



Amulsar Gold Project
Cultural Heritage Management Plan
May 2016

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Revision	Date	Details	Prepared	Checked	Approved
Draft 1E	Aug 14	Appendix 8.18 of ESIA version 9	ERM		
V2	31 Jan 15	Revision incorporating lender feedback and formatting into Geoteam template	CN		
	17 Feb 15	Review by ERM	ERM	JB	
	11 Dec 15	Updated by ERM based on revised mine layout	ERM	JB	

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Glossary

ADR	Adsorption, Desorption and Recovery
CO	Carbon Monoxide
DMP	Dust Management Plan
EAC	Effective Area Covered
ESIA	Environmental and Social Impact Assessment
Geoteam	Geoteam CJSC
GHG	Greenhouse Gas
g/t	grams per ton
HLF	Heap Leach Facility
Lydian	Lydian International Ltd
mg/m ² /d	milligrams per square meter per day
NO _x	Oxides of nitrogen
PM	Particulate Matter
PM _{2.5}	Very fine particles with a diameter of less than 2.5 microns
PM ₁₀	Small particles with a diameter of 10 microns or less
RA	Republic of Armenia
RC drilling	Reverse Circulation drilling – a particular type of drilling technology
SO ₂	Sulphur dioxide
SOPs	Standard Operating Procedures
SPZs	Sanitary Protection Zones
TSP	Total Suspended Particles
VOC	Volatile Organic Compounds
WAI	Wardell Armstrong International Ltd
WHO	World Health Organisation
µm	micron, micrometers, one millionth of a metre

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1 INTRODUCTION

Lydian International Ltd (Lydian) and its wholly-owned Armenian subsidiary, Geoteam CJSC (Geoteam), are developing the Amulsar Gold Project (the Project) in the central part of the Republic of Armenia (RA). The proposed Project will develop the gold deposit via open-pit mining and heap-leach processing using dilute cyanide solution.

A Mining Right (MR) for the Project was granted by the RA government in November 2014. This was based, in part, on the approval of the regulatory Environmental Impact Assessment (EIA) for the Project in October 2014. Some permits also exist for ongoing exploration and development activities with additional permits required for the construction and operation phase. The Project is currently in the early stages of development, with construction activities planned to start during the second quarter 2016 subject to financing.

In parallel with the EIA, an Environmental and Social Impact Assessment (ESIA) was undertaken in compliance with, amongst others, the Performance Standards (PS) of the International Finance Corporation (IFC) and the Performance Requirements (PR) of the European Bank for Reconstruction and Development (EBRD).

In mid-2015, a Value Engineering (VE) and Optimization process was initiated, with Lydian commissioning Samuel Engineering Inc. (Samuel) and other consultants to perform engineering design on several identified VE and Optimization concepts. The objective was to reduce capital expenditure without increasing operating costs or environmental and social impacts. The results from this work done in 2015, which were published in the NI “43-101 Technical Report: Amulsar Value Engineering and Optimization” in November 2015, included reduced capital and operational costs, making the Project more viable in a challenging economic environment.

Changes to the Project design as a result of the VE and Optimisation work have resulted in the need to prepare a revision to the new EIA approved in October 2014 and amend the ESIA completed and disclosed in April 2015. Lydian is in the process of preparing a new EIA and to apply to government for a new MR, both expected for approval in the second quarter of 2016.

The Project is subject to various health, safety, environmental and community/social (HSEC) commitments arising from the ESIA undertaken in compliance with the IFC PS and EBRD PR.

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The draft final version of the ESIA, denoted v10, was published for public review and comment in February 2016 with a series of public consultation and disclosure meetings planned for March to May 2016. Disclosure of the ESIA is programmed to take place in May & June 2016.

Both the EIA and ESIA make a number of commitments pertaining to the mitigation and management of E&S impacts. These commitments and requirements must be fulfilled as the Project moves forward. To facilitate implementation, all commitments made in the ESIA have been compiled into a full Commitments Register (CR) which will be used by Lydian for tracking purposes throughout the Project. Although many of the commitments apply to E&S management during Project implementation (construction, operation and closure), some apply to the Project design and engineering phase and must be addressed before construction works starts on site. The implementation of many of the commitments depends not only on the actions of full Project team.

E&S commitments are being managed by Lydian and Geoteam using the Environmental and Social Management System (ESMS). The ESMS includes the Management Plans (MPs), such as this one, that detail requirements that Geoteam and its contractors will follow in order to fulfil the Project's environmental and social commitments. For the purpose of this MP, "Contractor" means any all project participants, such as contractors working in the field on the project including but not limited to drilling contractors, construction contractors, camp service contractors, engineers, fabricators, suppliers, etc. Contractors should implement parts of the plans relevant to their activities, issuing their own management plans in line with the Geoteam ESMS, smaller contractors may fall directly under Lydian's OHSMS and ESMS and subject to specific training in the procedures relevant to the contract.

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1.1 Commitments

ID.	Condition/actions	Public Commitment	Monitoring and compliance	Cross references and documentation	Responsibility
CH1	Un-surveyed footprint areas may contain additional, as yet undiscovered, archaeological sites. Additional surface reconnaissance surveys will be conducted in these areas. If additional sites are found the mitigation measures of avoidance or excavation will be implemented at these sites to mitigate and manage the potential impacts.	Additional surface reconnaissance of un-surveyed Project Footprints and sites of un-assessed scientific importance;	Field surveys to be completed prior to construction within affected footprints. Surveys to be subject to evaluation and committed actions taken	See Figure 4.19.1	Site Environment Manager, reporting to Senior Manager HESS and Senior Permitting and Sustainability Manager
CH2	Known cultural heritage sites will be marked (with high visibility) and avoided when possible. Appropriate buffer zones and no-go areas will be established around known archaeological sites and high-potential areas.	Avoidance and marking of known cultural heritage sites	Validation report prior to construction	Archaeological Monitoring Execution Procedure (AMEP)	Site Environment Manager
CH3	When potential archaeological sites cannot be avoided, excavation will be carried out by qualified specialists to assess the scientific integrity and significance of the site through recovery of artefacts and cultural information.	Avoidance and marking of known cultural heritage sites	Results of evaluation will be published and made available for public record and Ministry of Culture (MoC)	Archaeological Monitoring Execution Procedure (AMEP)	Site Environment Manager

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ID.	Condition/actions	Public Commitment	Monitoring and compliance	Cross references and documentation	Responsibility
CH4	The Project will take a staged approach to evaluating which sites will require full excavation and the extent of those excavations. Potential sites within the footprint and 50m of proposed Project components will be subject to an archaeological field evaluation through a programme of limited and targeted excavation. Site-specific excavation strategies will be developed and executed in consultation with the Ministry of Culture (MoC) of RA, specifically with the Historical and Cultural Heritage Protection Agency (HCHPA). Excavation techniques will be aligned with internationally recognised practice and executed by qualified archaeologists.	Based on the results of the archaeological evaluations, excavation of sites of medium to very high importance that cannot be avoided through Project redesign;	Compiled in a report for the Project for the duration of the construction phase.	Archaeological Monitoring Execution Procedure (AMEP)	Site Environment Manager
CH5	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.	Enacting the protocols and procedures in the Chance Finds Procedure (CFP), including developing an Archaeological Monitoring Execution Procedure (AMEP).	AMEP report	Appendix 17a – Chance Finds Procedure	Site Environment Manager
CH6	Pre-construction site inspections will be conducted when ground is cleared in advance of construction activity. Archaeologists will monitor construction sites to guide the recognition of and response to archaeological finds made during ground disturbance.	Providing training for Project staff on the importance of cultural heritage, details of the CFP, and identifying cultural heritage sites.	n/a	Archaeological Monitoring Execution Procedure (AMEP)	Site Environment Manager
CH7	The Chance Finds Procedure will also be implemented during operation of the mine, but only in cases where ground disturbing activities might affect previously unknown archaeological sites.	Enacting the protocols and procedures in the Chance Finds Procedure (CFP), including developing an Archaeological Monitoring Execution Procedure (AMEP).	AMEP report	Appendix 17a – Chance Finds Procedure	Site Environment Manager

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1.2 Objectives and Goals

Responsible exploration and mining is a commitment of Lydian, in order to reduce risks and minimise negative impacts resulting from exploration and development over the Amulsar mining mineral right. ERM International Ltd (ERM) was engaged by Lydian to assess the cultural heritage of the Project site and develop suitable mitigation measures. This Cultural Heritage Management Plan (CHMP) defines a series of steps to minimise impacts to cultural heritage from Lydian's Project. This plan provides appropriate guidance and requirements for meeting the Project's cultural heritage responsibilities. These responsibilities have been established by a combination of Armenian national requirements; lender requirements; and Lydian's commitments as they relate to cultural heritage. The CHMP defines a series of commitments for the protection of cultural heritage sites based on the measures outlined in the Project Environmental and Social Impact Assessment (ESIA) 2014. The CHMP applies to Lydian and its contractors during the construction, operation, closure and post-closure phases of the Project and defines the roles and responsibilities of Lydian International personnel, contractors and external stakeholders in the management and protection of cultural heritage.

1.3 Structure of the CHMP

The CHMP is divided into six sections, namely:

- Roles and responsibilities and Project participants;
- The CHMP regulatory framework, including a review of applicable Armenian national legislation and international conventions/standards;
- Project background, including summary of the results of cultural heritage surveys and investigations conducted as part of the Project's ESIA;
- List of commitments to be implemented by Lydian and/or Geoteam to protect known and undiscovered cultural heritage sites from Project related impacts;
- Brief discussion of the process by which the CHMP can be modified.
- List of references cited in the document.

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2 ROLES AND RESPONSIBILITIES

The following Project participants have been identified as having specific roles and responsibilities in the implementation of the commitments outlined in the CHMP:

- Lydian/Geoteam;
- EPCM Contractor and other contractors/service providers;
- Cultural Heritage Non-Governmental Organization (NGO);
- Independent Cultural Heritage Consultancy (IHC); and
- Stakeholders within the government of the Republic of Armenia.

Each organization's specific roles and responsibilities for implementing the CHMP's commitments are listed below.

2.1 Lydian/Geoteam

Accountability for the implementation of the commitments of the CHMP lies with Lydian International or their designee(s). Lydian International's responsibilities include:

- Ensure issuance of the CHMP and Chance Finds Procedure (CFP) to relevant Project participants;
- Providing finalized Project Footprint and DF layout prior to the beginning of ground disturbing activities;
- Ensuring development and delivery of Cultural Heritage Training to all Project personnel;
- Ensure EPCM Contractor support for execution of the CHMP and CFP;
- Coordinate all communication and consultations between the Chance Find Team and the Ministry of Cultural (MoC) regarding additional reconnaissance surveys, excavations (if necessary), and Tier 3 and 4 Chance Find responses;
- Support the execution of the CFP;

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- Coordinate response to any Tier 3 or Tier 4 Chance Finds in conjunction with the Chance Finds Team; and
- Provide internal review of periodic CFP deliverables, such as the Weekly and Monthly reports.

2.2 EPCM Contractor and other contractors/service providers

The EPCM Contractor and other contractors/service providers are responsible for:

- Supporting all of the commitments outlined in the CHMP;
- Complying with all the EPCM Contractor and other contractors/service providers roles and responsibilities as outlined in the CFP;
- Providing equipment, materials, and staff to mark cultural heritage sites for avoidance;
- Providing staff to receive Cultural Heritage Training;
- Providing staff who have received Cultural Heritage Training to provide archaeological monitoring support in areas of low archaeological potential (see CFP roles and responsibilities);
- Providing health and safety direction to members of the Chance Finds Team while they are on working site; and
- Providing lists or schedules of planned construction activities (look-ahead) on a weekly and monthly basis.

2.3 Cultural Heritage NGO¹

The Cultural Heritage NGO will be responsible for the following:

- Reviewing and commenting on the CHMP, CFP, and Archaeological Monitoring Execution Plan (AMEP);
- Providing transportation to and from the Project area for all on site activities;

¹ A team of Armenian archaeologists under the direction of Dr. Hakob Simonyan from the MoC have been in this role since the start of the ESIA process.

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- Complying with all Project health and safety policies;
- Providing staff to supervise marking cultural heritage sites for avoidance in consultation with the EPCM Contractor and Lydian International;
- Developing additional reconnaissance survey, archaeological evaluation, and excavation (if necessary) plans in consultation with Lydian International, the ICHC, and MoC;
- Executing additional reconnaissance surveys and/or excavations in consultation with the ICHC;
- Providing staff for Cultural Heritage Training;
- Complying with all of the roles and responsibilities outlined in the CFP; and
- Providing sufficient staff, to be determined by Lydian/Geoteam and the ICHC based on construction look ahead schedules, to execute the archaeological monitoring program as outlined in the CFP.

2.4 ICHC²

The ICHC is responsible for:

- Reviewing and commenting on the CHMP, CFP, and AMEP;
- Participating in consultations with the Cultural Heritage NGO, the MoC, the Marzpet of Vayots Dzor, and local communities leaders in Jermuk and Gndevaz;
- Drafting final versions of the CHMP, CFP, and AMEP, incorporating comments from Lydian/Geoteam, Cultural Heritage NGO, the MoC, and the Marzpet of Vayots Dzor;
- Providing technical oversight and review during the execution of all commitments in the CHMP, including all additional reconnaissance survey, archaeological evaluation, and excavation Scope of Work(SoW)s (if necessary);
- Developing and delivering Cultural Heritage Training to relevant Lydian International, EPCM Contractor, and Cultural Heritage NGO staff participating in the Project;

² ERM has been in this role since the start of the ESIA process.

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- Developing the AMEP in consultation with the Armenian Archaeology Team; and
- Complying with the ICHC roles and responsibilities in the CFP within appropriate timeframes to support project development.

2.5 Government Stakeholders

The following representatives, ministries, and individuals from the government of the Republic of Armenia have been identified as CHMP stakeholders:

- The MoC and its internal agencies and institutions;
- The Marzpet of Vayots Dzor; and
- Local community leaders in in Gndevaz and Jermuk.

The MoC will be responsible for the following:

- Reviewing the Project ESIA, CHMP, CFP, and AMEP;
- Providing comments on the CHMP, CFP, AMEP;
- Approving the CHMP and CFP;
- Consulting with the ICHC, Cultural Heritage NGO, and Lydian International/Geoteam to develop SoWs for archaeological excavations, both preconstruction and for Tier 3 and 4 Chance Finds (if necessary); and
- Approving SoWs for any archaeological excavations.

The Marzpet of Vayots Dzor will be responsible for the following:

- Reviewing and providing comments on the CHMP, CFP, and AMEP; and
- Reviewing and providing comments on the SoWs for archaeological excavations.

Community leaders in Jermuk and Gndevaz will be responsible for the following:

- Reviewing the CHMP, CFP, AMEP, and SoWs for archaeological excavations.

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3 PROJECT PARTICIPANTS

The following Project participants have been identified as having specific roles and responsibilities in the implementation of the commitments outlined in the CHMP:

- Lydian International;
- Geoteam;
- EPCM Contractor and other contractors/service providers³;
- Cultural Heritage Non-governmental Organization (NGO)⁴;
- Independent Cultural Heritage Consultancy (IHC)⁵; and
- The Ministry of Culture of the Republic of Armenia (MoC);
- The Marzpet of Vayots Dzor; and
- Local community leaders in Gndevaz and Jermuk.

The Cultural Heritage NGO will be comprised of a team of Armenian Archaeologists employed by the Project to conduct the archaeological evaluations and excavations outlined in the CHMP⁶. The Cultural Heritage NGO will also perform archaeological monitoring and response to chance finds as part of the CFP. The employees of the Cultural Heritage NGO executing the CFP in the field will be referred to as archaeological monitors. The IHC will:

- Manage the implementation of the CHMP and CFP commitments for Lydian International/Geoteam; and

³ To be hired by Lydian International or Geoteam.

⁴ To be hired by Lydian International or Geoteam.

⁵ To be hired by Lydian International or Geoteam.

⁶ A team of Armenian archaeologists under the direction of Dr. Hakob Simonyan from the Ministry of Culture have been in this role since the start of the ESIA process. The Cultural Heritage NGO may be staffed by archaeologists and cultural heritage specialists from Armenian academic institutions or staff from the Ministry of Culture. It will, however, be contracted to Lydian International.

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- Provide technical review of CHMP and CFP reports drafted by the Cultural Heritage NGO; and
- Conduct CHMP and CFP performance audits.

4 REGULATORY FRAMEWORK

The CHMP will be implemented in accordance with and to satisfy the requirements of Armenian national legislation, international standards/conventions, and industry practices that are applicable to the Project. Relevant Armenian national legislation includes the Law on the Protection and Use of Immovable Historical and Cultural Monuments and Historical Environment, the principal law protecting cultural heritage, as well as cultural heritage components of the Mining Code. The pertinent international standards/conventions are a combination of international lender standards, such as the International Finance Corporation (IFC) and European Bank for Reconstruction and Development (EBRD), as well as international conventions ratified by the Armenian government. Industry standards and best practices include the Equator Principles and the standards of the International Council on Mining and Metals.

4.1 National Cultural Heritage Legislation

The principal laws and regulations of the Republic of Armenia that pertain to cultural heritage are presented in Table 1. The Constitution of the Republic of Armenia provides the underpinning for most of these laws by establishing the State as the ultimate protector of cultural monuments, and other cultural assets/values.

Table 1. National Cultural Heritage Requirements of the Republic of Armenia⁷

Name of Law or Regulation	Year
On Urban Development	1995
On Weapons	1998
On the Protection and Use of Immovable Historical and Cultural Monuments and Historical Environment	1998
On the Principals of Cultural Legislation	2002

⁷ Council of Europe-Heritage Assessment Report: Armenia. Report for the Kyiv Initiative Regional Programme Pilot Project 2: “Rehabilitation of Cultural Heritage In Historic Towns” and Amulsar Project ESIA

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On Immovable Monuments of History and Culture considered State Property of the Republic of Armenia and not subject to Alienation	2003
On Tourism Activity	2003
On Archives	2004
On Export and Import of Cultural Assets	2003
On the Mandatory Copy of the Documents	2005
On Specially Protected Areas of Nature	2006
On Non-material Cultural Heritage	2009
Mining Code (Chapter 3-Article 26 &Chapter 8-Article 66)	2012

The principal laws that apply to the Amulsar Project and the CHMP are:

- On the Protection and Use of Immovable Historical and Cultural Monuments and Historical Environment;
- On Immovable Monuments of History and Culture considered State Property of the Republic of Armenia and not subject to Alienation; and
- Mining Code, Chapter 3-Article 26 and Chapter 8-Article 66.

The Law On the Protection and Use of Immovable Historical and Cultural Monuments and Historical Environment defines the types of cultural heritage sites and objects that can be called “monuments” of history or culture and are subject to the government’s protection. Types of monuments include: archaeological, historical, urban, architectural, and monumental art. The significance of any monument is assessed as being of either local or national importance. The law outlines:

- The procedures for classifying and registering monuments with the government;
- Provides assurances and mechanisms for the protection of monuments, the study of monuments; and
- Establishes liabilities for the preservation of monuments.

An important category of monument for the Amulsar Project is newly discovered or newly appraised historical, scientific, art, or other valuable cultural objects. Newly discovered cultural objects can be considered monuments regardless of their character.

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The Law on Immovable Monuments of History and Culture considered State Property of the Republic of Armenia and not subject to Alienation further defines the types of monuments that are property of the Republic of Armenia and cannot be removed from government ownership as:

- Ancient, old and medieval monuments with defined and separated territories that they occupy; and
- Monuments of the new and newest period with defined and separated territories that they occupy⁸.

If cultural heritage sites or “monuments” as defined by Armenian national law are identified as a result of the commitments and associated actions outlined in the CHMP, these two laws will have to be taken into consideration. As property of the state, any potential monuments identified during Project related activities will require consultation with the Armenian national regulatory body for cultural heritage, the MoC.

