



FUNDED BY ADB AND EBRD

**Project:** Construction of Kvesheti- Kobi Road (Tunnel Section) under North-South Corridor  
(Kvesheti-Kobi) Road Project

## CULTURAL HERITAGE MANAGEMENT PLAN



საქართველოს საავტომობილო  
გზების დეპარტამენტი  
ROADS DEPARTMENT OF GEORGIA

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## ABBREVIATIONS AND DEFINITIONS

CRTG/Contractor	China Railway Tunnel Group C. Ltd
CH	Cultural Heritage
Chance Find	Archaeological find (artefact, grave, settlement, etc.) discovered during construction project that haven't been visible at pre-construction surveys and studies
CHM	Cultural Heritage Monitor
CHO	Cultural Heritage Officer
CHMP	Cultural Heritage Management Plan
EIA	Environmental Impact Assessment
Lenders	Donor organizations funded the Project (EBRD, ADB, etc.)
MoC	Ministry of Culture, Sports and Youth of Georgia
NACHP	National Agency for Cultural Heritage Preservation of Georgia
PCR	Physical Cultural Resources
Project	Construction of Kvesheti- Kobi Road (Tunnel Section) under North-South Corridor (Kvesheti-Kobi) Road Project
UBM	Supervision Consultant that oversees the project, makes quality assurance and provides Cultural Heritage Monitor
RD	Roads Department
MRDI	Ministry of Regional Development and Infrastructure



## 1. GENERAL INTRODUCTION

### 1.1 PURPOSE

The purpose of this management plan is to clearly outline the activities related to the construction of the Kvesheti-Kobi Road (Tunnel Section) under the North-South Corridor (Kvesheti-Kobi) Road Project. The primary goal of this plan is to effectively manage and mitigate the various impacts associated with the project, in accordance with the project's cultural heritage commitments as stated in the Environmental Impact Assessment<sup>1</sup> (EIA, 2019). Additionally, it aims to comply with the requirements and conditions specified by the Ministry of Environmental Protection and Agriculture stated in the Environmental Decision N2-354, as well as other relevant documents resulting from subsequent Cultural Heritage surveys and studies conducted between 2019 and 2022 following the approval of the EIA.

This plan builds upon the recommendations highlighted within EIA and recommendations developed by the National Agency for Cultural Heritage Preservation of Georgia (NACHP) given in the Cultural Heritage General Action Plan (Interim and final reports – June/July, 2021) for Kvesheti-Kobi Road Construction Project. The CHGAP has been revised by the NACHP and RD. The valuable feedback, comments and recommendations were taken into account and incorporated into the document.

This CHMP represents an updated version of the existing CHMP.

### 1.2 SCOPE

The scope of this management plan relates to the activities and responsibilities associated with cultural heritage management and protection during construction phase of Kvesheti- Kobi Road (Tunnel Section) project. The Cultural Heritage Management Plan (CHMP) reflects general approaches of the Contractor<sup>2</sup> towards Georgian cultural heritage located within and in close proximity to the project area.

The scope of this updated CHMP is to set out procedures that ensure that the Lot 1 Project adheres to the procedures and standards. Taking into account work completed or in progress, the CHMP sets out the known cultural heritage resources affected by the Lot 1 construction and identifies appropriate actions to minimize or mitigate impacts by the Contractor on the resources as well as unknown resources that might be encountered.

CHMP determines and defines roles and responsibilities between the Contractor, Supervision Company and other stakeholders such as the relevant governmental entities, Lenders.

### 1.3 OBJECTIVES

The key objectives of this document are as follows:

- Update the physical cultural heritage baseline of KKR lot 1;
- To indicate how the 5-phase strategy required by the EIA has been addressed and to identify any gaps;
- To identify site-specific actions that may be required;

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<sup>1</sup> EIA published on the following links: <https://www.adb.org/projects/documents/geo-51257-001-eia>  
<https://mepa.gov.ge/Ge/PublicInformation/81>

<sup>2</sup> China Railway Tunnel Group, Co. Ltd



- To set out a clear procedure for monitoring of remaining areas within lot 1.

#### 1.4 BACKGROUND

Construction of Kvesheti- Kobi Road (Tunnel Section) is a part of North-South Corridor (Kvesheti-Kobi) Road Project ensures continuous traffic throughout the year, improve road safety, and provide access to vital social services for local communities. The project is located in Dusheti and Kazbegi municipalities, Mtskheta-Mtianeti region in the central northern part of Georgia. The length of the new alignment is 22.7 km and will be divided into two construction packages/Lots.

The subject of interest of the presented CHMP is the Lot 1: Tskere – Kobi: 10 km length road includes 8.86 km long tunnel with two cut and cover sections and a junction connecting to the existing road near Kobi. The implementation agency for the project is the Roads Department of Georgia under the Ministry of the Regional Development and Infrastructure.

A wide range of cultural heritage can be found in the Project area. The Khadistskali Gorge itself is often referred as the Gorge of 60 Towers. Accordingly, most of the physical cultural resources (PCR) identified in the Project area which considers 300 m area along both sides of the project road RoW (600 m in total) are towers, in addition to a few churches, some memorials and cemeteries.

Most of the physical cultural resources within the Project area are set back more than 100 meters from the Project Road and are unlikely to be impacted during construction. However, some cultural heritage objects identified in the 600-meter buffer, are located within 100 meters of the project RoW (see detailed information on statuses and distances of CH sites in the tables 1, 2, 3) and from the tunnel section. Thus, there is a possibility of impact on some CH sites. In addition, the probability of impact is expected on monuments / facilities located along the 600-meter buffer zone of the tunnel; some cemeteries, churches, towers, war monuments and religious crosses (CH objects without CH Monument status) have been identified throughout the Project corridor that are within 50 meters of the alignment and could be impacted during construction works, e.g. impact caused by construction equipment or vibration. Furthermore, during excavation works the chance finds are expected.

During NACHP's survey, only eight CH object with a monument status were identified within the Lot 1 - two in Tskere and six in Kobi (associated buildings/elements of Giorgitsminda complex). However later in November 2022, the Church of Kvelatsminda in Tskere was granted with the status of Cultural Heritage Monument. Consequently, there are nine Cultural Heritage Monuments presented within the Lot 1.

Literature reviews and cultural heritage field surveys along the given project sections were undertaken in 2018, 2019, 2020 and 2021, 2022. These baseline and follow-up studies identified a number of sites having scientific and cultural significance and importance which have been considered during designing of the current project scope and during construction activities as well.

#### 1.5 A BRIEF HISTORICAL CONTEXT OF THE REGION

Today's Stepantsminda Municipality (Kazbegi Municipality area, historic Gorge) has been an important historical-geographical unit on the northern border of Georgia since ancient time. Traditionally, it was under the authority of the royal government. Throughout the centuries, the Tergi- Aragvi Gorge has been one of the major roads linking area, culturally and economically not only the North and the South Caucasus, but also the centers of the civilization of Europe, Asia, and the East.

Since ancient time (II century, BCE), at the narrowest part of the river Dariali, there was built a castle with



towers that protected the northern border of Georgia from enemy invasions. (The Greek geographer of the 1st c. BC, Strabo, in the essay of Iberia, described this road and the castle in more detail). Historically this road was called road of Dariali (Georgian Military highway of present-day), and the castle was called - Dari Alan, Aragvis Kari, Kavkasiis Kari, Kaspiis Kari, Sarmatis Kari, and etc. The archaeological material discovered here and the architectural monuments that have been preserved in this area, indicate the existence of the population since ancient times in the Khevi area.

In 1874, bronze items and jewellery were accidentally discovered during the construction of the Georgian Military Highway in Stepantsminda (Kazbegi), near the Church, on the right bank of the Tergi. In 1877, excavations at this site revealed treasure from 6-5CC BC on the old way of reckoning (about 200 units), known in the scientific literature as "Treasure of Kazbegi". The treasure included Achaemenid silver plates, bronze vessels, fibulas, mace head, girdles, human and deer statues, metal daggers, spears and many more. Most of the treasure are preserved in the Moscow State Historical Museum, and the small part - in the National Museum of Georgia. The entire material has been studied and published.

There are plenty of architectural monuments in the region - castles, towers, castle-houses, churches. Particularly significant are the Sioni and Garbani's St. George Churches (IX-X centuries); Gergeti Trinity Architectural Complex (XIII-XIV centuries), Bethlehem Cave-Monastery in Gergeti glacier (X-XII).

## 1.6 WORK COMPLETED

At the time of updating CHMP (June 2023), the works were ongoing at both portals. A substantial construction compound, including a concrete batching plant, crusher, as well as a worker's camp, temporary facilities, such as explosive and construction material storages, has been established at Kobi. The tunnel is being excavated from the northern end using a Tunnel Boring Machine (TBM). 6500 m of the main tunnel and 4370 m of the emergency tunnel have been completed up to the present. Construction of the southern portal and road alignment at Tskere has already commenced, as well as temporary construction facilities including an explosives storage area. 289m of the emergency tunnel from the southern portal has been completed.

## 1.7 PRINCIPALS

This revised CHMP has been prepared in accordance with Georgian law, international financial standards, with particular reference to EBRD's PR8 (2019) and Asia Development Bank's Safeguarding Policy Statement (SPS) (2009). When addressing the documentation and removal of cultural heritage PR8 requires the application of Good International Practice (GIP), while the SPS states that this needs to employ 'the best available techniques'.

## 1.8 LINKS WITH OTHER PLANS

The approach taken in this CHMP needs to be understood in the context of the 5-phase approach to cultural heritage set out in the EIA of April 2019:

- Phase 1, Review of Existing Data – to include desk-based studies, remote sensing and walkover surveys;
- Phase 2 Extensive and Intensive Surveys – to include detailed survey, geophysical survey and trial trenching in order to inform the design of the road, avoiding and minimizing impacts on cultural heritage



in accordance with the mitigation hierarchy;

- Phase 3 Pre-Construction Excavations – where damage to archaeological resources are unavoidable, archaeological excavation should be carried out, resulting in scientific reports and curation of artefacts by museums;
- Phase 4 Chance Finds During Construction – cultural heritage monitors are to be present during construction activities, focusing on higher sensitivity areas but including the whole construction corridor;
- Phase 5 Reporting – dissemination of the results to both specialist and public audiences.

The Environmental Management Plan appended to the EIA, set out detailed requirements for contractors with regard to cultural heritage including the implementation of a Chance Finds Procedure. These include ensuring that evaluation of known sites of archaeological sensitivity are carried out ahead of construction, ensuring that qualified cultural heritage monitors are present during construction and setting out required actions should archaeological remains be encountered.

In addition to the Phase 1 EIA walkover and desk-based studies, Phase 2 surveys were carried out in the course of 2020 by the National Agency for the Cultural Heritage Preservation of Georgia (NACHPG), resulting in a series of detailed reports providing extensive additional baseline information, followed by an Action Plan. This made a number of recommendations including legal designation/protection for a number of sites affected by the proposals including a number within Lot 1. The Action Plan also provided specific recommendations for a number of sites within the Lot 1 area including vibration monitoring, conservation work and fencing.

No sites within the Lot 1 area have been identified as requiring Phase 3 mitigation excavations.

## **2. LEGISLATIVE REQUIREMENTS**

This section provides information regarding the national and international laws and regulations for the protection of cultural heritage.

### **2.1 INTERNATIONAL FRAMEWORKS, TREATIES AND CONVENTIONS**

Treaties and international conventions ratified by Georgia have legal force in cultural heritage protection as in other areas. These include the following:

- The Convention for the Protection of the World Cultural and Natural Heritage (UNESCO 1972);
- The Valletta Convention for the Protection of the Archeological Heritage of Europe (Council of Europe, 1992);
- The European Landscape Convention (Council of Europe, 2000);
- The Faro Framework Convention on the Importance of Cultural Heritage for Society (Council of Europe, 2005)



## 2.2 IFI STANDARDS

### 2.2.1 ADB

ADB's Safety Policy Statement (SPS) sets out the client's responsibility 'for siting and designing the project to avoid significant damage to physical cultural resources'. The SPS requires that the identification of such resources should be informed by field-based surveys undertaken by 'qualified and experienced experts'.

In circumstances where the project may affect physical cultural heritage resources that have been used for long-standing cultural purposes the client will consult with affected communities and national or local regulatory agencies that are entrusted with protecting physical cultural resources.

Where adverse impacts on physical cultural resources are identified the client will identify appropriate measures for avoiding or mitigating these impacts, including salvage documentation where a portion or all of the physical cultural resources may be lost.

Expected to be found as determined during the environmental assessment process, chance finds procedures will be included in the EMP. Chance finds shall not be disturbed until an assessment by a competent specialist is made and actions consistent with these requirements are identified.

Cultural heritage resources will only be removed under the following conditions:

- i) No alternatives are available,
- ii) The benefits of the project outweigh the loss of cultural heritage and
- iii) Any removal is conducted in accordance with international standards and national legislation and employs the best available techniques.

### 2.2.2 EBRD PERFORMANCE STANDARD 8 (PR 8)

PR8 has the following objectives:

- Support the protection and conservation of cultural heritage;
- Adopt the mitigation hierarchy approach to protecting cultural heritage from adverse impacts arising from the project;
- Promote the equitable sharing of benefits from the use of cultural heritage in business activities; and
- Where significant elements of cultural heritage are identified, promote the awareness, appreciation and enhancement of cultural heritage as well as potential socioeconomic benefits for local communities.

PR8 provides a framework 'to protect cultural heritage and to guide clients to avoid or mitigate adverse impacts on cultural heritage in the course of their business operations. The clients are required to be precautionary in their approach to the management and sustainable use of cultural heritage.'

