

Terms of Reference (ToR) for Preparation of Detailed Design Documentation for Arrangement of Tourist Infrastructure and Urgent Restoration Works for Zarzma Monastery

Introduction

The Municipal Development Fund of Georgia (hereinafter the employer) is a legal entity of public law whose purpose is to mobilize financial resources from donors including international and Georgian financial institutions, in order to make them available for investments in local infrastructure and services, while simultaneously helping local self-governments in strengthening their institutional and financial capacity.

MDF programs envisage implementation of various projects including the Third Regional Development Project financed by the World Bank Group and the Georgian Government (GoG). The aim of the project is to promote tourism development in Meskheta and Samtskhe-Javakheti Regions, including the arrangement of tourist infrastructure at the cultural heritage monuments' adjacent areas.

The present TOR specifies requirements for preparation of detailed design documentation for rehabilitation of the tourist infrastructure and urgent preservation/restoration works at Zarzma Monastery.

Objective and Conditions

The present TOR defines service conditions for preparation of detailed design documentation for waterproofing of particular buildings of the monastery complex, paving (cobble riprap) of the footpath leading to the spring in the monastery adjacent area, restoration of the spring structure (also a monument). A map identifying the area and specific objects of intervention is provided in Annex D.

The detailed designs must be developed full respect of the cultural heritage requirements of this type of outstanding monuments. Any visual impact of new works and any obstruction of the heritage landscape should be minimized and managed through appropriate design of features. All design documents must be in accordance with the relevant requirements of the Georgian legislation in force and statutory normative documents and approved by the NCHPA and cleared by the MDF and the Supervision Consultant of the RDP3.

Project Brief Description and scope of Services

The project area is located in Adigeni Municipality, in the center of Zarzma Village. The monastery complex was founded in VIII-IX centuries and is one of the most distinguished monuments of cultural heritage of Georgia. The complex consists of various monastic premises, with a dominating 14-th century domed cathedral. Interior of the cathedral is painted and it represents one of the most significant samples of the medieval Georgian mural painting.

In general, the monastery is active and provides mess services. Its general condition is good. However, roofs certain parts damaged, eaves and facade finish also require some works. The existing challenges threaten the Cathedral's stability and require immediate attention.

This assignment includes services in relation to the following works:

1. Rehabilitation and water proofing works for the roof of the Cathedral and the bell tower, as well as the roofing of the small churches existing northward and eastward of and around the main cathedral.

Any damaged sections of the roof and walls, where the water may be leaking into the buildings, should be detected, assessed and documented based on a survey of the historic structures. The project shall envisage all such measures, which will provide reliable protection of the buildings from the surface

waters using the most appropriate technology and methodology for this type of historic structures, including (without being limited to):

- Rearrangement or replacement, as required, of the stone tiles of the roof in all sections and points detected;
 - In terms of protection against surface waters and dampness, detection and recording of the damaged sections of roofing, eaves and walls and fractures and cracks appearing in the walls; Through proposing respective restoration-construction measures and advanced restoration technologies, proper treatment, filling of these damaged sections for complete remediation of the named deficiencies;
 - Cleaning roofs and wall joints from the appearing plants;
 - Repair or replacement, as required, of damaged door-windows.
2. Examination of the monastery buildings' existing illumination system, detection of damages and shortcomings and modernization-upgrading of the system, as required. Moreover, for preparation of the rehabilitation project design, it is required to hold consultations with the Father superior of the monastery regarding this issue, and to reflect requirements of the monastery.
 3. Organization of the existing parking lot, which is located by the monastery. The parking lot cover is in a good condition. It shall be marked for regulation of traffic and provide parking opportunities for cars and busses. Also, the parking area connects the Monastery with the spring path. The proposed design should include a safe crossing and navigation plan for pedestrians as well.
 4. Arrangement of the footpath leading from the Monastery to the Historical Spring. The existing earth road shall be paved (cobble riprap) and water drainage measures shall be implemented, lighting shall be arranged. The path should be equipped with benches and litter bins in the vicinity of the spring.
 5. Restoration of architectural structure of the historical spring (i.e. „Tamari“ spring) – restoration of the remaining structure - walls, arch, overhead cover, floor, drainage measures, arrangement of the structure and road connecting space, architectural planning, with improvement of the territory, as required.
 6. Tourism Orientation Signage (multilingual), to be designed in style with the historic nature of the location, in order to orient visitors and provide background information on monuments and historic artifacts.