The two articles of the Armenian national Mining Code that have implications for cultural heritage are Chapter 3, Article 26 and Chapter 8, Article 66. The requirements of these two articles as they relate to cultural heritage sites require mining projects to minimize and/or mitigate impacts to cultural heritage sites identified within their territorial allotments. Chapter 3, Article 26 states that mining activities in any defined subsoil allotment shall be prohibited, in the manner prescribed by national legislation, to protect historical or cultural monuments if they are found to be present within the allotment.

Chapter 8, Article 66 establishes protocols for the preservation of subsoil allotments if objects representing special archaeological, antiquarian, scientific and scientific-cultural values are identified. It requires mining operators to discontinue works in areas where they are working if a cultural heritage site or monument is identified; inform the appropriate government institution; and

⁸ This provision of the law provides for the designation of more recent or modern cultural heritage resources as monuments. The monuments are defined as the individual resource as well as a designated area around the resource identified as its “territory” or “space”.

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allow for the implementation of preservation regimes if established by the government of the Republic of Armenia.

These laws and regulations are administered and implemented through the MoC and its structural and subordinate entities and divisions. In conjunction with state territorial administrations, the MoC develops and implements provisions, regulations, and criteria for the registration, inventory, protection, and use of historical and cultural heritage. Specifically, the MoC is tasked with:

- Approving or providing its professional opinion for planning and construction in settlements and settlement territories containing monuments;
- Approving or providing guidance for projects to reinforce, restore, or modify monuments and provides monitors to ensure the monuments are not damaged during these activities;
- Establishes the protection zones around monuments and their associated protection requirements;
- Prohibits or terminates excavation, repair, reinforcement, restoration, or reconstruction of a monument if they damage or may damage a monument or its protection zone;
- Prohibits or terminates construction, agricultural, or other activities that may damage or could potentially damage a monument or its protection zone; and
- Gives permission for the excavation and recordation of monuments and monitors the excavation process.

The subdivisions of the MoC that have regulatory purview over the types of cultural heritage sites known to be or are likely to be present within the Project area are the Agency of Protection of Historical and Cultural Immovable Monuments (APHCIM) and the Service of Protection of Historical-cultural Museum-reserves and Historical Environment (SPHMHE)⁹. These government agencies should be viewed as the principal stakeholders to be engaged within the MoC in the approval process and implementation of the CHMP.

⁹ Council of Europe-Heritage Assessment Report: Armenia. Report for the Kyiv Initiative Regional Programme Pilot Project 2: "Rehabilitation of Cultural Heritage In Historic Towns"

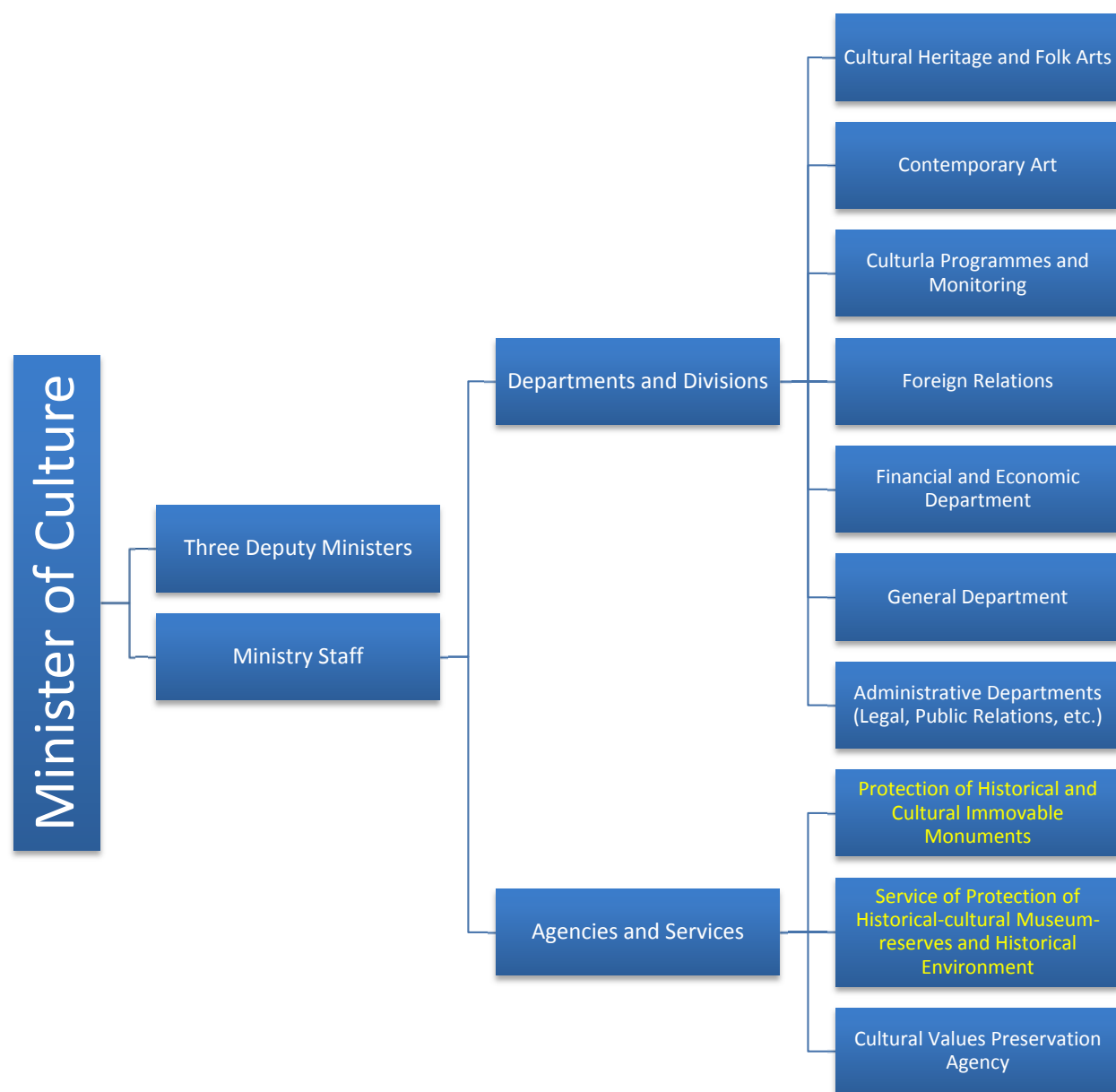
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The APHCIM is the agency within the MoC tasked with registering, protecting, and managing the use of cultural monuments and specially protected historical-cultural territories. The approval of the APHCIM is required for construction and development projects in communities or settlements where immovable cultural heritage monuments (archaeological, historical, urban, architectural, and monumental art) are present. The approval of the APHCIM is also required if any monuments are to be reinforced (protected), reconstructed, or relocated.

The MoC implements its regulatory control over monuments principally through the SPHMHE. The SPHMHE discuss issues related to monuments and adopts decisions on terminating projects or economic activities if it is determined that they will damage historical or cultural objects. The SPHMHE is also tasked with defining the penalties and liabilities for damaging reserve-museums and historical-cultural immovable monuments and communicating them to local law enforcement bodies.

In addition to the MoC, the individual Marzpet (governor) of Vayots Dzor and the heads of local communities play a role in implementing national cultural heritage legislation. The Law on the Principals of Cultural Legislation (2002) empowers the Marzpetarans (regions) and local communities (hamaynks) to ensure national cultural heritage policy is implemented within the marz area. The Marzpet is tasked with ensuring compliance with all national legislation for the protection and use of cultural heritage within the Marzpetaran. The Project is located within the marzpetaran of Vayots Dzor and the Marzpet will need to be engaged as a regulatory stakeholder. The heads of the nearest hamaynks, Jermuk and the village of Gndevaz, will also need to be engaged as potential regulatory stakeholders.

Figure 1. Organizational Structure of the Ministry of Culture, Republic of Armenia¹⁰



¹⁰ Yulia Antonyan, Compendium: Cultural Policies and Trends in Europe. "Country Profile: Armenia". November 2012

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4.2 International Conventions/Standards:

Table 2 contains a list of international conventions and standards to which the Armenian government and/or Lydian International are signatories. This CHMP is prepared pursuant to the guidance contained in IFC Performance Standard (IFC PS) 8. The requirements for managing impacts to cultural heritage outlined in IFC PS 8 and World Bank Operating Procedure (WBOP) 4.11 meet the minimum requirements established by the standards and conventions in Table 2 for the protection of tangible cultural heritage resources.

Table 2. International Cultural Heritage Standards and Conventions¹¹

Name of Standard/Convention	Adoption/Revision Year
Equator Principles	2012
International Finance Corporation Performance Standards and Guidelines	2006
European Bank of Reconstruction and Development Performance Requirements	2008
International Council on Mining and Metals: Sustainability Development Framework	2008
European Cultural Convention, Paris	1997
Convention on the Means of Prohibiting and Preventing the Illicit Import, Export, and Transfer of Ownership of Cultural Property, Paris	1993
Convention Concerning the Protection of the World Cultural and Natural Heritage, Paris	1993
Convention for the Protection of the Architectural Heritage of Europe, Granada	2009
European Convention on the Protection of the Archaeological Heritage, Valletta	2005
European Landscape Convention, Florence	2004
Convention for the Safeguarding of the Intangible Cultural Heritage, Paris	2006
Council of Europe Framework Convention on the Value of Cultural Heritage for Society, Faro	2005

¹¹ Council of Europe-Heritage Assessment Report: Armenia. Report for the Kyiv Initiative Regional Programme Pilot Project 2: "Rehabilitation of Cultural Heritage In Historic Towns";

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IFC PS 8 outlines a series of standards for mitigating adverse effects to cultural heritage, which is defined as movable or immovable objects, sites, structures, groups of structures, and natural features of the landscape that have archaeological, paleontological, historical, architectural, religious, aesthetic, or cultural significance. IFC PS 8, paragraph 8 states that IFC clients are responsible for siting and designing a project to avoid significant adverse impacts to cultural heritage. In cases where the proposed project is located in areas where cultural heritage is expected to be found, the client will develop provisions for managing chance finds (any tangible cultural heritage encountered unexpectedly during Project construction or operation) through a chance find procedure to be included in their Environmental and Social Management System (ESMS). The client will not disturb any chance finds until an assessment of the find is made by a competent professional who will determine if additional actions (avoidance, excavation, etc.) consistent with the requirements of IFC PS 8 are required.

The procedures and protocols outlined in the CHMP provide for the management of cultural heritage finds in compliance with IFC PS 8. Further, the Project Chance Finds Procedure (CFP; Appendix 1) provides for the management and mitigation of risks to unexpected tangible cultural heritage sites encountered during Project activities as described in IFC PS 8.

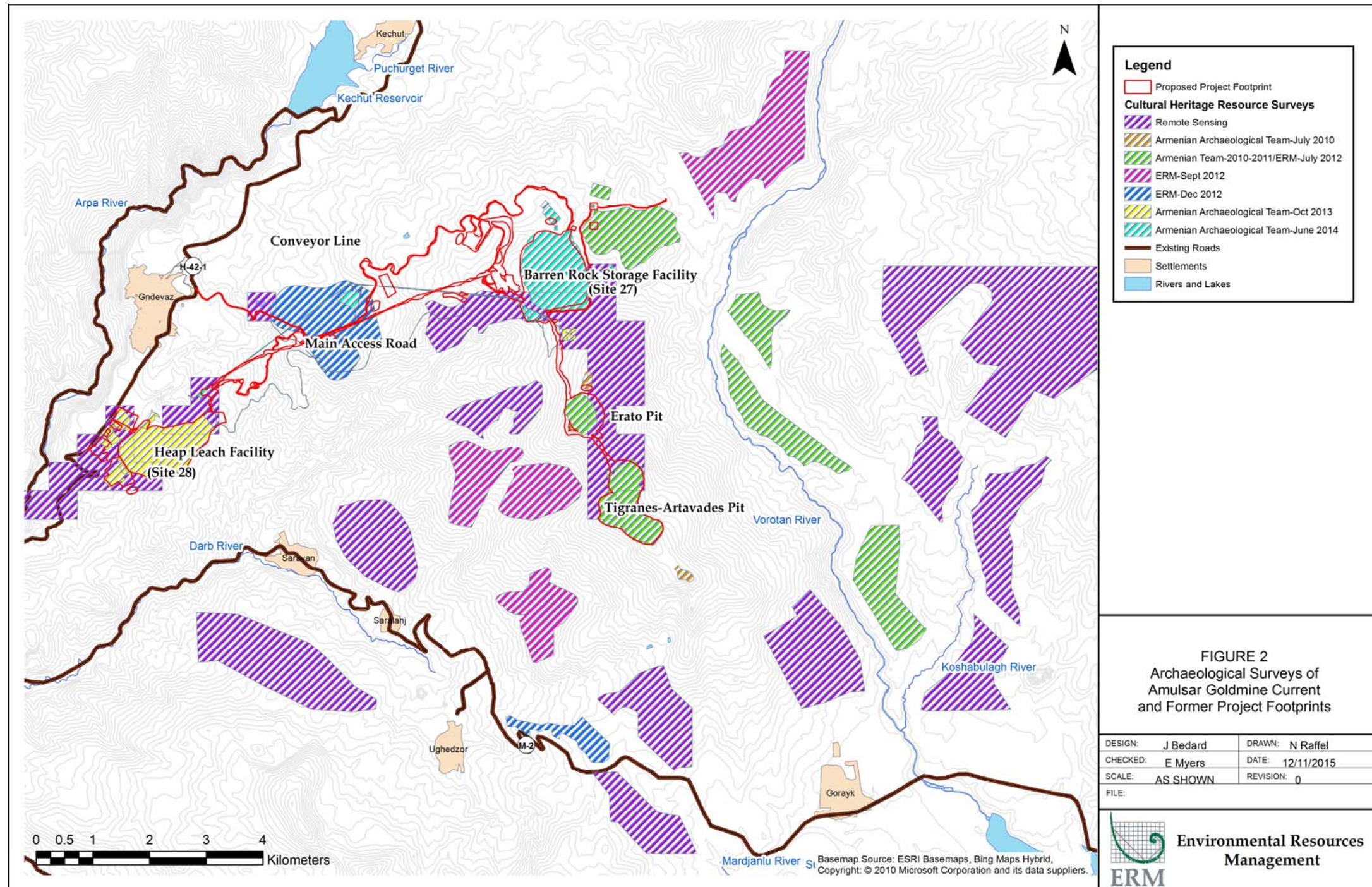
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5 PROJECT BACKGROUND AND KNOWN CULTURAL HERITAGE SITES

A number of cultural heritage investigations have been conducted within the Amulsar Project area under Lydian sponsorship. These surveys, consisting of both desktop research and cultural heritage field surveys, were conducted to obtain baseline information for the Project ESIA. The desktop research focused on a review of published sources on Armenian history and archaeology as well as satellite imagery analysis. A total of seven field reconnaissance surveys were undertaken by teams of Armenian archaeologists¹² and archaeologists from Environmental Resource Management (ERM) between July 2010 and November 2015 (Figure 2).

¹² The survey methodology employed by the Armenian archaeological team does not include mapping of survey boundaries. The focus of their survey was the east side of the Vorotan River Valley.

Figure 2. Archaeological surveys of Amulsar Goldmine current and former Project Footprints.



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The satellite imagery analysis involved a systematic review of aerial images and a multispectral imagery analysis of specific Project Footprints¹³ to identify potential cultural heritage sites, referred to as cultural heritage anomalies. Cultural heritage anomalies were defined as potential archaeological sites detectable through the analysis of both visible and non-visible wavelengths of light in satellite imagery. Anomalies identified during the satellite imagery analysis were targeted for further analysis in the field during subsequent field reconnaissance surveys.

The field reconnaissance surveys were conducted within the footprint of proposed mine facilities and infrastructure. The following currently and formerly planned Project Footprints have been subject to field survey:

- Former Heap Leach Facility (HLF), Phase I Area (Site 14);
- Former Barren rock Storage Facility (Site 13);
- Erato Tigranes and Artavazdes Open Pits;
- Former Heap Leach Facility location (Site 6);
- Vorotan Valley Sites 11, 12, and 13;
- Former potential HLF Sites 17, 18, and 19;
- Former Access Road through the Vorotan River Valley;
- Current Heap Leach Facility (Site 28);
- Current Barren rock Storage Facility (Site 27);
- Primary, Secondary, and Tertiary Crusher Areas;
- Conveyor Corridor;
- A proposed water line realignment south of the HLF (Site 28); and
- Main Access Roads.

¹³ Project Footprints are areas which will be physically occupied by infrastructure including roads and the mine pits.

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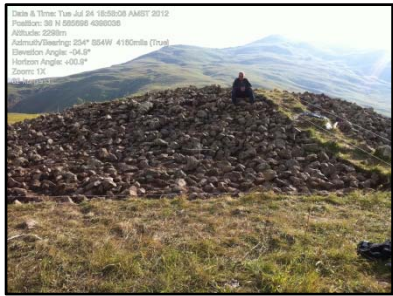
Due to a number of re-alignments of the proposed mine layout, multiple proposed locations for the same Project Footprint were surveyed. For example, three potential locations for the Heap Leach Facility were surveyed; one in the Vorotan River Valley and two near the town of Gndevaz. As a result, substantial areas outside of the current Project Footprints' have been surveyed.

The field reconnaissance surveys in the current and former Project Footprint resulted in the identification of 487 known or potential archaeological sites¹⁴ (Figure 3). The potential types of archaeological sites identified during the surveys are summarized in Table 3. Sites of varying archaeological potential were documented in the majority of the proposed Project Footprint locations, with the largest number of sites found in the Vorotan River Valley (Figures 3, 4, and 5). A total of 81 known or potential archaeological sites are currently located within or within 50 meters (m) of the Project's Disturbance Footprint (DF). The DF is defined as any area in which significant ground disturbance will take place. In some instances the DF is limited to the Project Footprint (areas physically occupied by infrastructure including roads and mine pits) while in other instances it extends beyond the Project Footprint to areas that will be impacted through construction of Project infrastructure.

¹⁴ The majority of the cultural heritage surveys conducted to date were limited to non-intrusive, pedestrian surveys. Sites identified during these surveys are potential archaeological sites as they cannot be confirmed as archaeological sites without intrusive excavation. Known archaeological sites are those sites identified during pedestrian survey which have been excavated and documented by the Armenian Archaeological Team.

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Table 3. Principal types of archaeological sites identified in the Amulsar project area¹⁵

Site Type	Comments	Photograph
Small to large stone tombs and/or kurgans	A large number of potential burial sites or “tombs” have been identified by the team of Armenian archaeologists. However, very few have been subject to any testing to conclusively identifying them as tombs or kurgans. A kurgan was excavated by a team of Armenian archaeologists near the former proposed Construction Access Road in the Vorotan Valley.	
Small stone piles, possible graves/tombs	These potential burial sites or “tombs” or “graves” have been provisionally identified by the team of Armenian archaeologists. Most still require confirmation through subsurface testing.	
Graveyards/ Cemeteries	Archaeological survey has identified Christian and Muslim grave markers within the Amulsar Project Area, likely dating as far back as the Middle Ages.	

¹⁵ Table 3 is not an exhaustive list of all types of sites identified during the surveys, but rather the most common types of sites identified. A list of all sites documented during the field reconnaissance surveys is available in Appendix 2.

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Site Type	Comments	Photograph
Structural Remains or ruins	The age of most of the potential stone foundations or wall remains identified by the team of Armenian archaeologists and/or ERM archaeologists could not be determined. The known remains could date from the Neolithic through Modern periods and may represent individual dwellings, animal corrals, or other agricultural features.	
Scatters of pottery sherds	Scatters of pottery sherds have been identified by the team of Armenian archaeologists and ERM archaeologists during cultural resource surveys of the current and former Project Footprint. Typically artefact scatters are associated with buried archaeological sites.	
Scatters of obsidian tools or flakes	Scatters of obsidian tools and/or flakes have been identified by the team of Armenian archaeologists and ERM archaeologists during cultural resource surveys of the current and former Project Footprint. Typically artefact scatters are associated with buried archaeological sites.	
Village sites	Remains of stone building foundations. Age of sites could not be determined due to lack of diagnostic artefacts. Sites could range in age from the Neolithic through Modern periods.	

