

JSC “Rogun HPP”

State Enterprise “Directorate for Flooding Zone of Rogun HPP”

Project Management Group for Energy Facilities Construction under the President of the Republic of Tajikistan

ROGUN HYDROPOWER PROJECT – UPDATED ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

Volume 3: Cultural Heritage Management Plan

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1. INTRODUCTION

1.1. INTRODUCTION

- 1.1.1. WSP has been commissioned by the Project Management Group for Energy Facilities Construction under the President of the Republic of Tajikistan (PMG) to prepare a Cultural Heritage Management Plan (CHMP) which describes the procedures and processes for the ongoing management of cultural heritage resources potentially affected by the Rogun Hydropower Project (RHPP) in Tajikistan (hereafter the 'Project').
- 1.1.2. An Environmental and Social Impact Assessment (ESIA) was conducted by WSP in support of the Project, and the Cultural Heritage chapter of the ESIA presented an assessment of the potential Project impacts and set out recommendations for their avoidance or minimization, where necessary. As per the guidelines outlined in the World Bank's Environment and Social Standard 8: Cultural Heritage (2016), a CHMP is required.
- 1.1.3. For the purposes of this report, 'cultural heritage' encompasses archaeological, historical and paleontological resources, cultural resources (e.g., sacred sites) and related intangible practices, in line with the definitions set out in Tajik cultural heritage law (2017), the United Nations Education, Scientific and Cultural Organization (UNESCO) World Heritage Convention (1973; ratified by Tajikistan in 1998) and World Bank Environmental and Social Standard 8 (ESS8): cultural heritage (2016).
- 1.1.4. The CHMP is a live document and PMG are responsible for its annual review and any subsequent update, during the lifetime of the Project (as outlined in Section 15).

1.2. AIMS AND OBJECTIVES

- 1.2.1. The aim of the CHMP is to establish, in line with Good International Industry Practice (GIIP) e.g., as set out in ESS8 Guidance Note (2018), and applicable national legislation (2017), an appropriate strategy to mitigate and manage adverse effects associated with the Project on known or possible (previously unrecorded) cultural heritage resources, as identified in the ESIA. These aims will be achieved through the following six objectives:
 - **Objective 1:** to establish roles and responsibilities within the RHPP Project Team and externally procured experts, for implementing and updating the CHMP throughout the lifetime of the Project;
 - **Objective 2:** to set out a process of educating all on-site workers and contractors with regard to cultural heritage sensitivities, and the requirements of the CHMP;
 - **Objective 3:** to outline the requirements for ongoing baseline data capture programs and related management recommendations – to facilitate avoidance or minimization of impact, as required, including archaeological evaluation, excavation or other schemes of investigation (e.g., historic building recording) and/or environmental monitoring;
 - **Objective 4:** to set out a process of ongoing consultation and engagement with Project Affected Persons (PAPs) in relation to anticipated or ongoing resettlement and cultural heritage management, including intangible cultural heritage and cultural resource relocation activities;
 - **Objective 5:** to set out the procedures to be implemented to mitigate any unforeseen impacts to cultural heritage resources during construction, including a Chance Find Procedure (CFP) to be followed in the event of unanticipated archaeological, paleontological or cultural resource discovery during any Project related works; and

- **Objective 6:** to provide international best practice guidelines for the ongoing grave and cemetery relocation (and any related archaeological recording of ancient graves) to be implemented alongside the ongoing village resettlement program.

1.3. SUPPORTING INFORMATION

1.3.1. This CHMP should be read in conjunction with the following associated documents:

- Volume 3 – Project Environmental and Social Management Plan
- Appendix A – Cultural heritage gazetteer
- Appendix B – Drawings
- Appendix C – Example consultation and site monitoring registers
- Appendix D – Chance Find Procedure (CFP)
- Appendix E – CHMP implementation cost estimates

1.4. SCOPE

1.4.1. The CHMP applies to both tangible and intangible cultural heritage resources found within the Project Area of Influence (AoI), which is defined in the Cultural Heritage chapter of the ESIA and shown in Appendix B. A buffer incorporating the Project footprint and associated components was used to draw the AoI for cultural heritage, to adequately consider both direct and indirect impacts during impact assessment.

2. BASELINE SUMMARY

- 2.1.1. To prepare a comprehensive cultural heritage baseline for the ESIA, systematic surveys were completed in 2023 by experts at the A. Donish Institute of History, Archaeology and Ethnography (the A. Donish Institute) in Dushanbe, who are also legally mandated (Chapter 3, Article 23, 2017) to carry out all cultural heritage survey within the proposed Project zone. The A. Donish Institute archaeology field team undertook a program of rapid, targeted reconnaissance in June, August and September 2023. The objective of these survey phases was to identify and record evidence of past human activity (e.g., archaeological remains) in a selected “sample areas”, to inform any requirement for further archaeological work and additional studies in support of the Project. The walkover survey, which involved visual (non-intrusive) inspection, was targeted to upper terrace levels not previously surveyed (for an earlier ESIA produced in 2014).
- 2.1.2. Concurrently, the A. Donish Institute ethnography field team undertook a rapid, targeted consultation program, informed by preceding desktop studies, in June, August and September 2023. The objective of these survey phases was to identify and record local cultural resources and intangible heritage practice, in participation with selected communities to be resettled under the current (RAP 2) resettlement schedule. Formal ethnographic consultations were conducted in the following villages:
- June 2023: Khakimii bolo, Khakimii poyon, Khumrogh (formerly Kumok or Qumoq), Obiboriki bolo, Obiboriki poyon and Lughuri poyon; and
 - August-September 2023: Mehrobod (formerly Komsomolobod), Roghuni poyon, Aligalaboni bolo, Khumrogh, Chanor and Bedikho.
- 2.1.3. This community consultation phase was guided by the requirements of ESS8 (2016) to sensitively record intangible practices (ceremonies, traditional crafts, music etc.) and the specific geographical locations of cultural receptors (cemeteries, memorials and natural sites of spiritual significance, e.g., medicinal plants, sacred watercourses) identified by PAPs.
- 2.1.4. Focus group discussions were held to identify key informants in each targeted settlement. Key Informant Interviews (KII) were subsequently undertaken with community / cultural leaders. The communities were asked to provide details of their knowledge of sites of cultural importance (e.g., religious places, cemeteries, burials, traditional practice areas, sacred watercourse or shrines) within their settlement (and near vicinity).
- 2.1.5. The Cultural Heritage chapter of the ESIA identified 28 archaeological, historical and paleontological resources within the Aol, including fortress sites, abandoned settlements and fossilized dinosaur footprints. A total of 37 cultural and sacred resources were identified within the Aol. These included cemeteries and burials, mosques and springs.
- 2.1.6. For ease of mapping, each identified cultural heritage resource was given an identification number (I.D.) prefixed “RHPP-AR” for archaeological, historical and paleontological resources and “RHPP-CR” for cultural and sacred resources, e.g., RHPP-AR-01. The distribution of all resources within the Aol is presented in Appendix B.
- 2.1.7. Of the 28 archaeological, historical and paleontological resources identified within the Aol, 14 are in areas potentially directly impacted by Project construction related activities. On a worst-case basis, without the implementation of mitigation measures, there is potential for sensitive ‘non-replicable’ materials, of potential national importance, to be re-deposited, damaged, removed or

rendered inaccessible as a result of the continued construction phase activities. Additionally, this may also include cultural heritage resources not yet identified.

- 2.1.8. Of the 37 cultural and sacred resources identified within the AoI, direct construction phase impacts (e.g. due to ground disturbance) are predicted to occur to 33, a number of these resources are considered to be of high sensitivity.
- 2.1.9. There is also a potential for indirect impacts to receptors within the AoI. Indirect impacts include the alteration of the environmental setting in which a cultural heritage resource is experienced (e.g., by related dust and noise disturbance and / or the visual presence of the reservoir); a loss of access to resources as a result of the resettlement of PAPs; and secondary land slippage resulting from the progressive flooding of the valley and seasonal variations in the reservoir water level, which may damage archaeological resources in proximity to the reservoir perimeter.
- 2.1.10. Evidence of intangible cultural heritage was also recorded within the AoI. The Cultural Heritage chapter of the ESIA concludes that, although much of the local culture is similar to that found elsewhere in Tajikistan, there remain local peculiarities and differences which can be explained, in part, by the geography of the region and the isolation of many of the settlements. Common themes found throughout the baseline consultation program included:
- Oral history and legends;
 - Traditional construction styles and techniques;
 - Traditional crafts, clothing and music;
 - Traditional medicine;
 - Traditional food; and
 - Traditional beliefs, rituals and ceremonies