Stages and specific Tasks

Stage I – Documentation works, survey of the design area and Project Concept

- a) cadastral documentation (to include in the design and status quo topographic plans the registered land plot(s) outline with indication of cadastral boundaries and codes); b) topographic survey of the area; c) general geological survey of the area; d) information on existing communications; e) art historian's basic opinion on the monument;
- Analysis of Existing Conditions Site and Landscape Evaluation, documenting and analyzing the significance of the heritage buildings and artifacts, their immediate surroundings and heritage landscape as a unified site, ensuring completeness of treatment for all the foreseen investments and works, and including (i) recommendations for any missing element and/or additional required works to ensure the integrated conservation of the historic site; and (ii) proposed unified treatment of public spaces and territory connecting the Monastery, minor churches, parking lot, pedestrian footpaths and spring and other key elements.
- Heritage Structure and Site Report.
- feasibility study for the sub-project, including review of the possible alternatives, analysis of project challenges and risks, with determining project scope and parameters (including financial scope) and tentative method and schedule of project implementation.
- Project Concept – with specified project site parameters, structural, architectural and technical solutions, including the overall site plan and location of signage.

Following completion of exploration-survey works and upon submission of the respective reports, rehabilitation-restoration methods and concept, the employer will specify project scope and parameters, and likely solutions, which will be followed by decision on commencement of the next stage works. After initial survey, the employer may come up with a decision to suspend services on any of the components, based on the findings and recommendations.

Stage II

Preparation of the draft design documentation and its endorsement by the stakeholders – Architectural Council of the Patriarchy of Georgia and NACHP.

Stage III

Preparation of the working documentation.

Deliverables

1. Heritage Structure and Site Report (see Annex C for a proposed outline), including (without being limited):
 - Cadastral data, outcomes of topographic and geological surveys;
 - Results of engineering survey – opinion on stability and technical state of the buildings. Primary information on defects and damaged sections;
 - Art and Landscape historians' basic opinion.
 - Final approval by NACHP
2. Project Concept Design, with respective graphic, photo and textual contents, including alternative proposals and preliminary financial analysis and estimate of works.
3. Draft Design
 - Executive Summary;
 - Topographic survey UTM (international) coordinate system;
 - Geological survey (as required);
 - General location and master plans (scale 1:500; 1:1000);
 - Integrated Site Plan, including signage, site lighting, public furnishing, pedestrian connections, green elements, etc (Scale 1:500)
 - Art historian's opinion with respect to designed rehabilitation works;
 - Monument related measurements, list of damaged sections and work methodology;
 - Architectural shop drawings (plans, sections, facades);
 - Main structural solutions;
 - Small architectural forms, as required;
 - Visual and photographic material.
4. Detailed Design Documentation
 - Executive Summary;
 - Topographic survey UTM (international) coordinate system;
 - General location and master plans (scale 1:500; 1:1000);
 - Architectural shop drawings (plans, sections, facades, details, units (1:100, 1:50, 1:25));
 - Bill of quantities of finishing, improvement works;
 - Detailed drawings of small architectural forms – bench, shed, decorative lamp pole etc. as required;
 - Structural shop drawings (schemes, details, units, specifications, (scale 1:100, 1:50, 1:25));
 - Engineering part: power network, drainage (schemes, details, units, specifications);
 - Work organization project with time Schedule and financial schedule, list of requisite machinery and equipment, etc;