Figure 3. Amulsar Project Layout and Cultural Heritage Sites.

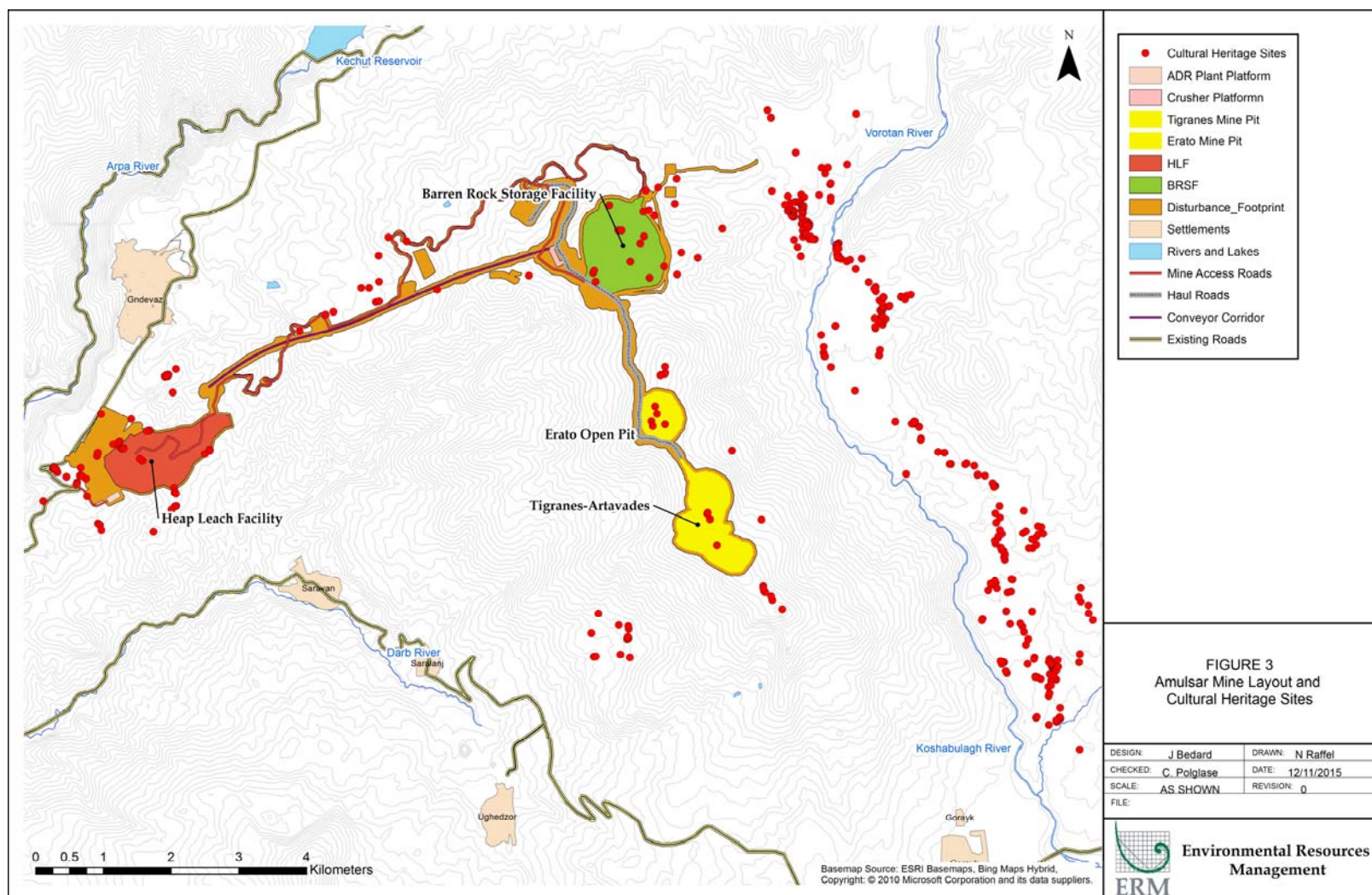


Figure 4. Heap Leach Facility and Conveyor Corridor and Cultural Heritage Sites.

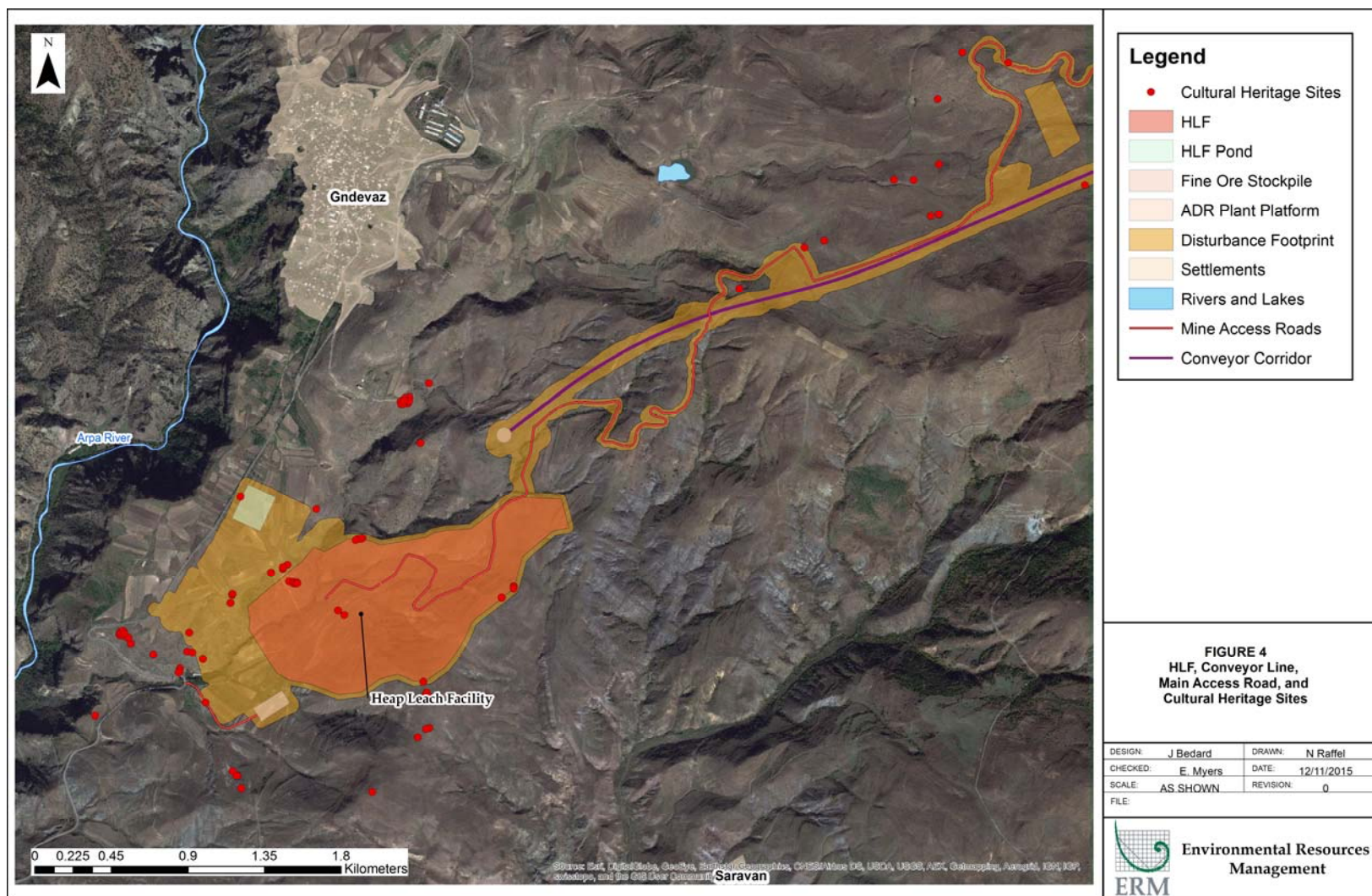
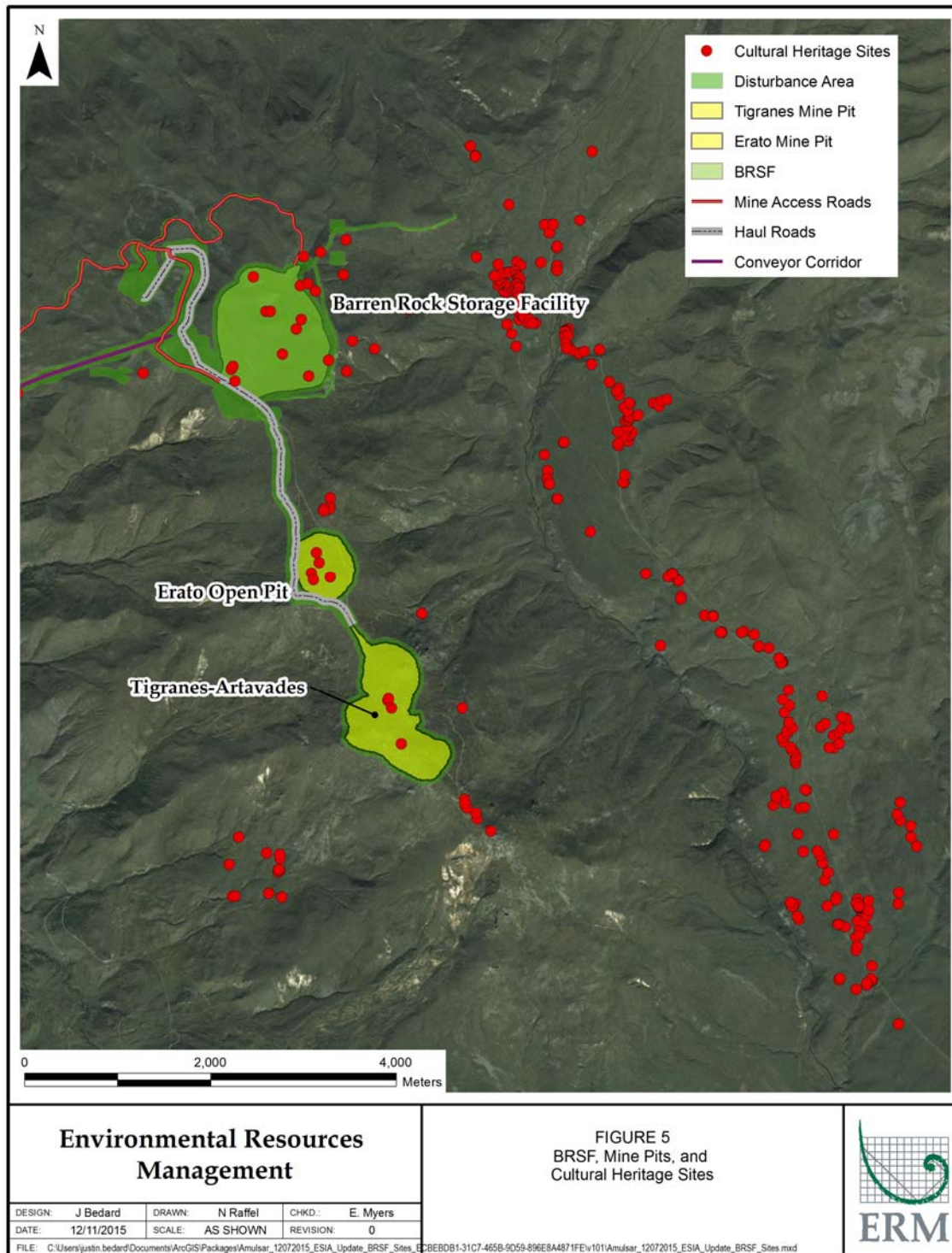


Figure 5. BRSF and Open Pits Potential Archaeological Sites



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Based on the results of the field and desktop surveys, a total of 81 known or potential archaeological sites would be impacted by the development of the Project. These sites are located within the footprints of the Erato and Tigranes Artavazdes Mine Pits, Main Access Road, Conveyor Corridor, HLF, and BRSF. The Armenian archaeological team identified nine potential cultural heritage sites within the proposed Erato and Tigranes-Artavazdes open pits and two additional sites within 50 m of the mine pit areas of disturbance. These sites have been provisionally identified as tomb hills, stone circles, and obsidian artifact scatters

A reconnaissance survey of the proposed HLF (Site 28) location was executed by the Armenian archaeological team over the course of 10 days from October 4 to 14, 2013 and as part of a waterline realignment survey conducted in November 2015. The survey area included the proposed new footprint of the HLF as well as the surrounding landscape. The survey team identified a total of 99 potential cultural heritage sites within the surveyed area. Fifty of the 99 potential sites are located within the proposed footprints of the HLF and nearby facilities. The survey identified an additional five potential sites within 50m of the HLF or associated facilities. Provisional site types identified by the Armenian archaeological team include tombs, crypts, grave mounds or *kurgans*, wall fragments and stone structure foundations. Two additional potential sites were identified within the HLF footprint during the satellite imagery study of this area. These two sites were provisionally identified as potential tombs or burial mounds by the satellite imagery analyst.

In January of 2014, ERM cultural heritage specialists conducted a satellite imagery analysis of the proposed locations of the BRSF, conveyor corridor, and main access road. This analysis identified 35 cultural heritage anomalies within and immediately adjacent to proposed Project component areas. Later, in June of 2014, the Armenian archaeological team conducted a pedestrian reconnaissance survey of these Project component areas. This survey was conducted to “ground truth” the cultural heritage anomalies identified by ERM as well as to survey for any additional potential sites not identified by the satellite imagery analysis. A total of forty-two potential sites were identified by the Armenian archaeological team during a survey of the BRSF, conveyor corridor, and main access road areas, including 25 potential sites that were initially identified by the satellite imagery analysis. The remaining 17 cultural heritage anomalies were GEOTEAM-ENV-PLN0218

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determined to represent the remains of 20th century farmsteads and animal corrals, or stone piles created by field clearing activities.

A total of 17 potential sites were determined to be within the proposed DF of BRSF, conveyor corridor, and main access roads, with an additional five potential sites located within 50m of the DF. Potential archaeological site types identified by the Armenian team included include a 19th-20th century structure and associated grave; an Eneolithic Period artefact scatter; potential Bronze Age tombs and ritual sites; structural ruins from seasonal 20th century Azeri herder's camps with potential burials; and a petroglyph image of a fish associated with the ruins of a possible temple.

The reconnaissance survey methodology employed during the field surveys did not always allow for a definitive determination of whether field sites represented archaeological sites or not. As a result, additional investigations will be necessary to determine whether all of the potential sites identified represent archaeological sites. For the purposes of managing and/or mitigating impacts to archaeological sites, all potential archaeological sites will be treated as cultural heritage resources (i.e. subject to avoidance, or further investigation prior to disturbance).

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6 COMMITMENTS

The following list of commitments will be executed by Lydian or its designees to mitigate and/or manage impacts associated with the Project to cultural heritage resources. The cultural heritage commitments of the Amulsar Goldmine Project are:

- Avoidance and marking of known cultural heritage sites;
- Additional surface reconnaissance of un-surveyed Project Footprints and sites of un-assessed scientific importance;
- Archaeological evaluation through additional surface reconnaissance and archaeological excavations of sites within proposed Project DF and sites located within 50 m of the proposed DF;
- Based on the results of the archaeological evaluations, excavation of sites of medium to very high importance that cannot be avoided through Project redesign;
- Enacting the protocols and procedures in the Chance Finds Procedure (CFP), including developing an Archaeological Monitoring Execution Procedure (AMEP);
- Providing training for Project staff on the importance of cultural heritage, details of the CFP, and identifying cultural heritage sites; and
- Consultation with stakeholders.

Lydian International may delegate the responsibility for performing tasks associated with these commitments, but retains ultimate responsibility for their execution.

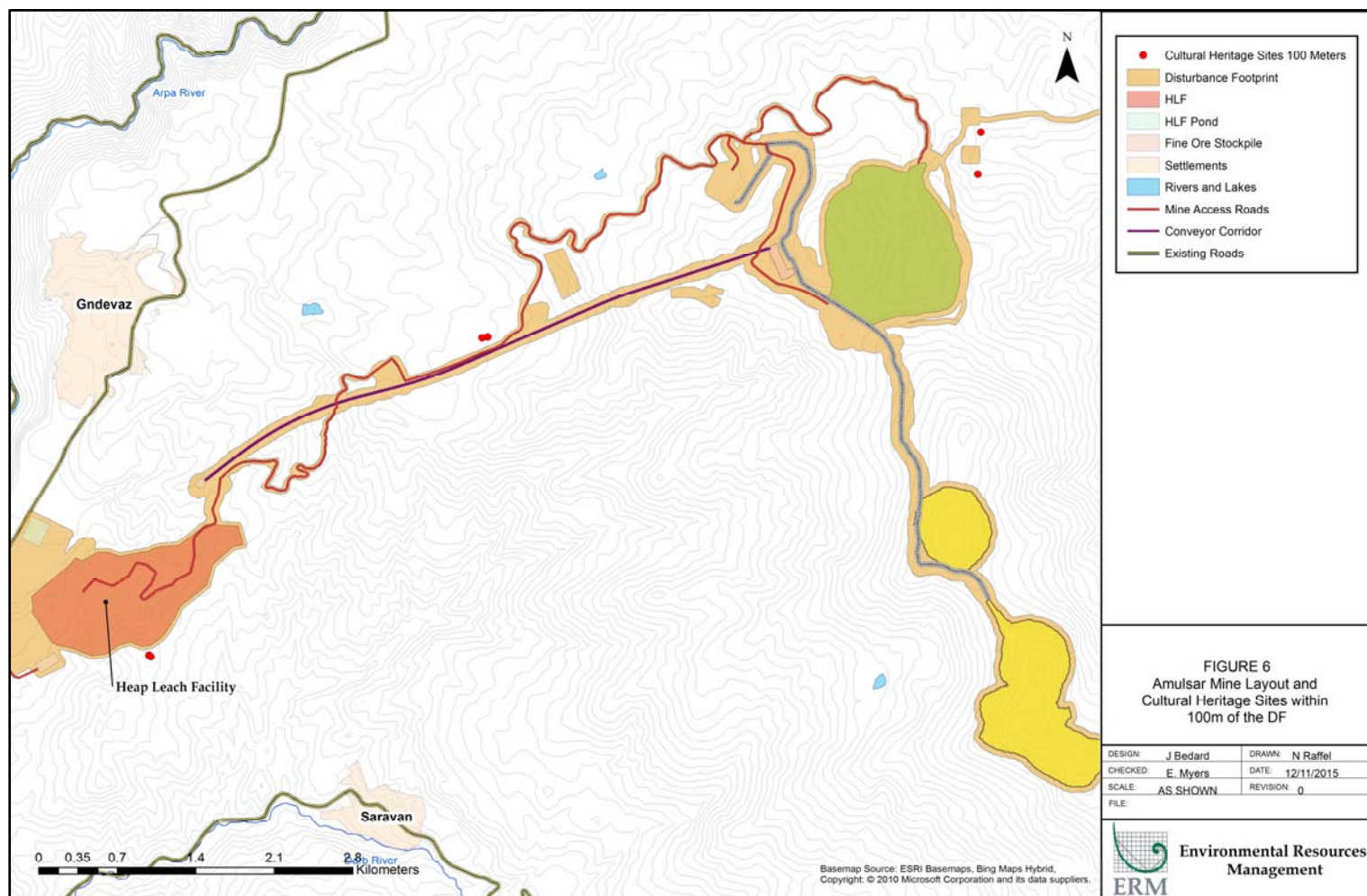
6.1 Avoidance and Marking

The most appropriate means of mitigating impacts to any cultural heritage site is avoidance through Project redesign. The proposed location of minor Project Footprints that can be adjusted or re-routed, such as the construction access roads, will be altered to avoid impacts to archaeological sites when feasible.

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Known or potential archaeological sites within 100 m of Project Footprints or construction laydown areas will be marked for avoidance. A total of eight cultural heritage sites are located within 100 m of Project Footprints and/or the Project's DF. These sites will be marked for avoidance using high visibility flagging or other types of marking.

