



# STAKEHOLDER BRIEF: ASSESSMENT AND MITIGATION OF IMPACTS TO CULTURAL HERITAGE

September 2021

## INTRODUCTION

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This brief aims to provide project stakeholders with information on the measures taken to assess, avoid, and mitigate possible impacts on cultural heritage from the Kvesheti-Kobi Road Project.

This brief is a non-technical summary that complements other publicly available resources. It builds on the eight stakeholder engagement events at which cultural heritage was discussed prior to the Asian Development Bank' (ADB) and European Bank for Reconstruction and Development's (EBRD) project approval, and the continued stakeholder engagement that has happened since.

ADB and EBRD are co-financiers of the project with \$415m and \$60m respectively. ADB's policy requirements for cultural heritage is set out in its [Safeguard Policy Statement \(2009\)](#) in Appendix 1, Section 11. EBRD's policy requirement for cultural heritage is set out in its [Environment and Social Policy \(2014\)](#): Performance Requirement 8 – Cultural Heritage.

The project was approved by ADB on [1 August 2019](#) and by EBRD on [2 October 2019](#). With respect to Cultural Heritage, the Ministry of Sport, Culture and Youth through the National Agency for Cultural Heritage Preservation of Georgia (NACHP) granted the positive conclusion for the project on 2 August 2019 (N<sup>o</sup>17/3158).

## PROJECT OVERVIEW

The project will improve connectivity and safety along Georgia's North-South Corridor by constructing about 23 kilometers (km) of climate-resilient, two-lane highway between Kvesheti and Kobi (the project road) and about 5 km of all-weather access roads.

The project is an essential part of the Government of Georgia's program to progressively upgrade the North-South Corridor between Jinali and Larsi (approximately 100 km). The project road has been designed in accordance with the following objectives:

- (i) Conform to European highway design standards for safety and operation
- (ii) Allow all year-round operation and access to local communities
- (iii) Enable traffic speed of 80km per hour
- (iv) Cope with expected increases in traffic volume, including freight trucks
- (v) Avoid major social and environmental impacts during construction and operation
- (vi) Enable future connection to Gudauri Valley

Figure 1: Project area and alignment of new highway



Source: Google Earth (2019)

**APPROACH TO CULTURAL HERITAGE**

Georgia is a land of ancient culture with a strong literary tradition based on the Georgian language and alphabet that dates to the 5th century AD. This ancient culture is reflected in the large number of architectural monuments, including many monasteries and churches which contributed to the development of the Byzantine style. Despite the project area’s historical role and importance, the archaeology of the area had not previously been studied extensively.

The project itself has evolved through several stages: (1) pre-feasibility, (2) feasibility, (3) detailed design during the preparation of the Environmental Impact Assessment (EIA), and (4) pre-construction.

This brief sets out the progression of data collection, assessment, and management of cultural heritage for the project. While details are provided relevant to each of the four stages, data collected has contributed to the updating of the national register of cultural heritage among others. This means that numbers of cultural heritage sites listed in the register with respect to the EIA in 2019 were correct at that time but have since been upgraded as a result of the project’s pre-construction work.

**Pre-Feasibility and Feasibility Assessment**

Both pre-feasibility and feasibility studies examined the entire Jinvali–Larsi Road comprising three sections, of which the Kvesheti–Kobi represented the second section of the road.

During the pre-feasibility stage (July 2017), the entire extent of the Jinvali–Larsi Road was examined as part of a high-level analysis of alternative alignments and environmental impacts. This analysis listed known cultural heritage sites in the Kazbegi and Dusheti municipalities.

In the feasibility stage (March 2018), further desk-top analysis of cultural heritage in the region was undertaken to identify sensitive environmental, social, and cultural heritage receptors within the project corridor. The feasibility study concluded that all cultural heritage sites (known at the time) as well as cemeteries and places of worship are bypassed by the project road and that as part of the construction permit, clearance must be obtained from the cultural heritage protection authorities. The feasibility study also notes that given the rich cultural heritage in the region, a chance find procedure should be adopted and sensitive work locations should be supervised by an archaeologist.