- BoQ for works to be implemented; Cost estimations (unit rate breakdown by resources and summarized unit rates);
- Detailed and general specifications of bidding documentation;
- Determination of load on engineering communication network for obtaining technical conditions from relevant institutions, as required;
- Economic analysis (should include capital expenditures required for project implementation as well as average annual operation and maintenance costs. The named data should be provided for each possible alternative solution of project design (based on technical specifics of the project, at least two alternative technological solutions should be presented). The deliverables should also include methodology of each alternative of cost calculation with respective clarification and reference to the data sources.
- Environmental Management Plan (EMP).

Technical specifications shall include general instructions and recommendations for the contractor (bidders) as well as detailed specifications (specifying all mandatory standards) for controlling materials used, methods of work performance and quality.

The graphical part of the design (construction as well as bidding drawings) shall be prepared in accordance with norms and standards required for working documentation, in appropriate scale and detailing.

Consultant's Experience

The Consultant shall have experience in preparation of cultural heritage sites restoration/rehabilitation designs in at least two contracts, that has been completed within the last five years and that is similar to the proposed consultant services by physical size, nature of works, complexity, methods and technology.

The Consultant's Staff

In order to provide for the top-level performance of the assigned task, the Consultant shall mobilize the qualified staff (key personnel as well as the support staff).

All the specialists shall be well-recognized professionals in their respective fields with at least 10-year experience in the similar work environment.

Reporting and Schedule

(a) Within a 6-week period following commencement of services, the consultant shall submit for approval to the employer, the above-mentioned surveys, opinions and design concept.

(b) Within a 9 week period following commencement of services, the consultant shall submit for approval to the employer the draft design (at this stage, the design should be agreed with all stakeholders, Architectural Council of the Patriarchy of Georgia and NACHP).

(c) Within a 4-week period following submission in writing or through email of notification regarding remarks and/or comments on documentation presented by the employer and/or the assignee of the employer under the contract at the previous stage (stipulated by paragraph 'b'), the consultant shall submit for approval to the employer the interim draft of the working documentation, which will incorporate all previous remarks/comments. It should reflect the basic design working documentation - with architectural and structural parts, drawings, details, units, specifications.

(d) Within an 5-week period following submission in writing or through email of notification regarding remarks and/or comments on documentation presented by the employer and/or the assignee of the employer under the contract at the previous stage (stipulated by paragraph 'c'), the consultant shall submit for approval to the employer the final version of the complete set of design documentation, which will incorporate all previous remarks – finalized working documentation for all parts of the design, with

respective details, units and specifications, cost estimations (unit rate breakdown by resources and summarized unit rates), bidding documentations and EMP.

At every stage, within one-week period following submission of the documentation, the employer will furnish the consultant with its remarks. The consultant shall consider the above-mentioned for the following stage and introduce the respective amendments to the design documentation.

Finally, the consultant shall submit to the employer four printed copies of the detailed design documentation and bidding documents prepared in Georgian and English languages. The submitted materials shall be accompanied with their electronic versions (textual part in Word and Excel file form, and drawings in - AutoCAD and PDF format).

The Municipal Development Fund of Georgia will make final approval of design and reports provided by the Consultant.

Additional conditions

During the progress of construction works, and even after expiration of the design documentation contract, in order to provide for adherence to the design documentation, the consultant shall take part in definition of design solutions and preparation-coordination of working documentations, bill of quantities and variation orders to the contract, as required.

Employer's Contribution

The employer shall grant access to all available materials, which may be required for the Consultant to perform their services.

Duration of Services

Expected duration of the design services is 140 days.