3. POLICY AND REQUIREMENTS

3.1. ESIA COMMITMENTS

- 3.1.1. All work pertaining to cultural heritage in relation to the Project has been completed in compliance with Tajik legislation (2017) and ESS8 (2016, 2018) guidance. This CHMP, in accordance with best practice, legislation and guidance, seeks to manage all cultural heritage related impacts effectively, and in participation with PAPs, to ensure a preference for the preservation of physical cultural heritage, and the maintenance of normal cultural activities, during all of Project phases, as far as reasonably practicable.
- 3.1.2. The following legislation, policy and guidance has been considered as part of the assessment:
- The UNESCO World Heritage Convention (1972; ratified by Tajikistan in 1992);
 - Asian Development Bank Environmental Assessment Guidelines (2003);
 - The Law of the Republic of Tajikistan on the Protection and Use of Objects of Historical and Cultural Heritage (2017);
 - The Law of the Republic of Tajikistan About Culture (1997);
 - World Bank ESS8: Cultural Heritage (2016) and associated Guidance Note (2018); and
 - European Investment Bank (EIB) Environmental and Social Standards (2022).
- 3.1.3. National Law in Tajikistan (the Law on the Protection and Use of Historical Cultural Heritage, 2017) governs the protection, use and promotion of cultural heritage. Intangible cultural heritage is also protected in the Law About Culture (1997), which covers non-material aspects. Cultural heritage is identified as the exclusive property of the State.
- 3.1.4. The 2017 law also states (chapter 3, article 23) that all related research (excavations and the survey of archaeological monuments) must be carried out only with the permission of the authorized state body, the Academy of Sciences of the Republic of Tajikistan (the A. Donish Institute).
- 3.1.5. Cultural heritage is defined in accordance with ESS8, and the other policy and guidance listed above, to include immovable, moveable and ethnographic elements. ESS8 requires the proponent to identify and reduce or avoid adverse impacts upon cultural heritage resources. The ESS also provides guidance which specifies the participation of PAPs and other interested parties in the identification of, and potential mitigation of, cultural heritage resources while recommending strategies for impact reduction and long-term management.
- 3.1.6. Standard 10 of EIB's Environmental and Social Standards (2022) concerns cultural heritage. This Standard requires a "precautionary approach to the management and sustainable use of cultural heritage". With regard to mitigation measures, it states that, when minimization of adverse impacts is not possible, the restoration in situ of the cultural heritage receptor(s) after the adverse impacts have occurred should take place to "ensure full restoration of the functionality and significance of the cultural heritage for the affected communities". Where minimization and restoration are not feasible, remediation / compensation for the loss of cultural heritage must be agreed with the PAPs before any potentially impactful works begin. Standard 10 also states that the views of PAPs on cultural heritage of importance should be incorporated into the Project design.
- 3.1.7. The 1972 United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Convention was ratified by Tajikistan in 1992. Each State Party to the Convention recognizes that it has the primary obligation to ensure the identification, protection, conservation,

presentation and transmission to future generations of the cultural and natural heritage ... situated within its territory (Article 4). For the purposes of this Convention, "cultural heritage" means:

- Monuments: monumental architectural, sculptural or painting works, elements or structures of an archaeological character, inscriptions, caves and groups of elements, which are of outstanding universal value from the point of view of history, art or science;
- Ensembles: groups of isolated or united buildings which, because of their architecture, their unity, or their integration into the landscape, have outstanding universal value from the point of view of history, art or science; and
- Sites: works of man or combined works of man and nature, as well as areas including archaeological sites that have outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view.

4. SUMMARY OF ACTIONS REQUIRED FOR CULTURAL HERITAGE

- 4.1.1. Generic cultural heritage management measures recommended by the ESIA include the following actions:
- Cultural heritage awareness program:
- 4.1.2. A cultural heritage awareness program for all staff during site induction and daily toolbox talks, to communicate the CHMP actions to be implemented during all Project phases– throughout ongoing construction and eventual operation, as described in Section 6.
- Ongoing baseline data collection program:
- 4.1.3. Baseline data collection for archaeological, historical and paleontological resources and cultural and sacred resources throughout the AoI is ongoing, as described in Section 7. This includes preconstruction surveys which will be required for elements of the Project design which have not yet been finalized and which may be situated outside the current AoI.
- Constraints mapping, demarcation and environmental enhancement:
- 4.1.4. The creation of constraints maps which include all sensitive receptors and avoidance areas in the form of proposed buffers, physical demarcation and, where applicable, community access routes, as described in Sections 8 and 9. Where necessary, additional enhancement or protection of a site's environmental setting (e.g., additional planting/screening around sacred places (e.g., cemeteries, shrines etc.) adjacent to roads or operational areas utilized during Project activities) may be recommended to mitigate adverse impacts.
- 4.1.5. Any translocation of medicinal plant species (depending on resource availability in the new resettlement locations) will be determined and managed in coordination with the Biodiversity team (see A04 Biodiversity Management Plan).
- Archaeological evaluation program:
- 4.1.6. The implementation of a program of archaeological evaluation (e.g., small-scale test pits) at sites where high-value, non-replicable, archaeological resources cannot be avoided by the Project, which will inform the requirement for any systematic removal / excavation to follow, as described in Section 10.
- Unexpected discoveries during continued construction (Chance Find Procedure [CFP]):
- 4.1.7. The implementation of a CFP in the event of unexpected and accidental archaeological, paleontological or cultural resource discoveries as outlined in Appendix D, as described in Section 11. The specific requirements of the CFP will form part of daily toolbox talks (and contractor site induction).
- Ongoing consultation and establishment of community museums:
- 4.1.8. Provisions for the continued liaison and communication between DFZ, assisted by the Cultural Heritage Management Team (CHMT), and identified local cultural leaders, to facilitate the ongoing identification and management of community cultural resources, as described in Section 12.
- Grave Relocation Best Practice Guide:

4.1.9. The implementation of the Grave Relocation Best Practice Guide is required to facilitate the ongoing relocation of graves and tombs from several sites within the Nurobod and Rogun districts. This will ensure that the relocation and any associated recording and assessment or analysis of the human remains will be undertaken in accordance with recognized best practice, as described in Section 13.

■ Environmental monitoring & reporting:

4.1.10. Changes in noise and vibration, surface water, visual setting and air quality will be monitored by the appropriate environmental specialist(s) throughout the Project's lifetime, and cultural heritage receptors (e.g., cemetery sites and other cultural and sacred receptors) should be included as monitoring locations, particularly where changes to local infrastructure (e.g., road widening and new access routes) are anticipated or proposed.

4.1.11. Ongoing slippage in the upper terraces (over 1,290 m asl) of the valley will also be monitored for cultural heritage (e.g., via unmanned aerial vehicle or visually from the water/by boat) to minimize the impact on archaeological, historical and paleontological resources and cultural and sacred resources in areas at risk of landslip (induced by Project activities). This Upper Terrace Cultural Heritage Monitoring Program must be prepared in continued consultation with the Dam Safety Panel of Experts (DSPoE), the Engineering Geology team and PMG, as stipulated in Section 14.

4.1.12. Table 4-1 sets out the phasing of the above summary actions.

Table 4-1 - Cultural heritage management actions applicable to Project phases

Action/phase	Construction	Operation
Cultural heritage awareness program	✓	✓
Ongoing baseline data capture	✓	
Constraints mapping, demarcation and environmental enhancement	✓	✓
Archaeological evaluation	✓	
Chance Find Procedure	✓	✓
Continued consultation and establishment of community museums	✓	✓
Ongoing grave relocation	✓	

Action/phase	Construction	Operation
Environmental monitoring & reporting	✓	✓

5. ROLES AND RESPONSIBILITIES

- 5.1.1. PMG will have overall responsibility for the implementation and any applicable update of the CHMP, with assistance from the Employer's Representative/future PMC, applicable EPC Contractors and DFZ. All departments, however, particularly the construction and design teams, must contribute and be actively engaged in its adoption.
- 5.1.2. The CFP (Appendix D) applies to all contractors and sub-contractors working on the Project. It is expected that individual EPC Contractors will prepare their own CFPs in accordance the ESS 8 complaint example provided (i.e., translated into local language and/or to include applicable on-site managerial contacts etc.). This is further explained in Section 11.
- 5.1.3. The responsibilities of PMG comprise:
- Overall communication regarding the CHMP commitments. Ensuring all requirements of this CHMP are disseminated to all relevant Project personnel responsible for delivering effective implementation (i.e., the Employer's Representative / future PMC and DFZ);
 - Annual review and any subsequent update of the CHMP, in collaboration with all responsible parties, during the lifetime of the Project;
 - Overseeing the procurement and commission of suitable external archaeological and ethnographic experts familiar with Lender standards and GIIP to work alongside the A. Donish Institute (and together forming the Project Cultural Heritage Management Team [CHMT]); and
- 5.1.4. Engaging with a regional paleontological expert team (e.g., at the Academy of Sciences of the Republic of Tajikistan) who will lead the management of any paleontological resources identified within the AoI. The responsibilities of the Employer's Representative / future PMC comprise:
- The preparation and implementation of an on-site cultural heritage awareness training program made available (during site induction) for all direct 'on site' employees and sub-contractors, with assistance from the CHMT (Section 6);
 - The implementation of 'avoidance plans' and demarcation (the installation of permanent fencing) around identified cultural heritage sites at risk, in coordination with DFZ (Sections 8 and 9);
 - Associated environmental monitoring and reporting (Section 14);
 - The preparation, dissemination and implementation of the CFP to EPC Contractors in accordance with the template provided in Appendix D.
- 5.1.5. The responsibilities of DFZ comprise:
- Continued consultation with PAPs regarding any ongoing grievances, compensation programs and any deviations in the Project's proposed design and the potential repercussions for sites of cultural heritage value (Section 12);
 - Management of a suitable expert CHMT, including retained specialists from the A Donish Institute, to effectively implement and deliver the CHMP (as described in Sections 9 and 12);
 - The inclusion of the schedule of ongoing cultural heritage baseline surveys and related CHMP commitments in the RAP schedule and Overall Implementation Program (OIP), in collaboration with PMG, and the inundation timeline.
 - and
 - Oversight of the best practice guide for ongoing grave and cemetery relocations, and any related archaeological investigation works in collaboration with the CHMT (Section 13).
- 5.1.6. The responsibilities for all other Project Contractors and Subcontractors are as follows:
-

- Adhere to the requirements of this CHMP in a safe and appropriate manner;
- Adhere to the Constraints Maps (avoidance plans) and related demarcated 'no go' areas;
- Communicate key message to field-based teams; and
- In the event that a Chance Find is observed and/or disturbed, site workers will follow the CFP.