The policy applies to irreplaceable cultural heritage 'irrespective of whether or not it has been legally protected or previously disturbed. With regards to intangible cultural heritage, the requirements of this PR apply only if the physical component of the project will have a material impact on such cultural heritage or if the project intends to use such cultural heritage for commercial purposes'.

PR8 applies to projects which:



- Involve significant excavations, demolitions, movement of earth, drainage, flooding or other changes in the physical environment;
- Are located in, or in the vicinity of, a cultural heritage site recognized by the country of operation; and/or
- May have an adverse impact on the intangible forms of cultural heritage of people including indigenous peoples.

At an early stage of the environmental and social appraisal, the client will identify if cultural heritage is likely to be adversely affected by the project, consulting relevant ministries, experts and local communities.

In assessing impacts on intangible heritage, it should be considered whether the environment is crucial for maintaining cultural identity and practices (including traditional skills, knowledge, beliefs and/or minor dialects and languages).

At an early stage of the environmental and social assessment, the client will identify if any cultural heritage is likely to be adversely affected by the project, and assess the likelihood of any chance finds. In doing so, the client will consult with relevant authorities, experts, local communities and other stakeholders as appropriate.

The assessment process will characterize the baseline and the potential risks and impacts of the project on cultural heritage. The extent of the assessment will be sufficient to characterize the potential significance, likelihood and severity of the impact and take into account the views of key relevant stakeholders. The client will develop and implement mitigation measures to address impacts on cultural heritage in accordance with the mitigation hierarchy and good international practice. Where the assessment has identified that the project may have material risks and impacts on cultural heritage, the client will engage cultural heritage expert(s) to assist in the preparation of a cultural heritage management plan, as appropriate. The client will apply internationally recognized practices for field surveys, documentation and protection of cultural heritage related to the project and ensure the application of such practices to contractors and other third parties.

The client will ensure that provisions for managing chance finds, defined as tangible cultural heritage encountered unexpectedly during project implementation, are in place and included into contracts, as appropriate. Such provisions will include notification of relevant competent bodies of found objects or sites; delivering training to the project personnel, including contractor and sub-contractor employees, on the procedures to follow in case chance finds are discovered; and securing the area of finds to avoid any further disturbance or destruction. The client will not disturb any chance finds until an assessment by a cultural heritage expert(s) is made and actions consistent with national laws and this PR are identified.

The client will carry out meaningful consultation and information provision in respect of the project with all key stakeholders with the view of: (a) identifying cultural heritage likely to be affected; (b) understanding the significance of cultural heritage to stakeholders, including local communities; (c) assessing the impacts and risks; (d) applying mitigation hierarchy; and identifying opportunities for potential community benefit.

### **2.3. NATIONAL FRAMEWORK**

Georgian legislation comprises the Constitution, Cultural Heritage law, international agreements, subordinate legislation, normative acts and governmental decrees, ministerial orders, instructions and regulations. Along with the national regulations, Georgia is signatory to a number of international conventions, including those related to Cultural Heritage protection and mentioned above.

Protection of heritage resources in Georgia is based on the Georgian Law on Cultural Heritage Protection, 2007



(last amended in 2023). This law is regulated by the Ministry of Culture, Sports and Youth of Georgia (MoC) and the National Agency for Cultural Heritage Preservation of Georgia (NACHP). Within this Law, monuments are classified by their significance.

Georgia's law for the protection of cultural heritage (No. 4708-IS of 2007) contains detailed recommendations for the legal protection of cultural heritage monuments, their protection in the context of development and how areas and landscapes of historic/archaeological significance should be designated and managed. The Law follows international Treaties and Conventions and is more detailed.

### **Development Control**

The law sets out procedures for the management of cultural heritage in the context of major development requiring large-scale earth-moving. This requires the developer to carry out archaeological surveys of the affected area including desk-based studies, field surveys and trial excavations. If archaeological sites are identified, the developer is responsible for commissioning 'a comprehensive study of the archaeological strata and objects uncovered on the study site' and to produce reports including plans and sections (Article 14).

The law also requires the reporting of any previously unknown archaeological discovery to the Ministry of Culture within 7 days (Article 10). It also sets out the requirements for licensing by the Ministry of Culture for any planned archaeological works (Article 47).

### **Designation**

The Georgian system of legal designation of cultural heritage covers individual monuments ('cultural properties'), 'buffer zones of historically developed areas' (conservation areas), 'regulation zones', 'protected archaeological areas' and protected historic landscapes.

### **Cultural Properties**

The Ministry of Culture is responsible for maintaining a State Registry for Cultural Properties, which includes immovable, movable and non-material cultural 'objects' (Article 16). This includes a wide range of categories including archaeological, architectural, engineering, urban settlement, parks and gardens, paleontological, artistic monuments, commemorative, ethnographic, fine art, archival and properties related to the development of science, technology or industry (Article 19). Cultural properties can be categorized as being of national importance 'if such cultural property has special artistic or aesthetic value, or if it is associated with an event or a person of special historical significance, or if it is related to a stage of national development, and if it has distinctive general and national values' (Article 18).

Not all cultural heritage 'objects' are legally protected – only those confirmed as being 'cultural heritage monuments' are protected by law. When the NACHPG nominates an object as meriting 'monument' status, it is automatically protected for 6 months, which can be extended for an additional 6 months.

Listing of a cultural heritage site as a Cultural Property requires the creation of a registration card, containing key information about the site, including recommendations for its preservation and protection (Article 16). All cultural heritage monuments are protected by buffer zones: a minimum of 50m radius for 'physical protection'<sup>9</sup> and 300m (500m for monuments of national significance)<sup>10</sup> for 'visual protection' (Article 36). Development that is forbidden within the inner 'physical' buffer zone includes activities causing vibration, storage of volatile substances, and the construction of structures that do not contribute positively to the structure's setting. Development is prohibited within the property's outer visual buffer which 'may damage the historically evolved environment of a cultural property, or hinder optimum visibility and full perception of the cultural property and



diminish its value’.

Nine sites within 300 m of the road corridor have been accorded the status of protected Cultural Heritage Monument as follows:

- the Giorgitsminda complex and associated settlement remains (see Map 1 & Table 1, sites);
- Naraidze and Zakaidzeebi towers at Tskere (; **Error! Reference source not found. & 3**);
- Kvelatsminda chapel in Tskere.

### **Buffer Zones**

A ‘buffer zone’ is defined as ‘a territory where a large concentration of cultural properties and other objects of cultural heritage have been discovered, and where a network of streets, developed areas, planning patterns and morphology are preserved in an authentic form’. Their purpose is ‘to preserve the historically evolved spatial and architectural environments of cultural properties and the traditional forms and appearance of the developments....’ (Article 37). The scope and nature of development within such buffer zones is strictly regulated.

### **Regulation Zones (Controlled Development Zones)**

Regulation zones are defined as areas where cultural heritage is partially preserved and are designed to ‘ensure the harmonized merger of historical and new developments’ (Article 38).

### **Archaeological Protection Zones**

Archaeological protection zones are intended to ‘ensure the protection of archaeological ensure the protection of archaeological cultural properties, cultural strata, or discovered or explored objects of archaeological interest and their surroundings’. Activities prohibited within these zones include earthworks and the dumping of waste. Other activities, such as the movement of traffic or cultivation, can also be prohibited if they present a threat to the buried remains (Article 40).

### **Historic Landscapes**

Historic landscapes can be formally designated in order to ‘to preserve and restore the appearance of immovable objects of cultural heritage and buffer zones for the protection of cultural heritage, and historically developed natural environments related to historical events, tales and folklore’ (Article 39). Objectives include the preservation of the natural environment, to regulate vegetation cover, protect meadows and woodland.

Permitted development within designated historic landscapes is limited to: the restoration of historic buildings; structures that support the conservation or enhancement of the landscape, developments (including linear infrastructure) ‘which do not significantly change the appearance of the historical relief and landscape or diminish the perception of cultural heritage’; or economic activities that support the objectives of the landscape designation.

### **Definition of Cultural Heritage**

The Law of Georgia on Cultural Heritage, with which the Project aims to comply, recognizes also both tangible and intangible cultural heritage, and provides the following definitions:

Tangible Cultural Heritage – any immovable or movable objects, documentary materials, as well as gardens, parks, sites of landscape architecture, historic settlements, historically shaped environment that have architectural, artistic, agricultural, archaeological, anthropological, ethnographic, monumental, urban planning interest or are related to technology progress, and possess artistic, aesthetic, historic, memorial value, and are



associated with the history, evolution, folk-lore, religion and customs, and earlier or present civilizations;

Intangible Cultural Heritage – oral traditions, expressions, including the language as a carrier of material cultural heritage, performing arts, social practices, customs, knowledge and skills related to traditional craftsmanship, also tools, articles, artefacts and cultural contexts recognized by communities, groups or individuals as part of their cultural heritage.

In Georgia, important cultural heritage resources may be designated *Cultural Heritage Monuments*. *Cultural Heritage Monuments* are protected under the law. “Protected by law” means that the Monument must be preserved - no changes can be made to the Monument that would in any way detract from its importance.

A cultural heritage resource may be important enough and therefore eligible for Monument status if it possesses historic or cultural value based on antiquity, uniqueness, and authenticity. That is, the resource must be at least 100 years old; one-of a kind; and possess originality with respect to structure, environment, context, function and/or features, contemporaneousness of creation or evolution.

Georgian Law recognizes the following types of Cultural Heritage Monuments:

- Archeology
- Architecture
- Engineering
- Urban Development
- Gardening and park landscaping art and landscape
- Architecture
- Paleographic
- Monumental
- Memorial
- Ethnographic
- Fine art
- Documentary
- Related to the progress of science, technology, and industry

The Project is concerned with both - Tangible and Intangible Cultural Heritage which contain known and potential archaeological sites, remains of the architectural objects and complexes and the sacred sites having specific spiritual and religious value and all rituals associated with these sites can be considered as an intangible heritage.

Approaches to the archaeological sites and architectural objects within the Kvesheti- Kobi Road (Tunnel Section) Project locations fully comply with the Georgian legislation on CH heritage, 2007, international treaties and conventions .

## **2.4 The CONSTITUTIONAL AGREEMENT BETWEEN THE STATE OF GEORGIA AND THE APOSTOLIC AUTOCEFALOUS ORTHODOX CHURCH (2002)**



This Agreement regulates the relationship between the state and the Church. Its provisions have a major influence on the management of cultural heritage in the country. By this agreement all the religious buildings and related structures on the territory of the country, in use or without function, standing or in ruins, together with their parcels and also all the immovable ecclesiastic treasures protected in museums and archives are handed down in the ownership of the Church of Georgia. The MoC must agree with the Church of Georgia in the process of adopting protection zones, rules and methodologies, planning and approving rehabilitation projects or scientific research of movable and immovable religious monuments. According to the Concordat the church is the owner of the majority of immovable listed properties in the country, most of which, at the same time, are living heritage sites, with the religious function. Because of this special circumstance, the specific rules for maintenance and protection of these properties need to be agreed.

### **3. ROLES AND RESPONSIBILITIES**

#### **3.1 ROADS DEPARTMENT OF GEORGIA**

The Roads Department of Georgia (RD) sits within the Ministry of Regional Development and Infrastructure (MRDI). RD is the Employer for the KKRP and is ultimately responsible for its design and implementation.

#### **3.2 NATIONAL AGENCY FOR CULTURAL HERITAGE PRESERVATION OF GEORGIA**

The National Agency for Cultural Heritage Preservation of Georgia (NACHP) is the Georgian government agency within the Ministry of Culture and Sport responsible for the management and protection of cultural heritage in the country, such as approval of all heritage-related works, issuing excavation licenses, acceptance/non-acceptance of all CH activities and associated reports, nomination/denomination for the status of CH monuments, as well as, monitoring and auditing of all CH related activities. The agency has the authority to carry out assurance over all cultural heritage activities associated with the Project.

For this particular construction project, as well as for other construction projects, the NACHP's activities are based on the Georgian Legislation on Cultural Heritage (2007) and its updated versions, where the last update took place in 2023.

#### **3.3 THE CONTRACTOR - CRTG**

##### Project Manager

The project manager has overall responsibility for cultural heritage protection. He will be responsible for the review of any finding or incident report submitted by the construction manager each month. Is responsible for the facilitation of immediate actions on important issues related to protection of the cultural heritage sites.

##### Construction manager

The construction manager has responsibility for the facilitation of the present plan and management of the H&S team responsible for the plan's actual implementation.

##### Environmental Manager

The environmental manager is responsible for the implementation of the Cultural Heritage Management Plan and monitoring throughout the construction activities for the archaeological findings. Environmental Manager supports the Cultural Heritage Officer in all concerns and issues associated with protection and preservation



of cultural heritage.

### The Cultural Heritage Officer (CHO)

The Cultural Heritage Officer is the main focal point for all cultural heritage issues associated with the Project and ensures protection and preservation of the cultural heritage objects and sites located close to the project area. CHO is responsible for the initial identification of sites and preparation of the initial reports as well as registration of all issues related to cultural heritage issues.

### The Cultural Heritage Officer:

- Attends all earth moving activities to ensure protection and proper treatment of the Chance Finds;
- Develops Daily Reports;
- Develops Chance Finds database;
- Provides technical support to the Cultural Heritage Contractors (archaeological excavations, monuments' stabilization and conservation, vibration monitoring, etc.);
- Represents the main focal point for the Cultural Heritage Monitor of Supervision Company UBM;
- Develops weekly reports for the Supervision Company UBM.