## Detailed Design

During the detailed design phase, to avoid potential impacts to known sites, the alignment of the road was selected to bypass monuments identified in the area as far as feasible. Specifically, the tower at the plateau at chainage 5+800 and the monument close to the interchange at Begoni. In parallel with the detailed design, more detailed studies of cultural heritage were undertaken as part of the EIA. This included:

- (i) Review of the national register for cultural heritage monuments;
- (ii) Review of national and international cultural landscape designations (for which Khada Valley is not designated);
- (iii) Consultation with local community and stakeholders including the NACHP;
- (iv) Walkover Field Survey undertaken by Iulon Gagoshidze, a Georgian independent expert archeologist with extensive experience.

The project established that no international or national cultural landscape designations existed in the project area of influence. Following this, the EIA focused on known sites – first to avoid potential impacts, and second to mitigate residual impacts. Mitigation measures included all known sites regardless of whether the sites were listed in the national registry in line with lender requirements.

According to the register of the cultural heritage monuments (source: Cultural Heritage Protection Agency data) most of the listed sites identified during the EIA did not have formal protection status.

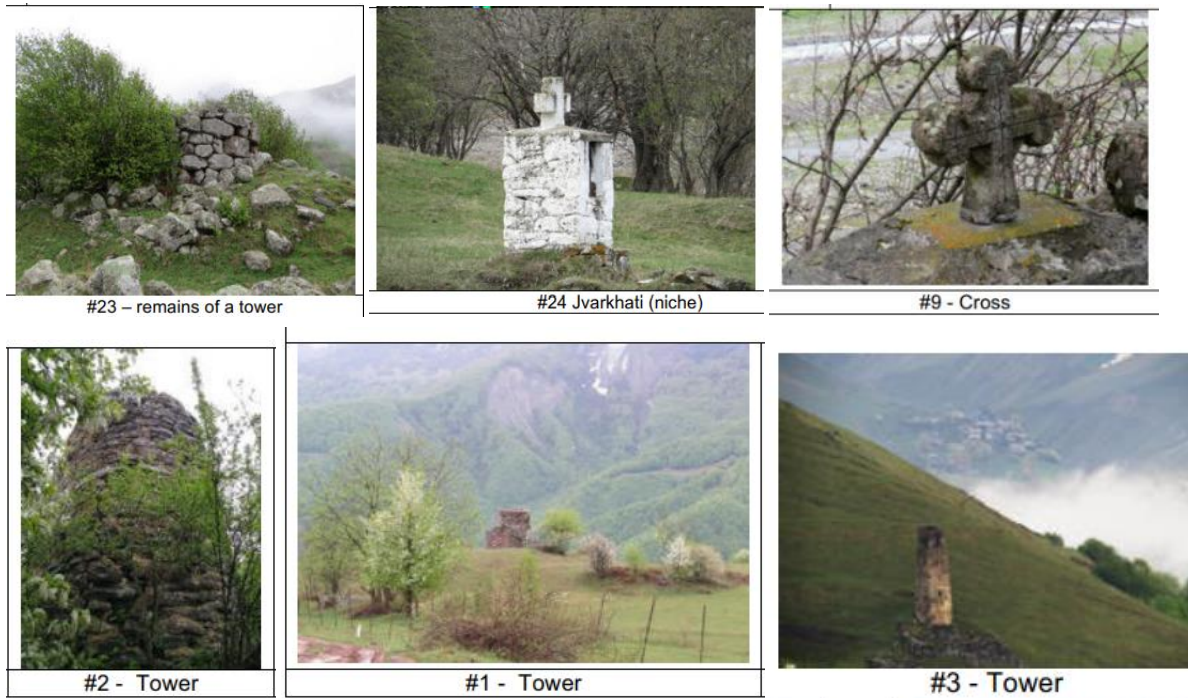
Given the sensitivity of the sites, a physical protection zone of not less than 50m (following Georgian Law on Cultural Heritage) was observed. Only six residual known sites were located within 50m of the right-of-way though none were directly within the project footprint.