5.1.7. The responsibility of Project Cultural Heritage Management Team (CHMT):

- Prepare and disseminate the cultural heritage Constraints Maps (avoidance plans) for the Project, in coordination with the Employer's Representative/future PMC;
- Assist the Employer's Representative/future PMC with the delivery of the cultural heritage awareness training;
- Deliver the ongoing baseline data collection program, prior to construction, and in coordination with PGM / DFZ as appropriate, (and in alignment with the inundation schedule and OIP);
- Undertake the ongoing ethnographic recording and management program, prior to continued construction;
- Preparation of an Archaeological Potential Model (APM), informed by ongoing data collection to guide ongoing / active management of cultural heritage throughout the Project lifetime;
- Ensure implementation of the grave relocation best practice guide, in collaboration with DFZ;
- Undertake the forthcoming archaeological fieldwork (evaluation), prior to continued construction;
- Report all findings and regularly feedback to PMG, OJSC and / or DFZ as appropriate;
- Assist PMG in developing cultural heritage requirements in support of the EPC tendering process; and
- Adhere to the responsibilities outlined in the CFP.

5.1.8. Estimated annual costs for the implementation of the CHMP are provided in Appendix E

6. CULTURAL HERITAGE AWARENESS PROGRAM

- 6.1.1. The cultural heritage awareness program should be prepared and led by the Employer's Representative / future PMC, assisted by the CHMT, and delivered during the general site induction for all on-site staff, visitors and subcontractors. This must be disseminated to both Project staff and sub-contractors, so persons are informed about local cultural practice and associated behaviors, the presence of sensitive cultural and/or archaeological sites, and burials and the CFP.
- 6.1.2. It should be adapted to be applicable for the work of specific teams/individuals and should cover as a minimum:
- A summary of local cultural heritage background. This introduction should seek to ensure local 'cultural norms and behaviors' are well respected and understood by all Project workers;
 - Information on who to report any local community grievances to, for example, if they are directly approached by a member of the local community with regard to cultural sites and related concerns;
 - Constraints maps, and demarcated / fenced areas, to show areas of archaeological and paleontological sensitivity and avoidance;
 - An outline of the Project's CFP (Appendix D), with details of who to contact in the event of any accidental disturbance or discovery (i.e. of archaeological artefacts, paleontological resources and/or burial sites); and
 - Maps (as included within this CHMP) and photographs (as presented within the Cultural Heritage chapter of the ESIA) should be used to facilitate communication.

7. ONGOING CULTURAL HERITAGE BASELINE DATA COLLECTION PROGRAM

- 7.1.1. Due to seasonal constraints, the active nature of Project construction and other health and safety constraints, the entirety of the AoI has not yet been fully inspected for cultural heritage sensitivities. For a project of this scale, it is common for baseline data capture and characterisation to continue beyond the ESIA stage. The baseline data collected at the ESIA stage is considered appropriate for the assessment of Project impacts and the design of effective mitigation strategies. Visual (non-intrusive) archaeological survey and sensitivity mapping of the following parts of the AoI, is ongoing (Archaeology & Paleontology Task 2 in Appendix E):
- along the left bank of the Vakhsh River from the village of Sangdevor to the dam itself;
 - on the right bank of the Vakhsh River, along its tributary, the Lugur Stream;
 - on the right bank of the Obikhingou River; and
 - along the left bank of the Obikhingou River, in the upper part of the flood zone.
- 7.1.2. Community consultation in villages yet to be engaged by the A. Donish Institute Ethnography Team in relation to cultural and sacred resources is also ongoing and must be captured in the Stakeholder Engagement Plan and coordinated with the ongoing RAP delivery in coordination with DFZ (Ethnography Tasks 1 and 2 in Appendix E).
- 7.1.3. This ongoing baseline data collection program will be delivered by the CHMT and overseen by DFZ, in collaboration with PMG, to ensure alignment with the inundation schedule. The methodology for this phase of the program will also be aligned with existing Baseline Work Plans (WSP, 2023) used by the A Donish Institute for previous phases of data collection, mapping and recording.
- 7.1.4. An APM of the AoI will be prepared by the CHMT and developed as an outcome of the ongoing archaeological reconnaissance and subsurface evaluation. The APM will highlight areas of high, medium and low archaeological potential based on factors such as height above sea level, geology, proximity to known archaeological resources and levels of prior ground disturbance. This model will be developed as the CHMP is implemented and used to guide ongoing management decisions for the Project, including updates and further iterations of the CHMP.
- 7.1.5. Further preconstruction survey will be required for elements of the Project design which have not yet been finalized and which may be situated outside the current AoI, such as the left bank roads and bridges and transmission lines. The CHMT must be consulted during this process to assess cultural heritage potential and determine applicable next steps. Any mitigation measures subsequently deemed necessary, must be undertaken prior to the construction of these elements of the Project and will form part of the Pre-construction Survey Process (Volume 3, Chapter 1) and the Management of Change Procedure (Volume 3, Chapter 2), as per the Environmental and Social Management Plan (ESMP).

8. AVOIDANCE PLANS FOR ARCHEOLOGICAL, HISTORICAL AND PALEONTOLOGICAL RESPOURCES

- 8.1.1. To facilitate the avoidance of sensitive, potentially non-replicable resources within the Aol, until they are fully evaluated/excavated in line with the mitigation program (Section 10), several site locations will be presented by the Employer's Representative / future PMC to all contractors as areas for avoidance and, potentially, physical demarcation (with barriers) during all ground preparation and continued construction works.
- 8.1.2. These Avoidance Plans will be prepared by the CHMT to include the receptors listed below, and any other archaeological, historical and paleontological resources identified during ongoing visual (non-intrusive survey) of the Aol (Section 7). Where there is a high potential for sub-surface remains, these locations will be buffered by a suitable "exclusion zone" (e.g., 25 m).

IDENTIFIED ARCHAEOLOGICAL, HISTORICAL AND PALEONTOLOGICAL SITES TO BE AVOIDED:

Kalai Bacha fortress site (RHPP-AR-05)

- 8.1.3. This fortress site, which has tentatively been dated to the 17th to 19th centuries, is located approximately 140m from the maximum inundation zone, near the village of Navdonak. This site is considered to be of medium cultural heritage sensitivity.
- 8.1.4. Without mitigation, there is a potential for this site to be impacted by Project activities during the continued construction phase, including vehicle induced vibration impacts that may damage structural integrity. It is recommended that a 25m buffer is applied around the site center and marked on project design maps as a "no-go" sensitive area during all Project activities. The site should be demarcated with barriers prior to the onset on any Project-related works in the vicinity.
- 8.1.5. This site is also at risk of indirect impacts as a result of secondary land slippage caused by the progressive flooding and seasonal variations in the reservoir water level. Mitigation measures for these impacts are outlined in Section 14. Due to its proximity to the FSL, the site will also be subject to an archaeological evaluation program, described in Section 10.

Kalai Dukhtarak A fortress site (RHPP-AR-06)

- 8.1.6. This fortress site, which has tentatively been dated to the 17th to 19th centuries, is located approximately 30m from the maximum inundation zone, near the village of Navdonak. A modern cemetery is located at this site. This site is considered to be of medium cultural heritage sensitivity.
- 8.1.7. Without mitigation, there is a potential for this site to be impacted by Project activities during the continued construction phase, including vehicle induced vibration impacts that may damage structural integrity. It is recommended that a 25m buffer is applied around the site center and marked on project design maps as a "no-go" sensitive area during all Project activities. The site should be demarcated with barriers prior to the onset on any Project-related works in the vicinity.
- 8.1.8. This site is also at risk of indirect impacts as a result of secondary land slippage caused by the progressive flooding and seasonal variations in the reservoir water level. Mitigation measures for these impacts are outlined in Section 14. Due to its proximity to the FSL, the site will also be subject to an archaeological evaluation program, described in Section 10.

Kalai Dukhtarak B fortress site (RHPP-AR-07)

- 8.1.9. This possible fortress site, which has tentatively been dated to the 17th to 19th centuries, is located approximately 30m from the maximum inundation zone, near the village of Navdonak. This site is considered to be of medium cultural heritage sensitivity.
- 8.1.10. Without mitigation, there is a potential for this site to be impacted by Project activities during the continued construction phase, including vehicle induced vibration impacts that may damage structural integrity. It is recommended that a 25m buffer is applied around the site center and marked on project design maps as a “no-go” sensitive area during all Project activities. The site should be demarcated with barriers prior to the onset on any Project-related works in the vicinity.
- 8.1.11. This site is also at risk of indirect impacts as a result of secondary land slippage caused by the progressive flooding and seasonal variations in the reservoir water level. Mitigation measures for these impacts are outlined in Section 14. Due to its proximity to the FSL, the site will also be subject to an archaeological evaluation program, described in Section 10.

Kalai Shohindar fortress site (RHPP-AR-10)

- 8.1.12. This possible fortress site is located approximately 150m from the maximum inundation zone, near the village of Shohindara. This site is considered to be of medium cultural heritage sensitivity.
- 8.1.13. Without mitigation, there is a potential for this site to be impacted by Project activities during the continued construction phase, including vehicle induced vibration impacts that may damage structural integrity. It is recommended that a 25m buffer is applied around the site center and marked on project design maps as a “no-go” sensitive area during all Project activities. The site should be demarcated with barriers prior to the onset on any Project-related works in the vicinity.
- 8.1.14. This site is also at risk of indirect impacts as a result of secondary land slippage caused by the progressive flooding and seasonal variations in the reservoir water level. Mitigation measures for these impacts are outlined in Section 14. Due to its proximity to the FSL, the site will also be subject to an archaeological evaluation program, described in Section 10.