### The Contractor shall be responsible for:

- Notification relevant people and authorities in case of Chance Finds (see Attachment 1. Chance Finds Procedure);
- Any work to be undertaken by contractor outside the identified easement is subject to a Cultural Heritage Survey;
- Interface with Supervision company E&S team and liaison with CH Monitor to prevent damage and promote preservation of cultural heritage objects/sites;
- Regular reporting to the Supervision Company about conditions of CH sites, risk of impact, measures taken for their protection or new findings (if any) during ongoing construction activities/earth works;
- Reporting on Chance Finds to the relevant authority and Supervision Company;
- Suspending activity if Chance Find is suspected and communicate to the E&S team and CH Monitor;
- Providing site supervision including health and safety, labor, tools, equipment (including mechanical excavator as required by Cultural Heritage Contractor), facilities and attendances to chance find excavations;
- Providing and installing any identified measures such as bog mats over archaeological sensitive areas, demarcation of cultural heritage sites to be avoided, or other measures to assist the CH program. This will be in areas to be determined by CH Monitor of Supervisory Company;
- Construction activities including implementation of mitigation measures and assisting with Chance Find Procedure.



### 3.4 SUPERVISION COMPANY – UBM

UBM is a supervision company that oversees the entire project, makes quality assurance of all activities during the project implementing, provides Cultural Heritage Manager and Cultural Heritage Monitors and takes responsibility to act as a mediator between the Contractor and RD on all issues related to Cultural Heritage.

#### Cultural Heritage Manager

A Cultural Heritage Manager (CHM) will be determined by the UBM to provide oversight of all measures outlined in this CHMP. He/she will be responsible for the following:

- Ensuring that all aspects of the CHMP are fully implemented;
- Preparing method statements in keeping with national legislation, international standards and GIP for additional evaluation and/or mitigation fieldwork in consultation with the NCHAPG, if necessary;
- Maintaining and overseeing programme of archaeological works;
- Provide quality assurance of works undertaken by Cultural Heritage Contractors (archaeological excavations, site conservation, vibration monitoring, etc.)
- Reviewing the monthly reports prepared by the archaeological monitors;
- Liaising with Contractor, employer and NACHP to ensure that all parties are kept informed about the progress of archaeological works;
- Liaise with the Client and Contractors to ensure that any design changes and/or temporary works (such as topsoil storage, contractor camps, materials storage areas, haul roads or borrow pits) are preceded by appropriate archaeological surveys (if needed), reporting and impact assessments; and
- Ensure that the project GIS database of cultural heritage sites is maintained and kept up to date.

#### Cultural Heritage Monitor

The nominated CH Monitors should have the appropriate qualifications and experience to oversee both archaeological and architectural sites, including vibration monitoring.

Supervision Company shall ensure that the CH Monitors will advise the Contractor's Supervisors on procedures to be followed in line with the Chance Finds Procedure. Supervision Company/UBM via CHM will be empowered to temporarily stop work and suspend construction, if artefacts are seen or any potential damages to the cultural heritage objects/sites are visible.

CH monitor shall ensure that known CH sites within 50m of the road centerline, or other construction areas will be demarcated throughout the construction phase.

CH monitor shall ensure that any archaeological sites identified during construction are archaeologically recorded.

#### CH Monitor shall implement the following requirements:

- Provide induction training to personnel regarding the issues related to the cultural heritage, its value, necessity and measures of protection, safety, impact avoidance/mitigation and monitoring aspects, identification of potential CH objects, chance find procedures, including ownership of finds, chance find notification rationale, will be included in induction training of the staff in particular that responsible for earthworks and drivers.
- Oversee all works implemented by the Contractor's Cultural Heritage Officer;
- Ensure any ripping or other ground disturbance activities required during reinstatement work will be planned to avoid CH objects located nearby and protect archaeological evidence that has been preserved



in-situ

- Undertake site assessments (taking into consideration ecology, cultural heritage, social, erosion risk, water resources) if the need for additional land is identified following submission of the EIA
- Monitors and makes quality assurance on the works made by the Cultural Heritage Contractor (archaeological excavations, site conservation, vibration monitoring, etc.)
- Report to RD (monthly progress report)
- Upon specific request develops Monthly/other reports and communicates them to the NACHP.

### 3.5 CULTURAL HERITAGE/ARCHEOLOGICAL CONTRACTOR

Cultural Heritage Contractors are the organizations in case of any urgent works (rapid pre-construction archaeological excavations or in case of Chance Finds, urgent rehabilitation/stabilization of the architectural or other above-ground object, etc.) contracted by CRTG to be responsible for:

- Directing and providing expertise to archaeological excavations and recording, study and reporting of the materials discovered during pre-construction and construction phases and provide appropriate reports upon Contractor's request;
- Directing and providing expertise to the above-ground monuments (architectural, stand-alone, remains, etc.) studies/physical works and reporting associated with the Project locations.
- Propose recommendations via the Contractor's site supervisor and/or CH Monitor that may assist in achieving objectives of Cultural Heritage Management Plan or Chance Finds Procedure.
- In case the NACHP is contracted by contractor as an archeological contractor, the rules and responsibilities CH management and protection will be same as for any other contractor.
- Georgian legal requirements for archaeological work (No. 4708-IS of 2007) include the following:
  - Appropriate protection should be ensured for all archaeological finds – they will normally be kept in the nearest museum (Article 11);
  - Any investigation of archaeological remains found within the construction corridor will involve 'a comprehensive study of the strata and objects' presented in a report which should include mapping, site plans, stratigraphic sections, identification of character and age of archaeological remains, photographs and graphic records, analytical processing of material recovered from the excavations, and the presentation of conclusions (Article 14)
  - According to the Article 51 of Law of Georgia on Cultural Heritage (Article 51):
    1. If, as a result of natural and environmental factors or force majeure circumstances, a cultural property or archaeological site is under the threat of irreversible damage or deterioration, and there is an urgent need to conduct emergency archaeological and research works or preventive conservation activities on the cultural property, and if complete project documents cannot be prepared within the time frame, an appropriate permit may be issued on the basis of incomplete project documents.
    2. In the case of an urgent need under paragraph 1 of this article, only archaeological or research

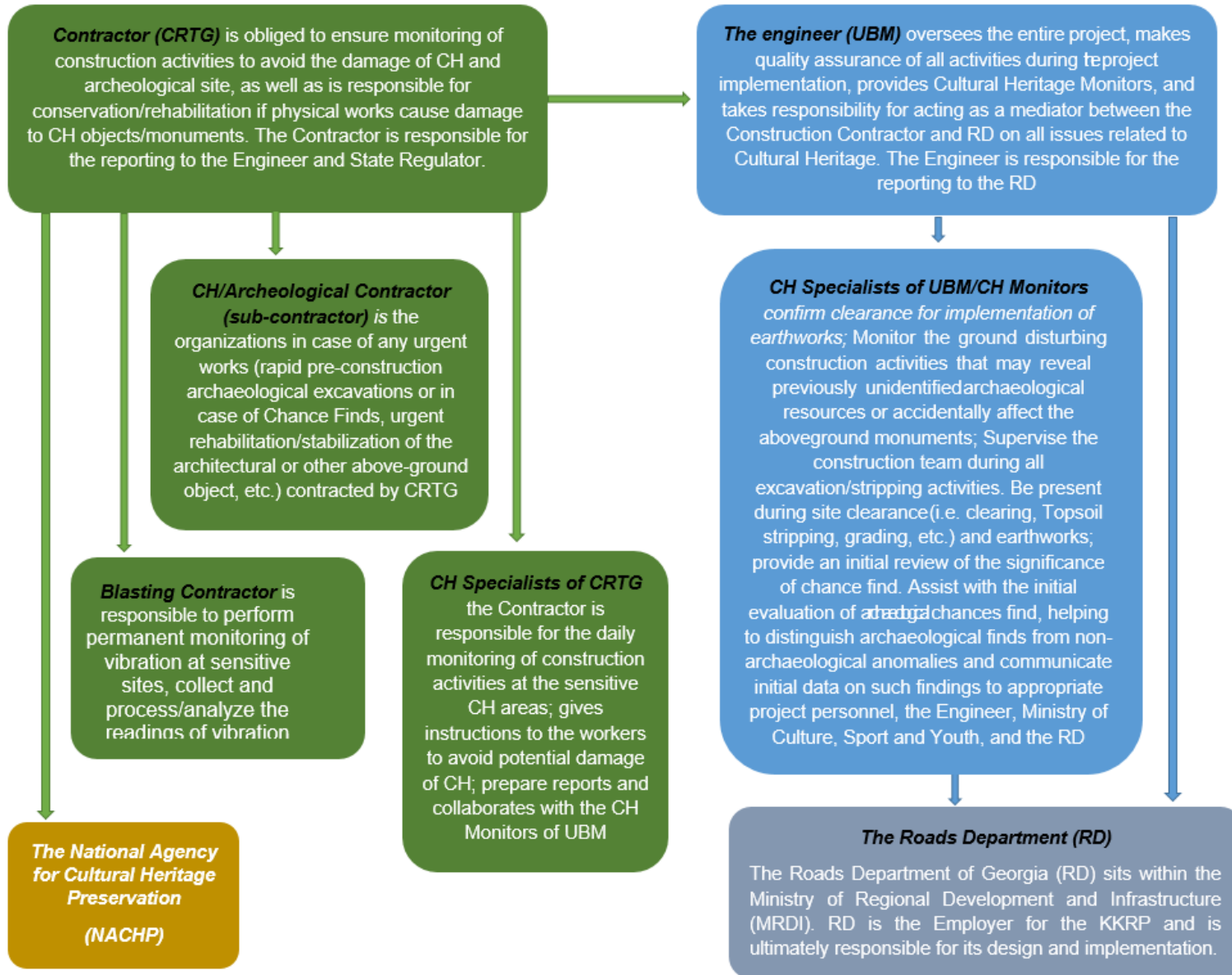


works, and preventive conservation activities may be conducted. In this case, the project document of the works shall include the following parts:

- a) An executive summary. The executive summary shall specify the exact name of the cultural property or archaeological site (in the case of a movable cultural property, the name of its storage location), and if the exact name does not exist, the name of its location and its exact address. The executive summary shall substantiate the following:
  - a.a) The urgent need to conduct the works and the impossibility of preparing full project documents under the given circumstances;
  - a.b) the type, category and volume of the works to be conducted, the technologies and methodology to be used, and confirmation of their compliance with the legislation of Georgia;
  - a.c) in the case of preventive conservation, the estimated length of the effectiveness of the preventive conservation, and the type of further activities and estimated time frames for their execution;
- b) Detailed photographic material showing the property and the damage thereto;
- c) In the case of an immovable property, a layout plan of the study area with the respective scale and accurate coordinates;
- d) In the case of archaeological works, the provision of conditions for the conservation and cultivation of properties and materials discovered as a result of the works to be performed, and for their proper placement and storage in an appropriate depository;
- e) A schedule of works on the basis of calendar days (and in the case of the archaeological site, showing the sequence of respective sectors and appropriate works);
- f) A report on the estimated results of works performed.

The structure of responsibilities in field of CH protection for all parties involved in the project is presented below:

## Structure of responsibilities in field of CH Protection



### **3.6 IFI'S**

As financial institutions supporting the KGRP, ADB and EBRD have a responsibility to ensure that the KGRP Lot 1 is undertaken in line with their policies and standards. They will monitor the construction process and ensure it is being carried out in accordance with their heritage protection standards. If aspects of the project implementation fall below these standards they will advise RD and provide recommendations about how any gaps can be addressed.

## **4. COMPLIANCE MANAGEMENT**

North-South Corridor (Kvesheti-Kobi) Road Project EIA includes the commitments relating to cultural heritage management and protection to be implemented by the Project.

Also, the Project shall consider and apply special requirements and conditions set up by the Ministry of Environmental Protection and Agriculture issued within the EIA approval document.

The Project shall comply with the recommendations issued by the National Agency for Cultural Heritage Preservation of Georgia.

The Cultural Heritage Management Plan is a live document and updated according to any changes related to the legislation, responsibilities or statuses if/when they take place.

## **5. PRE-CONSTRUCTION CH STUDIES AND IDENTIFIED CH OBJECTS AND SITES**

The studies of the project area started in well advance before construction. The cultural heritage surveys were implemented by the Georgian archaeologists, historians, art historians, architects and by other specialists whose job directly or indirectly is related to study, conservation and preservation of the cultural heritage monuments.

Studies that have been implemented by the different groups of experts during 2018-2020, 2021 and 2022 have identified a number of the CH objects and archeological sites within and in close proximity to the project area (both lots). The tunnel section of the project, in particular, encompasses several CH objects, with the majority concentrated in the villages of Kobi and Tskere.

The comprehensive CH survey has been done in 2020-2021 by the National Agency for Cultural Heritage Preservation of Georgia within the whole project area including Kobi and Tskere villages, adjacent to the territories where tunnel portals, landfills and the campsites were to be constructed. The survey identified a number of new CH sites and objects that haven't been included in the Projects EIA (they were not registered in existing databases). NACHP team made registered them in the NACHP inventory and gave respective ID numbers/codes. Therefore, all CH sites and objects given in this management plan will have the ID numbers assign by the NACHP.

A number of the CH sites and objects are located relatively close to the project footprint and the potential risks to the CH is still exist, therefore the range of comprehensive mitigation measures has been developed to ensure protection of all CH sites within the project area.

The areas marked in advance on the basis of studying aerial photos, satellite and topographic maps, bibliographic archive materials, which fell into the project construction sections, were revised and described in detail. In the case of revealing a single object bearing signs of cultural heritage, there have been carried out their photo fixation, defined geographical coordinates of their presumable distribution area and described them

in detail. Eventually, final maps of their relation to the project areas were drawn.

