside, designed to safeguard a viable population of *Potentilla porphyrantha*, as well as Brown Bear dens, Sub-Alpine Meadows with Alpine Elements, and breeding habitat for alpine birds, will be finalised following further consultation with communities and the Ministry of Nature Protection (which has approved the set-aside in principle as a measure to meet the requirements of the Flora Decree). An indicative boundary has been established and no Project activities will take place in the set-aside.

A comprehensive soil and vegetation restoration programme will be employed to reinstate appropriate vegetation types post-impact (during construction as well as operation). Ecologists are working closely with landscape specialists to identify suitable native species, and field trials will be undertaken in conjunction with the national herbarium and National Academy of Science - Institute of Botany in Armenia to investigate restoration techniques. Restored areas will be monitored for a period of five years post-mine closure.

As a general practice and where it is technically feasible, the top 10cm of topsoil will be stripped and stored separately from other soil that is removed. However, there are areas where the abundance of rocks will make the separate removal of topsoil impossible. Within these areas, the composite of soil material together with loose rocks will be removed for use in rehabilitation, where practical. In addition, because many alpine plants rarely produce seed and spread vegetatively, the Ecological Clerk of Works will identify topsoil/vegetation turves that will be selectively removed prior to excavation and stored for use as 'plugs' in amongst seeded areas during restoration (including the herbarium at Lake Sevan). This action is critical because surveys have shown that there are relatively few examples of the vegetation that will be lost to mining in the wider surrounding area. A seed collection programme has been initiated for native plant species and three plant nurseries have been established in local villages to provide stocks for re-vegetation. These have been used initially to produce trees for visual screening purposes, but will be expanded to cater for restoration requirements, in partnership with the local communities in which they are located.

An offset will be established for natural habitat that will be lost or degraded by the Project. This offset will provisionally be located within the proposed Jermuk National Park. An implementation plan has been prepared which outlines how Lydian will engage with national and local government and NGOs on the set-up of the National Park via a stakeholder engagement process. The Project Biodiversity Offset Strategy provides consideration of potential costs and funding mechanisms and outlines Lydian's proposed approach to provision of support during National Park establishment and ongoing management.

Based on the results of loss/gain calculations, an offset of 836.5 "habitat impact units" is required for the Project to achieve no net loss of natural habitat.

Potentilla porphyrantha plants within the mine pit footprints have been translocated to suitable research and propagation facilities at Sevan Botanical Garden. These plants will be maintained in controlled conditions and used to research the ecological requirements of the species and to produce plants for re-introduction to restored mine pits in future, if suitable conditions can be created. Rockeries have also been constructed on North Erato to act as experimental nurseries. The research project started in 2015 and will run until 2018, with full budget secured.

Locations of *Potentilla porphyrantha* plants have been and/or will be recorded and fencing and signs used to safeguard them for as long as possible. Measures

are being taken to avoid incidental damage. Regular inspection and monitoring will be undertaken to ensure that the markings remain visible, that personnel are aware of the need to safeguard marked rocks and that detailed design changes are compatible with the need to avoid impacts. Monitoring will also be undertaken to observe the potential effects of dust deposition on the species. These measures will be consolidated and maintained throughout construction and operation.

A research programme with the Cambridge University Botanic Garden (UK) and the National Academy of Science - Institute of Botany (Armenia) has been established by Lydian to test techniques for propagating *Potentilla porphyrantha* plants and to improve knowledge of requirements. This will provide the basis for restoring plants to suitable habitat on mine closure if suitable conditions can be created.

Residual impacts on Brown Bear are considered to be likely due to scale of the Project and the level of associated noise, disturbance and habitat fragmentation. Therefore, some form of offset is likely to be necessary. Brown Bear is associated with natural habitat and therefore the proposed natural habitat offset will also include measures to offset impacts on Brown Bear.

Measures to enhance food supply for Brown Bear might be needed due to loss of feeding habitat, and will be developed if monitoring suggests a decline in population.

Caucasian endemic plant species including *Fritillaria armena*, *Phelypaea tournefortii* and *Juniperus polycarpu*, will be translocated if to be affected by earthworks.

Establishment of an independent biodiversity advisory group will be considered and Lydian will work with investors, civil society organisations, and government to develop possible terms of reference.

Social

Training will be provided for local communities to increase their skills. Training is being designed to target operations roles, as these provide a longer-term opportunity than the short-term construction roles.

Preferential hiring from the local area of influence will take place where skills are held (or can be developed) within those communities.

The central office for the Project is to be located in Jermuk or Gndevaz, at least through construction and ramp-up. Recruitment will occur from the central office (no recruitment will take place at the mine gate).

A widely disclosed and effectively managed grievance mechanism will be maintained for communities to register complaints or contribute information important in the event of any strain on resources.