Potential remains of structures on a plain near Roghuni poyon (RHPP-AR-31)

- 8.1.15. The possible remains of an abandoned structure were recorded approximately 1.7 km from the maximum inundation zone, near Roghuni poyon, as part of the Central Asian Archaeological Landscapes (CAAL) Project. This site is considered to be of low cultural heritage sensitivity.
- 8.1.16. Without mitigation, there is a risk that the construction of the proposed left bank access roads and bridges, the designs of which have not yet been finalized, will have an impact on this resource during the continued construction phase, including vehicle induced vibration impacts that may damage structural integrity. It is recommended that a 25m buffer is applied around the site center and marked on project design maps as a “no-go” sensitive area during all Project activities.

Potential remains of multi-room structure near Darband City (RHPP-AR-32)

- 8.1.17. The possible remains of an abandoned structure were recorded approximately 730m from the maximum inundation zone, near Darband City, as part of the CAAL Project. This site is considered to be of low cultural heritage sensitivity and is very unlikely to be at risk of indirect impacts as a result of secondary land slippage.
- 8.1.18. Without mitigation, there is a potential for this site to be impacted by Project activities during the continued construction phase including vehicle induced vibration impacts that may damage

structural integrity. It is recommended that a 25m buffer is applied around the site center and marked on project design maps as a “no-go” sensitive area during all Project activities.

Potential earthwork remains of field systems (RHPP-AR-33, RHPP-AR-34, RHPP-AR-35)

- 8.1.19. Possible agricultural earthwork remains, including terraces, lynchets and other field systems, have been identified in several locations around the AoI as part of the CAAL Project. These are concentrated on the north-eastern slopes of the Vakhsh Valley. These resources are considered to be of low cultural heritage sensitivity.
- 8.1.20. Without mitigation, there is a potential for these sites to be impacted by Project activities during the continued construction phase. It is recommended that the resources are grouped and 25m buffers are applied around them and marked on project design maps as “no-go” sensitive areas during all Project activities.

Fossilized dinosaur footprints near Rogun (RHPP-AR-36)

- 8.1.21. A set of fossilized dinosaur footprints, which likely date to the Cretaceous period (145 – 55 million years ago), were identified approximately 500m to the west of the existing crest of the dam during recent Project excavations. Due to its rarity and research value, this resource is considered to be of high cultural heritage sensitivity.
- 8.1.22. The footprints are located in a rockface immediately adjacent to an existing and active construction road. During the September 2024 site visit by the WSP team it was noted that the condition of the footprints had deteriorated due to dust caused by nearby construction work. Without urgent mitigation, there is a potential for this site to be further impacted by Project activities during the continued construction phase, particularly as a result of vehicle induced vibration. It is recommended that a 1 – 5m buffer is applied around the site center and marked on project design maps as a “no-go” sensitive area during all Project activities (and to account for topographic constraints). The location should be physically demarcated, with barriers.
- 8.1.23. These recommendations, and any further mitigation or management measures deemed necessary, will be discussed and confirmed between PMG and OJSC (responsible for the construction and operation of the HPP area) and the paleontological team at the A. Donish Institute (Archaeology & Paleontology Task 6 in Appendix E).

Gumushkala fortress site (RHPP-AR-41)

- 8.1.24. This fortress site is located approximately 520m from the maximum inundation zone, near the village of Dakhani gumush. This site is considered to be of medium cultural heritage sensitivity and is unlikely to be at risk of indirect impacts as a result of secondary land slippage.
- 8.1.25. Without mitigation, there is a potential for this site to be impacted by Project activities during the continued construction phase including vehicle induced vibration impacts that may damage structural integrity. It is recommended that a 25m buffer is applied around the site center and marked on project design maps as a “no-go” sensitive area during all Project activities. The site should be demarcated with barriers prior to the onset on any Project-related works in the vicinity.

Yapoloki fortress site (RHPP-AR-42)

- 8.1.26. This fortress site is located approximately 600m from the maximum inundation zone, near the village of Yapoloki. This site is considered to be of high cultural heritage sensitivity and is unlikely to be at risk of indirect impacts as a result of secondary land slippage.

- 8.1.27. Without mitigation, there is a potential for this site to be impacted by Project activities during the continued construction phase including vehicle induced vibration impacts that may damage structural integrity. It is recommended that a 25m buffer is applied around the site center and marked on project design maps as a “no-go” sensitive area during all Project activities. The site should be demarcated with barriers prior to the onset on any Project-related works in the vicinity.

Kalai Chungi Zubaid fortress site (RHPP-AR-46)

- 8.1.28. This fortress site is located approximately 170m from the maximum inundation zone, near the village of Zarda. This site is considered to be of medium cultural heritage sensitivity.
- 8.1.29. Without mitigation, there is a potential for this site to be impacted by Project activities during the continued construction phase including vehicle induced vibration impacts that may damage structural integrity. It is recommended that a 25m buffer is applied around the site center and marked on project design maps as a “no-go” sensitive area during all Project activities. The site should be demarcated with barriers prior to the onset on any Project-related works in the vicinity.
- 8.1.30. This site is also at risk of indirect impacts as a result of secondary land slippage caused by the progressive flooding and seasonal variations in the reservoir water level. Mitigation measures for these impacts are outlined in Section 14. Due to its proximity to the FSL, the site will also be subject to an archaeological evaluation program, described in Section 10.

9. AVOIDANCE PLANS FOR CULTURAL AND SACRED RESOURCES

- 9.1.1. The implementation of appropriate signage and the fencing of sites, such as cemeteries and sacred sites, will protect sensitive areas and ensure they are avoided during Project construction activities.
- 9.1.2. Sites identified in relation to the Project development are discussed by location below and shown in Appendix B. Where deemed necessary, suggested measures for site mitigation and management are set out in the text to follow.
- 9.1.3. Constraints maps will be prepared by the CHMT and implemented by the Employer's Representative / future PMC (see Section 5), to include the sensitive receptors (e.g., cemeteries, tombs and shrines) and detail construction avoidance areas in the form of proposed buffers. Following ongoing community consultation (see Section 12) the constraints maps will be updated if required.
- 9.1.4. The continued construction phase avoidance plan includes all cultural and sacred resources currently identified within the Project Aol and will be updated as further resources are identified in participation with communities.
- 9.1.5. Where the exact location of a resource is unknown, accurate GPS co-ordinates will be obtained during the ongoing fieldwork phase (Sections 7 and 12), following further community consultation if necessary. This fieldwork will be aligned with the inundation schedule in consultation with PMG and DFZ.

INDIRECT IMPACT MITIGATION

- 9.1.6. During the June 2023 ethnographic survey, local communities indicated the presence of various sites which may be of cultural value. PMG and DFZ are consulting affected communities to discuss how to manage these sites in the context of resettlement, inundation or other activities which could affect them. The following sites are predicted to experience indirect impacts during the continued construction phase and appropriate mitigation measures are suggested for each identified resource as follows:

Cemetery in Khumrogh (RHPP-CR-09)

- 9.1.7. This modern cemetery in the village of Khumrogh was identified by the ethnography team during the June 2023 survey and is considered to be of high cultural heritage sensitivity. Although its exact location is unknown, it is likely to be situated close to (but outside of) the maximum inundation zone.
- 9.1.8. Without mitigation, potential impacts to this site include vegetation clearance, land disturbance associated with continued construction works and changes in its environmental setting through increased noise, dust and visual disturbance. The site may also experience direct physical damage through ground invasive activity, or compaction through the presence of heavy construction traffic required to support the development of Project facilities and/or vehicle induced vibration impacts that may damage structural integrity.
- 9.1.9. The exact location of this site should be determined through further community consultation. Once located, it is recommended that a buffer is applied around the site center and marked on the project design maps as a "no-go" culturally sensitive area during all Project activities. The size of the buffer surrounding the site should be determined in conjunction with the site guardians and

related to the proposed level of Project works in the near vicinity. The site should be demarcated with barriers prior to the onset on any Project-related works in the vicinity.

- 9.1.10. Depending on the confirmed location of RHPP-CR-09, the site may also be at risk of indirect impacts as a result of secondary land slippage caused by the progressive flooding and seasonal variations in the reservoir water level, mitigation measures for these impacts are outlined in Section 14.

Tomb of Hazrat Shamsiddinkhoja in Khumrogh (RHPP-CR-10)

- 9.1.11. The tomb of religious scholar, Hazrat Shamsiddinkhoja, in the village of Khumrogh was identified by the ethnography team during the June 2023 survey. It dates to the 16th or 17th century and is considered to be of high cultural heritage sensitivity. This is one of several tombs/graves of religious scholars recorded on a register of monuments for the district, which was consulted by the ethnography team. Although the exact location of the tomb is unknown, it is likely to be situated close to (but outside of) the maximum inundation zone.
- 9.1.12. Without mitigation, potential impacts to this site include vegetation clearance, land disturbance associated with continued construction works and changes in its environmental setting through increased noise, dust and visual disturbance. The site may also experience direct physical damage through ground invasive activity, or compaction through the presence of heavy construction traffic required to support the development of Project facilities and/or vehicle induced vibration impacts that may damage structural integrity.
- 9.1.13. The exact location of this site should be determined through further community consultation. Once located, it is recommended that a buffer is applied around the site center and marked on the project design maps as a “no-go” culturally sensitive area during all Project activities. The size of the buffer surrounding the site should be determined in conjunction with the site guardians and related to the proposed level of Project works in the near vicinity. The site should be demarcated with barriers prior to the onset on any Project-related works in the vicinity.
- 9.1.14. Depending on the confirmed location of RHPP-CR-10, the site may also be at risk of indirect impacts as a result of secondary land slippage caused by the progressive flooding and seasonal variations in the reservoir water level, mitigation measures for these impacts are outlined in Section 14.