Besides of abovementioned, prior to the earth works the Supervision Consultant's CH monitors carried out the CH preconstruction survey. Contractor is allowed to proceed the construction activities only after CH clearance.

## 5.1 KOBI VILLAGE

### Tangible Cultural Heritage

Village Kobi, located opposite the northern tunnel portal of Lot 1, is situated at the confluence of the Baidara, Narvani and Tergi Rivers at a critical strategic location on the transboundary road. In the early middle Ages, its strategic location guarding approaches from the north made it an important defensive location for the Georgian government. The Kobi section of the 'military road' (historical name) was maintained by the locals. There was an inn and a horse-changing road station at Kobi – near the surviving post office - which existed throughout the nineteenth century.

The project area (north portal) is located on the left bank of Mtiuleti's Aragvi (known as White Aragvi) on the right side of the Georgian highway. Survey was done near the villages Kobi, at the areawhere are supposed to take place tunneling in the mountains and related earth works.

Among the recognized cultural heritage sites, the survey identified the remarkable complex of Giorgitsminda (ID: 536), which consists of a fortified tower, the St. George Church (ID: 18546), and a bell tower (ID: 18547) (Fig. 1). Situated approximately 276 meters from the right side of the Mtskheta-Stepantsminda-Larsi highway, this complex has the status of a Cultural Heritage Monument.

Adjacent to the St. George complex, on the meadow nestled at the base of a wooded slope, lies St. George's niche (ID: 11810) (Fig. 2). Currently, the niche is enclosed by a fence to protect it from potential damage during ongoing construction works. This niche is a place of worship, where the local population congregates during St. George festivals. Furthermore, on the left side of the present motorway, there is a memorial erected in honor of soldiers who never came back from war – War Memorial (Fig. 3). It should be noted, that none of these sites have the legal status of Cultural Heritage Monuments.

Distribution of the CH monuments and objects at Kobi are shown below on the maps 1 and 2.

Other significance cultural sites nearby are a series of cemeteries on both sides of the Narvani river. (Map 3)

### *Traditions<sup>3</sup>*

The traditions of Kobi is quite distinct from that of the Khada Valley to the south. It sits within a different region – Khevi – and contains a mixed population of Georgians and Ossetians. There is a powerful tradition of hospitality among the Mokhevi, where the 'guest is God's'. While the overall belief system is Christian, the strong influence of pre-Christian belief systems, aligned closely with the forces of nature and containing stories of many spirits and supernatural beings. Every house traditionally has its own guardian spirit.

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<sup>3</sup> Corresponds term "Intangible heritage" of EBRD PR 8.

## 5.2 TSKERE VILLAGE

### Tangible Cultural Heritage

The village Tskere is located at the east of the southern tunnel portal. The origins of the settlement dates back to at least the early Middle Ages (the 4th-9th centuries AD) but very probably earlier. Ruins of three characteristic backed towers - the Naraidze (ID: 6606) (Fig.4), Zkaidze (ID: 6605) (Fig. 5) and Mtavarangelozi tower (ID: 14843) (Fig.6) - that may date back to this period stand at the core of the village. These were sacred as well as defensive structures – a pattern that characterizes much of the built heritage and culture of the Khada valley.

To the west of these towers is the Kvelatsminda Chapel (ID:6584) (Fig. 7), which sits within an old graveyard containing an 18th century crypt, also ruins of a mill and associated settlement site in the gorge of the Khadistskali River to the east.

A niche dedicated to Kviratskhoveli (ID: 35123) (Fig. 8) is located on the track leading north out of the village. A tower/chapel complex also dedicated to Kviratskhoveli (ID: 11928) (Fig. 9) stands on a crag overlooking the valley 600m to the west, from a height of some 200 m.

Distribution of the CH monuments and objects at Tskere are shown below on the maps 4 and 5.

The road in Tskere area runs along the old and the new cemeteries, which are currently accessed from the south side of the plot. The proposed alignment is close to this area but does not directly interfere with the cemetery. Consultations with villagers in Tskere have led to design changes to protect the cemetery through reinforcement of cut slopes and modifications to their location and slope.

Furthermore, to avoid any kind of impact on the cemetery it was fenced by the Contractor and is under the regular monitoring of CH monitors (maps 6 and 7). Also, temporary accesses to the cemetery during the construction time have been adopted at the design. Also, Tskere section of the road, the alignment is proposed to bypass the village on the north side, which runs close to the riverbed. It is not expected that there will be archaeological objects in the area; interviews with the local residents and owners of the land plots located in this section indicated that no archaeological finds have been made in this area.

### Traditions<sup>4</sup>

While entirely culturally Georgian, Tskere shares many other aspects of its traditional culture with Kobi. There is a similar mixture of Christian forms and pre-Christian rituals and traditions. There are many stories of devils and elves that live in the surrounding landscape.

Key holidays and festivals at Tskere include Alaverdoba, Ascension, Peritsvaleba, Mariamoba, Giorgoba. The main holiday of the valley and the village was Khadijroba, a week-long festival held in July. Starting on Saturday, the community went up the valley to the Alaverdi shrine (30) and prayed. On Sunday, the men and children of the villager walk up to the Kviratskhoveli church (28) above the village to the west. During the procession, men sing songs and bring sacrificial offerings of sheep. Monday is a day of visits and feasting.

In terms of handicrafts, the village has a strong tradition of weaving and dyeing that is still preserved by an elderly resident, Ana Bekauri.

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<sup>4</sup> Corresponds term "Intangible heritage" of EBRD PR 8.

### 5.3 MUGHURE VILLAGE

#### Tangible Cultural Heritage

Mughure is a partially abandoned village (two families still use it as a basis for pastoral agriculture in the summer) situated less than 700m south of Tskere on the west side of the valley (falling within the 1km study area), around 600m south of the Lot 1 tunnel portal and 350m south of the point where Lot 1 and Lot 2 meet. The main families of the village are the Zakaidzes, Jermizashvilis and Naraidzes. It is included here because the track leading south from Tskere to Mughure is being used by construction traffic to access an explosives storage facility and soil storage area.

It should be emphasized that arrangement of explosive storage facility was approved by the NACHP on May 2022.

The main historic village core is located on a north-west to south-east trending ridge that overlooks gorge containing a stream that meets the Khadistskali River to the south. There are traces of medieval towers to the north and south of the main group of surviving buildings. Mughure's churches and cemetery associated stand on the lower slopes of the valley to the east. To the south-east of the main historic settlement is located a Church of a Virgin (ID: 13716) (Fig. 10) and backed tower (ID: 13939) (Fig. 11), with the ruined remains of a watermill in the village below (ID: 35105) (Fig. 12). Immediately west of this – and south of the haul road – is a large village cemetery including some large tombstones with inscribed reliefs.

#### Traditions<sup>5</sup>

Traditional beliefs of the village are very similar to that of Tskere. In terms of crafts, women were known for spinning and weaving wool, while the men were famous for building in stone and leatherwork.

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<sup>5</sup> Corresponds term "Intangible heritage" of EBRD PR 8.

**Fig. 1 Complex of Giorgitsminda – Kobi Village**

**Rectangular tower with bell**



**Church**



**Backed tower**



**Fortification wall**



**St. George complex and the construction footprint**



**Fig. 2 St. George's Niche – Kobi**



**Fig. 3 War Memorial – Kobi Village**



**Fig. 4 Naraidze Tower – Tskere Village**



**Fig. 5 Zakaidze Tower – Tskere Village**



**Fig. 6 Mtavarangelozi Tower – Tskere Village**



**Fig. 7 Kvelatsminda**



**Fig. 8 Kviratskhoveli Niche – Tskere Village**

**Fig. 9 Kviratskhoveli Complex – Tskere Village**



**Fig. 10 Church of Virgin – Mughure Village**



**Fig. 11 Backed Tower – Mughure Village**



**Fig. 12 Old Cemetery – Mughure Village**

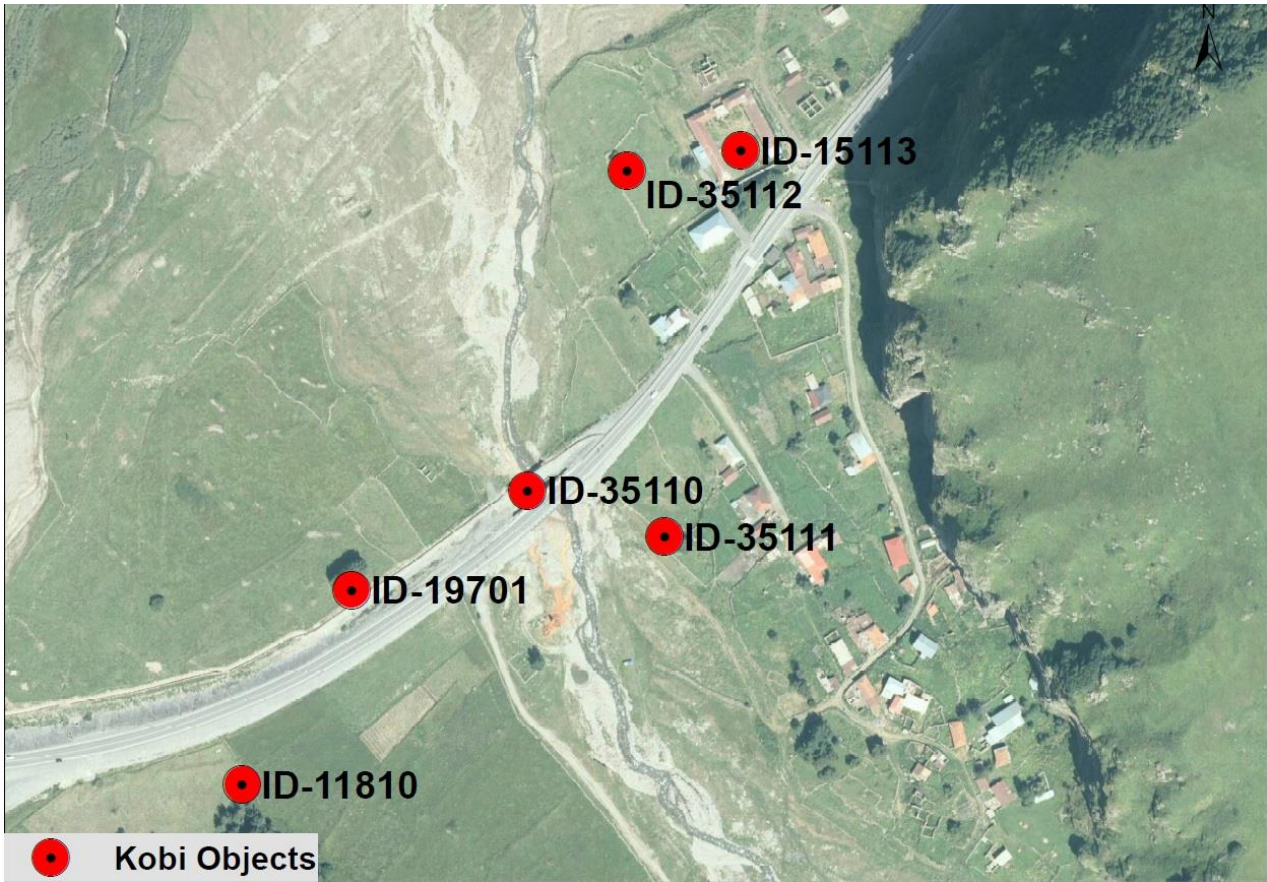


**Map 1. Distribution of CH monuments (Legally Protected) within the Kobi Village area**



#	Name of CH	Database #	Status
1	Hall-type church of Giorgitsminda Complex	18546	Legally protected
2	Walls of the Giorgitsmina Complex	18548	Legally protected
3	Giorgitsminda Complex	536	Legally protected
4	Tower of bell-tower of Giorgitsminda Complex	18547	Legally protected
5	Backed tower of Giorgitsminda Complex	6601	Legally protected
6	Remains of facilities and residential constructions of Giorgitsminda Complex	35114	Legally protected