The six sites within 50m are:

1. Site #23, located 79m from the road embankment, but close to the interchange slip road (2 meters).
2. The Niche in Kobi, Site #24, which is 45 meters from the existing road.
3. Cross, Site #9, on the road alignment.
4. Site #2, a tower located on the Plateau; small mound of remains of a stone structure and remains of stone masonry in several locations.
5. Cemetery in Kobi, Site #1. Impact on the cemetery is not expected but if advisable by the Supervision Engineer, the site must be fenced to avoid accidental damage.
6. Cemetery in Tskere, Site #3, adjacent to the alignment. Special measures have been considered in the design resulting from informal consultations with villagers (see EIA Section 4.5 – PCR). Protection measures, e.g., fencing of the site, and careful management of construction works will be required in this section of alignment to avoid impact.

For the known sites within the vicinity of the project, detailed mitigation measures were set out in the EIA to reduce any potential impacts.

**Figure 2: Six sites within 50m of project right of way**



Source: Project's Environmental Impact Assessment (2019)

Figure 2 shows the six residual heritage sites located within the project corridor identified during the EIA preparation phase. These were also discussed with stakeholders during community meetings.

Source: GEO: North-South Corridor (Kvesheti-Kobi) Road Project Environmental Impact Assessment (2019)

## **VIBRATIONS AND SOUND**

Given that monuments are built without mortar and are particularly sensitive to vibrations, the project pays particular attention to the impacts of vibrations.

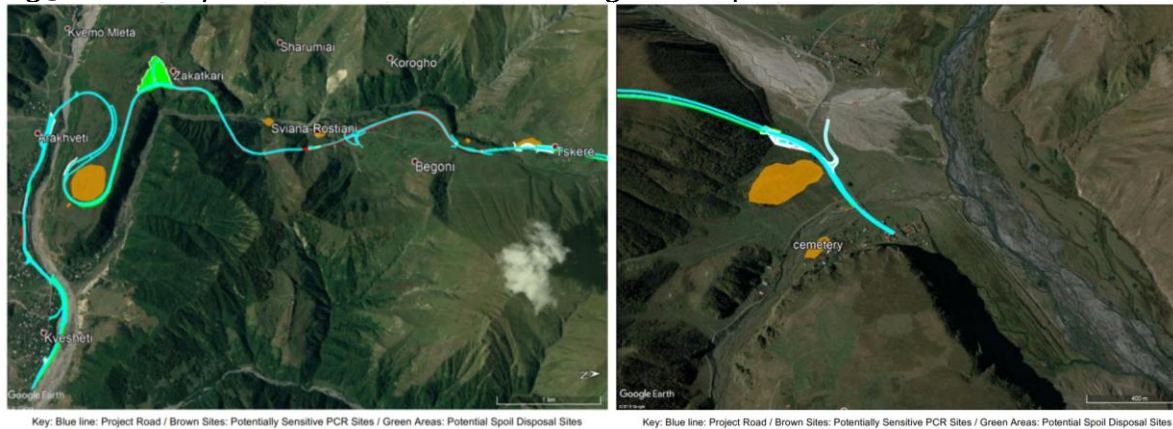
DIN4150-3 standards were used and a threshold limit of 2.5mm/sec considered as the maximum allowable limit was set. Above this limit, there could be impacts to buildings of poor construction quality and those of cultural heritage value termed Category 3 buildings or structures.<sup>1</sup> These structures are viewed as vulnerable to vibration impacts and hence require close monitoring of vibration impacts in their vicinity.

The project undertook predictive modelling to establish whether there could be impacts from normal road construction and high vibration activities including piling and blasting. For all sites, it was concluded that impacts would be below the set thresholds.