Continued consultation will take place with the nominated Community Liaison Committee (CLC) groups, which will be used as a formal procedure for soliciting information on unanticipated indirect impacts from influx.
Monitoring of population changes will be conducted in coordination with village Mayors through the “Village Passport” system.
Assistance programmes targeted at non-industrial sector activities in the local communities will be supported by the Project to reduce the impact of economic inequality.
Employees and contractors will be required to comply with the Lydian Code of Conduct, with disciplinary consequences for non-compliance. Compliance with the Code of Conduct will be checked on a regular basis through testing including random drug and alcohol tests for employees and contractors.
<i>Labour and Working Conditions</i>
All workers will have access to a worker grievance mechanism. Where a Lydian contractor does not have a formal grievance process, the contractor will be invited to provide access to Lydian’s system for its workers.
A Supply Chain and Logistics – Local Business Initiative programme will be rolled out during the construction period.
A supplier register will be developed and maintained to inform a qualified bidder list. The list will enable the identification of local businesses that may not be able to show full compliance with Lydian’s requirements, but can demonstrate initiative to do so if given support.
Construction worker influx will be in accordance with the requirements of the Worker Accommodation Management Plan.
<i>Economics</i>
Lydian will comply with IFC requirements to report on all taxes and government payments. This disclosure is part of the Extractive Industries Transparency Initiative (EITI) process and is required by the IFC for new extractive industry projects. Lydian is in the process of becoming a Supporting Company of EITI.
Lydian will monitor prices for a staple basket of goods on a monthly basis. The basket of goods will be defined with reference to the “basket of goods” used in the Integrated Living Conditions Survey (ILCS) in Armenia. This will be done in the local area of influence, as well as in other areas of the regional area of influence to determine if inflation is a localised impact related to the Project or may have other causes.
Lydian will work closely with community administrators to build capacity around budgeting and prioritisation of projects, and to manage the municipal consolidation process.
<i>Land Use, Agricultural and Natural Resources</i>
Access to land adjacent to the Project-affected area will be maintained where it is safe to do so.

Access restrictions will be minimised when safe to do so; land will only be fenced off when necessary and crossings will be put in place to maintain access over linear features.

Livelihoods

Land access principles have been clearly defined:

- Physical displacement is avoided (Project facilities avoid all residential areas and only one person will have to move as a result of the Project);
- Land access is based upon negotiated settlements in the sense of IFC Performance Standard 5 and EBRD Performance Requirement 5; expropriation is used only as a last resort if all avenues to reach a reasonable amicable settlement have been exhausted;
- Any compensation is at replacement value;
- A land for land option is available to those willing to choose replacement land rather than cash compensation;
- Identification of affected plots and affected people is based on cadastral information, complemented by ground-truthing if claims arise;
- Impacts to livelihoods are assessed and mitigated where needed;
- Wherever legally, technically and economically possible, land used for the Project is returned to its previous physical condition and ownership after use for mine construction and operations;
- A grievance mechanism is in place, whereby all grievances are registered, reviewed and responded to in an amicable fashion within 30 days, and where the aggrieved individual or group is able to resort to Justice at any stage in the resolution process.;
- Affected people are informed and consulted with; and
- Vulnerable individuals are identified and assisted where needed.

The household requiring physical relocation will be compensated for the value of their lost assets, and assistance will be provided to relocate to a new location of their choosing.

The following activities will be implemented in cooperation with local authorities in respect of vulnerable people affected by economic displacement due to the Amulsar Project:

- Assistance during the land acquisition and negotiation process, including, at the stage of plot and landowner identification, specific individual meetings to explain eligibility criteria and entitlements, clauses in compensation agreements, grievance avenues etc.;
- Assistance in the payment process (provision of transport to the bank effecting compensation payment, support in the payment procedure, money management awareness etc.); and
- Prioritization for training courses to enhance employability and prioritization for employment by contractors where possible and subject to contractors' operational needs.

For herders who lose access to pasture lands:

- Lydian will support herders to engage with community administrators to identify new equivalent lands available for rental, and will monitor to ensure that access to similar land is actually achieved when construction starts. The intention is that seasonal herders will be relocated to lands owned by Gorayk to the east of the Vorotan River. Herders will also be eligible for a one-off compensation for disruption to their activities if they are required to relocate. In the event that the new herding lands do not have access to sufficient spring catchments, the Project will support the establishment of new water sources for herders;
- If structures are lost and herders can ascertain ownership, Lydian will provide replacement structures or means to construct replacement shelters following consultation with affected herders;
- Herders who lack formal or informal rights to the land which they have been using will be supported in gaining access to new land; and
- To reduce impacts on daily herders from restricted access to land, a number of crossings will be installed over the conveyor, allowing herders, their animals and equipment to cross.

Cultural Heritage

When potential archaeological sites cannot be avoided, excavation will be carried out to assess the scientific integrity and significance of the sites through recovery of artefacts and cultural information.

The Chance Finds Procedure will be implemented throughout the construction period, including training of relevant staff and contractors in the recognition, handling and response to archaeological chance finds.

<i>Community Health, Safety and Security</i>
Effective communication strategies with the local communities on water, air and soil quality will be developed. This will include transparent reporting of water quality results from the Project's water monitoring points and effective communication thereof. Participative community monitoring of water quality will be continued by the Project, and an office will be set up in Gndevaz for this purpose.
A cyanide management plan is being developed that is compliant with the International Cyanide Management Code (ICMC). Lydian is to become a signatory to the Cyanide Code in June 2016.
Lydian will comply with the Voluntary Principles on Security and Human Rights (VPSHR). A full review of the security arrangements put in place will be conducted following completion of the Project Security Management Plan (SMP).
<i>Environmental and Social Management Plan</i>
A Compliance Assurance Plan will be developed during the construction phase once the contracting strategy and arrangements have been finalised and will be in place for the operations phase
Construction contracts would be awarded in accordance with the Contractor Management Plan