**Map 2. Distribution of CH objects within the Kobi Village area**



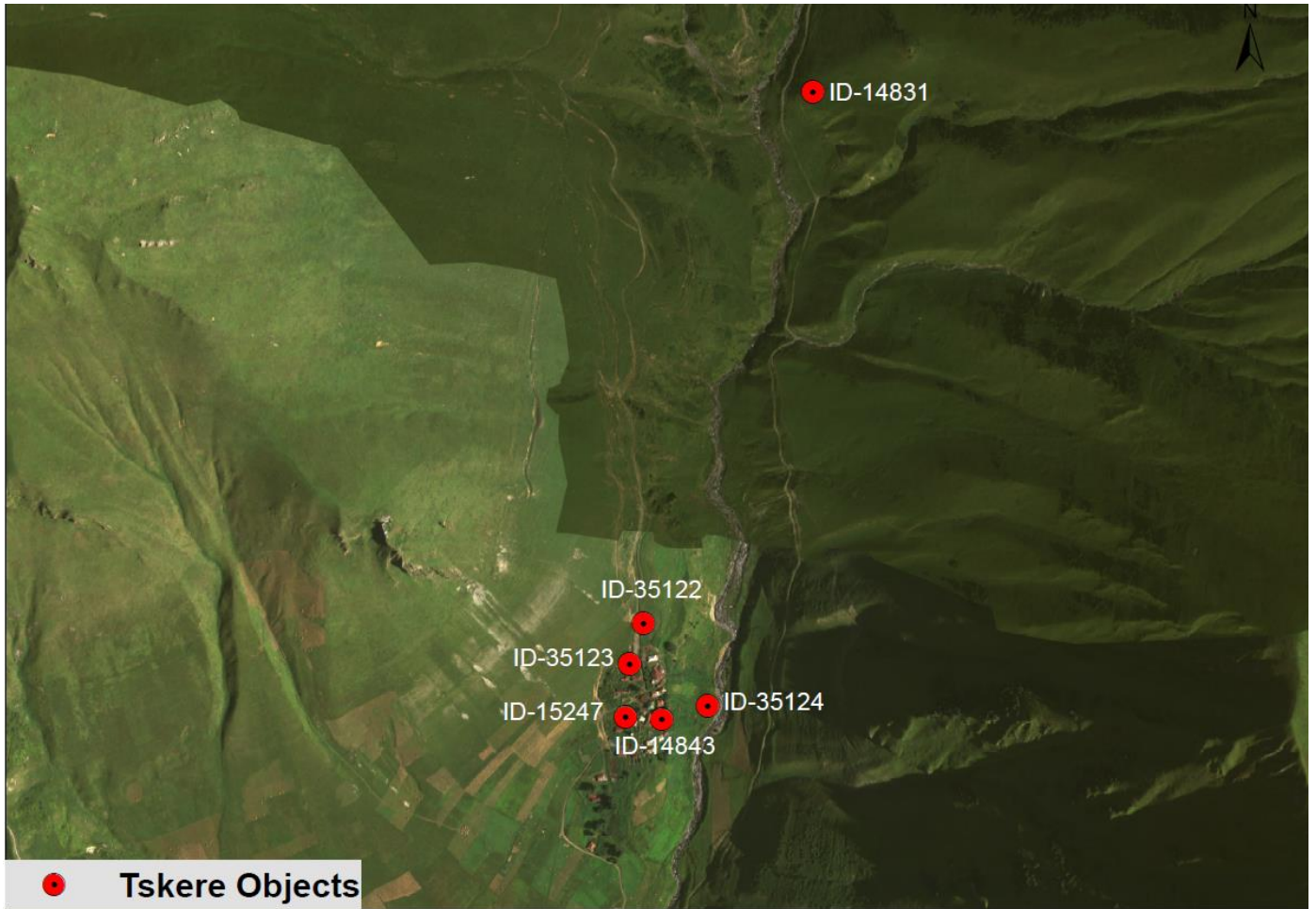
#	Name of CH	Database #	Status
1	Saint George niche	11810	CH object
2	Double span bridge of Kobi	35110	CH object
3	Memorial to WWII Victims	19701	CH object
4	Lomisa niche	35122	CH object
5	Kviratskhoveli niche	35123	CH object
6	Kobi Cemetery	35111	CH object
7	Kobi Cemetery	35112	CH object

Map 3. Cemetery – Kobi Village Map 4. CH monuments within the Tskere Village



#	Name of CH	Database #	Status
1	Naraidze Tower	6606	Legally Protected
2	Zakaidze Tower	6605	Legally Protected
3	Kvelatsminda Church	6584	Legally Protected

**Map 4. CH objects within the Tskere Village**



#	Name of CH	Database #	Status
1	Lomisa Niche	35122	CH object
2	Kviratskhoveli Niche	35123	CH object
3	Mill Complex	35124	CH object
4	Old Graves	15247	CH object
5	Ruins of Tower Archangel	14843	CH object
6	Ruins	14831	CH object



Map. 5. Location of Cemetery in Relation to the Project Buffer - Tskere



**Map. 6. CH objects in Mughure Village**

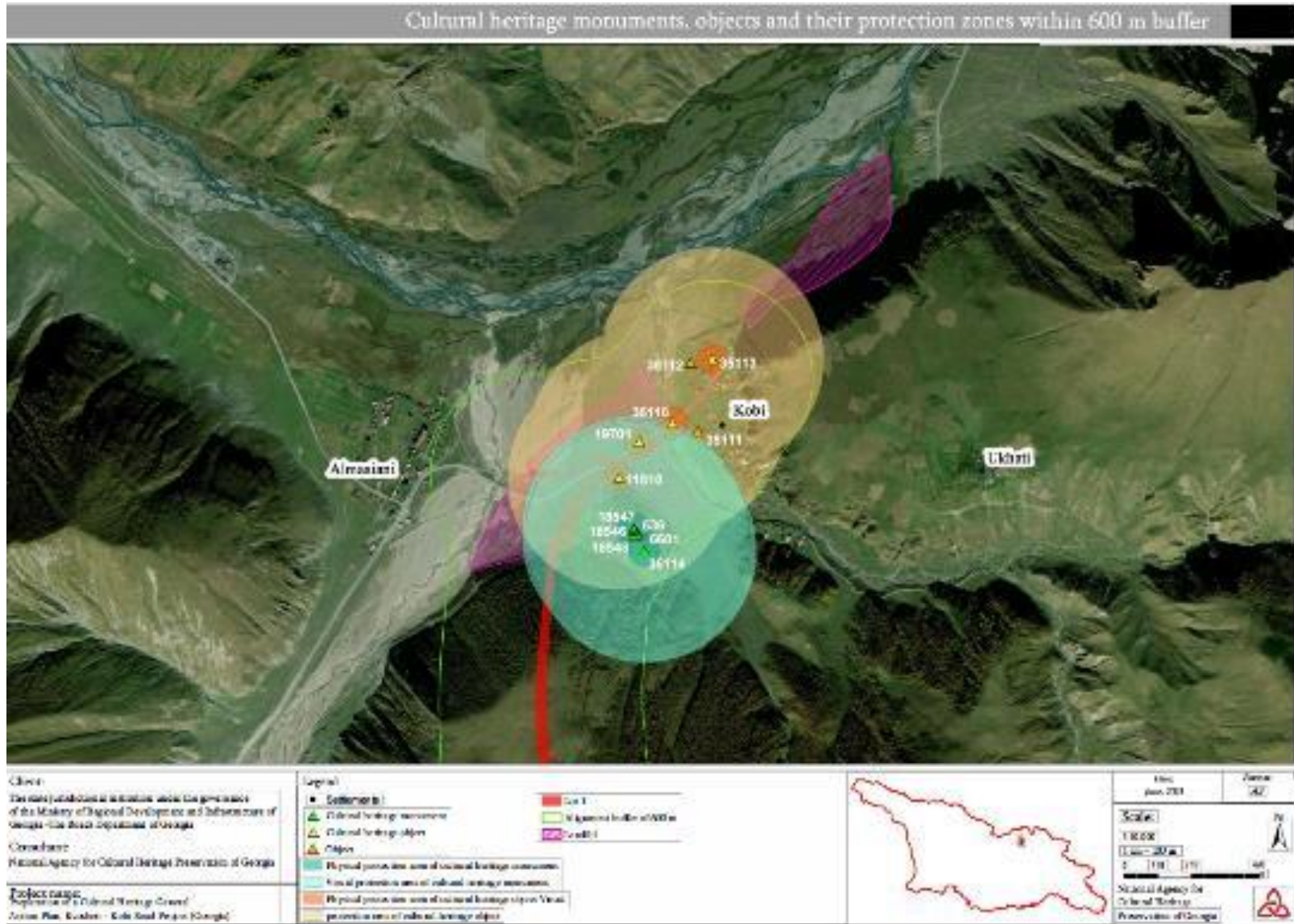


#	Name of CH	Database #	Status
1	Mughure Cemetery	35120	CH objet
2	Backed Tower	13939	CH objet
3	Mill Complex	35105	CH objet
4	Holy Virgin Church	13716	CH objet
5	Old Cemetery	35120	CH objet



Map 7. Physical and visual protection zones of the Objects and Monuments

7-1 Kobi





7-2 Tskere

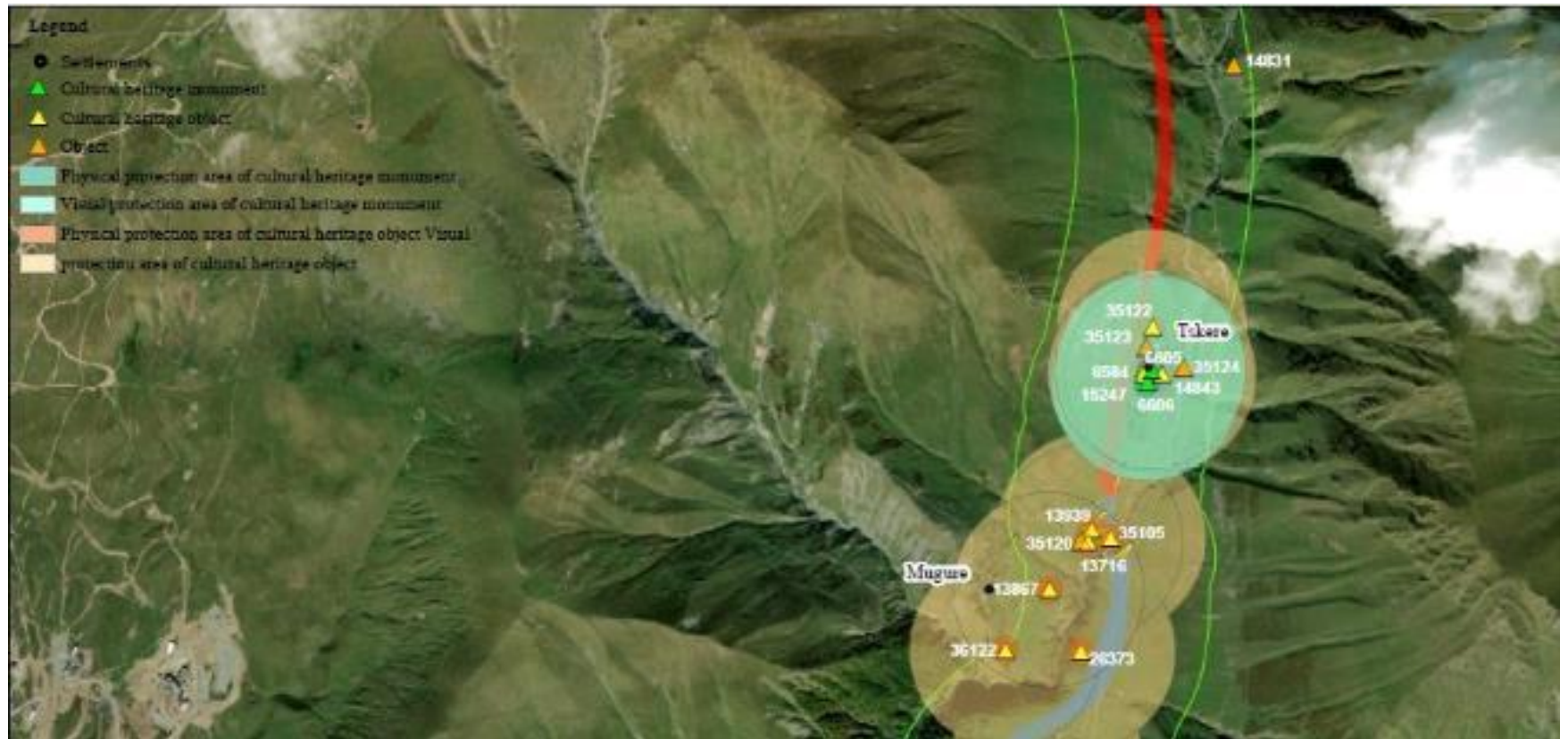




Table 1 reflects identified CH monuments within 0-300m zone of construction footprint, and distance from the road construction<sup>6</sup>.

**Table 1. List of the Monuments (Legally protected) in the 0-300-meter zone of the project area:**

#	Database #	Settlement	Name of object	Status/date	Distance to the road/m
1	536	Kobi	Giorgitsminda complex	Monument / 2010	179
2	6601	Kobi	Backed tower of Giorgitsminda	Monument / 2010	182
3	18547	Kobi	Right-angled tower with bell-tower	Monument / 2010	167
4	35114	Kobi	Remains of facilities and residential constructions	Monument / 2010	217
5	18546	Kobi	Hall-type church	Monument / 2010	169
6	18548	Kobi	Fence of Giorgitsminda complex	Monument / 2010	172
7	6606	Tskere	Naraidze Tower	Monument / 2006	56
8	6605	Tskere	Zakaidze Tower	Monument / 2006	79
9	6584	Tskere	Church of Kvelatsminda	Monument / 2022	55

<sup>6</sup> This data has taken from the report of the CHGAP implemented by the NACHP experts in 2020-2021.



Table 2 shows identified CH objects within 0-50m zone of construction footprint and distance from the road construction.

**Table 2. List of the objects in the 0-50-meter zone of the project area:**

#	Database #	Settlement	Name of object	Status/date	Distance to the road/m
1	11810	Kobi	Saint George niche	Object* <sup>7</sup>	27
2	35110	Kobi	Double-span bridge of Kobi	Object*	7
3	19701	Kobi	Memorial to WWII Victims	Object*	17
4	35122	Tskere	Lomisa niche	Object*	42
5	35123	Tskere	Kviratskhoveli niche	Object	38

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<sup>7</sup> In the tables below, the object \* indicates the valuable object/property granted cultural heritage status by the order of the Director General of the National Agency for Cultural Heritage Preservation of Georgia 07/12/2020 (02/80). According to the Law on Cultural Heritage of Georgia, "The property may be included in the List of Cultural Heritage for a period of 6 months. This time period may be extended only once, and not for more than 6 months"; In addition, "prescribed by Chapters VI and IX of this Law shall be applied to the object thereafter"



Table 3 shows identified CH objects within 50 -300m zone of construction footprint and distance from the road construction

**Table 3. List of the objects in the 50-300-meter zone of the project area:**

#	Database #	Settlement	Name of object	Status/date	Distance to the road/m
1	35111	Kobi	Cemetery <sup>8</sup>	Object	56
2	35112	Kobi	Cemetery	Object	86
3	15113	Kobi	Post station	Object*	55
4	35124	Tskere	Mill complex	Object*	190
5	14831	Tskere	Ruins	Object	239
6	15247	Tskere	Old tombs	Object*	56
7	14843	Tskere	Ruins of tower/ Mtavarangelozhi	Object*	115

**Table 4. List of Cemeterys, which does not have status**

#	Name	Location	Status	Coordinates
1	Cemetery	Tskere	N/A	X: 461620 Y: 4703000

<sup>8</sup> The cemeteries in Kobi village (ID: 35111 and 35112) include the Osetian graves and graveyards. These graves are located on the territory of both cemetery.