<sup>1</sup> This standard specifies methods of determining and evaluating the effects of vibration on structures designed for predominantly static loading. Source: [https://standards.globalspec.com/std/13113683/DIN\\_4150-3](https://standards.globalspec.com/std/13113683/DIN_4150-3)

## ASSESSING UNKNOWN SITES

Fig 3: Potentially sensitive sites identified during the EIA process



Source: Project's Environmental Impact Assessment (2019)

Given Georgia's rich history and cultural heritage, and the presence of towers and other architectural monuments, it was considered possible that additional archaeological finds could be discovered. Potentially sensitive sites where such finds may occur are shown in Figure 3.

## MITIGATION, MANAGEMENT AND MONITORING MEASURES

Based on this information, measures to avoid, mitigate, manage and monitor impacts were developed to reduce potential project risk. These measures included:

1. An archaeology five-phase strategy to be implemented by the works contractors;
2. Development and implementation of a chance find procedure;
3. The requirement for the works contractors in charge of the long tunnel section (also referred to as Lot 1) and the road section (Lot 2) to deploy cultural heritage experts as part of their personnel and develop their own cultural heritage management plans;
4. Carry out regular consultation meetings with all key users and custodians of the identified cultural heritage sites;
5. Employing cultural heritage monitors under the scope of the project management and construction supervision consultant (PMSCS);

The measures set out above were developed in full compliance with requirements set out in the national approval, particularly with respect to Article 10 of the Law of Georgia on Cultural Heritage and approval conditions set on the project that "archaeological supervision is necessary during the whole course of the road construction."

## **Archaeology Five Phase Strategy**

The phased approach allows for the progressive identification of sites and any impacts during the design and construction of the project. The five phases are:

1. **Reviewing Existing Data** – Areas of potential archaeological interest are identified by desk-based activities including a scientific literature review, documentary searches for previous archaeological work, and examination of aerial and satellite images. The road route and locations of facilities are examined on the ground in a rapid walkover survey to verify the route facilities and proposed access road locations.
2. **Extensive and Intensive Surveys** – The route of the road corridor is examined on the ground to help determine the potential impact and define parameters of 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. The information is used to assist in the detailed design of the road corridor and permanent facilities.
3. **Pre-Construction Excavations** – In areas where damage 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. Investigations under phase 3 will result in a scientific report accompanied by artefacts prepared for museum curation.
4. **Chance Finds during Construction** – Construction may reveal previously unknown archaeological features. Arrangements are made for the monitoring of construction and provision of a team of archaeologists to conduct ‘rescue/salvage excavations’ where required.
5. **Reporting** – Study of material and preparation of reports on the archaeological works carried out during the project. This phase includes the dissemination of the results of studies of the archaeological works carried out during the project to the archaeological establishment and wider public.

## **Chance finds**

The chance finds procedure is in place for all construction works. It provides a key mechanism by which any unknown sites can be quickly identified, assessed and then appropriate actions taken such as stopping the work or continuing. The implementation of the chance finds procedure is supervised by the cultural heritage monitor who has the authority to suspend the works when further investigation is needed.

The project will cooperate with the PMSC and the Roads Department on measures to preserve physical cultural resources. These include providing site supervision, labour and equipment for chance find excavations, and demarcation of cultural heritage sites to be avoided. This will be observed in areas to be determined by the cultural heritage monitor and reported.

## **Engagement with key users and custodians**

The project will continue to conduct regular consultation meetings with users, custodians, and other key stakeholders regarding cultural heritage sites, in order to understand the level of significance the local communities attach to various cultural heritage sites.

Results of consultation meetings will be integrated into the cultural heritage management plans, and help define site-specific mitigation and monitoring measures. To facilitate regular engagement with local communities and other stakeholders, the community liaison officers, supported by the cultural heritage monitors, are deployed in the project area.