Figure 6. Cultural Heritage Sites within 100m of DF



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6.2 Additional Surface Reconnaissance Surveys

Lydian International or its designee will conduct additional surface reconnaissance surveys within the footprint of Project elements that have not been surveyed. These areas include:

- Gndevaz River Channel Diversion;
- Mine Access Roads;
- River pump station and associated water line; and
- Any additional electrical, water, or gas transmission or pipelines¹⁶;

Additional surface reconnaissance surveys will also be required for additional Project Footprints added or if the location of existing Footprints is altered.

6.3 Archaeological Evaluations and Excavations

A total of 69 sites have been identified within the proposed Project's DF with an additional 11 sites located within 50 m of the DF (Table 4 and Figure 7). Lydian International or its designee(s), in consultation with the Armenian MoC, will identify potential archaeological sites which will require additional archaeological evaluation. The determination of whether to conduct additional archaeological excavations will be made on a site-by-site basis and be based on results of the satellite imagery analysis and archaeological field surveys conducted as part of the ESIA baseline studies.

The Project will take a staged approach to evaluating which sites will require additional excavation and the extent of those excavations. Potential sites within the footprint of the proposed DF will be subject to an archaeological field evaluation¹⁷ to determine the presence or absence of archaeological features, structures, deposits, and artefacts through a programme of limited and targeted excavation. If these types of resources are identified, the field evaluation will define their character, extent, and archaeological integrity. Potential sites located within 50 m of the proposed

¹⁶ The location of these Project Footprints was not available during drafting of the CHMP. Information related to these Project elements will be shared with stakeholders to scope future surveys.

¹⁷ "Standards and Guidance: Field Evaluation", Institute for Archaeologists November 22, 2013.

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DF will be examined in a similar fashion with a focus on identifying the boundaries of the site to determine whether an archaeological site is present and if the site extends into the Project's impact area.

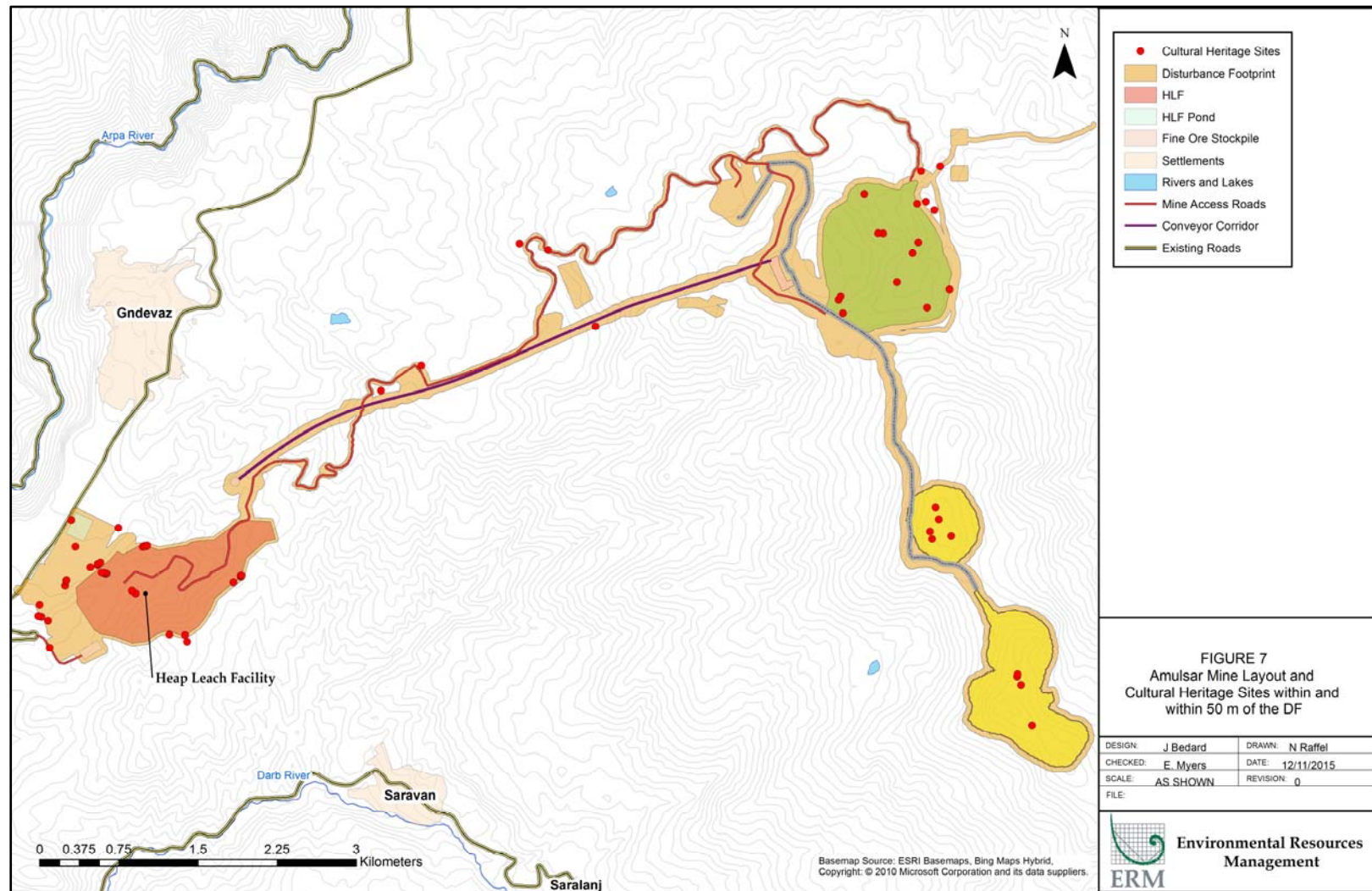
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Table 4. Potential Cultural Heritage Sites within DF and 50 m of DF.

Project Footprint	Sites within Project Disturbance Footprint	Sites within 50 m of Disturbance Footprint	Potential Types of Sites ¹⁸
Heap Leach Facility, ADR Plant, and associated infrastructure	CH-342; CH-347; CH-348; CH-350; CH-355; CH-357; CH-358; CH-359; CH-360; CH-361; CH-362; CH-363; CH-364; CH-365; CH-366; CH-367; CH-368; CH-369; CH-386; CH-387; CH-388; CH-389; CH-390; CH-391; CH-392; CH-393; CH-394; CH-395; CH-396; CH-397; CH-398; CH-415; CH-416; CH-419; CH-420; CH-423; CH-424; CH-425; CH-426; CH-427; CH-436; CH-444; CH-469; CH-480; CH-482	CH-343; CH-354; CH-356; CH-429; CH-481	Tombs; Crypts; Grave mounds; Wall fragments; and Tower foundations
Erato Mine Pit	CH-84; CH-85; CH-86; CH-87; CH-88	--	Tomb hills; Stone circles
Tigranes-Artavazdes Mine Pit	CH-89; CH-90; CH-92; CH-93	--	Stone circles; Obsidian lithic scatter
Conveyor Corridor	CH-457; CH-468	CH-462; CH-469	
Mine Access Roads	CH-461	CH-469	Artefact scatters and tomb hills
Barren Rock Storage Facility and adjacent facilities	CH-79; CH-438; CH-439; CH-442; CH-443; CH-445; CH-446; CH-448; CH-449; CH-451; CH-452; CH-454; CH-455; CH-456	CH-440; CH-441	Tombs; Petroglyph; Potential temple ruins; Crypts; Grave mounds; Wall fragments; and Tower foundations

¹⁸ Site types are based on assessments made by Armenian Archaeological Team during rapid field reconnaissance surveys. As these sites have not been subject to archaeological evaluations, the site types assigned to each site are provisional.

Figure 7. Known and Potential Cultural Heritage Sites Subject to Project Impacts



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Archaeological evaluations may consist of excavations at individual cultural heritage sites or excavations of a sample of similar and/or related sites that define a site type. Excavations at a sample of a site type will be designed to define the character, extent, archaeological integrity, and importance of that type of resource.

Based on the results of the archaeological field evaluations, Lydian International, in consultation with the MoC, will identify a list of significant archaeological sites that will be impacted by the Project. In order to mitigate impacts, these sites will be subject to archaeological excavation. Site specific excavation strategies will be developed and executed in consultation with the MoC. Archaeological excavations will be executed by qualified archaeologists prior to impact by Project activities.

Archaeological excavations will consist of controlled, intrusive fieldwork to examine and document archaeological deposits, features, and structures and to collect a sufficient sample of artefacts and other remains for analysis and interpretation¹⁹. Excavation will be accomplished in stratigraphic layers using hand tools, as appropriate. Soils will be carefully culled for artefacts, which will be retained for further study and curation. Excavation activities will be recorded in drawing, digital photographs and detailed field notes. When appropriate, special analyses such as human osteology or C¹⁴ dating will be undertaken. Data and artefacts will be analysed and reported on in archaeological reports that reflect current international practice. Artefacts and scientific samples from excavated sites will be retained by appropriate local museums or universities.

6.4 Training

In order to mitigate impacts to cultural heritage sites, including both known sites and those that may be encountered during ground disturbing activities, Lydian International or its designee will develop a cultural heritage training program for all Project staff. This Cultural Heritage Training Program will cover the following topics:

¹⁹ "Standards and Guidance: Excavation", Institute for Archaeologists November 22, 2013

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- The significance and importance of cultural heritage both to the Armenian people and internationally;
- Armenian national laws protecting cultural heritage and the liabilities and penalties associated with violating these laws;
- Identification of cultural heritage resources (i.e. Chance Finds), including typical signs or indicators that a site may be present; and
- The procedures and protocols of the Project's CFP, with an emphasis on the stop work procedures and the names and contact information of Project staff to be contacted in the event of a discovery.

This training will be included in the Project's health and safety training/induction program for all Project staff. Emphasis will be placed on providing this training to staff from the Project's EPCM Contractor in order to support the execution of the CFP.

6.5 Chance Finds Procedure

The CFP (Annex I of the present document) defines a series of steps to minimize Project impacts to undiscovered cultural heritage resources. The CFP does this by providing a process for conducting archaeological monitoring of ground disturbing activities and responding to any tangible cultural heritage encountered during Project construction or operation. These unexpected discoveries are known as Chance Finds²⁰. The protocols and procedures in the CFP outline the actions to be taken if any Chance Finds are encountered during construction and operations. The CFP will be applicable to any ground disturbing works associated with the Project during the pre-construction, construction, operational, and closure and post-closure phases.

The following Project participants have specific roles and responsibilities outlined in the CFP:

- Lydian International;
- Contractors and other service providers including the EPCM Contractor²¹;

²⁰ International Finance Corporation Performance Standard 8, paragraph 8: *Chance Finds Procedures*

²¹ To be contracted by Lydian International

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- Cultural Heritage NGO;
- ICHC²²; and
- The Ministry of Culture of the Republic of Armenia.

Each organization's roles and responsibilities are described in detail in the CFP. Detailed descriptions of each position within the participant groups are provided in the CFP. The ICHC and the archaeological monitors from the Cultural Heritage NGO are collectively referred to as the Chance Finds Team. The role of the Cultural Heritage NGO is to execute the day-to-day operation of the CFP and the execution of and participation in a number of the commitments of the CHMP. The ICHC will provide independent review, auditing, and consultation services for the implementation of the CHMP and CFP to Lydian International.

6.6 Implement CFP: Archaeological Monitoring Execution Procedure (AMEP)

Lydian International or its designee will develop an AMEP in order to guide the day-to-day implementation of the procedures and protocols in the CFP.²³ The development of this procedure will involve consultation between Lydian International, the Cultural Heritage NGO, the ICHC, the EPCM Contractor, and the MoC.

The purpose of the procedure will be to structure daily interactions and information exchanges between staff from Lydian International, the EPCM Contractor, and the Chance Finds Team so that all Project participants are aware of their required daily activities under the CFP. Topics to be addressed will include, but not be limited to:

- Daily roles and responsibilities of Lydian/Geoteam; EPCM Contractor and other service providers; Cultural Heritage NGO and their archaeological monitors; and the ICHC in the execution of the CFP;

²² To be contracted by Lydian International

²³ Lydian may also decide to develop an Execution Procedure as part of the revised Chance Finds Procedure. Whichever Lydian chooses, this would best be done just prior to the start of construction when the organizational hierarchy of the construction phase has been finalized.

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- Information each Project participant is responsible for providing to the Chance Finds Team each day (i.e. list of planned construction activities and areas; number of archaeological monitors required on-site);
- Instructions for the completion of the Chance Find Team's daily recording forms, such as the Daily Construction Log, Chance Find Form, and Archaeological Monitoring Daily Report Form; and
- A list of planned construction activities (grading, excavation, hand-digging, vegetation clearance, etc.) and their required level of archaeological monitoring.

The AMEP will be divided into three phases: Off-Site or Daily Pre-construction Phase; Daily Construction Phase; and the Daily Close-out Phase. The timing and content of each Project participant's reporting responsibilities will be clearly laid out for each phase. The AMEP will also include provisions for its rapid modification should its procedures prove incompatible with daily operations, Project health and safety standards, or inadequate to provide the level of archaeological monitoring required in the CFP.

6.7 Consultation with Stakeholders

A number of the commitments outlined above involve consultation with the MoC and other national and local stakeholders. Actions that require consultation with the MoC and other relevant stakeholders include:

- Review, comment, finalization, and agreement with the procedures in the CHMP and CFP;
- Archaeological evaluations and mitigation excavations; and
- Archaeological excavations resulting from the identification of significant Chance Finds.

The stakeholder consultation process can be divided into two phases: Pre-construction and construction phase. In both phases, the primary regulatory stakeholders requiring engagement are the MoC, the Marzpet of Vayots Dzor, and local community leaders in Jermuk and Gndevaz.

After submission of the Project ESIA, Lydian International will engage the MoC to begin a formal review process of the ESIA, CHMP, and CFP. These documents will be submitted to the MoC

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for review, comment, and approval. Lydian International and/or their designee will provide responses to and/or address comments provided by the MoC in order to prepare a final version of the CHMP and CFP. At the end of consultation, the MoC will be asked to provide formal, written approval of the policies and procedures outlined in the CHMP and CFP. After this review process is complete, Lydian International will submit the CHMP and CFP to the Marzpet of Vayots Dzor for review and comment. Copies of the CHMP and CFP will be provided to community leaders of Jermuk and Gndevaz for review.

A second pre-construction consultation with the MoC will be conducted in order to approve the list of potential archaeological sites requiring further evaluation. This consultation will take place prior to beginning any archaeological evaluations; Lydian International or their designee will not perform any archaeological evaluations without formal approval from the MoC. Along with the list of sites requiring additional investigations, Lydian International or their designee will provide scopes of work (SoW) for the archaeological evaluations to the MoC for review, comment, and approval. The SoW presented to the MoC will include the following elements:

- A schedule for the proposed work, including start date, progress benchmarks, and finish date;
- The scale of the archaeological excavations, including the size of the excavation area in square meters;
- Excavation methodology and techniques to be used at each site;
- Number of staff required to execute the excavations;
- Description of deliverables to be produced.

Lydian International and/or their designee will provide responses to and address comments provided by the MoC in order to prepare a final version of the SoWs. Lydian International or their designee will submit the final versions of the SoW to the Marzpet of Vayots Dzor for review and comment. The final product of the consultation with the MoC, Marzpet of Vayots Dzor will be SoWs agreed to by the Marzpet of Vayots Dzor and approved by the MoC. Copies of the SoWs will be provided to local community leaders in Jermuk and Gndevaz for review.

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Upon completion of the archaeological evaluations, the results of these investigations will be submitted to the MoC in a written report. Based on the results of the archaeological evaluations, some archaeological sites within the DF may require archaeological excavations. Lydian International or their designee will develop SoWs for these archaeological excavations and submit them to the MoC for review, comment, and approval. The SoWs for archaeological excavations will contain the same elements as the archaeological evaluation SoWs described previously. The results of any archaeological excavations will be submitted to the MoC in a written report.

Construction phase consultations will take place if any significant Chance Finds are identified during construction. The identification of significant archaeological sites that cannot be avoided through Project redesign may lead to a requirement from the MoC to conduct archaeological excavations at individual sites. The scope of such an excavation will be developed in consultation between representatives of Lydian/Geoteam, the Chance Finds Team, the Marzpet of Vayots Dzor, and MoC. The following points will need to be defined explicitly during the consultation and incorporated into a SoW that is approved by all of the parties:

- Site constraints and access: The area that will be restricted from ground works while archaeological evaluation or mitigation is completed. Access to the area through construction areas should be clarified;
- Scale of Archaeological Excavations: The number of test excavation units or total square meters that will need to be excavated;
- Timeline and Process for stakeholders to resolve the status of the chance find;
- Define post-excavation requirements such as reporting requirements and any other post-construction activities required by the MoC.

The final product of any consultations related to additional archaeological excavations will be a SoW agreed to by all Project participants and approved by the MoC.

7 MODIFYING THE CHMP

The Amulsar Gold Project CHMP was drafted by ERM at the request of Lydian International. The Ministry of Culture of the Republic of Armenia will be engaged to confirm that they agree with all of the procedures outlined in this document before they are implemented. The CHMP is intended

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to be a “living document” that can be modified based on changes to Project construction plans, Project re-design, changes to roles and responsibilities, the addition and/or subtraction of Project participants, etc. Modifications to the CHMP will be made in consultation with the previously identified Project participants: Lydian/Geoteam; the EPCM Contractor and other contractors/service providers; the Cultural Heritage NGO, ICHC, the MoC, the Marzpet of Vayots Dzor, and local community leaders in Jermuk and Gndevaz in their roles as regulatory stakeholders.

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Republic of Armenia

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Annex I: Chance Finds Procedure

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Annex II: List of Cultural Heritage Sites

Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-1	82.4; 82.5	Solution Pond	Low	Goshabulag ancient rural settlement	Recent historic yet largely abandoned building. Late 19th-Early 20th century. The site is known as Goshabulag.
Site-2	84	HLF 6	Negligible	Tomb	Neither obvious, nor ambiguous site identifiers visible on surface.
Site-3	84.1	HLF 6	Negligible	The ruins of a wall	Neither obvious, nor ambiguous site identifiers visible on surface.
Site-4	84.2	HLF 6	Negligible	The ruins of a wall	Neither obvious, nor ambiguous site identifiers visible on surface.
Site-5	100.4	HLF 6	Negligible	Tomb	Neither obvious, nor ambiguous site identifiers visible on surface.
Site-6	100.3	HLF 6	Negligible	Tomb	Neither obvious, nor ambiguous site identifiers visible on surface.
Site-7	98	HLF 6	Negligible	Tomb Hill	Neither obvious, nor ambiguous site identifiers visible on surface.
Site-8	100.2	HLF 6	Negligible	Tomb	Neither obvious, nor ambiguous site identifiers visible on surface.
Site-9	100.1	HLF 6	Negligible	Tomb	Low potential for being a cultural site. Neither obvious, nor ambiguous site identifiers visible on surface.
Site-10	100	HLF 6	Negligible	Tomb	Low potential for being a cultural site. Neither obvious, nor ambiguous site identifiers visible on surface.
Site-11	99	HLF 6	Medium	Tomb	A potential small burial mound, possible Kurgan, marked by a clustering of field stones.