## 6. POTENTIAL IMPACTS TO THE CULTURAL HERITAGE SITES AND THEIR MITIGATION MEASURES

### 6.1 IMPACTS

Following potential impacts on the archaeological and cultural heritage sites should be considered during implementation of the Project:

- Unexpected discovery of archaeological deposits during construction earth moving;
- works that can cause significant damages and disruption of integrity of the archaeological site;
- Damage of architectural objects because of vibration (heavy equipment movement, ground explosion, etc.);
- Accidental physical damages caused by construction equipment.
- Damages cause by vandalism and human negligence.
- Pollution of cultural heritage sites with dust.
- Looting.

### 6.2 MITIGATION

In order to avoid the above-mentioned risks, the Project should take particular preventive measures:

- Before the commencement of construction, activities conduct preconstruction surveys, in order to assess and protect CHR that may be present within the project area. Pre-construction survey includes the following elements:
  - ✓ Site Assessment: A comprehensive assessment of the project site and its surroundings. This includes examining maps, historical records, and existing documentation related to the area's cultural heritage (see section on Updated Impact Assessment below);
  - ✓ Field investigation: Archeologists, historians, or cultural resource specialists may conduct site visits to identify and document any cultural heritage resources on the ground;
  - ✓ Mapping and documentation: The surveyors create maps and documentation that detail the location, type, and significance of cultural CHR found during the field investigation;
  - ✓ Assessment of significance: Cultural heritage resources are evaluated for their historical, archaeological, architectural, or cultural significance;
  - ✓ Mitigation Planning: Based on the survey's findings and the significance assessment, the survey team may propose mitigation measures to protect and preserve the identified resources. These measures can include site avoidance, excavation and data recovery, or preservation in place;
  - ✓ Compliance with Regulations: The survey is typically conducted in accordance with local, national, and international regulations and guidelines;
  - ✓ Stakeholder Engagement: Engaging with local communities, indigenous groups, or other stakeholders is often part of the process to gather input, address concerns, and ensure that their perspectives are considered in the survey and mitigation planning.



- ✓ Report Preparation: A final report summarizing the survey findings, significance assessments, and mitigation recommendations is typically prepared and submitted to relevant authorities, regulatory agencies, and project developers.
- Ensure permanent involvement of Cultural Heritage personnel/Monitors during planning of any earth using or earth moving works;
- Ensure obtaining of Cultural Heritage clearance before starting the works;
- Ensure permanent Cultural Heritage monitoring during any type of earthmoving works even if earthworks are carried out simultaneously at different places that means involvement of sufficient number of CH Officers/Monitors;
- Ensure CH monitoring during planned dismantling of dwellings that are not registered as cultural objects but represent the residential buildings typical for Khada Valley. Prior to the demolition of dwellings, their planning, photo fixation and illustration should be carried out;
- Ensure permanent CH monitoring at those cultural heritage objects which are located close to the main and access roads, the road knot, concrete mixing plants, camps and other temporary use areas;
- Arrange vibration monitoring for the Cultural heritage objects that are under the risk of damage;
- Where possible adjust/make minor changes in the project route or other infrastructure to avoid CH sites or objects;
- Protect known CH sites/objects from the accidental damages by barricading, fencing and conducting awareness raising tool box talks;
- Stabilization and rehabilitation of CH objects if necessary.
- The reinforcement of CH in accordance with the design and permission;

Approaches to the mitigation measures are based on the good international industrial practice, national legislation and the performance requirements set up by EBRD, the ADB's safeguard policy and other E&S requirements of the international financial institutions.

According to the abovementioned standards, the mitigation hierarchy for the Cultural Heritage component can be considered as follows:

- Avoidance;
- Minimization of adverse impacts and implementation of conservation measures *in situ*;
- Permanent removal of historical and archaeological artefacts and structures, recording of all materials, mapping, making photos, drawings, 3D reconstruction, etc.
- Offset compensation of loss where minimization of adverse impacts and restoration not feasible.

All subjects listed in the mitigation hierarchy can be achieved by applying the internationally accepted and recognized methodology that considers splitting construction-related CH activities into separate phases. There are 5 standard/normal phases for CH management which implementation guarantees proper protection and preservation of cultural heritage sites and objects (Appendix N of EIA).

The Contractor is using this 5-phased approach and cultural heritage management for the project is being



implementing accordingly.

### Summary of Phases.

A structured program is generally followed to allow for the identification and protection of cultural heritage sites during a development project. A phased approach is being adopted for the Kvesheti-Kobi Road (Tunnel Section) construction project to comply with national legislation and in line with relevant international best standards and practice for the management of cultural heritage sites within construction projects. Where damage is unavoidable, the sites will be excavated and recorded, and a program of research and publication followed.

#### **6.2.1 Phase 1.**

Review Existing Data: Areas of potential cultural heritage interest were identified by various desk-based activities such as the literature review, documentary searches for previous archaeological works and examination of aerial and satellite images. The project route and facilities were also examined by the several walkover surveys to assist in the determination of potential impacts. The walkover surveys have been implemented by the various groups of experts during preparation the EIA and also after approval of it. This allowed construction team to plan the route and construction ROW with minimal impact of existing cultural heritage sites and object.

#### **Actions taken under phase 1:**

- During the planning of the Road Project, during and after preparation of the EIA document and its approval, a study of the literature and archive material was performed by the relevant experts;
- Study of documentary data from previous archaeological works, examining aerial and satellite images;
- The project route was also studied through several pedestrian surveys, which made it possible to identify potential impacts on cultural heritage. The pedestrian surveys were carried out by different groups of experts. This allowed the construction team to plan the route and construction corridor with minimal impact on existing cultural heritage sites and sites.

#### **6.2.2 Phase 2**

Extensive and Intensive Surveys: The route of the road corridor is examined on the ground to assist in the determination of potential impact and to define the parameters of the further investigation. Areas of potential lying within the construction corridor (50m) or which may be impacted by permanent or temporary facilities (such as access roads and construction camps) are examined to determine their nature and significance. This can be by various means including detailed survey, geophysical survey and trial trenching. The information is used to assist in the planning of the road construction and permanent facilities and where possible, the route can be changed or its impact reduced to minimize the damage to PCR features. Such survey also be key for siting of temporary facilities.

If deemed necessary based on the initial walkover and desk study, Phase 2 archaeological work (trial trenching) may be commissioned which will involve subsurface investigations/excavations of archaeological sites identified to be the most significant sites which are revealed within the present route and at other facilities sites. Potentially significant sites have been avoided by the current road alignment, some of which were done specifically to avoid the known archaeological sites.



### **Actions taken under Phase 2:**

Areas of potential lying within the construction corridor were examined to determine their nature and significance (Cultural Heritage General Action Plan June-July 2022). This included:

- The site walkover surveys and archaeological test trenches along the alignment within 600 m zone (300 m from each side of the alignment);
- For inventory of CH resources (buildings/structures, landscape) and identification of its value, the field surveys were carried out along the project area within 600 m zone of the alignment;
- A location plan indicating CH sites along the alignment together with high resolution aerial photo and Google imagery were developed;
- Comprehensive written and visual analysis related to the significance or/and interest of CHR sites along the project area in the 600 m zone (for all identified CHR sites) including physical/tangible, historical, religious, and contextual values;
- A historic analysis of all identified CHR sites including original construction, additions and alterations with dates of construction/modifications;
- Compilation of research material to include relevant historic maps, atlases, drawings, photographs, sketches, permit records etc;
- Prepare identity cards (defined according to Georgian cultural heritage law) for all revealed cultural heritage sites recorded during the project”.

Prior to the construction activities, CH preconstruction surveys have been carried out for the campsites, SDAs and other project elements. Furthermore, CH preconstruction survey is ongoing for the avalanche protection wall, which will be located immediately west of the Tskere cemetery in Lot 1.

### **6.2.3 Phase 3**

**Preconstruction Excavations:** In areas where damage to the resource is unavoidable, archaeological deposits are recorded by “planned” excavation prior to construction activities. Phase 3 work will be carried out at those sites found by Phase 2 investigations to contain significant remains. Phase 3 investigations involve the level of work known as “archaeological data recovery”, in which cultural values are recovered from the sites in the form of data and artefacts. Phase 3 investigation of a site results in a scientific report accompanied by artefacts prepared for museum curation. Phase 3 work therefore mitigates impacts to such archaeological sites. An alternative mitigation measure is site avoidance by rerouting of the road alignment. Mitigation by avoidance, however, could require investigations outside of the Project right-of-way to determine site boundaries, since Phase 2 work focuses on those site areas that lie within the construction area.

In this way, Phase 3 excavations mitigate impacts to the significant archaeological sites by extracting the deposits and moving them to the safe location – museum exhibitions or the museum storage facilities. The scientific reports developed after the excavations keep all details about the excavated site and the scientific interpretation of the site makes aware future generation about the past discoveries. This type of work was not required for Lot 1.



### Actions taken in regard with Phase 3:

- Two rounds of extensive archeological surveys were carried out in 2021-2022, with the first round conducted from May to June 2021, and the second round carried out in September and November 2022;
- The primary objective of the first round of excavations was to conduct a detailed survey and clear specific cultural heritage sites along the Kvesheti-Kobi road. These sites were identified by the Cultural Heritage General Action Plan (CHGAP) in 2020, to prevent any potential impact during the construction activities. During the first round of excavations, archeological investigations were carried out on ten sites, and four additional sites were recommended for further study.
- Based on these recommendations, the second round of archeological investigations was conducted in September and November 2022.

No Archeological sites were identified under the Lot 1 Project.

#### 6.2.4 Phase 4

Chance Finds during construction – It is recognized that construction of a road and associated permanent and temporary facilities may reveal previously unknown archaeological features. Arrangements are made for the monitoring of construction and provision of a team of ‘Cultural Heritage Monitor’ who will be trained archaeologists. The Cultural Heritage supervisor/Officer/monitor will be on site to observe the excavations in areas with high archaeological potential identified during Phase 1 and Phase 2 excavations, and in other areas where chance of accidental archaeological discovery is low, they will be available on a call out basis to immediately travel to site and assess the chance find. This is also known as the ‘Chance Finds’ process (the assessment and categorization of chance finds is described in the Appendix 1).

Actions to be taken during construction activities: Arrangements will be made for the cultural heritage monitoring of construction and provision of an archaeological expedition to conduct excavations where needed. CH monitoring also will protect all known CH sites – archaeological and architectural – located in the vicinity of the project area.

No any archeological discovery were identified up today (June 2023) under the Lot 1 Project.

An expenses for the additional archeological works (if needed) will be covered under the sub-clause 4.24 of the Contract.

#### **Finds Requiring Notification to the Civil Authorities.**

It is common for evidence of various human activities to be uncovered during earthmoving. In the majority of cases, these can be seen to have a convincing historic or earlier, origin and represent no threat or interest to the wellbeing of the contemporary society. However, there are several types of discoveries that are of concern and need to be reported to the civil authorities. These can include:

- Human burials
- Munitions or unexploded ordnance (UXO)
- Animal disease burial pits.

The last two items above have their own response procedures within construction Management Plans, but it is



quite possible that staff on the construction team may make the initial discovery so need to be aware of the correct procedures. Part of their training to be provided by Contractor will include the first actions to be taken in the event of such discoveries.

Human remains are a different case, in that historic human burials can be mistaken for recent, unmarked burial sites. In such instances, the appropriate action is to leave the site undisturbed and protect and report it to the civil authorities for their investigation. Where the CH Monitor or Cultural Heritage Contractor is convinced of the ancient origin of such remains, it is a legal requirement to report such discoveries and the professional view of their age to the local authority.

### **Verification and Monitoring**

Contractor, through Supervision Company shall implement a cultural heritage surveillance program (close monitoring and watching brief) during all type of earth moving activities at the project locations including ROW, facilities and access roads; All ground disturbance works during construction on the road and other areas related to the road's temporary facilities will be monitored by CHM appointed by Supervision Company.

ROW preparation and the construction process prior to earth moving activities, typically leads to discovery of additional archaeological resources that were not identified during the Phase 1 and 2 studies. To address this situation systematically, CHM will be present with ROW clearance (i.e. clearing, topsoil stripping, grading, etc.) and trenching throughout the construction process. The CHM purpose will be to assist with the initial evaluation of archaeological chance finds, helping to distinguish archaeological finds from non-archaeological anomalies and to communicate initial data on such findings to appropriate Project personnel.

The CHM will identify and report archaeological chance finds and communicate these finds to appropriate Project staff for timely evaluation and formulation of any appropriate site-specific response that may be needed. Prior to the start of construction, the CHM will develop a specific written set of monitoring and protection protocols, including notification and reporting requirements for Project team and appropriate government authorities.