Tomb of Sayedawazi Kozi in Khumrogh (RHPP-CR-11)

- 9.1.15. The tomb of religious scholar, Sayedawazi Kozi, in the village of Khumrogh was identified by the ethnography team during the June 2023 survey. It dates to the 16th or 17th century and is considered to be of high cultural heritage sensitivity. This is one of several tombs/graves of religious scholars recorded on a register of monuments for the district, which was consulted by the ethnography team. Although the exact location of the tomb is unknown, it is likely to be situated close to (but outside of) the maximum inundation zone.
- 9.1.16. Without mitigation, potential impacts to this site include vegetation clearance, land disturbance associated with continued construction works and changes in its environmental setting through increased noise, dust and visual disturbance. The site may also experience compaction through the presence of heavy construction traffic required to support the development of Project facilities or related vibration impacts that may damage structural integrity.
- 9.1.17. The exact location of this site should be determined through further community consultation. Once located, it is recommended that a buffer is applied around the site center and marked on the

project design maps as a “no-go” culturally sensitive area during all Project activities. The size of the buffer surrounding the site should be determined in conjunction with the site guardians and related to the proposed level of Project works in the near vicinity. The site should be demarcated with barriers prior to the onset on any Project-related works in the vicinity.

- 9.1.18. Depending on the confirmed location of RHPP-CR-11, the site may also be at risk of indirect impacts as a result of secondary land slippage caused by the progressive flooding and seasonal variations in the reservoir water level, although mitigation measures for these impacts are outlined in Section 14.

Vakhobiddin mazar in Zarda (RHPP-CR-24)

- 9.1.19. This old mazar (shrine), named after Vakhobiddin, in the village of Zarda was identified by the ethnography team during the June 2023 survey and is considered to be of high cultural heritage sensitivity. Although its exact location is unknown, it is likely to be situated close to (but outside of) the maximum inundation zone.
- 9.1.20. Without mitigation, potential impacts to this site include vegetation clearance, land disturbance associated with continued construction works and changes in its environmental setting through increased noise, dust and visual disturbance and/or vehicle induced vibration impacts that may damage structural integrity.
- 9.1.21. The exact location of this site should be determined through further community consultation. Once located, it is recommended that a buffer is applied around the site center and marked on the project design maps as a “no-go” culturally sensitive area during all Project activities. The size of the buffer surrounding the site should be determined in conjunction with the site guardians and related to the proposed level of Project works in the near vicinity. The site should be demarcated with barriers prior to the onset on any Project-related works in the vicinity.
- 9.1.22. Depending on the confirmed location, this site may also be at risk of indirect impacts as a result of secondary land slippage caused by the progressive flooding and seasonal variations in the reservoir water level, although mitigation measures for these impacts are outlined in Section 14.

10. ARCHAEOLOGICAL EVALUATION PROGRAM

10.1. INTRODUCTION

- 10.1.1. Where the avoidance of identified archaeological, historical and paleontological receptors predicted to be impacted by Project activities is not possible, as in the case of those within the flood zone and a surrounding 250m buffer area from the FSL, a program of archaeological evaluation is required. This supplementary program will fully investigate the subsurface potential of locations of heightened archaeological potential (identified purely by surface means to date). If necessary, the sensitivity levels currently applied to these resources during the ESIA will be refined following their evaluation. This program comprises two phases:
- The Phase 1 evaluation must occur urgently, prior to any preparatory works or continued construction activities commencing, to determine the sub-surface extent and research value of those receptors thus far identified by purely visual means within the flood zone (Archaeology & Paleontology Task 1 in Appendix E).
 - The Phase 2 evaluation is for those receptors identified within 250m of the flood zone. This phase should occur after a program of monitoring has been undertaken, to determine the risk of impact due to landslip in consultation with the DSPoE (see Section 14) (Archaeology & Paleontology Task 3 in Appendix E).
- 10.1.2. The archaeological evaluation program will comprise a scheme of preliminary, shallow and targeted hand-dug test pits (1.0m x 1.0m in size) through which the archaeological potential could be firmly established, and any further analysis (e.g., systematic excavation) undertaken, which may be completed in parallel. This scheme will seek to eliminate the risk of archaeological induced delays during the continued construction phase and the loss of sensitive, non-renewable resources.
- 10.1.3. Once the evaluation stage is complete, further measures to minimize impacts to archaeological resources will be determined. For example, if the targeted sites yield archaeological material, it may be necessary to implement a program of “preservation by record” through systematic recording (e.g., archaeological excavation; Archaeology & Paleontology Task 4 in Appendix E). Such work, where required, will be described in appropriate detailed work programs and specifications to be prepared by the CHMT.
- 10.1.4. Test pits will be excavated at the locations of the receptors listed in Table 10-1.

Table 10-1 - Archaeological, historical and paleontological sites to be evaluated

Site ID	Latitude	Longitude	Type	Preliminary date	Cultural heritage value
Phase 1 (receptors within flood zone)					
RHPP-AR-01	38.882143	70.03	Fortress site	16 – 18 C	Low
RHPP-AR-02	38.894816	70.102159	Fortress site	18 – 19 C	Medium
RHPP-AR-03	38.946	70.109862	Fortress site	18 – 19 C	Low
RHPP-AR-04	38.946	70.109864	Mound	4 – 6 C	Medium

Site ID	Latitude	Longitude	Type	Preliminary date	Cultural heritage value
RHPP-AR-11	38.992635	70.1460	Watchtower site	Unknown	Medium
RHPP-AR-12	~ 38.753173	~ 69.814995	Building	19 – 20 C	Medium
RHPP-AR-14	38.866933	69.962154	Historical settlement	Unknown	Medium
RHPP-AR-24	38.9234	70.1130	Abandoned settlement	Unknown	Medium
RHPP-AR-28	38.992984	70.24461	Structural remains	Unknown	Low
RHPP-AR-37	38.810402	69.871432	Structural remains	19 C	Low
RHPP-AR-38	38.860791	69.9665	Fortress site	18 – 19 C	Medium
RHPP-AR-39	38.833549	69.920917	Fortress site	18 – 19 C	Medium
RHPP-AR-40	38.801764	69.882144	Fortress site	18 – 19 C	Medium
Phase 2 (receptors within 250m of flood zone)					
RHPP-AR-05	38.986266	70.208681	Fortress site	Unknown	Medium
RHPP-AR-06	38.98608	70.215258	Fortress site	Unknown	Medium
RHPP-AR-07	38.98608	70.215258	Fortress site	Unknown	Medium
RHPP-AR-10	39.054836	70.192867	Fortress site	Unknown	Medium
RHPP-AR-46	~ 38.887119	~ 70.068286	Fortress site	Unknown	Medium

EVALUATION AIMS AND OBJECTIVES

- 10.1.5. The aim of the evaluation is to clarify the presence, nature, date and extent of any archaeological or paleontological remains that might be present within the identified areas where archaeological or paleontological survival is expected to be high. This is for the purposes of informing an appropriate mitigation strategy for any significant archaeological remains. If the evaluation reveals little of archaeological significance then no further work may be necessary. The project CHMT will update the mitigation program and related schedule accordingly.
- 10.1.6. In respect of the archaeological research objectives specific to the sites, based on the archaeological or paleontological potential as identified in the Cultural Heritage chapter of the ESIA, these may be as follows:

- How significant are the fossilized footprints recorded in the AoI?

- When were the fortress and watchtower sites within flood zone operational, and how were they used?
- What was the relationship between the fortified sites within the flood zone and the Karategin sub-section of the Silk Road?
- What was the function of the mound at Dahana?
- What was the function of the abandoned structures identified within the flood zone, and when were they utilized?

10.1.7. The CHMT will ensure that all progress and outcomes will be shared with stakeholders (e.g., Non-Governmental Organizations (NGOs) with an archaeological or paleontological interest e.g., ICOMOS) as appropriate and in consultation with PMG.

EVALUATION METHODOLOGY

10.1.8. The methodology for further evaluation of the paleontological resources identified in the Aol will be led by the CHMT, including appropriate regional experts (e.g., at the Academy of Sciences of the Republic of Tajikistan).

10.1.9. The fieldwork evaluation methodology will conform to best professional practice as summarized in Standard and guidance for archaeological field evaluation (e.g., ClfA, 2020).

10.1.10. The relevant project archive repository for the project archive (e.g., the National Museum of Tajikistan) will be confirmed by the archaeological fieldwork subcontractor and a unique project number - a "site code" obtained prior to the start of the project. Depending on the results the archaeological evaluation, a more local, community museums/repositories (e.g., the museum in Tursunzoda School) should be considered and suitably developed (as described in Section 12).