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-12	82.3	HLF 6	Negligible	The ruins of walls	Neither obvious, nor ambiguous site identifiers visible on surface.
Site-13	85	300m East HLF 6	Negligible	Tomb	Neither obvious, nor ambiguous site identifiers visible on surface.
Site-14	84.3	35m East HLF 6	Negligible	Rock	Neither obvious, nor ambiguous site identifiers visible on surface.
Site-15	85.1; 85.2	400m East HLF 6	Uncertain, Not Visited	Muslim Graves/The Ruins of Walls	-
Site-16	82.2	HLF 6	Negligible	Observation tower	Neither obvious, nor ambiguous site identifiers visible on surface
Site-17	NA	HLF 6	Medium	-	Potential burial mound, possible Kurgan, atop natural rise 200 m NW of guard station. Dense concentration of small field stones acting as seal-stones.
Site-18	81.1; 82; 82.1	HLF 6	Low	Tomb	Surface identifiers are ambiguous. Could either be natural concentration of small field stones or perhaps a small grave site.
Site-19	NA	HLF 6	High	-	Potential burial mound, possible Kurgan. Small, less than 10 m across and 75 cm high.
Site-20	NA	HLF 6	High	-	Large graveyard with 2 Early Christian/Islamic carved grave stones.
Site-21	81	HLF 6	Low	Tomb	Medium Potential for being a cultural site. Surface identifiers are ambiguous. Just seems to be a natural low concentration of small field stones
Site-22	85.3	900m East HLF 6	Uncertain, Not Visited	Stone Piles	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-23	86; 86.1	850m East HLF 6	Uncertain, Not Visited	Tomb/The Ruins of Walls	-
Site-24	97.1	HLF 6	Low	Tomb	Surface identifiers are ambiguous. Could either be natural low concentration of small field stones or perhaps a small prehistoric grave site.
Site-25	80.1	HLF 6	Negligible	Stone Piles	Neither obvious, nor ambiguous site identifiers visible on surface
Site-26	86.2	950m East HLF 6	Uncertain, Not Visited	Tomb	-
Site-27	87	750m East HLF 6	Uncertain, Not Visited	Tomb	-
Site-28	87.1	700m East HLF 6	Uncertain, Not Visited	Pile of Stones	-
Site-29	79.1; 80	HLF 6	Low	Tomb and the Ruins of Walls	Surface identifiers are ambiguous. Likely modern stone gathering from agricultural activity and/or modern field wall.
Site-30	78.2; 79	HLF 6	Low	Tomb and Stone Piles	Surface identifiers are ambiguous.
Site-31	75.1; 76	HLF 6	High	Tomb	Potential stone lined/filled grave.
Site-32	87.2	700m East HLF 6	Uncertain, Not Visited	Stone Piles	-
Site-33	75	HLF 6	Negligible	Tomb	Low potential for being a cultural site. Neither obvious, nor ambiguous site identifiers visible on surface
Site-34	74	HLF 6	Medium	Tomb Hill	Large potential burial mound, possible Kurgan. A large and deep trench has been dug into the middle of it.
Site-35	78; 78.1	HLF 6	Low	Tomb and Stone Piles	Surface identifiers are ambiguous.
Site-36	77	HLF 6	Negligible	Tomb	Neither obvious, nor ambiguous site identifiers visible on surface.

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-37	71; 72; 72.1; 73	HLF 6	Negligible	Tomb and Stone Piles	Neither obvious, nor ambiguous site identifiers visible on surface.
Site-38	70	HLF 6	Low	Tomb	Medium Potential for being a cultural site. Surface identifiers are ambiguous. It is likely it is just a modern field wall.
Site-39	69	HLF 6	Low	Tomb	Medium Potential for being a cultural site. Surface identifiers are ambiguous. It is likely a modern pile of field stones.
Site-40	68	HLF 6	Negligible	Tomb	Low potential for being a cultural site. Neither obvious, nor ambiguous site identifiers visible on surface.
Site-41	-	HLF 6 Ext	High	-	Stone lined/filled grave. Old Lichen growth on stones. Possibly prehistoric.
Site-42	89	HLF 6 Ext	High	Tomb Hill	Stone circle, possibly associated with an adjacent potential burial mound, possible Kurgan, and potentially part of a larger site.
Site-43	-	HLF 6 Ext	High	-	Potential burial mound, possible Kurgan. Possibly part of a larger site.
Site-44	67.5	HLF 6 Ext	Low	Stone Piles	Surface identifiers are ambiguous. It is likely just a pile of modern field stones.
Site-45	87.3; 88	5m East HLF 6 Ext	High	Tomb	Foundations of a stone building, potentially historic or ancient. Possibly part of a larger site.
Site-46	67.4	HLF 6 Ext	Negligible	Stone Piles	Neither obvious, nor ambiguous site identifiers visible on surface.

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-47	67.3	HLF 6 Ext	Negligible	Tomb	Neither obvious, nor ambiguous site identifiers visible on surface.
Site-48	90	HLF 6 Ext	Medium	Tomb	Surface identifiers are ambiguous. Could either be natural concentration of small field stones, modern agricultural stone pile, or a potential small grave site.
Site-49	67.2	HLF 6 Ext	Negligible	Tomb	Neither obvious, nor ambiguous site identifiers visible on surface
Site-50	91	5m East HLF 6 Ext	High	Tomb Hill	Potential burial mound, possible Kurgan. Possibly part of a larger site.
Site-51	67; 67.1	HLF 6 Ext	Low	Tomb	Medium Potential for being a cultural site. Surface identifiers are ambiguous. It is likely just a pile of modern field stones.
Site-52	92	50m East HLF 6 Ext	Uncertain, Not Visited	Tomb Hill	-
Site-53	-	HLF 6 Ext	High	-	Possible stone lined/filled grave.
Site-54	93	150m East HLF 6 Ext	Uncertain, Not Visited	Tomb Hill	-
Site-55	96; 97	HLF 6 Ext	Medium	Tomb	Surface identifiers are ambiguous. Could either be natural low concentration of small field stones or perhaps a small grave site.
Site-56	95	HLF 6 Ext	Medium	Tomb	Surface identifiers are ambiguous. Could either be natural low concentration of small field stones or perhaps a small grave site.
Site-57	66; 66.1	HLF 6 Ext	High	Tomb	Potential stone lined/filled grave.
Site-58	93.1	150m East HLF 6 Ext	Uncertain, Not Visited	The Ruins of Walls	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-59	94	150m East HLF 6 Ext	Uncertain, Not Visited	Tomb	-
Site-60	65.2	HLF 6 Ext	Negligible	Obsidian Tools	Low potential for being a cultural site. Neither obvious, nor ambiguous site identifiers visible on surface. Did not find any obsidian.
Site-61	65.1	HLF 6 Ext	Negligible	Tomb	Low potential for being a cultural site. Neither obvious, nor ambiguous site identifiers visible on surface.
Site-62	62	5m north of HLF 6 Ext	Very High	Kurgan	Kurgan that is currently being excavated. Was thought to lie within previous Project Area of Disturbance (HLF site 6), but in fact does not.
Site-63	-	Just East HLF 6 Ext	Low	-	A clustering of historical rural structures. Probably early 20th Century
Site-64	63; 63.2; 63.1; 64	35m north of HLF 6 Ext	Medium	Tomb and Tomb hill	Settlement with possible grave dated to the Middle Ages. Currently being excavated.
Site-65	-	200m North of Former Conveyor Belt	Very High	-	Very large potential settlement defined by a series of large wall complexes on multiple levels and possible domestic structures. Possible occupations dating from the Neolithic through Antique periods.
Site-66	41; 41.2; 42; 42.1; 44; 45; 45.1; 46; 47; 48; 48.1; 49	Construction Access Road	Very High	Tomb and Tomb Hill and stone piles	Cultural mound, not a tomb, with rectilinear architecture. Located north of potential ancient settlement upon the river. Architectural remains visible atop of mound used bedrock as its southern wall. Circular/apsidal foundation identified. Undetermined age but likely ancient

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-67	36; 37; 38; 39; 40; 41; 42; 43; 44; 45; 45.1; 46; 47; 48; 49; 50; 51; 52; 53; 56; 73; 74; 75	Construction Access Road	Very High	Tomb and Tomb Hill	A potential very large necropolis containing a burial mound (possible Kurgan) and early Christian and Muslim graves. A dense Kurganfield of multiple potential burial mounds located on the southern edge of the site appear to have been heavily disturbed by an existing pipeline.
Site-68	58	South of Site 11	Negligible	Lodging	Neither obvious, nor ambiguous site identifiers visible on surface.
Site-69	60	South of Site 11	Negligible	Circular masonry made of massive stones?	Neither obvious, nor ambiguous site identifiers visible on surface.
Site-70	59	South of Site 11	Negligible	Ruins of walls	Neither obvious, nor ambiguous site identifiers visible on surface.
Site-71	69	Located within Site11	Negligible	Exposure 13	Pile of field stones removed from agricultural fields. Not an archaeological site. Confirmed by local herder consulted near this location.
Site-72	51.1; 52.1; 52.2; 52.3	Located just to the east of Site11	Negligible	Tomb	Bed rock, not a cultural feature.
Site-73	49.2; 49.3	Located just to the east of Site11	Low	Tomb	Possible stone lined/filled grave.
Site-74	49.1	Located just to the west of Site11	Negligible	Tomb	Bed rock, not a cultural feature.
Site-75	65; 66	Located 50m to the east of Site13	Negligible	Tomb	Bed rock, not a cultural feature.
Site-76	55	Within Site 13	Negligible	Circular Situated Rocks	Bed rock, not a cultural feature.

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-77	1.1; 1.4; 1.5	Within Site 13	Negligible	Tomb, Stone Piles, Dwelling	Bed rock, not a cultural feature.
Site-78	1.3	Within Site 13	Negligible	Tomb	Bed rock, not a cultural feature.
Site-79	1; 1.2	Within Site 13	Negligible	Tomb Hill	Bed rock, not a cultural feature.
Site-80	13; 14	N Erato	Negligible	Tomb and Tomb Hill	Bed rock, not a cultural feature.
Site-81	12	N Erato	Medium	Tomb Hill	Potential collapsed burial mound, possible Kurgan.
Site-82	11	N Erato	Negligible	Tomb Hill	Bed rock, not a cultural feature.
Site-83a	10	N Erato	Negligible	Tomb Hill	Bed rock, not a cultural feature.
Site-83b	9	N Erato	Negligible	Tomb Hill	Bed rock, not a cultural feature.
Site-84	8	Erato	Negligible	Tomb Hill	Bed rock, not a cultural feature.
Site-85	4; 5; 6; 7	Erato	Negligible	Tomb Hill	Said to be a tomb. It is a concentration of rocks in what looks like to be a pit. In fact this type of bolder-in-pit is wide-spread across this side of Erato. Interpreted as a natural landscape feature.
Site-86	3	Erato	Negligible	Tomb Hill	Bed rock, not a cultural feature.
Site-87	1	Erato	Low	Stone Circle	Said to be a stone circle. Is actually a triangular feature made out of small field stones. Unclear if cultural or not. If cultural it likely represents a temporary structure. No associated artefacts found.
Site-88	2	Erato	Negligible	Tomb Hill	Bed rock, not a cultural feature.
Site-89	76	Artavazd	Negligible	Obsidian Fragments	Bed rock, not a cultural feature.

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-90	77	Artavazd	Negligible	Stone Circle 1	Site of previous excavation, but looks like only bed rock was uncovered. Not a site.
Site-92	78	Artavazd	Negligible	Stone Circle 2	Bed rock, not a cultural feature
Site-93	79	Artavazd	Negligible	Stone Circle 3	Not a cultural feature.
Site-94	15	Topsoil Stockpiles	Uncertain, Not Visited	Tomb	-
Site-95	16	Topsoil Stockpiles	Uncertain, Not Visited	Tomb	-
Site-96	17	Topsoil Stockpiles	Uncertain, Not Visited	Tomb	-
Site-97	18	Topsoil Stockpiles	Uncertain, Not Visited	Tomb	-
Site-98	19	Topsoil Stockpiles	Uncertain, Not Visited	Tomb	-
Site-99	20	Topsoil Stockpiles	Uncertain, Not Visited	Tomb	-
Site-100	21	Topsoil Stockpiles	Uncertain, Not Visited	Tomb	-
Site-101	22	Topsoil Stockpiles	Uncertain, Not Visited	Tomb	-
Site-102	23	Topsoil Stockpiles	Uncertain, Not Visited	Tomb	-
Site-103	24	Topsoil Stockpiles	Uncertain, Not Visited	Tomb	-
Site-104	25	Topsoil Stockpiles	Uncertain, Not Visited	Tomb	-
Site-105	26	Topsoil Stockpiles	Uncertain, Not Visited	Tomb	-
Site-106	27	Topsoil Stockpiles	Uncertain, Not Visited	Tomb	-
Site-107	28	Topsoil Stockpiles	Uncertain, Not Visited	Tomb hill	-
Site-108	29	Topsoil Stockpiles	Uncertain, Not Visited	Tomb hill	-
Site-109	30	Topsoil Stockpiles	Uncertain, Not Visited	Mound	-
Site-110	31	Topsoil Stockpiles	Uncertain, Not Visited	Tomb hill	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-111	32	Topsoil Stockpiles	Uncertain, Not Visited	Tomb	-
Site-112	33	Topsoil Stockpiles	Uncertain, Not Visited	Tomb	-
Site-113	34	Topsoil Stockpiles	Uncertain, Not Visited	Tomb hill	-
Site-114	35	Topsoil Stockpiles	Uncertain, Not Visited	Tomb	-
Site-115	54	HLF 13	Uncertain, Not Visited	Tertaedral rock ledder	-
Site-116	57	HLF 11	Uncertain, Not Visited	Late middle ages cemetery	-
Site-117	61	HLF 11	Uncertain, Not Visited	Tomb 9	-
Site-118	62	HLF 11	Uncertain, Not Visited	Footprints of massive and small stone masonry?	-
Site-119	63	HLF 11	Uncertain, Not Visited	Tombs	-
Site-120	64	HLF 11	Uncertain, Not Visited	Stone gatherings?	-
Site-121	67	HLF 11	Uncertain, Not Visited	Tomb 1	-
Site-122	68	Topsoil Stockpiles	Uncertain, Not Visited	Exposure 12	-
Site-123	70	Topsoil Stockpiles	Uncertain, Not Visited	Tomb hill	-
Site-124	71	HLF 11	Uncertain, Not Visited	Tomb	-
Site-125	72	HLF 11	Uncertain, Not Visited	Southern border of the necropolis	-
Site-126	80	Parandzem	Uncertain, Not Visited	Roofing slabs?	-
Site-127	81	Parandzem	Uncertain, Not Visited	Tomb - stone box	-
Site-128	82	Parandzem	Uncertain, Not Visited	Tomb hill with stone circle	-
Site-129	83	Arshak	Uncertain, Not Visited	Stone circle?	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-130	84	Arshak	Uncertain, Not Visited	Stone circle with a roofing slab in the center	-
Site-131	85	Arshak	Uncertain, Not Visited	Tomb hill with stone circle	-
Site-132	86	Arshak	Uncertain, Not Visited	Tomb hill with stone circle (?)	-
Site-133	87	Arshak	Uncertain, Not Visited	Tomb hill	-
Site-134	88	Tigranes	Uncertain, Not Visited	Obsidian tool - spear edge	-
Site-135	1.6	HLF 12	Uncertain, Not Visited	Ceramic finding	-
Site-136	2	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-137	2.1	HLF 12	Uncertain, Not Visited	Rock	-
Site-138	3	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-139	4	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-140	5	HLF 12	Uncertain, Not Visited	Stone basket	-
Site-141	6	HLF 12	Uncertain, Not Visited	Tomb	-
Site-142	6.1	HLF 12	Uncertain, Not Visited	Stone piles	-
Site-143	7	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-144	8	HLF 12	Uncertain, Not Visited	Tomb	-
Site-145	9	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-146	10	HLF 12	Uncertain, Not Visited	Tomb	-
Site-147	10.1	HLF 12	Uncertain, Not Visited	Tomb	-
Site-148	10.2	HLF 12	Uncertain, Not Visited	Tomb	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-149	11	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-150	11.1	HLF 12	Uncertain, Not Visited	Tomb	-
Site-151	12	HLF 12	Uncertain, Not Visited	Tomb	-
Site-152	13	HLF 12	Uncertain, Not Visited	Tomb	-
Site-153	14	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-154	15	HLF 12	Uncertain, Not Visited	Tomb	-
Site-155	16	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-156	17	HLF 12	Uncertain, Not Visited	Tomb	-
Site-157	18	HLF 12	Uncertain, Not Visited	Dwelling	-
Site-158	18.1	HLF 12	Uncertain, Not Visited	Tomb	-
Site-159	18.2	HLF 12	Uncertain, Not Visited	The ruins of a wall	-
Site-160	18.3	HLF 12	Uncertain, Not Visited	Obsidian tools	-
Site-161	18.4	HLF 12	Uncertain, Not Visited	Tomb	-
Site-162	19	HLF 12	Uncertain, Not Visited	Tomb	-
Site-163	20	HLF 12	Uncertain, Not Visited	Tomb	-
Site-164	21	HLF 12	Uncertain, Not Visited	Tomb	-
Site-165	22	HLF 12	Uncertain, Not Visited	Tomb	-
Site-166	23	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-167	23.1	HLF 12	Uncertain, Not Visited	Stone piles	-
Site-168	23.2	HLF 12	Uncertain, Not Visited	Stone piles	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-169	24	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-170	25	HLF 12	Uncertain, Not Visited	Tomb	-
Site-171	26	HLF 12	Uncertain, Not Visited	Tomb	-
Site-172	27	HLF 12	Uncertain, Not Visited	Tomb	-
Site-173	28	HLF 12	Uncertain, Not Visited	Tomb	-
Site-174	28.1	HLF 12	Uncertain, Not Visited	Dwelling	-
Site-175	29	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-176	30	HLF 12	Uncertain, Not Visited	Tomb	-
Site-177	31	HLF 12	Uncertain, Not Visited	Tomb	-
Site-178	32	HLF 12	Uncertain, Not Visited	Tomb	-
Site-179	33	HLF 12	Uncertain, Not Visited	Tomb	-
Site-180	34	HLF 12	Uncertain, Not Visited	Tomb	-
Site-181	35	HLF 12	Uncertain, Not Visited	Tomb	-
Site-182	35.1	HLF 12	Uncertain, Not Visited	Tomb	-
Site-183	36	HLF 12	Uncertain, Not Visited	Tomb	-
Site-184	36.1	HLF 12	Uncertain, Not Visited	Tomb	-
Site-185	36.2	HLF 12	Uncertain, Not Visited	Tomb	-
Site-186	37	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-187	38	HLF 12	Uncertain, Not Visited	Tomb	-
Site-188	39	HLF 12	Uncertain, Not Visited	Tomb	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-189	40	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-190	40.1	HLF 12	Uncertain, Not Visited	Tomb	-
Site-191	41	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-192	41	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-193	41.1	HLF 12	Uncertain, Not Visited	Tomb	-
Site-194	41.2	HLF 12	Uncertain, Not Visited	Tomb	-
Site-195	42	HLF 12	Uncertain, Not Visited	Tomb	-
Site-196	42.1	HLF 12	Uncertain, Not Visited	Tomb	-
Site-197	43	HLF 12	Uncertain, Not Visited	Tomb	-
Site-198	50	HLF 12	Uncertain, Not Visited	Tomb	-
Site-199	50.1	HLF 12	Uncertain, Not Visited	Tomb	-
Site-200	50.2	HLF 12	Uncertain, Not Visited	Stone piles	-
Site-201	50.3	HLF 12	Uncertain, Not Visited	Stone piles	-
Site-202	51	HLF 12	Uncertain, Not Visited	Tomb	-
Site-203	52	HLF 12	Uncertain, Not Visited	Tomb	-
Site-204	52.1	HLF 12	Uncertain, Not Visited	Stone piles	-
Site-205	52.2	HLF 12	Uncertain, Not Visited	Stone piles	-
Site-206	53	HLF 12	Uncertain, Not Visited	Tomb	-
Site-207	54	HLF 12	Uncertain, Not Visited	Tomb	-
Site-208	54.1	HLF 12	Uncertain, Not Visited	Stone piles	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-209	54.2	HLF 12	Uncertain, Not Visited	Tomb	-
Site-210	54.3	HLF 12	Uncertain, Not Visited	Tomb	-
Site-211	54.4	HLF 12	Uncertain, Not Visited	Muslim tomb stone	-
Site-212	55	HLF 12	Uncertain, Not Visited	Tomb	-
Site-213	56	HLF 12	Uncertain, Not Visited	Tomb	-
Site-214	57	HLF 12	Uncertain, Not Visited	Tomb	-
Site-215	57.1	HLF 12	Uncertain, Not Visited	Muslim graves	-
Site-216	57.2	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-217	58	HLF 12	Uncertain, Not Visited	Tomb	-
Site-218	59	HLF 12	Uncertain, Not Visited	Tomb	-
Site-219	59.1	HLF 12	Uncertain, Not Visited	Tomb	-
Site-220	59.2	HLF 12	Uncertain, Not Visited	Tomb	-
Site-221	59.3	HLF 12	Uncertain, Not Visited	Stone piles	-
Site-222	59.4	HLF 12	Uncertain, Not Visited	Obsidian tools	-
Site-223	60	HLF 12	Uncertain, Not Visited	Tomb	-
Site-224	60.1	HLF 12	Uncertain, Not Visited	Stone piles	-
Site-225	61	HLF 12	Uncertain, Not Visited	Tomb	-
Site-226	61.1	HLF 12	Uncertain, Not Visited	The ruins of a walls	-
Site-227	61.2	HLF 12	Uncertain, Not Visited	Tomb	-
Site-228	61.3	HLF 12	Uncertain, Not Visited	Tomb	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-229	61.4	HLF 12	Uncertain, Not Visited	Tomb	-
Site-230	83	HLF 6	Uncertain, Not Visited	Tomb	-
Site-231	101	HLF 12	Uncertain, Not Visited	Tomb	-
Site-232	102	HLF 12	Uncertain, Not Visited	Tomb	-
Site-233	103	HLF 12	Uncertain, Not Visited	Tomb	-
Site-234	104	HLF 12	Uncertain, Not Visited	Tomb	-
Site-235	104.1	HLF 12	Uncertain, Not Visited	Ceramic finding	-
Site-236	105	HLF 12	Uncertain, Not Visited	Tomb	-
Site-237	105.1	HLF 12	Uncertain, Not Visited	The ruins of a wall	-
Site-238	105.2	HLF 12	Uncertain, Not Visited	Dwelling	-
Site-239	106	HLF 12	Uncertain, Not Visited	Tomb	-
Site-240	106.1	HLF 12	Uncertain, Not Visited	Tomb	-
Site-241	106.2	HLF 12	Uncertain, Not Visited	Ceramic finding	-
Site-242	107	HLF 12	Uncertain, Not Visited	Tomb	-
Site-243	108	HLF 12	Uncertain, Not Visited	Tomb	-
Site-244	109	HLF 12	Uncertain, Not Visited	Tomb	-
Site-245	110	HLF 12	Uncertain, Not Visited	Tomb	-
Site-246	111	HLF 12	Uncertain, Not Visited	Tomb	-
Site-247	112	HLF 12	Uncertain, Not Visited	Tomb	-
Site-248	113	HLF 12	Uncertain, Not Visited	Tomb	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-249	113.1	HLF 12	Uncertain, Not Visited	Tomb	-
Site-250	114	HLF 12	Uncertain, Not Visited	Tomb	-
Site-251	114.1	HLF 12	Uncertain, Not Visited	Tomb	-
Site-252	114.2	HLF 12	Uncertain, Not Visited	Tomb	-
Site-253	115	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-254	115.1	HLF 12	Uncertain, Not Visited	Tomb	-
Site-255	116	HLF 12	Uncertain, Not Visited	Tomb	-
Site-256	117	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-257	118	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-258	119	HLF 12	Uncertain, Not Visited	Tomb	-
Site-259	120	HLF 12	Uncertain, Not Visited	Tomb	-
Site-260	120.1	HLF 12	Uncertain, Not Visited	Tomb	-
Site-261	120.2	HLF 12	Uncertain, Not Visited	Tomb	-
Site-262	120.3	HLF 12	Uncertain, Not Visited	Tomb	-
Site-263	120.4	HLF 12	Uncertain, Not Visited	Tomb	-
Site-264	120.5	HLF 12	Uncertain, Not Visited	Ceramic finding	-
Site-265	121	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-266	122	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-267	123	HLF 12	Uncertain, Not Visited	Tomb	-
Site-268	123.1	HLF 12	Uncertain, Not Visited	Tomb	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-269	123.2	HLF 12	Uncertain, Not Visited	Tomb	-
Site-270	123.3	HLF 12	Uncertain, Not Visited	Rock	-
Site-271	124	HLF 12	Uncertain, Not Visited	Tomb	-
Site-272	125	HLF 12	Uncertain, Not Visited	Tomb hill	-
Site-273	125.1	HLF 12	Uncertain, Not Visited	Tomb	-
Site-274	125.2	HLF 12	Uncertain, Not Visited	Tomb	-
Site-275	125.3	HLF 12	Uncertain, Not Visited	Tomb	-
Site-276	125.3	HLF 12	Uncertain, Not Visited	Tomb	-
Site-277	125.4	HLF 12	Uncertain, Not Visited	Tomb	-
Site-278	Not Defined	HLF 6	Negligible	Possible Tomb	Excavated but nothing found.
Site-279	Not Defined	HLF 6	Negligible	Possible Tomb	Not a site.
Site-280	Not Defined	HLF 6	Negligible	Ancient Rock Art	A few stones with markings. Inconclusive.
Site-281	Not Defined	HLF 6	Medium	Tomb	Possible tomb or cromlech
Site-282	Not Defined	HLF 6	High	Tomb	Potential large burial mound, possible kurgan with 5 associated smaller mounds or cromlechs. Many obsidian stone tools and early bronze age black burnished ceramics
Site-283	Not Defined	HLF 6	Low	Tomb	Looted grave. Found some carnelian, faience and bone beads. Could have surrounding cromlechs
Site-284	Not Defined	HLF 6	Low	Tomb	Possible tomb.
Site-285	Not Defined	Solution Pond	High	Tomb	Possible large round cromlech. Well preserved. Two series of concentric circles. Exists next to a large wall with two courses.