### **Contractor cultural heritage management plans**

The works contractors are implementing their cultural heritage management plans. Areas of potential cultural heritage impact (Figure 3) will be examined, and any necessary excavations conducted prior to construction in line with the Archaeology Five Phase Strategy. Additional actions include:

- Visual and instrumental monitoring of vibrations at sensitive locations as determined by the EIA;
- Recording sites identified during construction ;
- Pre-construction works to evaluate, and record known archaeological sites will be agreed with the Ministry of Sport, Culture and Youth through NACHP;
- Archaeological surveillance (watching brief 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, and those areas identified above in Figure 3;
- The works contractors have in place cultural heritage specialists to monitor construction activities and prepare the management plan. They will be tasked with implementing the chance finds procedure;
- For sites identified during pre-construction survey or from any chance finds identified during construction activities, works will be stopped and feedback from the Ministry of Sport, Culture and Youth through NACHP will be sought in line with Article 10 of the Law of Georgia on Cultural Heritage. Where finds are deemed significant and works cannot easily be adjusted to avoid damage, construction activities will be suspended at the site until the excavation and recording required by the authorities has been carried out.

### **Cultural heritage monitor**

In addition to the works contractors' staff, cultural heritage monitors have been deployed by the PMCSC. Their role is to review the works contractors' cultural heritage management plans, undertake pre-construction surveys throughout the project area, including temporary sites (this work is already underway).

Approval for any temporary sites is only provided by the PMCSC following consideration by the cultural heritage monitor. The monitors are also required to identify areas of high risk for archaeological resources that might require dedicated investigation and further consultation with the Ministry of Sport, Culture and Youth through NACHP.

The cultural heritage monitors will also directly monitor work on-site, ensure the works contractors are properly implementing protocols for vibration monitoring and that limits set are being properly enforced. The cultural heritage monitors will also ensure that the cultural heritage management plans are being followed and that the chance finds procedure is also being implemented.

The cultural heritage monitors are therefore required to be present on-site during the whole course of the road construction as per the approval conditions. As an employee of the PMCSC, the cultural heritage monitor has the authority to stop the work of the contractor, providing an additional layer of assurance on cultural heritage.

The PMCSC currently has two cultural heritage monitors in place who are both well trained archaeologists with significant experience of implementing large scale infrastructure projects in Georgia and managing cultural heritage issues.

## **PRE-CONSTRUCTION ACTIVITIES**

As mentioned above, the significance of unknown potential cultural heritage values within the project area was identified during the development of the EIA. Ongoing feedback from stakeholders raised further concerns. To address these concerns and fully implement the measures set out in the EIA (para 1274) for the works contractors to implement the Archaeology Five Phase Strategy, the Georgian Roads Department approached NACHP to undertake a detailed further pre-construction survey and assessment of the project area and zone of influence.

NACHP subsequently undertook a detailed survey in 2020 and 2021 to examine all cultural heritage resources within the project zone of influence. This included the direct road alignment and the footprint from other permanent components and temporary facilities or infrastructure. The works looked to prepare a cultural heritage general action plan which covered all aspects of the project in further detail with respect to cultural heritage. The work on the general action plan has now been complete and included:

- Identification of unknown cultural heritage sites through field investigations;
- Compilation of a full register of the monuments/sites within the project area, and identification of their physical condition;
- Preparation of recommendations for their protection and conservation in compliance with international conventions and Georgian legislation;
- Identification of any nationally significant sites warranting a redesign to the road or realignment.<sup>2</sup>

## **NACHP Cultural Heritage General Action Plan Findings**

### **Survey Findings**

- Based on intensive field survey in the project area of influence, 155 objects with no status were identified and assessed as valuable cultural heritage object/property;
- All these identified objects were included in the list of the objects of cultural heritage on 7 December 2020 and are now subject to legal protection;
- A total of 213 monuments/objects (identified during EIA preparation and/or pre-construction survey) have been identified in Khada Gorge and Kobi area, 104 of which are in the 600 m zone of influence. 20 resources have the status of cultural heritage property/monument, and 70 are on the recommended Cultural Heritage Object List.