Annex A: Consultant’s Personnel for the Detailed Project of Arrangement of Tourist Infrastructure and Urgent Restoration Works for Zarzma Monastery Tentative Cost estimate (in USD) (including taxes)

N	Consultants	number	month	Input (Person* Month)
1. Key Experts				
1	Team Leader/ Architect Restorer	1	3,5	3,5
2	Structural Engineer	1	3,5	3,5
3	Landscape Architect	1	1	1
4	Electrical Engineer	1	3	3
	Subtotal 1	4		11
2. Non-Key Experts				
1	Architect Restorer	1	2	2
2	Structural Engineer	1	1	1
3	Civil Engineer	1	1	1
4	Art Historian	1	1	1
5	Electrical Engineer	1	1	1
6	Translator	1	1	1
7	Economist	1	1	1
8	Cost Estimator	1	1	1
9	Environment Specialist	1	1	1
	Subtotal 2	9		10
	Total	13		21

Annex B: Narrative Qualification Requirements for Key Experts

Title	Specific experience (Years)	Area of Specialization, Qualification	Special Skills and Knowledge, but not limited to
Team Leader/ Architect Restorer	12	<p>Experience in design and management of similar size and type (cultural heritage) project implementation;</p> <p>Minimum Master’s degree in civil engineering with further advanced training;</p> <p>knowledge of international and local design and construction codes/regulations/standards</p>	<p>Overall responsibility for implementing the project and managing the team of designers</p> <p>Review and certify subcontracting parts of the works;</p> <p>Monitor performance, deadlines, project progress, and conduct a risk management plan to avoid any unexpected incidence that may have a negative impact on the project development.</p> <p>Review the procedures set up by the contractor,</p> <p>Knowledge of the local and international standards for construction/rehabilitation works on cultural heritage sites.</p> <p>In-depth overall knowledge in detailed design supervision for large, and medium sized civil works projects</p>
Structural Engineer	10	<p>Civil Engineering — structural Engineering with experience in construction and rehabilitation of buildings and structures, experience of implementation of similar size and type projects;</p> <p>Minimum Master’s degree in civil engineering.</p> <p>With conservation and historic monument experience</p>	<p>Conducts the research on the technical conditions of the existing building;</p> <p>If necessary, prepares the constructive project documentation of reinforcement works;</p> <p>Prepares the constructive project documentation according to the architectural solutions;</p>
Electrical Engineer	10	<p>M&E Engineering – design of mechanical and electrical equipment, power supply and lighting systems, construction supervision</p> <p>Minimum ’s degree in M&E engineering;</p>	<p>Conducts the research on the existing communications;</p> <p>Gets the project solutions and prepares the technical documentation in contact with the team leader;</p>

Annex C: Sample Outline for the Heritage Structures and Site Reports:

“Heritage Structures and Site Report” should include, without being limited to, the following basic information:

1) For each historic structure:

- Short descriptive history of the historic structures to be preserved/renovated, with a focus on past interventions and restoration works, based on physical and documentary evidence;
- Current conditions, describing the main heritage characteristics (e.g. type of tiles, type of mortar, stone-work, etc.);
- Recommended preservation plan and overall treatment approach (i.e. rehabilitation, restoration or reconstruction);
- Recommended specific treatments and methodology for individual features or areas (e.g. type of mortar to be used, composition, color; type of proposed tiles, where to procure them, etc.);
- Proposed prioritization of recommendations and cost estimates;
- Recommendation for additional/future essential complementary treatment work (if any) and justification.

2) For the overall heritage site and territory immediately surrounding the Monastery and linking the project interventions:

- Analysis of Existing Conditions Site and Landscape Evaluation, documenting and analyzing the significance of the heritage buildings and artifacts, their immediate surroundings and heritage landscape as a unified site;
- recommendations for any missing element and/or additional required works to ensure the integrated conservation of the historic site; and
- proposal for a unified treatment of public spaces and territory

After due consultations with NACHP, the Consultant should provide the methodology for proposed specific treatments for restoration works. The consultant shall agree the “Heritage Structures Reports” with NACHP.

Annex D: Map