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-286	Not Defined	Solution Pond	Medium	Tomb	Obsidian tools and bronze tools, unclear if a grave
Site-287	Not Defined	HLF 6	High	Acheulian Tools	Location of acheulian tool.
Site-288	Not Defined	HLF 6	Low	Stone Tools	Large wall where about 50 obsidian tools were found.
Site-289	Not Defined	HLF 6	High	Acheulian Tools	Location of three Acheulian handaxes.
Site-290	Not Defined	HLF 6	Negligible	Acheulian Tools	A trench that was dug to look for obsidian and Acheulian tools (ERM is unsure if this is a site).
Site-291	Not Defined	HLF 6	Negligible	Stone Tools	Site turned up very few natural obsidian chunks.
Site-292	Not Defined	HLF 6	Negligible	-	Just testing nothing found
Site-293	Not Defined	HLF 6	Negligible	Stone Tools	A few pieces of obsidian shatter. When obsidian pieces encountered during in-field assessment appeared to be natural shatter.
Site-294	Not Defined	HLF 6	Low	Possible Tomb	Found a few medieval ceramics and obsidian fragments.
Site-295	Not Defined	50m East of previous storm water pond location.	Medium	Tomb	Potential grave
Site-296	Not Defined	50m East of Stormwater Pond	Medium	Tomb	Possible grave
Site-297	Not Defined	50m East of Stormwater Pond	Medium	Tomb	Possible grave
Site-298	Not Defined	50m East of Stormwater Pond	Medium	Tomb	Possible grave or cromlech
Site-299	Not Defined	50m East of Stormwater Pond	Medium	Tomb	Possible cromlech

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-300	Not Defined	50m East of Stormwater Pond	Medium	Tomb	Possible cromlech
Site-301	Not Defined	Stormwater Pond	Medium	Tomb	Possible triangular cromlech
Site-302	Not Defined	ARD Plant	Medium	Tomb	Possible cromlech
Site-303	Not Defined	ARD Plant	Medium	Tomb	Possible cromlech
Site-304	Not Defined	HLF 6	Medium	Tomb	Possible tomb currently under excavation. Bronze Age and Iron Age ceramics, obsidian tool, cow/horse bones (2).
Site-305	Not Defined	HLF 6	High	Tomb	Cromlech, currently under excavation.
Site-306	Not Defined	HLF 6	Low	Tomb	Potential grave, but very low potential. There is bed rock here. The only indication is a circular berry bush growing on top of this. But probably best left for chance finds.
Site-307	Not Defined	HLF 6	Low	Tomb	Possible 2 cromlechs, but not very convincing. Maybe part of the site just to the east
Site-308	Not Defined	Former Conveyor Belt	High	Tomb	Large potential burial mound, possible kurgan, located outside of impact area.
Site-309	Not Defined	Former Conveyor Belt	High	Tomb	Possible large cromlech. Should be avoided
Site-310	Not Defined	Former Conveyor Belt	Medium	-	Possible small grave
Site-311	Not Defined	Former Conveyor Belt	Medium	-	Possible small grave just to west of conveyor belt
Site-312	Not Defined	Former Conveyor Belt	Medium	-	Possible small grave to west of conveyor belt
Site-313	Not Defined	Former Conveyor Belt	Medium	-	Possible small grave to west of conveyor belt

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-314	Not Defined	Former Conveyor Belt	Medium	-	Possible kurgan/cromlech.
Site-315	Not Defined	Former Conveyor Belt	Medium	-	Possible smaller cromlech
Site-316	Not Defined	HLF 6	Low	-	Possible small grave.
Site-317	Not Defined	HLF 6	High	-	Possible large stone tomb/cromlech
Site-318	Not Defined	HLF 6	Medium	-	Potential small tomb
Site-319	Not Defined	100 meters east of Site 12	High	-	Muslim cemetery
Site-322	Not Defined	Site-19	Medium	-	Possible cromlech
Site-323	Not Defined	Site-19	Medium	-	Possible cromlech
Site-324	Not Defined	Site-19	Medium	-	Possible cromlech
Site-325	Not Defined	Site-19	High	-	Potential large burial mound, possible kurgan situated above a settlement site.
Site-326	Not Defined	Site-19	High	-	Stone structure, possible house.
Site-327	Not Defined	Site-19	High	-	Stone circle
Site-328	Not Defined	Site-19	High	-	Stone structure
Site-329	Not Defined	Site-19	High	-	Stone circle
Site-330	Not Defined	Site-19	High	-	Stone structure, possible wall/building ruin.
Site-331	Not Defined	Site-19	Low	-	Modern herder's pen.
Site-332	Not Defined	Site-19	High	-	Obsidian scatter. Debitage. Maybe washed down from above. A sample was collected.
Site-333	Not Defined	Site-19	High	-	Stone circle with obsidian tools inside.
Site-334	Not Defined	Site-19	Medium	-	Possible small stone grave
Site-335	Not Defined	Site 14	Medium	-	A wide scatter of artefacts including obsidian tools and ceramics sherds.

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-336	Not Defined	Site 28	Uncertain, Not Visited	-	Possible cluster of domestic structures identified during satellite imagery analysis.
Site-337	Not Defined	Site 28	Uncertain, Not Visited	-	Possible cluster of domestic structures identified during satellite imagery analysis.
Site-338	Not Defined	Site 28	Uncertain, Not Visited	-	Possible cluster of domestic structures identified during satellite imagery analysis.
Site-339	Not Defined	Site 28	Uncertain, Not Visited	-	Possible kurgan identified during satellite imagery analysis.
Site-340	Not Defined	Site 28	Uncertain, Not Visited	-	Possible kurgan identified during satellite imagery analysis.
Site-341	Not Defined	Site 28	Uncertain, Not Visited	-	Possible kurgan identified during satellite imagery analysis.
Site-342	Not Defined	Site 28	Uncertain, Not Visited	-	Possible kurgan identified during satellite imagery analysis.
Site-343	Not Defined	Site 28	Uncertain, Not Visited	-	Possible kurgan identified during satellite imagery analysis.
Site-344	Not Defined	Site 28	Uncertain, Not Visited	-	Possible kurgan identified during satellite imagery analysis.
Site-345	Not Defined	Site 28	Uncertain, Not Visited	-	Possible kurgan identified during satellite imagery analysis.
Site-346	Not Defined	Site 28	Uncertain, Not Visited	-	Possible kurgan identified during satellite imagery analysis.
Site-347	Not Defined	Site 28	Uncertain, Not Visited	Grave Mound	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-348	Not Defined	Site 28	Uncertain, Not Visited	Grave Mound	-
Site-349	Not Defined	Site 28	Uncertain, Not Visited	Grave Mound	-
Site-350	Not Defined	Site 28	Uncertain, Not Visited	Tomb	-
Site-351	Not Defined	Site 28	Uncertain, Not Visited	Crypt	-
Site-352	Not Defined	Site 28	Uncertain, Not Visited	Crypt	-
Site-353	Not Defined	Site 28	Uncertain, Not Visited	Crypt	-
Site-354	Not Defined	Site 28	Uncertain, Not Visited	Cavern	-
Site-355	Not Defined	Site 28	Uncertain, Not Visited	Cavern	-
Site-356	Not Defined	Site 28	Uncertain, Not Visited	Cavern	-
Site-357	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-358	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-359	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-360	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-361	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-362	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-363	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-364	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-365	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-366	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-367	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-368	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-369	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-370	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-371	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-372	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-373	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-374	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-375	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-376	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-377	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-378	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-379	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-380	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-381	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-382	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-383	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-384	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-385	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-386	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-387	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-388	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-389	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-390	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-391	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-392	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-393	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-394	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-395	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-396	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-397	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-398	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-399	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-400	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-401	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-402	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-403	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-404	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-405	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-406	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-407	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-408	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-409	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-410	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-411	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-412	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-413	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-414	Not Defined	Site 28	Uncertain, Not Visited	Tomb mound	-
Site-415	Not Defined	Site 28	Uncertain, Not Visited	Circular stone wall foundations	-
Site-416	Not Defined	Site 28	Uncertain, Not Visited	Circular stone wall foundations	-
Site-417	Not Defined	Site 28	Uncertain, Not Visited	Circular stone wall foundations	-
Site-418	Not Defined	Site 28	Uncertain, Not Visited	Circular stone wall foundations	-
Site-419	Not Defined	Site 28	Uncertain, Not Visited	Circular stone wall foundations	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-420	Not Defined	Site 28	Uncertain, Not Visited	Circular stone wall foundations	-
Site-421	Not Defined	Site 28	Uncertain, Not Visited	Circular stone wall foundations	-
Site-422	Not Defined	Site 28	Uncertain, Not Visited	Circular stone wall foundations	-
Site-423	Not Defined	Site 28	Uncertain, Not Visited	Tomb	-
Site-424	Not Defined	Site 28	Uncertain, Not Visited	Tomb	-
Site-425	Not Defined	Site 28	Uncertain, Not Visited	Tomb	-
Site-426	Not Defined	Site 28	Uncertain, Not Visited	Tomb	-
Site-427	Not Defined	Site 28	Uncertain, Not Visited	Tomb	-
Site-428	Not Defined	Site 28	Uncertain, Not Visited	Tomb	-
Site-429	Not Defined	Site 28	Uncertain, Not Visited	Tomb	-
Site-430	Not Defined	Site 28	Uncertain, Not Visited	Tomb	-
Site-431	Not Defined	Site 28	Uncertain, Not Visited	Tomb	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-432	Not Defined	Site 28	Uncertain, Not Visited	Tomb	-
Site-433	Not Defined	Site 28	Uncertain, Not Visited	Tomb	-
Site-434	Not Defined	Site 28	Uncertain, Not Visited	Tomb	-
Site-435	Not Defined	Site 28	Uncertain, Not Visited	Tomb	-
Site-436	Not Defined	Site 28	Uncertain, Not Visited	Walls	-
Site-437	Not Defined	Site 28	Uncertain, Not Visited	Walls	-
Site-438	Not Defined	Site 27	Uncertain, Not Visited	Phallic monolith	-
Site-439	Not Defined	Site 27	Uncertain, Not Visited	Isolated small structure	-
Site-440	Not Defined	Site 27	Uncertain, Not Visited	Isolated small structure	-
Site-441	Not Defined	Site 27	Uncertain, Not Visited	19 th -20 th century structure and grave	-
Site-442	Not Defined	Site 27	Uncertain, Not Visited	Tomb	-
Site-443	Not Defined	Site 27	Uncertain, Not Visited	Eneolithic artefact scatter	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-444	Not Defined	Site 27	Uncertain, Not Visited	Wall ruin	-
Site-445	Not Defined	Site 27	Uncertain, Not Visited	Petroglyph	-
Site-446	Not Defined	Site 27	Uncertain, Not Visited	Kteis	-
Site-447	Not Defined	Site 27	Uncertain, Not Visited	Cluster of structures	-
Site-448	Not Defined	Site 27	Uncertain, Not Visited	Large structure	-
Site-449	Not Defined	Site 27	Uncertain, Not Visited	Tumulus	-
Site-450	Not Defined	Site 27	Uncertain, Not Visited	Animal corral	-
Site-451	Not Defined	Site 27	Uncertain, Not Visited	Petroglyph and temple	-
Site-452	Not Defined	Site 27	Uncertain, Not Visited	Cluster of structures	-
Site-453	Not Defined	Site 27	Uncertain, Not Visited	Isolated small structure	-
Site-454	Not Defined	Site 27	Uncertain, Not Visited	Structure	-
Site-455	Not Defined	Site 27	Uncertain, Not Visited	Tower	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-456	Not Defined	Site 27	Uncertain, Not Visited	Road	-
Site-457	Not Defined	Site 27	Uncertain, Not Visited	Tower	-
Site-458	Not Defined	Conveyor Corridor/ Main Access Road	Uncertain, Not Visited	Terrace wall	-
Site-459	Not Defined	Conveyor Corridor/ Main Access Road	Uncertain, Not Visited	Obsidian tool	-
Site-460	Not Defined	Conveyor Corridor/ Main Access Road	Uncertain, Not Visited	Tumuli	-
Site-461	Not Defined	Conveyor Corridor/ Main Access Road	Uncertain, Not Visited	Tower	-
Site-462	Not Defined	Conveyor Corridor/ Main Access Road	Uncertain, Not Visited	Tower	-
Site-463	Not Defined	Conveyor Corridor/ Main Access Road	Uncertain, Not Visited	Tower	-
Site-464	Not Defined	Conveyor Corridor/ Main Access Road	Uncertain, Not Visited	Stone pile with tower in centre	-
Site-465	Not Defined	Conveyor Corridor/ Main Access Road	Uncertain, Not Visited	Tumulus	-