### **Cultural Heritage Landscape**

- The project will cause impacts to the cultural landscape of the project zone of influence that need careful management to avoid significant long-term impacts. Key recommendations included:
  - Undertake works to restore and rehabilitate the immediate settings of the cultural heritage resources for their conservation, reinforcement, and mitigation of the effects of the project alignment. This is particularly relevant for temporary facilities built within the visual buffer of some monuments, notably in Kobi and Tskere.
  - Detail rehabilitation and recultivation measures to restore the landscape altered by construction activities to ensure the living conditions of the historic settlements and reduce other environmental impacts. Consideration of green cover and planting to reduce landscape visual impacts.
  - Undertake work to protect historic settlements, their material and non-material cultural heritage and setting.

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<sup>2</sup> The RD will defer to the Ministry of Sport, Culture and Youth through NACHP as the statutory authority in these matters for a final decision as to if any realignment or redesign is required.

## Assessment of impacts on cultural heritage resources

- Detailed assessment of all 104 monuments / objects identified within the project zone of influence was undertaken with recommendations provided for each comprising of requirements for: (1) archaeological survey, (2) vibration monitoring; (3) fencing, and (4) preservation enhancement.
- 18 cultural heritage monuments/objects were identified for which project components were within the physical protection zone (50m) or were within a potential project impact zone (65m) as identified for blasting. For these sites preliminary research will need to be conducted and construction methods identified to ensure no damage.
- Detailed archaeological surveys were required for nine objects within the main road section. This work has now been completed by NACHP. From this work four sites have been identified where the following actions are required. Pending their successful implementation, works in these areas can be undertaken.
  - Fencing, tower strengthening and close monitoring (one site)
  - Fencing and close monitoring (one site)
  - Realignment of the future Gudauri access road
  - Removal of object and move to another location (one site)
- Adjustment of four project elements (two access roads, junction, project camp) are required to avoid impacts or require archaeological study to be concluded prior to the start of construction
- Reinforcement works are required at the Rostiana archaeological site and must be concluded prior to the start of works
- Monitoring of a further 16 archaeological objects and vibration monitoring will be required by cultural heritage monitors
- In case of widening the Khada Valley access road, two further objects will require full study
- Fencing is required for six further objects

## CONSTRUCTION ACTIVITIES

Following the detailed recommendations and requirements set out by the pre-construction work of NACHP, recommendations are now being actioned by the contractors under close supervision of PMCSC's cultural heritage monitors.

As construction activities are yet to start in various locations, both pre-construction surveys to clear sites and condition assessments are ongoing. The chance finds procedure is in place and the cultural heritage management plans of both works contractors have been updated to reflect the additional objects and sites identified during NACHP's work.

## CULTURAL HERITAGE MASTERPLAN

To protect and popularize cultural heritage in the project area, and in the Khada Valley and Kobi area, NACHP recommended several activities in accordance with Georgian legislation and international good practice. These include:

- Development of historic-cultural reference plan for the settlements in the project road area within the framework of the pre-project studies of the development regulation plans
- Establishment of general protection zones of cultural heritage in the project area within the framework of pre-project studies of land use and development regulation plans
- Development of urban regulating plans for historical settlements on the territory of the project road
- Development of conservation plans for complex monuments of cultural heritage
- Documentation of nationally and locally significant cultural heritage sites and objects that includes video, photos, and other records

- Study of intangible cultural heritage in the project road area

A Historic-Cultural Reference Plan (HCRP) will be delivered following national legislation and in alignment with international best practice. Work on this activity began in September 2021. Consultations are being planned with relevant stakeholders and inputs will be sought throughout the HCRP development process. The HCRP is scheduled for completion in February 2022 and will be publicly available on the project website.

## **MORE INFORMATION**

The following documents can be downloaded from the dedicated project website (English and Georgian):  
<https://kveshetikobiroad.ge/en/public-information/>

- (i) Environmental Impact Assessment
- (ii) Land Acquisition and Resettlement Plans
- (iii) Project Fact Sheet
- (iv) Frequently Asked Questions
- (v) Project map
- (vi) Project video
- (vii) Stakeholder Brief: Assessment of Alignment Alternatives
- (viii) Community Needs Assessment
- (ix) Cultural Heritage General Action Plan