Archaeological investigation

10.1.11. The exact methodology used will be agreed and prepared by the CHMT. This is likely to incorporate the following aspects:

- Targeted test pits will be opened by hand by archaeological specialists at the A Donish Institute, who will decide when remains of archaeological significance requiring recording are revealed.
- Following initial exposure of archaeological horizons, investigation by the archaeological fieldwork subcontractor will comprise cleaning, examination, sampling and recording (see below) in the appropriate manner. Archaeological hand-dug investigation and recording will proceed only until significant archaeological levels have been reached and will be sufficient to allow the nature, extent, survival and significance of archaeological remains to be identified.
- The levels at which all sampling excavation will cease will be determined by consultations with the CHMT. This will typically entail a site visit. Where the evaluation has revealed no significant archaeological remains digital photographs may be sufficient.
- In addition to the evaluation of archaeological (i.e. man-made) deposits, in accordance with an identified research objective, an assessment of natural deposits may be necessary, especially when these are organically preserved and laid down within archaeological timescales; for example, alluvial deposits, which can hold paleoenvironmental potential.
- In the unlikely event that remains of very high significance warranting preservation in situ are identified, the archaeological fieldwork subcontractor will inform the CHMT immediately. Appropriate measures will be taken to protect such remains from any damage or deterioration. This might involve for instance protective boxing, wrapping deposits or features in a geo-textile such as terram, sealing with sand or other suitable soft materials, or other means as deemed suitable/appropriate.

- Topsoil and subsoil will be stored separately adjacent to each test pit to enable backfilling.

Sampling strategy

10.1.12. In order to obtain sufficient information on the likely nature, date, extent, survival and significance of any potential archaeological features and deposits identified, these will be sample excavated by hand. It is not the objective of the evaluation to archaeologically excavated features in their entirety as this would form part of a future mitigation strategy for preservation by record.

Archaeological recording

- 'Site location plans' indicating site north shall be prepared at 1:1250. Plans at 1:200 (or 1:100) shall be prepared showing the location of archaeology investigated in relation to the investigation areas.
- Standard archaeological recording methods will comprise a written record (both description and interpretation with annotated sketches where appropriate), scaled drawings both in plan and in section, photographic record, and retrieval and annotation of archaeological finds and samples.
- Written records will be produced using either pro-forma context or test pit record sheets and where complex stratigraphy is encountered, by the single context planning method.
- Each discrete archaeological layer, fill, cut, etc., that is sampled will be individually numbered and described in terms of soil composition, stratigraphic position, dimensions, artefact content, samples, with professional interpretation as to the likely nature and date of the feature. The context system will be able to be cross-referenced to all records and will be compatible with digitization.
- A record of the full sequence of all archaeological remains as revealed in the evaluation will be made. Plans and sections of features will be drawn at an appropriate scale of 1:10 or 1:20, with sections drawn at 1:10. All plans and sections will include the Ordnance Datum (OD) height of strata and all principal features.
- A 'Harris matrix' stratification diagram shall be employed to record stratigraphic relationships (Harris et al. 1993), where appropriate. This record shall be compiled and checked during the course of the fieldwork with spot dating, where appropriate, incorporated onto this diagram.
- A full photographic record will be made using Digital Single Lens Reflex (SLR) cameras equipped with an image sensor of not less than 10 megapixels in high resolution TIFF (uncompressed) format. This will record both the detail and the general context of the principal features and the site as a whole. Digital images will be subject to managed quality control and curation processes which will embed appropriate metadata within the image and ensure long term accessibility of the image set. Photographs will also be taken of all areas, including access routes, to provide a record of conditions prior to and on completion of the fieldwork.
- Registers will be kept of all photographs, levels, plans, sections, finds and samples taken in the field.

Archaeological finds

10.1.13. All recovery, retention and treatment of finds and samples will be carried out mindful of the overall purpose of the exercise, i.e. to evaluate for further decision making. To this end, all artefactual and ecofactual material will be reviewed on site for its capability to inform the evaluation report.

10.1.14. Identified archaeological finds and artefacts will be carefully recovered by hand and bagged or boxed according to the type of artefact (i.e. pottery, ceramic building material/CBM, bone, worked flint, metal) archaeological context from which they came, with a label indicating the site code, find type and context reference number). Particularly notable artefacts will be recorded as a 'registered' find, and recorded three dimensionally with to include altitude.

10.1.15. All pottery, bone, iron slag and worked flint will be washed and then marked in accordance with the project archive repository guidelines. Most building material and burnt flint (not including significant diagnostic material) will be identified, counted, weighed and discarded. Samples will be retained as appropriate. The finds identification and specialist work will be undertaken by relevant finds specialists as required. This evidence will be used to characterize the site, and to establish the potential for all categories of finds should further archaeological work be necessary. Records of artefact assemblages will clearly state how they were recovered, sub-sampled and processed.

REPORTING, DISSEMINATION AND ARCHIVING

Reporting

10.1.16. A fully illustrated archaeological evaluation report will usually be prepared within 6 weeks of the completion of fieldwork (Archaeology & Paleontology Task 7 in Appendix E). This will include as a minimum, the following:

- Non-technical summary. One-page summary outlining project background and circumstance, the principal reason for the work and when it was undertaken and by whom, its objectives, main results, and where appropriate, recommendations.
- Introduction. This will set out the circumstances of the project and the reason for the work and will include the aims and specific research objectives.
- Archaeological and historical background. A brief summary with the site description (including size, geology and topography, location) and background.
- Fieldwork methodology. The methods used. This will include the detail of any variation to the agreed methodology and the reasons for such.
- Results. This will present a series of summary objective statements, organized clearly in relation to the methods used, and describing both structural data and associated finds and/or environmental data recovered. Descriptive material will be clearly separated from interpretative statements. Technical terminology (including dating or period references) will be explained.
- Conclusions. Summary and interpretation the results and their likely significance. Other elements might include a confidence rating on the results and limitations (e.g., weather or problems of access). Recommendations on further work may also be included.
- References and bibliography. A list of all sources used. The final destination of the archive (records and finds) will be noted in the report along with the site code assigned by the relevant project archive repository.
- Appendices. Essential technical and supporting detail, including for example lists of artefacts and contexts or details of measurements, gazetteers etc.
- Illustrations. Location plan, plans and sections at appropriate scales showing location and position of test pits dug and features located and selective photography.

Archiving

10.1.17. The site archive will contain all the data collected during the fieldwork, including records and finds, and all reports. The archaeological fieldwork subcontractor will ensure that the archive is quantified, ordered, indexed and internally consistent, and adequate resources will be provided to ensure that all records are checked. Archive consolidation will be undertaken immediately following the conclusion of fieldwork.

10.1.18. A unique site code for the project will be designated to this project and will be used as the site identifier for all records produced.

- 10.1.19. Any finds of archaeological interest must be appropriately conserved and deposited in an appropriate institution (e.g., the National Museum of Tajikistan): any finds which cannot be so deposited should be fully analyzed and published.
- 10.1.20. Copyright of the written archive will be vested in the project archive repository, which will be clearly identified in the evaluation report. The site archive will be deposited within 6 months of issuing the evaluation report

11. UNEXPECTED DISCOVERIES CONTINUED CONSTRUCTION (CHANCE FIND PROCEDURE)

- 11.1.1. The ESIA determined that the Project footprint and surrounding area have been occupied to some degree from as early as 50 thousand years before present (B.P.). Of the 46 archaeological, historical and paleontological resources recorded within the baseline study area used for the Cultural Heritage chapter of the ESIA (i.e., the Project footprint plus a 20km buffer), 20 were fortress sites, mostly dating to the 16th – 19th centuries and commonly sited on the outskirts of currently populated (ancient) villages. It is also possible that other sites of archaeological and paleontological interest exist that are not currently identifiable by purely visual inspection. Other (potentially important) remains may survive in below-ground deposits, or in areas which were inaccessible to baseline survey (July, August and September 2023). The field surveys were subject to constraints imposed by restrictive ground visibility, health and safety and inaccessibility.
- 11.1.2. The Chance Find Procedure (CFP) will allow for the recovery of cultural heritage artefacts, archaeological sites and paleontological resources uncovered during all project phases and provide for their recording and curation. A CFP for the project is included in Appendix D.

12. ETHNOGRAPHIC MANAGEMENT AND MUSEUM PROGRAM

12.1. INTRODUCTION

12.1.1. Provisions must be made for continued (and scheduled) consultation with PAPs, aligned with the SEP program, regarding the success and management of the measures to be implemented (Ethnography Task 1 in Appendix E), particularly to determine and refine:

- The size of buffers applied to all cultural and sacred sites (including cemeteries) during Project activities;
- The establishment of new access routes (where necessary) used by the villagers to frequent cultural and sacred sites where necessary (e.g., cemetery sites beyond the FSL);
- Generic and site-specific mitigation measures proposed e.g., evaluation, recording;
- The effectiveness of mitigation proposed; and
- The exact locations of identified sites that are yet to be accurately determined:

RHPP-CR-01	RHPP-CR-24
RHPP-CR-02	RHPP-CR-25
RHPP-CR-03	RHPP-CR-26
RHPP-CR-04	RHPP-CR-27
RHPP-CR-05	RHPP-CR-28
RHPP-CR-06	RHPP-CR-29
RHPP-CR-07	RHPP-CR-30
RHPP-CR-08	RHPP-CR-31
RHPP-CR-09	RHPP-CR-32
RHPP-CR-10	RHPP-CR-33
RHPP-CR-11	RHPP-CR-34
RHPP-CR-12	RHPP-CR-35
RHPP-CR-13	RHPP-CR-36
RHPP-CR-14	RHPP-CR-37
RHPP-CR-15	
RHPP-CR-16	
RHPP-CR-17	
RHPP-CR-18	
RHPP-CR-19	
RHPP-CR-20	
RHPP-CR-21	
RHPP-CR-22	
RHPP-CR-23	

12.1.2. The format and content of scheduled consultation forums should be adapted as required by the community and the client, to, for example, provide opportunity for cultural leaders to discuss concerns and/or the client to relay relevant information and mitigation strategies. The consultation program and associated schedule will be aligned with the SEP program and this CHMP will be updated accordingly. Suggested agenda topics for regular committee meetings include:

- The success of mitigation measures once put in place (e.g., site demarcation/signage);
- Additional measures required for specific sites (recording and relocation);
- Any additional cultural sites requiring management and monitoring (including those not previously shared by the community); and
- The maintenance of access routes to cultural sites during the lifetime of the Project.