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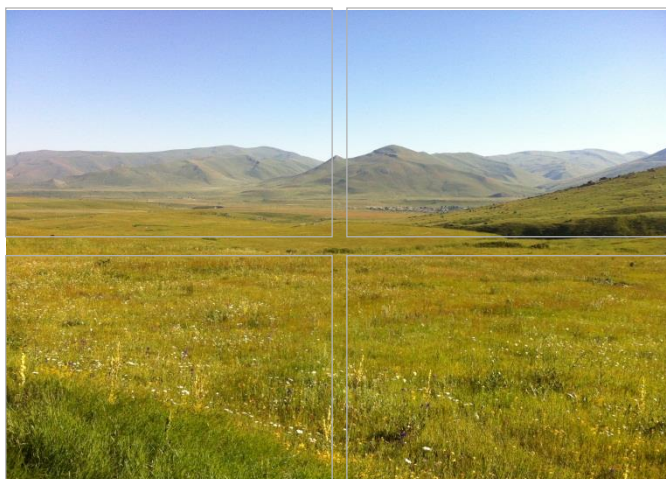
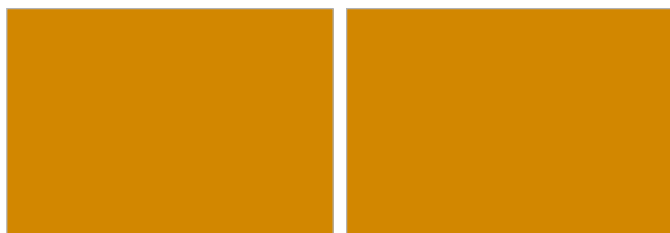
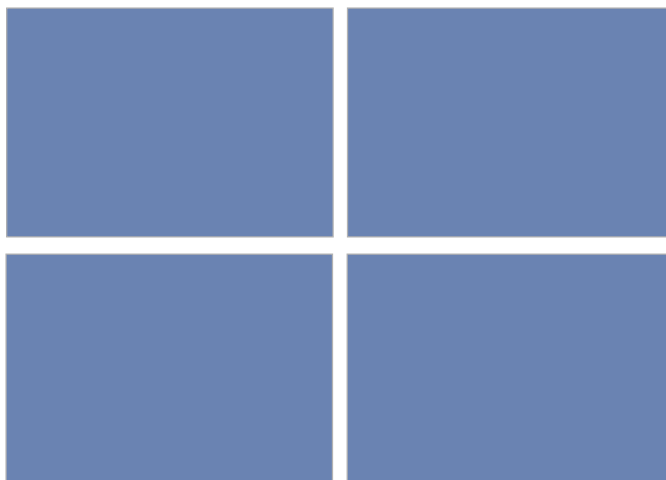
Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-466	Not Defined	Conveyor Corridor/ Main Access Road	Uncertain, Not Visited	Tumuli	-
Site-467	Not Defined	Conveyor Corridor/ Main Access Road	Uncertain, Not Visited	Fort and tumuli	-
Site-468	Not Defined	Conveyor Corridor/ Main Access Road	Uncertain, Not Visited	Terrace	-
Site-469	Not Defined	Conveyor Corridor/ Main Access Road	Uncertain, Not Visited	Fort	-
Site-470	Not Defined	Conveyor Corridor/ Main Access Road	Uncertain, Not Visited	Tower-shaped stone mounds	-
Site-471	Not Defined	Conveyor Corridor/ Main Access Road	Uncertain, Not Visited	Stone tower	-
Site-472	Not Defined	Conveyor Corridor/ Main Access Road	Uncertain, Not Visited	Wall	-
Site-473	Not Defined	Conveyor Corridor/ Main Access Road	Uncertain, Not Visited	Stone tower	-
Site-474	Not Defined	Conveyor Corridor/ Main Access Road	Uncertain, Not Visited	Stone tower	-
Site-475	Not Defined	Site 27	Uncertain, Not Visited	Obsidian artefacts	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-476	Not Defined	Site 27	Uncertain, Not Visited	Tombs	-
Site-477	Not Defined	Site 27	Uncertain, Not Visited	Fortress wall	-
Site-478	Not Defined	Site 27	Uncertain, Not Visited	Sanctuary	-
Site-479	Not Defined	Site 27	Uncertain, Not Visited	20th century, Azeri herder's summer camp and possible child burial	-
Site -480	Not Defined	Site 28	Uncertain, Not Visited	Tomb	-
Site-481	Not Defined	Site 28	Uncertain, Not Visited	Crypt	-
Site-482	Not Defined	Site 28	Uncertain, Not Visited	Obsidian Artefact Scatter	-
Site-483	Not Defined	Site 28	Uncertain, Not Visited	Obsidian Artefact Scatter	-
Site-484	Not Defined	Site 28	Uncertain, Not Visited	Crypt	-
Site-485	Not Defined	Site 28	Uncertain, Not Visited	Crypt	-
Site-486	Not Defined	Site 28	Uncertain, Not Visited	Crypt	-

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Cultural Heritage Sites					
ESIA Site ID	Armenian NGO Site ID	Project Location	ERM Judgement of Importance	Armenian Archaeologist's Description	ERM Description
Site-487	Not Defined	Site 28	Uncertain, Not Visited	Potential Kurgan	Possible kurgan burial mound identified during ERM remote sensing survey



Prepared For:

Amulsar Goldmine Project

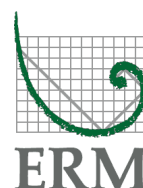


Cultural Heritage Management Plan Annex I: Chance Finds Procedure

August 2014

Prepared By:
ERM
1776 I Street, NW
Washington, DC 20006

Delivering sustainable solutions in a more competitive world



1 Introduction

This Chance Finds Procedure (CFP) defines a series of steps to minimize physical impacts to undiscovered cultural heritage resources from the Amulsar Gold Project (the Project) being developed by Lydian International Ltd. (Lydian). Geoteam CSJC (Geoteam), a fully owned subsidiary of Lydian, is the operating entity of the Project in Armenia. The CFP minimizes impacts to cultural heritage by providing a process for conducting archaeological monitoring of ground disturbing activities and responding to any tangible cultural heritage encountered unexpectedly during Project activities. These unexpected discoveries are known as Chance Finds¹. The CFP will be applicable to any ground disturbing works associated with the Project during the pre-construction, construction, operational, and closure and post closure phases.

In order to mitigate potential impacts to tangible cultural heritage and ensuring Project compliance with relevant Armenian legislation and international standards/conventions, the CFP defines the roles and responsibilities of Project participants in protecting and/or mitigating impacts to cultural heritage sites. The CFP also includes a series of steps to be implemented during all project ground works to identify, document, and assess any potential Chance Find identified during Project activities. The assessment process includes provisions for consulting external stakeholders if it is determined additional mitigation, beyond the scope of the CFP, is required.

The procedures described in this document will be further developed and implemented in consultation with the Ministry of Culture (MoC) of the Republic of Armenia; Lydian/Geoteam; the Cultural Heritage Non-governmental Organization (Cultural Heritage NGO)²; Lydian's Independent Cultural Heritage Consultancy (IHC)³; the EPCM Contractor and other service providers; and any other appropriate Armenian cultural heritage officials or stakeholders. The CFP is one of the main commitments of the Project Cultural Heritage Management Plan (CHMP). It is intended as a stand-alone document, but has also been annexed to the Cultural Heritage Management Plan. It will be implemented along with other components of the Project's Management Plans as described in the Environmental and Social Impact Assessment (ESIA) prepared in 2014.

¹ International Finance Corporation Performance Standard 8, paragraph 8: *Chance Finds Procedures*

² A team of Armenian archaeologists under the direction of Dr. Hakob Simonyan from the MoC have been in this role since the start of the ESIA process.

³ ERM has been in this role since the start of the ESIA process.

2 Need for the CFP

A total of 479 archaeological resources dating from the Neolithic Period up through the Late Medieval period have been recorded in the Amulsar Project area as a result of ESIA baseline studies. In total, 75 of these archaeological resources are located within or within 50 meters (m) of the Project's Disturbance Footprint (DF). The baseline fieldwork was conducted by teams of Armenian and ERM archaeologists, all contracted by Lydian. Table 1 summarizes the periods of Armenian History and Pre-History to which these finds correspond. Potential sites primarily consist of ancient burials, including potential Bronze Age and Iron Age burial mounds or tombs capped or marked with stones. Other archaeological sites identified in the region include: surface scatters of obsidian and ceramic artifacts (probably indicative of subsurface remains), Islamic graves, group burial mounds (*kurgans*), a Late Medieval period cemetery, petroglyphs, and ancient stone structures including domestic structures, settlements, observation towers, possible temples, and the remains of walls. A list of known sites is given in Annex II of the CHMP.

A team of Armenian Archaeologists have conducted confirming and rescue investigations at a sample of these resources as a part of the ESIA effort, a large percentage of these known sites have been avoided by the current project design.⁴ While the majority of the proposed Project Footprints have been subject to cultural heritage baseline surveys, those surveys consisted of pedestrian reconnaissance surveys without any type of intrusive investigations. Based on the number of potential cultural heritage sites identified during these preliminary surveys and the lack of subsurface testing, it is likely that undiscovered, subsurface archaeological resources are present within proposed development areas. These new finds could be similar to those resources already identified by surface reconnaissance, but could also include additional sites from other time periods and with other cultural affiliations indicated in Table 1.

⁴ Current design is as of July 29th, 2014.

Table 1. Timeline of Armenian History and Prehistory

Period	Date ¹	Characteristics and Major Events
Paleolithic Period	2.5 million years ago – 10,000 BC	Movement of humans out of African continent; the earliest evidence of human occupation found outside of Africa north of the Project Area, in the neighboring country of Georgia, dating as far back as 1.8 million years; development of basic stone tools; small groups relying on hunting and gathering.
Mesolithic Period	10,000 – 6,000 BC	Nomadic foraging economy exploiting favorable post-Pleistocene resources; development of microlithic stone tool assemblages; bow and arrow used in hunting; beginning of plant domestication.
Neolithic Period	6,000 – 3,000 BC	Emergence of village life dependent on domestication of plants and animals; first traces of human settlement in the Project Area; manufacture and use of obsidian tools; pottery; mudbrick and stone architecture; anthropomorphic female figurines.
Bronze Age	3,400 – 1,500 BC	Kura-Araxes culture (3500-2400 BC), economic stability based on cattle and sheep raising; Trialeti culture (2200 – 1500 BC); local warlords emerge as men of wealth and power; burial mounds; bronze weapons.
Iron Age	1,500– 600 BC	Development of iron metallurgy, Nairi (1200 – 800 BC), Urartian culture (1000 – 600 BC), advanced agricultural practices.
Antiquity/ Antique Period	590 BC – AD 646	Kingdom of Armenia, expansion under the rule of Tigranes the Great, Hellenism, Armenia becomes Roman province (AD 114- 118); Christianity becomes the state religion (AD 301); foreign incursions from Roman, Byzantine, and Parthian Persian empires.
Middle Ages	AD 646 – 1375	End of Byzantine and Parthian partition of Armenia. Autonomous Emirate of Arminiya under Umayyad Caliphate; Independent Kingdom of Armenia (858-1045); Turkish control (1071-early 12 th century); invasions by Mongols and other Central Asian tribes.
Period of Foreign Control	AD 1376 – 1918	Continued invasions from Central Asian groups; parts of Armenia controlled by Ottomans & Persians, then Ottomans & Russians after the Russo-Persian War (1826-1828); WWI; Armenian Genocide; Democratic Republic of Armenia declared independent in 1918.
Modern Period	1919 – Present	Territorial wars with Georgia, Azerbaijan and Turkey; communism introduced; Armenian Soviet Socialist Republic joins the Soviet Union; WWII; Soviet Union dissolves and Armenia regains independence (1991); formation of modern Armenian national identity
Note: ¹ Dates are approximate		

3 Objective of the CFP

The objective of this CFP is to provide a step-by-step process to confirm, document, and assess any tangible cultural heritage that may be found by chance discovery, in order to mitigate cultural heritage impacts due to Project activities. The procedure applies to all cultural heritage objects, features, or sites identified as a result of any ground disturbing activities associated with the Project's pre-construction, construction, operations, or closure and post closure phases. The protocols outlined in the CFP will be implemented by the Chance Finds Team, which will be staffed and operated jointly by the Cultural Heritage NGO, Geoteam, and the ICHC. Oversight of the Chance Finds Team will be provided by Lydian.

In addition, the CFP has been designed to ensure the Project is compliant with pertinent Armenian national legislation and aligned with international conventions and standards. A more in depth review of the domestic legislation and international conventions/standards is presented in the Project CHMP. The CFP is designed to meet the requirements of the following legislation and international conventions/standards:

- The Mining Code of the Republic of Armenia, Chapter 8-Article 66; and
- International Finance Corporation Performance Standard (IFC PS) 8;

The Mining Code of the Republic of Armenia, Chapter 8-Article 6 establishes the requirements and protocols to be followed if objects representing special archaeological, antiquarian, scientific and scientific-cultural values are identified. It requires that mining operators discontinue works in their respective area(s) if a cultural heritage site or monument is identified; inform the appropriate government institution; and allow for the implementation of preservation regimes if established by the government of the Republic of Armenia.

IFC PS 8, paragraph 8 states that IFC clients are responsible for siting and designing a project to avoid significant adverse impacts to cultural heritage. In cases where the proposed project is located in areas where cultural heritage is expected to be found, the client will develop provisions for managing Chance Finds through a Chance Find procedure to be included in their Environmental and Social Management System (ESMS). A Chance Find is defined by IFC PS 8 as any archaeological, tangible cultural heritage⁵ encountered unexpectedly during project construction or operation. The

⁵ Archaeological tangible cultural heritage, as defined in IFC PS8, refers to tangible moveable or

client will not disturb any Chance Find further until an assessment of the find is made by a competent professional who will determine if additional actions (avoidance, excavation, etc.) are warranted consistent with the expectations in PS 8. The procedures and protocols outlined in the CFP provide for the management of Chance Finds in compliance with Armenian national legislation and is aligned with PS 8.

4 Archaeological Monitoring

The majority of the proposed Project Footprints have been subject to cultural heritage baseline surveys. As a result of these surveys, professional archaeologists have conducted reconnaissance surveys over 522 hectares (ha). These surveys identified a total of 81 potential cultural heritage resources within the Project's DF or within 50 m of the DF. A number of these potential resources will be subject to archaeological evaluation, as defined in the CHMMP, and potentially will be subject to archaeological excavation.

The combination of the completed cultural heritage baseline surveys and the implementation of the Project's cultural heritage commitments outlined in the CHMP (additional cultural heritage survey; archaeological evaluation; and archaeological excavations) will result in a high level of pre-construction archaeological investigation of Project Footprints. This staged approach is designed to collect sufficient information to mitigate impacts to cultural heritage sites within the Project's DF. It is expected that this robust process will reduce the need for archaeological monitors to observe every ground disturbing activity associated with the Project.

Rather than have an archaeological monitor(s) present at every ground disturbing activity, the Project will employ archaeological monitors to monitor activities in sensitive areas (i.e., near previously identified archaeological sites) and to provide on-call support in the event that Project personnel identify a potential Chance Find. The archaeological monitors will be employees of the Cultural Heritage NGO contracted by Lydian/Geoteam described in the Project CHMP. Multiple archaeological monitors may be required based on the size of the work area and the number of simultaneous work fronts. However, an archaeological monitor need not be present at each individual construction site or ground disturbing activity.

The archaeological monitor(s) will be responsible for monitoring multiple locations, moving from location to location during construction. To provide support for the archaeological monitor(s), the EPCM Contractor will have at least one individual that has received training in the identification of cultural heritage resources and the CFP present at each construction or activity site. The trained individual will be responsible for stopping work and contacting the archaeological monitor(s) if a potential Chance Find is identified.

5 Chance Finds Response Procedures

The CFP identifies four tiers (or scenarios) of response for different categories of Chance Finds or potential Chance Finds. The defining characteristics of each tier will be determined in consultation with the MoC, the ICHC Cultural Heritage Technical Lead, and the Cultural Heritage NGO. The response to Chance Finds and potential Chance Finds initially falls on the archaeological monitor(s), who makes an assessment of the Chance Find Tier (1-4) that applies. The procedures used to resolve a Chance Find will depend on the tier to which it is assigned by the archaeological monitor. Less significant Chance Finds will be documented and collected in the field by the archaeological monitors. The identification of a significant Chance Find will necessitate consultation between Lydian International, the ICHC, the Cultural Heritage NGO, and the MoC.

5.1 Chance Find Tiers

The general characteristics of each Chance Find tier are:

- **Tier 1 - Non-archaeological/Cultural Find.** This scenario relates to a non-archaeological or cultural heritage find, such as modern artifacts or architectural features (Figure 2). It is resolved by the archaeological monitor(s) in the field.



Figure 1. Tier 1 Potential Chance Find: Modern Trash

- **Tier 2 – Insignificant Chance Find.** This scenario relates to a Chance Find that is determined by the archaeological monitor(s) to be insignificant. It is resolved by the archaeological monitor(s) in the field. An example of this type of Chance Find would be an isolated pottery sherd or small scatter (Figure 3).



Figure 2. Tier 2 Chance Find: Pottery Scatter

- **Tier 3 – Potentially Significant Archaeological Find.** This scenario relates to a Chance Find that is determined by the archaeological monitor(s) to be potentially significant. An example of this type of Chance Find would be a potential archaeological site or ruin (Figure 4). The response to Potentially Significant Archaeological Finds requires work to stop in the area while Lydian International and the Chance Finds Team consult with the MoC.



Figure 3. Tier 3 Chance Find: Structural Ruins

- **Tier 4 – Human remains and/or Burial-related Material.** This scenario relates to a Chance Find that is determined by the archaeological monitor(s) to potentially contain human remains or burial related material (Figure 5). In the event that potential human remains are encountered, the archaeological monitor will determine if they are human remains and attempt to determine whether they represent archaeological remains or more recent human remains. If they are determined to be modern human remains, the appropriate local authorities, police and/or community representatives, will be contacted by the Chance Finds Team. If the remains are determined to be archaeological, the response to this type of Chance Find requires work to stop in the area while Lydian International and the Chance Finds Team consult with the MoC.



Figure 4. Tier 4 Chance Find: Human Burial

5.2 Chance Find Tiers Responses

It is likely the majority of finds will be categorised in the field by the archaeological monitor(s) as “non-archaeological” (Tier 1) or “insignificant archaeological find” (Tier 2), depending on the nature of the discovery. Such instances require a brief cessation of work in the immediate vicinity of the discovery while the archaeological monitor(s) collects data related to the Chance Find and completes a Chance Find Form. In those instances where the archaeological monitor(s) categorises the Chance Find as “non-archaeological” or “insignificant archaeological find,” work can resume as soon as the archaeological monitor(s) has completed the field records of the Chance Find. Such finds are to be included in the internal documentation of the CFP, but consultation need not be elevated beyond the members of the Chance Finds Team present in the field.

If the archaeological monitor(s) assesses a find as a Tier 3 or Tier 4 Chance Find, all ground works will be stopped in the vicinity of the find and Lydian International, the Chance Find Team, and representatives of the MoC will be notified. The Chance Finds Team will develop a site treatment plan for further assessment, excavation, and/or mitigation of the Chance Find. Typical site treatment plans for Tier 3 and 4 Chance Finds include preservation in place through redesign or specialized construction techniques, or rescue excavations in advance of additional construction work if avoidance is not possible.

The site treatment plan will be submitted to Lydian International and the MoC for review, comment, and endorsement. The plan will be submitted to the Marzpet of Vayots Dzor for review and comment. A copy of the treatment plan will be submitted to the community leaders Gndevaz and Jermuk for their review. In unusual circumstances, such as the discovery of human remains, civil authorities and local community representatives may need to be included in the assessment and consultation processes. After treatment work is agreed and any required excavations carried out, Project excavation or construction activity will be cleared to resume in the area.

Any archaeological excavations, even to assess a newly identified archaeological site, must be conducted by the Cultural Heritage NGO in consultation with Lydian International, the ICHC, and under the guidance of the MoC. It will be the responsibility of the Cultural Heritage NGO to obtain all necessary excavation permits and/or permissions from the Armenian Government.