The following requirements shall be implemented by Contractor, Supervision Company and Cultural Heritage Contractors, as applicable:

- Prior to construction, the Contractor shall ensure areas of potential cultural heritage will be examined and any necessary studies conducted by the Cultural Heritage Contractor are complete.
- The EIA and the further CH surveys have identified a number of archaeological sites that require pre-construction studies. Contractor shall install sufficient protection measures to avoid any damage to sites before planned excavations during construction (e.g., fencing, barriers and/or signage).
- Possible mitigation measures that shall be used if there is an unexpected discovery may include re-routing, special construction techniques, compensation, rapid archaeological survey, excavation etc.
- If archaeological artefacts or structures are found by Contractor, the Chance Finds Procedure shall be followed and Contractor shall seek CH advice from NACHP;
- The Contractor shall acknowledge that there can be considered making minor adjustments to the route of the initial location where to avoid damage to a valuable cultural heritage feature that is discovered during construction operations.
- The Contractor shall acknowledge that if the construction route cannot easily be adjusted to avoid



damaging the feature, Contractor shall suspend construction activities at the site until the excavation or other heritage activities and recording required by the authorities has been carried out;

- Based on the info and guidance provided by the CH Monitor and CH Contractor, Contractor will implement location-specific commitments as determined.
- On completion of the works the full width of the ROW and all temporary work areas will be reinstated in accordance with the Reinstatement Management Plan, to near original condition. Disturbed areas will be re-vegetated to active conditions similar to those that exist immediately adjacent to ROW.

### **Details of Cultural Heritage Monitoring:**

- A program of archaeological surveillance (watching brief done by the Cultural Heritage Monitor) will be implemented during topsoil stripping of work sites, the facility sites, construction camps and equipment lay-down areas and ancillary areas, spoil disposal sites.
- Use Chance Finds Procedure - in the event of the unexpected discovery of archaeological objects during construction operations the CRTG's environmental manager will report to the Engineer requesting to stop construction activities and to inform the Employer and Ministry of Culture and Monument Protection about the finding. In this case construction works will be stopped until the Ministry has given clearance for the continuation of operations. Works will resume only after appropriate measures have been taken as requested by the Ministry and confirmation has been received that works may continue;
- Fencing and warning signs - cultural heritage monuments and sites located in proximity to the project should be fenced and barricaded prior to commencement of works;
- Observe physical protection boundaries for monuments (Min 50m);
- Monitoring vibration effects at cultural heritage sites;
- Ensure presence of Cultural Heritage Monitor on the site when any type of earthmoving is planned.
- Ensure the field staff is familiar with chance find procedures and monument protection requirements.
- An experienced and trained machine driver will operate in areas with a high potential for archaeological sites. Their skill is essential.
- During the earth moving, the excavator operator will be supported by the foreman who will be walking in manner to see the operating blade of excavator.
- In case of an unexpected discovery of cultural heritage objects, construction will stop.
- The area will be secured with the safety tapes and notification will be made to the Engineer, Client and the Ministry of Culture of Georgia.
- All activities at the site will be on hold should and while the archaeologist require time to investigate.
- No archaeological material will be removed from a site without written permission.
- The Contractor will follow all instructions issued by the archaeologists.
- The construction managers will be responsible for operation in quarries and borrow pits. Most risky operation is the opening of new quarry and soil stripping. During mentioned operations, the normal



procedure like during soil stripping on the new sections of road will be followed.

- The cultural heritage buildings' reinforcement shall be done before blasting, the reinforcement construction plan shall be done by qualified and certificate expert.
- The Contract shall submit the reinforcement construction plan to relevant authorized departments for approval.
- The contract shall follow the reinforcement construction plan and take the appropriate proper actions.

### **Cultural Heritage awareness training**

- Contractor is responsible to ensure proper communication between the CH Monitor and Project field staff to raise staff's awareness in CH by arranging dedicated training sessions and Toolbox talks, including for all new staff.
- Contractor is responsible to the overall CH training sessions which includes the CH awareness training for all field personnel clarifying meaning of cultural heritage, methods of its protection and preservation, legislative base of cultural heritage, meaning of Chance Find and brief introduction in Chance Find Procedure; also, there will be developed specific trainings for operators of heavy equipment. Thus, the field personnel will be well prepared in the cultural heritage protection sector, their roles, responsibilities and acting scenarios with regard the cultural heritage sites, objects and artefacts.
- On 10<sup>th</sup> of October 2021 Cultural Heritage Awareness Trainings have been conducted by Engineers cultural heritage specialists for the workers of Kobi and Tskere construction sites.

### **Mitigation of construction dust impact**

Systematic watering of the construction access roads and community roads will prevent sedimentation of construction dust on the CH objects. In the cases where watering of the roads is not sufficient measure and construction dust may cover the CH objects, the project should ensure their protection by temporary covering with plastic cloth. CHM to ensure that the objects are not covered with dust.

### **Mitigation of Construction Vibration**

Vibration caused during the construction is perceived as the most impactful factor to the local community, but it also affects the architectural monuments or fragile structures that easily can significantly damage or even destruct them.

The main sources of noise and vibration that could affect sensitive receptors during the project implementation are as follows:

- Construction machinery operation.
- Drilling activities.
- Hammering (hydraulic or pneumatic).
- Blasting

A number of cultural and historical structures are located within the Project Area, but studies determined that no structural damage to buildings from general construction works (compactor roller and pneumatic hammer) is anticipated, even within 5 m of the work sites. But they could potentially be impacted by construction vibration, e.g. by roller compaction.



Taking into account all aforementioned, the following mitigation measures will be taken to minimize any possible adverse impacts to structures:

**Technical management:**

- Control blasting method at the tunnel portal and the dosage of single-stage charge shall be restricted.
- Alternative construction method in the tunnel portal shall be considered.
- Select charge and delay time in drill and blast tunnels so to avoid excessive vibration.
- At the end of each workday, after blasting works are completed in areas within 110 m of physical and cultural resources, the Cultural Heritage Monitor shall undertake a visual inspection of each site to determine the extent of any damage to the sites.
- The qualified and certificate expert prepare the reinforcement construction plan for cultural heritage protection, which is to make the heritage stability throughout the construction activities.
- The Contractor should be in compliance with the statement provided by EIA: „For blasting, a safe distance of about 100-110 m from blasting point should be considered for cosmetic damages and a distance of 60-65 m for structural damages“. (It should be emphasized that the Contractor chose the conservative approach and 217 m was determined for the blasting point).

**Communication and Reporting**

Contractor is responsible for formally notifying the Engineer and the Employer of archaeological discoveries during the project activities. The Employer will then notify the NACHP and calls in the excavating team to fully explore archaeological material. The Project Manager is responsible for carrying out any corrective action during the project. All personnel are responsible for reporting archaeological finds or human remains to the environmental manager or the Site Supervisor.

All issues related to the protection of cultural heritage will be recorded in a special form. If an archaeological finding is found the special report will be prepared in accordance with the Chance Find Procedure.

The following information will be reported by the Company (thru the CH Officer, Cultural Heritage/Archaeological Contractor) to UBM prior to any earthmoving activity:

- Date of the survey;
- Location (GIS coordinates);
- Description of the area, where the earthworks are planned;
- CH assessment of the area;
- Conclusion.

The following information will be reported by the Company (thru the CH Officer, Cultural Heritage/Archaeological Contractor,) to UBM during active construction activities near recorded cultural heritage sites, archaeological sites or objects:

- Date of monitoring
- Location;
- Description of potential source of impact;
- Duration of activities potentially having an impact on CH sites;



- Monitoring results.

The following information will be reported by the Company (thru the CH Officer, Cultural Heritage/Archaeological Contractor) to UBM during potential chance finds:

- Date of Chance find;
- Type of the works when the chance find revealed

The following information will be reported by the Company (thru the CH Officer, Cultural Heritage/Archaeological Contractor) to UBM upon completion of works near a cultural heritage site, archaeological site, or object:

- Date of monitoring
- Location;
- Information about the works carried out to avoid impact on CH sites (measures taken);
- Results of actions taken.

### **Updated impact assessment**

Where the footprint of construction works expands into areas that were not part of the original road design, the Contractors will ensure that a cultural heritage impact assessment has been made of any such extension before confirmation of design. This impact assessment may be carried out by the CHM. It should include the following:

- A map showing the area of the extension overlaid on a map of known cultural heritage resources;
- A written assessment of the archaeological potential of the area affected including a consideration of the importance of any affected cultural heritage resources and the level of proposed impact;
- An assessment of both direct and indirect impacts of the proposals;
- If it is concluded that the proposals will or are likely to impact on areas of buried archaeological sensitivity, the impact assessment should recommend a Phase 2 evaluation to be following by a Phase 3 mitigation excavation;
- If the proposals have the potential to impact built heritage, appropriate recommendations for protection should be made which may include fencing and signage, conservation work and/or vibration monitoring;
- If the proposals have the potential to impact on sites of intangible heritage significance, there should be consultation with affected members of the local community and an appropriate management plan developed.

## **6.2.5 Phase 5**

### **Handover to Heritage Authorities**

After construction is complete, certain tasks are needed for Kvesheti-Kobi Road (tunnel section) project to close out. Including dissemination of information, compensatory works if required, and good stewardship. Heritage Authorities have a duty of protection for cultural heritage resources known to exist on or near operating facilities and installations. The potential for impacts to the resources must be considered when the



road will need maintenance, repair, and/or improvements. All reasonable efforts must be made to minimize adverse effects to heritage resources. Upon completion of the Construction Phase, a Transition Plan will be handed over to the Heritage Authorities. The Transition Plan will document the following:

- CH database of all known and potential CH sites,
- Map of all chance finds/known archaeological sites;
- All excavation reports;
- Ongoing risks applicable in relation to cultural heritage sites;
- Recommendations and actions to be undertaken by Heritage Authority

### **Final Reporting**

This phase includes the dissemination of the results of the work both to the archaeological establishment and to the wider public via an appropriate medium and will be done upon agreement with the RD or in collaboration with the lenders.

After construction is completed, the certain tasks are needed for project for closing out. If required, the compensatory works and good stewardship of the CH materials and obtained info - study of material and preparation of reports of the archaeological works carried out during the Project. This phase includes the dissemination of the results and will be done upon agreement with the RD or in collaboration with the Lenders.



## 7. IDENTIFIED RISKS AND THEIR MITIGATION MEASURES

Cultural heritage studies implemented for the Project identified the certain and potential risks to the cultural heritage objects and sites.

Considering the fact that the project foresees activities within the physical protection zones of some cultural heritage sites, it is necessary to follow the requirements defined by the Law on Cultural Heritage of Georgia in order to protect every important element of the given cultural heritage site/object that means that any construction works in the perimeter of physical security of a site shall be planned in the way that excludes their negative impact on a cultural property.

Also, the construction project has an impact on the historically established cultural landscape which contains both - historical settlements and the natural landscape. The project, which includes the roads – the main artery and its bridges and tunnels connecting it, form a network of roads that enter through the valley area for transport functions.

An identified sites being impacted by the project are as follows:

- The Giorgitsminda Complex (Kobi);
- St. George's Niche (Kobi);
- Kobi war memorial (Kobi)
- Kvelatsminda Church (Tskere)
- Naraidze and Zakaidze towers (Tskere)
- Cemetery (Tskere)
- Cemetery (Kobi)

To avoid damage of the abovementioned sites the following mitigation measures are proposed:

- Regular vibration monitoring of Giorgitsminda (Kobi) and Kvelatsminda (Tskere) churches
- Fencing of St. George Niche and Kobi war memorial;
- Conservation works of Kvelatsminda church and Naraidze and Zakaidze towers. It should be underlined that prior to the conservation works, conservation design should be approved by the NACHP.
- Regular visual monitoring of the sensitive locations, such as cemeteries and ensure that appropriate demarcation is in place

### **Mitigation measures carried out up to current period (May 2023)**

The Contractor has already initiated and implemented vibration monitoring at the sensitive areas, where are located the architectural monuments having cultural, historical and religious significance. These monitoring sites were determined by the CHGAP of NACHP (Table 4). The sensors measuring vibration are installed at the Giorgitsminda Church in Kobi and Kvelatsminda church in Tskere and vibration monitoring is ongoing (Fig. 13). In order to acknowledge the vibration level, the additional handheld vibration monitoring device was used at the sensitive locations, it aims to monitor the vibration at blasting and record the data of vibration timely (the details of vibration monitoring process is provided in the Vibration Monitoring Plan).

It worth to mentioned that the Contractor conducted specific pre-construction study of Giorgitsminda Complex in Kobi, which theoretically could be affected by construction vibration and funded conservation and



stabilization works of backed tower to ensure better preservation of the monument (Fig. 14). The letters of conservation permit and approval is provided in Annex 2.

Additionally, Contractor has involved the third party to carry out the conservation/reinforcement works for three more cultural heritage sites in Tskere village - Kvelatsminda (All Saint) Church, Naraidze and Zakaidze towers, from which two of them are completed (Kvelatsminda church and Zakaidze tower) (Fig. 15, 16) and one is ongoing (Fig. 17). These measures were taken to protect the CH sites from the impact during the blasting activities (See Annex 3 for the conservation design of the towers and letters of conservation permit and acceptance).

Cultural Heritage monitors carried out Cultural Heritage pre-construction survey prior to the arrangement of Spoil Disposal Area #3 (see Annex #3)

The Contractor obtained approval from NACHP for the arrangement of explosive storage near Mughure,

Cultural Heritage Monitor during the course of the Construction works may identify additional sensitive sites. In the even that additional sites are confirmed that may be impacted by Project works, they will be added to "Construction Vibration Management Plan" and mitigation and monitoring measures prepared for these sites.

In accordance to the NACHP's recommendation, prior to the demolition of dwellings in Tskere, their planning and photo fixation have been done.

The Cemeteries in Kobi and Tskere are fenced.

The UBM's CH monitors are continuing the regular monitoring of construction works.