Where cultural leaders/contact people for local communities are not known, these must be identified as part of the next phase of community consultations (see 12).

CONSULTATION SCHEDULE

- Monthly at the start of the continued construction phase for one year; and
- Bi-annually for the remainder of the continued construction phase.

12.1.3. During each meeting a register of attendees is taken and issues noted in a Consultation Register. The Register will be reviewed annually as a Key Performance Indicator. An example Consultation Register is provided in Appendix C.

GRIEVANCE PROCEDURE AND COMPENSATION FOR LOSS/DISTURBANCE

12.1.4. In circumstances where it is considered that there is:

- No technically or financially feasible alternative to cultural heritage loss or disturbance; and
- There is agreement amongst affected stakeholders (including site guardians and the affected community) that the overall benefits of the Project outweigh anticipated cultural heritage disturbance or loss.

12.1.5. Then the disturbance/removal/relocation of a cultural heritage site will be led by DFZ in conjunction with the CHMT and the site guardian prior to the commencement of Project operations in the area of concern. In such instances where cultural heritage may be disturbed or lost due to the absence of a feasible alternative, a process of compensation will be established by DFZ in collaboration with the CHMT, that considers:

- How cultural heritage disturbance or loss will be valued;
- Identification and processing of all legal requirements;
- What type of compensation will be made;
- What methods of compensation are appropriate;
- Identify which groups of stakeholders hold the site as significant and are entitled to compensation; and
- Culturally accepted means of moving/removing or disturbing cultural heritage site (this might include ceremonial activities and/or financial compensation).

MUSEUMS PROGRAM

12.1.6. Suitable repositories for cultural artefacts recovered from the Project area and villages (prior to resettlement), must be sought for deposition of cultural and archaeological materials.

- 12.1.7. This program must be facilitated by appropriate experts in the CHMT, in collaboration with DFZ and PAPS.
- 12.1.8. DFZ will identify nominal 'heritage champions' for each resettled community (or Jamoat) to provide local input into the process, with suitable 'heritage hubs' or community museums installed within the new resettlement areas (Ethnography Task 3 in Appendix E).
- 12.1.9. These new museums will help provide key focal points for cultural heritage management:
- Programs linked to the forthcoming Livelihood Restoration Program (LRP) on traditional crafts, other activities (e.g., music);
 - Deposition of ethnographic materials from resettled communities;
 - Heritage education programs linked to local schools and the LRP;
 - Centers of regular cultural festivities / ceremonial events;
 - Archival materials (photographs, video, oral histories) linked to the 'old' villages and the resettled communities;
 - Archaeological materials and archives recovered in the course of Project implementation;
 - Sustainable tourism initiatives, and
 - Training in museum curation and archiving.
- 12.1.10. Further details of the museums/intangible heritage management program will be determined as this CHMP is implemented, following discussions between the CHMT and DFZ. This CHMP will be updated accordingly by PMG, who have overall responsibility for its implementation

13. ONGOING GRAVE RELOCATION BEST PRACTICE GUIDE

13.1. INTRODUCTION

- 13.1.1. The cultural heritage baseline study (ESIA Chapter 20: Cultural Heritage) of the Project identified 25 cemetery or tomb sites within the Nurobod and Rogun districts, which will be directly impacted due to the continued construction and operation of the proposed Project (Table 13-1).
- 13.1.2. These sites were identified through ethnographic survey undertaken in June, August and September 2023. As discussed in previous sections of the CHMP, avoidance of cultural and sacred resources of high significance and which are considered non-replicable (i.e., human remains), is the preferred option. However, as this is not possible with the cemetery and tomb sites, the most appropriate mitigation measure is minimization through relocation of the sites, where practicable (Ethnography Tasks 4 and 5 in Appendix E). Ideally, the sites would be relocated to or near the relocated communities to which they are associated.
- 13.1.3. All relocations (ongoing and future) should be developed in coordination with the RAP timeframe and informed by the inundation schedule (i.e. DFZ in collaboration with PMG). It should be noted that cemetery relocations are in progress.
- 13.1.4. For the cemetery and tomb sites to be relocated, it is necessary for the implementation of a best practice guide. This will ensure that the relocation of human remains, associated structures, grave goods and any intangible practices is undertaken with due diligence and to recognized best practice. When followed correctly it will also ensure that any scientific assessment or analysis of the remains, or data obtained from the recording of the cemeteries or tombs is conducted to internationally recognized guidance and methodologies.
- 13.1.5. The best practice for relocation of the graves and tombs should also be implemented in conjunction with the ongoing PAPs consultation program regarding cultural heritage management.

Table 13-1 - List of cemetery and tomb sites impacted by the proposed development

Site ID	District	Village	Site Type	Preliminary date
RHPP-CR-01	Nurobod	Khakimii bolo	Cemetery	Modern
RHPP-CR-02	Nurobod	Khakimii bolo	Tomb	17 th /18 th century
RHPP-CR-03	Nurobod	Khakimii bolo	Tomb	17 th /18 th century
RHPP-CR-04	Nurobod	Khakimii bolo	Tomb	19 th century
RHPP-CR-06	Nurobod	Khakimii bolo	Cemetery	Modern
RHPP-CR-09	Nurobod	Khumrogh	Cemetery	Modern

Site ID	District	Village	Site Type	Preliminary date
RHPP-CR-10	Nurobod	Khumrogh	Tomb	16 th /17 th century
RHPP-CR-11	Nurobod	Khumrogh	Tomb	16 th /17 th century
RHPP-CR-12	Nurobod	Obiboriki bolo	Cemetery	Modern
RHPP-CR-17	Rogun	Lughuri poyon	Cemetery	Modern
RHPP-CR-18	Rogun	Lughuri poyon	Tomb	18 th century
RHPP-CR-20	Nurobod	Khakimii bolo	Cemetery	18 th /19 th century
RHPP-CR-21	Nurobod	Pandovchii Agba	Cemetery	17 th /18 th century
RHPP-CR-22	Nurobod	Pandovchii Agba	Mausoleum	Modern
RHPP-CR-25	Nurobod	Margzori Sir	Cemetery	Unknown
RHPP-CR-26	Nurobod	Sari Kosh	Cemetery	Unknown
RHPP-CR-27	Rogun	Bedikho	Tomb	Modern
RHPP-CR-28	Rogun	Bedikho	Tomb	Ancient
RHPP-CR-29	Rogun	Bedikho	Tomb	Ancient
RHPP-CR-30	Rogun	Bedikho	Tomb	Unknown
RHPP-CR-31	Rogun	Bedikho	Tomb	Unknown
RHPP-CR-32	Nurobod	Mehrobod	Tomb	Ancient
RHPP-CR-34	Rogun	Aligalaboni bolo	Tomb	Unknown

Site ID	District	Village	Site Type	Preliminary date
RHPP-CR-35	Rogun	Aligalaboni bolo	Tomb	Unknown
RHPP-CR-36	Rogun	Aligalaboni bolo	Tomb	Unknown

SUMMARY OF LEGAL FRAMEWORK

- 13.1.6. In addition to national and municipal legal frameworks, the ongoing relocation of graves and tombs must also be conducted in accordance with World Bank's ESS5 (Land Acquisition, Restrictions on Land Use and Involuntary Resettlement; ESS8 (Cultural Heritage).
- 13.1.7. Formal authorization such as permits from the Ministry of Justice and/or the local authority, or equivalent, must be obtained in advance of any works pertaining to the relocation of graves or tombs. The governing Department of Environmental Health and Sanitation, or equivalent must also be informed and consulted on the methodology process to ensure that the highest standards of health and safety are met and that operatives involved with the relocation of human remains are protected.
- 13.1.8. Where graves are determined to be ancient and archaeological in nature, and unrelated to current populations, it may be necessary to obtain confirmation and permission from the Department for Culture, or equivalent. Any archaeological works should comply with Tajik archaeological heritage protection regulations and laws such as Law on Culture (1997) and Law on Export and Import of Cultural Property (2001).

CONSULTATION WITH PAPS

- 13.1.9. Consultation with PAPS regarding the relocation of graves and tombs should be implemented at all stages of the process, in accordance with ESS 5 and ESS 8. This should be undertaken for the relocation of graves and tombs of modern date where there may be living relatives, as well as for archaeological remains. Religious and cultural leaders should also be consulted prior to grave or tomb relocation, regardless of whether the interments are modern or archaeological in nature.
- 13.1.10. Living relatives of remains interred within modern cemeteries should be consulted prior to any works relating to relocation, and especially exhumation. Advanced notice of relocation plans should be made public to PAPS to allow for adequate time to prepare for any cultural or religious practices necessary for the exhumation and relocation of human remains. The Client's community liaison team, or equivalent, should be notified of such preparations in order to include them within the cultural heritage awareness program in order to inform operatives.
- 13.1.11. Where no living relatives of interments are anticipated within the PAPS, advanced notice should still be given of relocation plans due to the sacred and cultural connections which may exist between the community and grave or tomb sites, regardless of the status of the deceased. The PAPS should be consulted to determine the most appropriate cultural and/or religious practices for relocation of such interments.