5.3 Chance Finds Response Procedure

The step-by-step procedures for the Chance Finds Protocol are outlined below. A quick reference flow chart is provided in Figure 6. In the event a Chance Find is encountered by the archaeological monitor(s) or any Project Staff:

1. Ground works will be stopped in the immediate area of the potential Chance Find;
2. The site contractor supervisor/foreman will be informed of the Chance Find;
3. Temporary site protection measures (high visibility warning tape and stakes, avoidance signs in language(s) understandable to the project team) will be installed around the Chance Find, establishing a no-go area;
4. If the potential is made by someone other than an archaeological monitor, the monitor will be notified of the discovery;
5. Other relevant project personnel will be informed of the Chance Find if access to any part of the work area is restricted;
6. The archaeological monitor(s) will perform a preliminary evaluation to determine whether the find is a Chance Find or not. If it is a Chance Find, the

archaeological monitor will determine if it is an isolated find or part of a larger site or feature;

7. The archaeological monitor(s) will assign the find to one of the four tiers outlined above;
8. If the find is not archaeological (Tier 1) or is an insignificant archaeological find (Tier 2), and can therefore be sufficiently documented by the archaeological monitor(s) in the field, the monitor will authorize the removal of protection measures and ground works can resume after the find is documented;
9. The Chance Find will be documented through photography, field forms, notes, GPS coordinates, and maps (collect spatial data) as appropriate;
10. Artifacts will be left in place when possible; if materials are collected they will be placed in bags and labeled by the archaeological monitor(s) and transported to a pre-approved curation facility. Project personnel are not permitted to take or keep artifacts as personal souvenirs;
11. If the archaeological monitor confirms the Chance Find is a Tier 3 or 4 Chance Find, the monitor will contact the Archaeological Monitoring Team Lead. The Team Lead will contact the ICHC and the MoC to initiate discussions to develop a treatment plan;
12. The archaeological monitor(s) will prepare an initial Chance Finds report (for any possible Chance Finds, cultural heritage or not); include site coordinates for use in the cultural heritage database and GIS system;
13. If required, the archaeological monitor(s) will implement an approved treatment plan developed in consultation with the ICHC, Lydian International, MoC, and the Marzpet of Vayots Dzor. The plan will be reviewed by local community leaders from Jermuk and Gndevaz. The plan will be implemented by qualified local archaeologists or using cultural heritage contractors employed by the Project;
14. While treatment is ongoing, the Archaeological Program Team Leader and Supervisor will coordinate with the EPCM contractor and other contractors/service providers and Geoteam, keeping them informed as to the

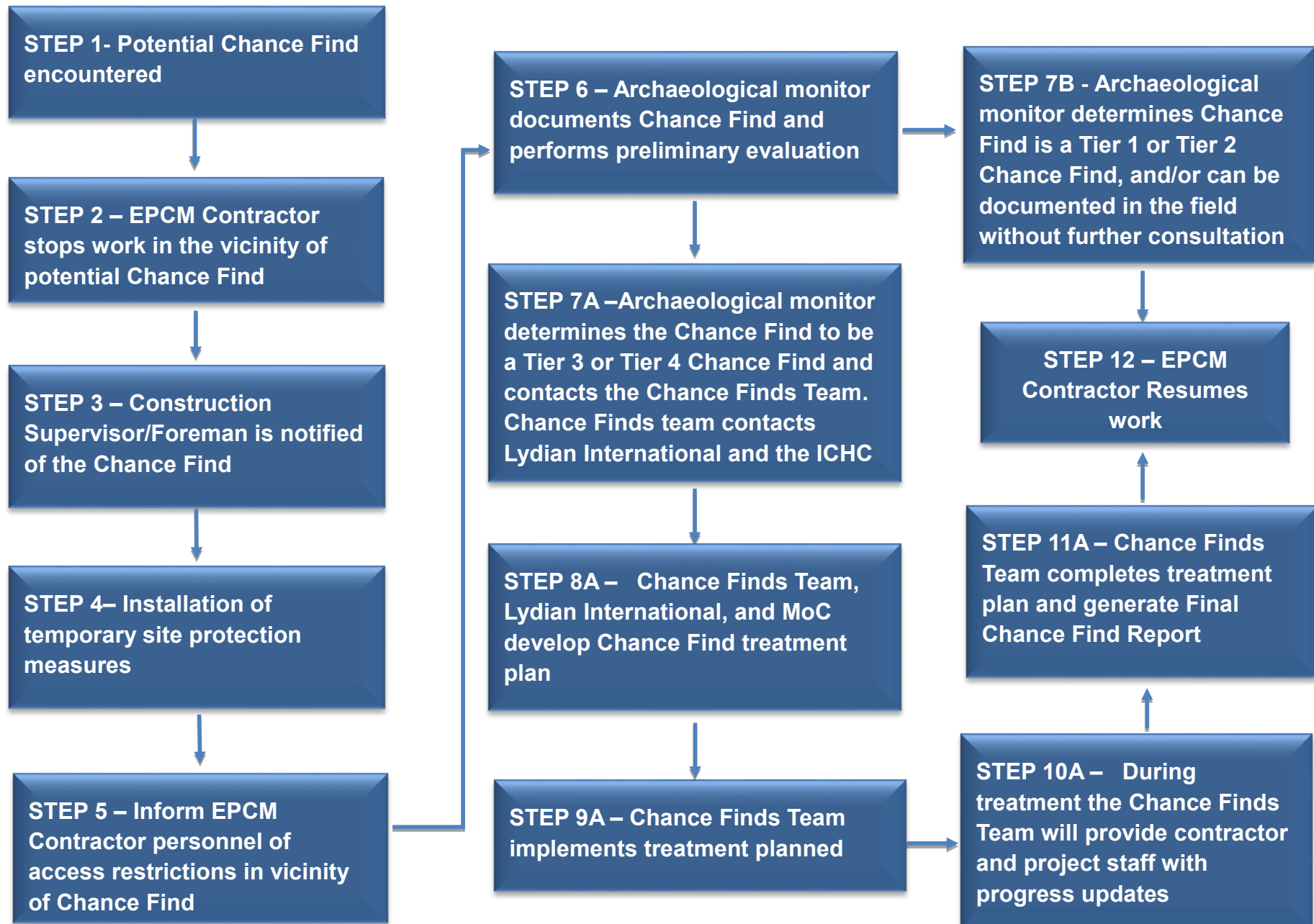
status and schedule of investigations, and informing them when the construction may resume.

The collection of archaeological artefacts or other cultural heritage objects should be minimal as most artefacts should be left where they are found whenever possible. Those retained because they are accidentally unearthed or broken free of their soil matrix will be retained with precise notation of their original location, and with photographs taken of their original context. No artifacts or cultural heritage objects will be permitted to be discarded or removed as souvenirs by any Project personnel.

Artefact photos and site photos may be useful for consultation regarding Chance Finds and should be taken as soon as possible. Artefacts and associated notes and photographs taken by any Project personnel should be given to the members of the Chance Finds Team. Ultimately the artefacts belong to the Armenian government, and Project staff will be responsible for transferring the material to appropriate authorities.

A training program in the recognition of archaeological remains and implementation of the Chance Finds Protocol will be designed by ICHC and the Cultural Heritage NGO. This training will be delivered to all Project employees as a part of HS&E field induction. Tool box talks and refresher sessions will also be provided.

Figure 5. Chance Finds Response Procedure.



6 Roles and Responsibilities

The following Project participants have been identified as having specific roles and responsibilities in the implantation of the protocols outlined in the CFP:

- Lydian;
- EPC Contractor and other contractors/service providers⁶;
- Cultural Heritage NGO⁷;
- Independent Cultural Heritage Consultancy (IHC)⁸; and
- Stakeholders from the government of the Republic of Armenia.

Each organization's specific roles and responsibilities for implementing the CFP are discussed below. The roles and responsibility of each participating organization may increase or decrease based on the protocols established in an Archaeological Monitoring Execution Procedure (AMEP) to be developed as a commitment under the CHMP. The IHC and the Cultural Heritage NGO together comprise the Chance Finds Team. The organizational hierarchy for the all CMP participants is provided in Figure 7.

6.1 Geoteam/Lydian

Accountability for the Chance Finds Team lies with Geoteam CJSC's Sustainability and Permitting Senior Manager. The Sustainability and Permitting Senior Manager is ultimately responsible for implementing the CFP. At the operational level, Geoteam's Mine Environmental Manager will take daily responsibility. The Geoteam staff will:

- Ensure issuance of the CFP to involved parties, including all contractors and service providers working on site;
- Support execution of the CFP;

⁶ To be contracted by Lydian International

⁷ To be contracted by Lydian International

⁸ To be contracted by Lydian International

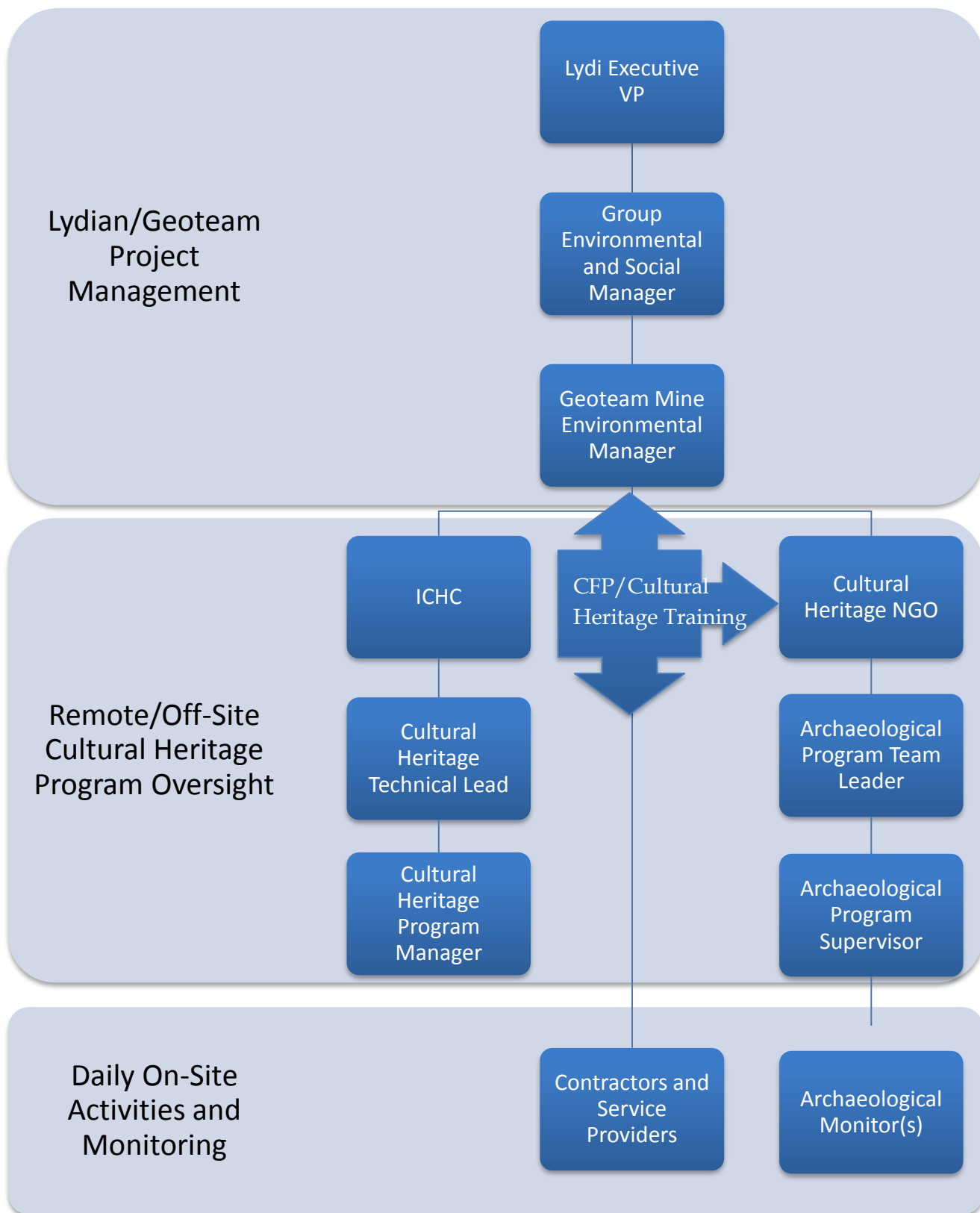


Figure 6. Organizational Diagram for the Chance Finds Procedure.

- Ensure development and delivery of training program to all field-related staff, including EPCM contractor, regarding the CFP and Chance Finds process for Project personnel;
- Coordinate responses to Chance Finds between the internal and external stakeholders, working with the Archaeological Program Team Lead and the Cultural Heritage Team Lead or their designees;
- Meet with contractor(s), any sub-contractor and/or the EPCM Contractor on a weekly basis to discuss the number, types, and locations of ground works to be conducted the following week (weekly look ahead) and use this information to provide information on expected staffing requirements to the Chance Finds Team;
- Coordinate all communication between the Chance Finds Team and all the various service providers on site including the EPCM Contractor;
- Provide internal review comments to the ICHC on periodic reports generated by the Cultural Heritage NGO;
- Review and approve all communication between the Chance Finds Team and the Armenian Ministry of Culture (MoC);
- Ensure all contractors and service providers including the EPCM Contractor working on site support execution of the CFP.

6.2 The contractors and service providers, including the EPCM Contractor⁹

All contractors and service providers including the EPCM Contractor are responsible for:

- Complying with the provision of this CFP in regards to Chance Finds;

⁹ These roles and responsibilities should be addressed in EPCM tender documents and will be subject to review and contractual agreement by Lydian International and the EPCM Contractor.

- Providing a completed Weekly Construction Log to the Cultural Heritage NGO based on a detailed construction schedule with a list of the type and location of planned ground work(s);
- Providing appropriate staff to receive training on the importance of cultural heritage; identifying archaeological materials, deposits and features; and the procedures and protocols of the CFP (referred to as Cultural Heritage Training);
- Providing personnel trained in the identification of Chance Finds and the procedures of the CFP to provide support to the Chance Finds Team in instances where an archaeological monitor is not present;
- Providing Health & Safety (H&S) direction to the Chance Finds Team while they are on site;
- Providing monthly look-ahead work schedules regarding areas planned for ground works;
- Report the discovery of a possible Chance Finds to the Archaeological monitor(s) and Geoteam Sustainability and Permitting Sr. (or their representative) within 1 hour of the initial discovery in order that the investigation of the find can begin promptly; and
- Cooperating with Lydian and/or Geoteam and the Chance Finds Team in resolving any potential Chance Finds, including:
 - Stopping ground works in the area of a potential Chance Find until it is assessed, categorized, and, when applicable, completely documented by the archaeological monitor(s);
 - Excluding ground works around a Chance Find if so directed by an archaeological monitor(s) or by Geoteam; and
 - Placing protective marking around a Chance Find if so directed by an archaeological monitor(s) or by Geoteam Site Environmental Manager.

6.3 Cultural Heritage NGO¹⁰

As a key part of the CFP a Cultural Heritage NGO will be employed by the Project to perform archaeological monitoring in specific locations as well as respond to any Chance Finds identified during construction activities. The archaeological monitors employed by the Cultural Heritage NGO will be responsible for executing the CFP in the field. Potential Chance Finds may be made by any member of the Project, but whether a find is a legitimate Chance Find or not will be confirmed by an archaeological monitor(s).

The Cultural Heritage NGO is primarily responsible for management of the Chance Find Team's field operations, including: recruitment, training and supervision of archaeological staff; management of the program's logistics, materials, and equipment requirements; and regular reporting. Responsible individuals include:

- **Chance Finds Team Leader:** responsible for the overall management of the field operations; establishment and maintenance of data systems; health and safety; and logistics/operations management. The Chance Finds Team Leader will be responsible for managing the Cultural Heritage NGO's coordination and consultation with Lydian/Geoteam; the ICHC; and the MoC.
- **Chance Finds Team Supervisor:** responsible for design of the archaeological monitors' tools and methodologies; staff training; supervision of day-to-day implementation of the CFP; response to Chance Finds requiring in-field meetings; quality assurance; and analyses and reporting.

The Cultural Heritage NGO will be responsible for the following:

- Interacting with the ICHC to provide the archaeological monitor(s) as required by Geoteam and all contractors and service providers including the EPCM Contractor;
- Reporting on site as required by Geoteam ;
- Complying with H&S requirements set forth jointly in due course from Geoteam and/or the EPCM Contractor;

¹⁰ Subject to review by the Armenian Ministry of Culture.

- Completing the Daily Archaeological Monitoring Log form and Chance Finds form;
- Completing and submitting Monthly Archaeological Monitoring Reports to Geoteam and the ICHC, along with scanned copies of the daily logs;
- Reporting Chance Finds in accordance with this CFP;
- Interfacing with Geoteam, all contractors and service providers including the EPCM Contractor and other parties as needed to resolve the status of Chance Finds categorized by the archaeological monitor(s) as Potentially Significant Archaeological Sites or human remains and/or burial-related material;
- Providing subject matter experts, as needed, to identify/classify artefacts recovered during execution of the CFP; and
- Addressing comments on the draft Monthly Archaeological Monitoring Reports from the ICHC.

6.4 Independent Cultural Heritage Consultancy (ICHC)

The CFP will be managed by the ICHC. Responsible individuals include:

- **Cultural Heritage Technical Lead:** responsible for the Chance Find Team design; development and delivery of training; reporting; and ensuring the implementation of agreed project management, quality control and health, safety and environmental standards for the ICHC.
- **Cultural Heritage Program Manager:** responsible for reviewing the monthly reports from the Cultural Heritage NGO and providing feedback to the Cultural Heritage NGO; making staffing recommendations in coordination with all contractors and service providers including the EPC Contractor and the Cultural Heritage NGO; providing guidance on the day-to-day execution of the CFP.

The ICHC is responsible for:

- Providing overall guidance regarding the execution of the CFP;

- Providing the Cultural Heritage Technical Lead and Program Manager;
- Developing and delivering cultural heritage training to all contractors and service providers including EPCM Contractor, Geoteam staff, and the Cultural Heritage NGO regarding the CFP and Chance Finds process;
- Based on the weekly look ahead information provided by the EPCM, the ICHC will make recommendations to the Cultural Heritage NGO and Lydian/Geoteam on staffing requirements for the Chance Finds Team each week;
- Tracking the progress of the CFP through use of the Daily Archaeological Monitoring Logs and the Archaeological Monitoring Monthly reports supplied by the Cultural Heritage NGO and the preliminary construction plans and monthly construction schedules supplied by the EPCM Contractor;
- Providing technical review and comments on the Cultural Heritage NGO's Monthly Archaeological Monitoring reports;
- Using the monthly reports supplied by the Cultural Heritage NGO to generate annual Chance Finds reports and a Final Chance Finds Report at the end of the construction phase;
- Providing regular, in-country audits of the Cultural Heritage NGO's performance in executing the CFP;
- Making recommendations to Geoteam/Lydian and the Cultural Heritage NGO on the number of archaeological monitors required during different phases of construction;
- Submission of final Monthly Archaeological Monitoring Reports to Geoteam and Lydian for review;
- Addressing comments on the final CFP reports from Lydian;
- Providing on-call Tier 3 and Tier 4 Chance Find support to Lydian International and the Cultural Heritage NGO on an as-needed basis, to include In-Country

and Out-of-Country responses within the framework of the ICHC's contract with Lydian International; and

- Technical advice to the Cultural Heritage NGO during recovery of Chance Finds.

6.5 Government Stakeholders

The following representatives, ministries, and individuals from the government of the Republic of Armenia have been identified as CFP stakeholders:

- The MoC and its internal agencies and institutions;
- The Marzpet of Vayots Dzor; and
- Local community leaders in Gndevaz and Jermuk.

The MoC will be responsible for the following:

- Reviewing the Project CFP and AMEP;
- Providing comments on the CFP and AMEP;
- Approving the CFP and AMEP;
- Consulting with the ICHC, the Cultural Heritage NGO, and Lydian International/Geoteam to develop SoWs for archaeological excavations for Tier 3 and 4 Chance Finds (if necessary); and
- Approving SoWs for any archaeological excavations.

The Marzpet of Vayots Dzor will be responsible for the following:

- Reviewing and providing comments on the CFP and AMEP; and
- Reviewing and providing comments on the SoWs for archaeological excavations.

Community leaders in Jermuk and Gndevaz will be responsible for the following:

- Reviewing the CFP, AMEP, and SoWs for archaeological excavations.

7 Modifying the CFP

The Project CFP was drafted by ERM at the request of Lydian International. The MoC will be engaged to confirm that they agree with all of the procedures outlined in this document before they are implemented.

In addition, the CFP is intended to be a “living document” that can be modified based on changes to Project construction plans, Project re-design; changes to roles and responsibilities, the addition and/or subtraction of Project participants, etc. Modifications to the CFP will be made in consultation with the previously identified CFP participants: Lydian International, the EPCM Contractor, the Cultural Heritage NGO, and ICHC. Prior to implementation, this CFP will be accompanied by an updated paper and electronic map linked to a GIS-based Project cultural heritage database that includes known archaeological site locations and sites with high potential to contain undiscovered archaeological sites. The database will be updated on a continuous basis as needed.

8 References

International Finance Corporation

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Republic of Armenia

2012 Mining Code: Chapter 8, Article 66, obtained from Wardell Armstrong International.