Furthermore, to enhance monitoring and streamline data collection, the GIS database has been developed by UBM's CH Monitors. This database serves as an additional tool for facilitating data sharing among project partners. It encompasses a GIS map that includes all known CH sites, each accompanied by concise reports



**Table 5. Required Mitigation Actions regarding Cultural Heritage and Archeological Sites**

#	Cultural Heritage Objects/ Site	ID	Status	Distance from Road (m)	Vibration Monitoring	Fencing	Preservation	Location	Coordinates
1	Giorgitsminda complex	536	Cultural Heritage Monument	179	During construction works Ongoing	N/A	Done	Kobi	X: 459659.00 Y: 4711611.00
2	Backed tower of Giorgitsminda complex	6601	Cultural Heritage Monument	182	During construction works	N/A	Done	Kobi	X: 459660.32 Y: 4711601.72
3	Right-angled tower with bell-tower of Giorgitsminda complex	18547	Cultural Heritage Monument	167	During construction works	N/A	Done	Kobi	X: 459671.71 Y: 4711600.06
4	Remains of Facilities and residential constructions of Giorgitsminda complex	35114	Cultural Heritage Monument	217		N/A	N/A	Kobi	X: 459682.77 Y: 4711552.73
5	Hall- type church of Giorgitsminda complex	18546	Cultural Heritage Monument	169		N/A	N/A	Kobi	X: 459643.62 Y: 4711610.42
6	Walls of the Giorgitsminda complex	18548	Cultural Heritage Monument	172		N/A	Done	Kobi	X: 459649.12 Y: 4711597.95
7	Saint George niche	11810	Cultural Heritage Object	27	During construction works	N/A	If construction affects the CHR, conservation will be required	Kobi	X: 459602.98 Y: 4711779.84



8	Double- span bridge of Kobi	35110	Cultural Heritage Object	7	During construction works	N/A	If construction affects the CHR, conservation will be required	Kobi	X: 459769.00 Y: 4711951.00
9	War memorial (World War II Monument)	19701	Cultural Heritage Object	17	During construction works	N/A	If construction affects the CHR, conservation will be required..	Kobi	X: 459666.93 Y: 4711893.06
10	Kobi cemetery	35111	Without status and category	56	During construction works	N/A	If construction affects the CHR, conservation will be required..	Kobi	X: 459849.36 Y: 4711924.66
11	Kobi cemetery	35112	Without status and category	86	During construction works	N/A	If construction affects the CHR, conservation will be required..	Kobi	X: 459827.36 Y: 4712138.54
12	Kobi postal station	35113	Cultural Heritage Object	55	During construction works	N/A	If construction affects the CHR, conservation will be required	Kobi	X: 459894.34 Y: 4712150.26
13	Naraidzes' tower	6606	Cultural Heritage Monument	56	During construction works	N/A	If construction affects the CHR, conservation will be required. Done by initiative of Contractor	Tskere	X: 461809.06 Y: 4703178.18
14	Zakaidzes' tower	6605	Cultural Heritage Monument	79	During construction works  Ongoing it is covered by the monitor located at Kvelatsminda church	N/A	If construction affects the CHR, conservation will be required. Ongoing –based on the initiative of Contractor	Tskere	X: 461823.83 Y: 4703221.74
15	Mills complex	35124	Cultural Heritage Monument	190	Ongoing it is covered by the monitor located at	N/A	N/A	Tskere	X: 461942.19 Y: 4703230.27



					Church of the Virgin				
16	Kvelatsminda church in Tskere	6584	Cultural Heritage Monument	55	During construction works  Ongoing	N/A	If construction affects the CHR, conservation will be Requiredr.	Tskere	X: 461800.88 Y: 4703223.64
17	Old graves (crypts)	15247	Cultural Heritage Monument	56	During construction works	N/A	If construction affects the CHR, conservation will be required.	Tskere	X: 461798.47 Y: 4703209.79
18	Ruins of tower/ /Archangel	14843	Cultural Heritage Monument	115	During construction works	N/A	If construction affects the CHR, conservation will be required.	Tskere	X: 461861.35 Y: 4703206.02
19	Lomisa niche	35122	Cultural Heritage Object	42	During construction works	N/A	If construction affects the CHR, conservation will be	Tskere	X: 461829.60 Y: 4703374.82
20	Kviratskhoveli niche	35123	Cultural Heritage Object	38	During construction works	N/A	If construction affects the CHR, conservation will be required.	Tskere	X: 461804.72 Y: 4703303.66
21	Ruins	14831	Without status and category	239		N/A	N/A	Tskere	X: 462126.18 Y: 4704306.32
22	Church of the Virgin	13716	Cultural Heritage Monument	75	During construction works  Ongoing	N/A	If construction affects the CHR, conservation will be required	Mughure	X: 461593.77 Y: 4702607.10
23	Kviratskhoveli church	13867	Cultural Heritage Object	222		N/A	N/A	Mughure	X: 461450.79 Y: 4702436.55
24	Backed Tower	13939	Cultural Heritage Object	58	During construction works	N/A	Alignment of the access road has to be changed. Should construction work affect the	Mughure	X: 461607.16 Y: 4702649.33



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							CHR conservation will be required.		
25	Mughure old cemetery	35120	Cultural Heritage Object	101	During construction works	To be done before construction works.	Fencing needed	Mughure	X: 461567.82 Y: 4702610.13



**Fig. 13 Vibration monitoring sites**

Kvelatsminda church (Tskere)



Giorgitsminda Church (Kobi)



**Fig. 14 Giorgitsminda Complex before and after conservation – Kobi Village**

Before



After



**Fig. 15 Conservation of Kviratskhoveli Church – Tskere Village**

Before



After





**Fig. 16 Conservation of Zakaidze Tower – Tskere Village**

Before



After



**Fig. 17 Conservation of Naraidze Tower – Tskere Village**





## 8. PROJECT BEST PRACTICE

As previously stated, the project area (as a whole region) is rich with cultural heritage sites, therefore the Contractor acknowledges its responsibility in terms of preservation and protection of the existing cultural heritage.

Furthermore, it is important to note, that CRTG respects local customs and traditions and always tries to support the population in every possible way and provides assistance within its capability.

The restoration of Kvelatsminda church served as an example of demonstration of respecting traditions and supporting preservation of CHs for the locals and visitors, since the Contractor was obliged to carry out the conservation only if the construction activities would affect the CH site. Based on the vibration monitoring results, no impact on the Kvelatsminda church and nor Zakaidzeebi and Naraidzeebi towers were observed, but Contractor still conducted conservation works on all three CH sites. The Contractor fully covered all expenses associated with the conservation works.

Furthermore, the Contractor supported locals with providing the access roads to the villages, cemeteries or particular land plots during the religious festivals, as well as supplying with water or goods during the heavy winter seasons. These approaches were inspired by the best practices that exist in the country during the implementation of various international projects.



## ANNEX 1. Chance Finds Procedure

Georgian legislation comprises the Constitution, Cultural Heritage law, international agreements, subordinate legislation, normative acts, presidential orders and governmental decrees, ministerial orders, instructions and regulations. Along with the national regulations, Georgia is signatory to a number of international conventions, including those related to Cultural Heritage protection.

Protection of heritage resources in Georgia is based on the Georgian Law on Cultural Heritage Protection, 2007 (last amended in 2020). This law is regulated by the Ministry of Education, Science and Culture of Georgia (MoC) and the National Agency for Cultural Heritage Preservation of Georgia (NACHP). Within this Law, monuments are classified by their significance.

The Chance Finds Procedure ensures that if archaeological remains are encountered during construction they are reported and protected until satisfactory treatment strategy is identified, agreed, implemented, and completed.

The procedure is intended to ensure that all activities around the Chance Find are stopped and construction site management and Environmental personnel are informed.

The National Law on Cultural Heritage, Chapter 3 Initial (Temporary) Protection of Known and Identified Cultural Heritage requires:

- Stop Work for Chance Finds
- Written notification of the Chance Find and Stop Work to the Ministry of Culture within 7 days Ministry verification and response within 14 days of receipt of above
- Failure of the Ministry to verify and respond within 14 days is, by default, an authorization to lift the Stop Work.

It means that during earthmoving, in case of accidental discovery of a cultural heritage object, artefact or other archaeological feature, in order to avoid its damage or destruction, it is necessary to take measures provided by the legislation of Georgia (Law of Georgia on Cultural Heritage, 2007). The contractor is obliged to stop the construction works at the given place, to protect the place of discovery and to invite the specialists of the body authorized by the legislation of Georgia (National Agency for Cultural Heritage Preservation of Georgia - NACHP- under the Ministry of Culture) to determine importance of the discovered archaeological object and to make decision on the continuation of the construction works. Continuation of works will be possible on the basis of a permit issued by NACHP after evaluation the site or completion the necessary archaeological works.

If the MoC/NACHP has waived the requirement for onsite inspection and assessment within the two weeks specified in the National Law on Cultural Heritage, Chapter 3 Initial (Temporary) protection of Known and Identified Cultural Heritage, construction will be continued.

This document – the Chance Find Procedure is concerned with the execute phase of Construction of Kvesheti-Kobi Road (Tunnel Section) under North-South Corridor (Kvesheti-Kobi) Road Project and defines the procedure for identification, evaluation, and protection of previously unknown archaeology found as a direct result of construction activities (“chance finds”).

This procedure applies to all Kvesheti- Kobi Road (Tunnel Section) under North-South Corridor (Kvesheti-



Kobi) Road Project related construction activities undertaken in Georgia. This procedure applies to all work undertaken during the Project construction phase until completion of the Project and handover to Operations.

## Chance Finds Defined

This document describes the procedures that the Kvesheti- Kobi Road (Tunnel Section) under North- South Corridor (Kvesheti-Kobi) Road Project will follow to protect previously unknown cultural heritage resources encountered during the Project construction process. “Chance Finds,” as these resources are called, include suspected and confirmed:

- Paleontological remains (fossils and associated soil and artefacts deposits)
- Remains of past temporary and long-term occupation sites
- Archaeological artefacts (for example, fragments or complete pieces of worked stone, bone, or wood; bronze, gold, and other metal items; and ceramic or glass objects)
- Anthropogenic soil features, such as refuse and storage pits, or ruined structures (houses, shrines, or fortifications, for example)
- Human remains in isolated burials or unmarked cemeteries
- Other types of resources dating to the historic and prehistoric past

Paleontological and archaeological resources are protected under Georgian National Law. It is illegal to damage, destroy, excavate, or remove them without a government issued permit.

The assessment and categorization of chance finds is described in the Appendix A.

The Chance Finds Procedure is intended to ensure that if archaeological remains are encountered during construction they are **reported and protected** until satisfactory treatment strategy is identified, agreed, implemented, and completed.

The procedure is intended to ensure that all activities around the Chance Find are stopped and Contractor sitemanagement and cultural heritage specialists are informed.

## Chance Find Identification

All Contractor’s personnel, in the event of identification of a chance find, must:

- 1) Immediately cease potentially destructive activity in the affected area
- 2) Notify Contractor’s Environmental Manager and senior representative that are on site
- 3) Contact Contractor’s CHO for initial assessment (details of this assessment are provided bellow)
- 4) Cordon off the area with using protective barriers; restrict access such that there are nounauthorized personnel, activity, or machinery on or near the Chance Find
- 5) Inform all construction personnel of the Chance Find if access to the worksite is restricted and strictly enforce a no go area to protect the Chance Find
- 6) Install avoidance signage at the Chance Find location



- 7) Not undertake any further construction works at the Chance Find location until authorized by Contractor

### **Preliminary Assessment of Significance**

The objective of the site inspection is to determine and agree internally that the Project should either:

- Take no action and resume normal construction activity;
  - Conduct excavations aimed at better defining and evaluating the Chance Find;
  - Conduct “emergency” or “rescue” data recovery excavations and upon completion of fieldwork resume normal construction activity through the site area, or
  - Preserve the Chance Find in place upon receipt of a request from the field for initial assessment (in cases where the Contractor is not responsible for the identification the Chance Find):
- 1) CHM of the Supervisory Consultant (UBM) visits the Chance Find location as soon as possible to record and make a preliminary assessment (including photographs, sketch maps, GPS coordinate and other specific location of the project area as applicable)
  - 2) CHO and CHM complete initial assessment, and provide on the spot guidance to Contractor on the way forward
  - 3) CHO adds Chance Finds data to the Chance Finds Log (update/maintain until close out)
  - 4) Environmental Manager, CHO and CHM agree on need for NACHP notification within 7 days
  - 5) NACHP visits the Chance Find location and the observed archaeological material for its assessment within 14 days
  - 6) If the MoC/NACHP has waived the requirement for onsite inspection and assessment within the two weeks specified in the National Law on Cultural Heritage, Chapter 3 Initial (Temporary) protection of Known and Identified Cultural Heritage, construction can be proceeded.
  - 7) Contractor will agree the final site treatment strategy based on recommendations issued by the NACHP that can be:
    - the preservation of the Chance Find in situ or
    - salvage archaeological excavations

If preservation in place/avoidance is not possible a technical memorandum is required. The production of the memorandum will be coordinated by the CHM with technical input from site construction representative and personnel as appropriate. The memo will:

- clearly explain the reasons why the site cannot be preserved in place
- be supported by maps, photos, and/or illustrations and text describing relevant constraints preventing preservation in place
- The site treatment strategy, along with any required special site protection measures recommended by the NACHP will be formally communicated to Contractor’s team with location specific information (i.e. co-ordinates).



- NACHP to arrange the appropriate steps for CH contractor identification
- Implementing of salvage archaeological excavations by CHC
- After the archaeological excavations complete, CHC submits the corresponding technical report to NACHP
- If the archaeological site is excavated in compliance with the NACHP recommendations and the technical report is acceptable, NACHP issues a permit to continue construction.