EXHUMATION STANDARDS AND GUIDANCE

- 13.1.12. If no Tajik standards and guidance exist for such purposes, excavation and exhumation works shall be undertaken following the Chartered Institute for Archaeologists (CIfA) regulations, standards and guidance, namely:
- Code of Conduct: professional ethics in archaeology (2022);
 - Professional conduct (2021);
 - Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives (2020);
 - Standard and guidance for archaeological excavation (2020); and
 - Standard and guidance for an archaeological watching brief (2020).
- 13.1.13. Additionally, the following British Association for Biological Anthropology and Osteoarchaeology (BABAO) ethics and standards should be consulted with regards to human remains:
- BABAO Code of Ethics (2019);
 - BABAO Code of Practice (2019);
 - Updated Guidelines to the Standards for Recording Human Remains (Mitchell and Brickley 2017) and Guidelines to the Standards for Recording Human Remains (Brickley and McKinley 2004); and
 - BABAO recommendations on the ethical issues surrounding 2D and 3D digital imaging of human remains (2019).

EXHUMATION METHODOLOGY

- 13.1.14. Prior to the relocation works, a Written Scheme of Investigation (WSI) should be compiled, detailing the scope of works, schedule and reporting timeline. This will be undertaken by the CHMT through consultation with the Department of Health, or equivalent, and signed off by the appropriate authority. A risk assessment and method statement (RAMS) should also be in place before any works commence.
- 13.1.15. Prior to ground disturbance, any upstanding monuments such as grave markers, cairns or tombs should be recorded on pre-approved proformas. This should include dimensions, descriptions and photographs of in situ structures. Once this has been conducted, the grave markers may be removed and carefully stored for relocation to the new burial site. Alternatively, the grave markers may be retained by living family members or PAPs by agreement.
- 13.1.16. Once the structures have been recorded, vegetation clearance and topsoil removal may be undertaken as part of archaeological monitoring by a suitably qualified archaeologist and following the guidance and standards listed in the previous section. If the depth of the remains is known, a mechanical excavator may be used for the bulk removal of grave soil. Hand excavation should be undertaken once human remains or coffins are encountered. Where coffins are exposed, they should be recorded as part of the excavation methodology on proformas. This includes orientation, material, and any coffin furniture present. Grave cuts should also be recorded where visible. Biographical information such as name and age should be recorded if present, such as engraved on a breast plate.
- 13.1.17. If human remains are fully skeletal, they may be exposed following the appropriate guidance outlined in the previous section and by a fully qualified archaeologist. Where practicable, an osteoarchaeologist should be available to oversee this or provide advice. If archaeological recording

is appropriate, the remains should be recorded on proformas, and include orientation of the skeleton, burial position (e.g., supine or crouched), direction head facing, arm placement and if any clothing or grave goods are present. Once recorded, the remains may be lifted for transfer to the new grave location.

- 13.1.18. If the remains are not fully skeletal and have soft tissue present, they should be exhumed by a specialist contractor with the necessary health and safety certification to deal with such remains. If these remains are encountered, they should be stored appropriately for relocation, such as in mobile refrigerated mortuaries.
- 13.1.19. If it is thought that archaeological remains have been encountered, the A. Donish Institute must urgently be engaged to determine if further archaeological investigations are appropriate in the older cemetery areas. Any subsequent scientific assessment or analysis of the archaeological remains will be undertaken subject to an agreed research strategy which utilizes internationally recognized best practices.
- 13.1.20. Should there be accidental disturbance of human remains, this should be reported to the coroner and local police as well as the appropriate authorities. In such instances, the CFP should also be implemented.

RELOCATION METHODOLOGY

- 13.1.21. Relocation sites should be identified through PAP consultation, and preferably within the community relocation areas to ensure that access and cultural norms are maintained. PAPs should also indicate whether newly identified areas require re-consecration or other cultural practices to be performed before reburial.
- 13.1.22. The relocation sites may require archaeological evaluation, such as geophysical survey and/or trial trenching to determine the archaeological potential of the site. If possible, avoidance of such areas would be preferable. However, if this is not possible then minimization mitigation, such as “strip, map and record” or “open area excavation”, may be required

14. ENVIRONMENTAL MONITORING & REPORTING

14.1. INTRODUCTION

- 14.1.1. Changes in noise and vibration, surface water, visual setting and air quality will be monitored by the appropriate environmental specialist(s) throughout the Project's lifetime. Cultural heritage receptors (e.g., cemetery sites and other cultural and sacred receptors) should be included as monitoring locations, particularly where changes to local infrastructure (e.g., road widening and new access routes) are anticipated or proposed. Concerns specific to vehicle induced vibrations on cultural heritage monuments are highlighted in this regard Section 8 & Section 9).
- 14.1.2. Monitoring in the vicinity of sensitive cultural sites should be carried out in agreement with (and possibly accompanied by) the appropriate site guardian. Specific thresholds for environmental conditions that would be deleterious to cultural heritage sites will require correction in coordination with the CHMT (and the contractor responsible for preparing and implementing the Noise and Vibration Management Plan).
- 14.1.3. Once their exact locations have been determined (see Section 12), environmental monitoring may be required at the following cultural and sacred receptors due to their proximity to the flood zone and construction traffic etc:
- RHPP-CR-09 (cemetery);
 - RHPP-CR-10 (burial);
 - RHPP-CR-11 (burial); and
 - RHPP-CR-24 (mazar).

ENVIRONMENTAL MONITORING SCHEDULE

- Environmental monitoring weekly at start of each Project phase for one month;
- Then quarterly for the first year; and
- Annually for remainder of the Project.
- After each monitoring phase the register kept by the relevant environmental specialist (e.g., Vibration, Air Quality or Visual Impact) will be disseminated to the Employer's Representative / future PMC for inclusion into the Environmental Monitoring Register provided in Appendix C.

UPPER TERRACE CULTURAL HERITAGE MONITORING PROGRAM

- 14.1.4. A cultural heritage monitoring program is needed to monitor archaeological impacts resulting from predicted ongoing slippage in the upper terraces (over 1,290 m asl) of the valley, and to assess the effectiveness of existing measures for ensuring slope stability (netting, gabions etc.) (Archaeology & Paleontology Task 5 in Appendix E).
- 14.1.5. The aim of the program is to minimize the impact on archaeological, historical and paleontological resources and cultural and sacred resources in areas at risk of landslide (through monitoring and recording).
- It is proposed that the cultural heritage monitoring (and recording) of the upper terraces from the water or via Unmanned Aerial Vehicles (UAV) is informed by the reservoir inundation schedule (phased program) and as agreed with the CHMT;

- This program will be confirmed and prepared by the CHMT in continued consultation with the DSPoE, the Engineering Geology team and PMG, particularly to:
 - **ensure that slope stabilisation / community and occupational safety is prioritised over any archaeological recording and/or preservation;** and
 - that options to avoid ground intrusive works / excavation are included in slope stability feasibility studies and prioritised where possible, and within budgetary capacity, over equivalent (invasive) effective methods of slippage protection.
- This cultural heritage monitoring programme will also need to be prepared in full coordination with the Employer's Representative / future PMC responsible for occupation and community health and safety to ensure a safe approach and applicable risk assessment is prepared to inform the archaeological monitoring methodology (via unmanned aerial vehicle and/or from the water by boat); and
- Evidence/records of assessments undertaken at monitored cultural heritage sites will be presented in a Monitoring Register (Appendix C).

15. KEY PERFORMANCE INDICATORS AND CONTINUOUS IMPROVEMENT

- 15.1.1. Key Performance Indicators (KPIs) should be reviewed at the commencement and cessation of each of the Project phases. KPIs may include:
- Incorporation of cultural heritage issues and requirements in EPC tendering process (to ensure adequate resourcing/budget within applicable contracts);
 - Updated cultural heritage sensitivity mapping and related datasets for the Project;
 - Published archaeological evaluation reports and associated records;
 - Evidence/records of assessments undertaken at monitored cultural heritage sites e.g., archaeological resources within the landslide risk zone (as specified in the Monitoring Register – Appendix C);
 - Evidence of implemented mitigation/improvements (as specified in the Monitoring Register – Appendix C);
 - Evidence of updates to the Register of Chance Finds (Appendix D);
 - Evidence of ongoing consultation, aligned with the RAP program (as specified in the Consultation Register – (Appendix C); and
 - Evidence of cultural awareness training for contractors during site induction (e.g., sign-off sheets).
- 15.1.2. A review will be undertaken to assess the effectiveness of this CHMP annually, and to amend it as appropriate. Improvements may, for example, entail changes to the monitoring timetable program and/or inclusion of additional stakeholder groups (e.g., NGOs with archaeological interest) and as informed by ongoing data collection and evaluation.
- 15.1.3. Ongoing external engagement with NGOs will be facilitated by the Project CHMT, in collaboration with PMG and DFZ. UNESCO's ongoing Silk Roads research program, already supported by the A Donish Institute, is of particular relevance, given the proximity of the flood zone to the Karategin sub-section of the ancient Silk Road route. If deemed appropriate, the CHMT will engage with UNESCO and share relevant data acquired during ongoing baseline data capture and/or identified through the CFP process.
- 15.1.4. Any changes to monitoring and consultation strategies should be recorded in the Monitoring and Consultation Registers (Appendix C).

16. GLOSSARY

- **Chance Find Procedure** – defined as potential cultural heritage objects, archaeological features or sites that are identified after a formal site reconnaissance phase, normally during construction monitoring.
- **Consultation** – the two-way discussion process covering community issues and priorities as well as the concerns and needs of the business. It should involve the business with key individuals, organizations and groups affected by or interested in its activities.
- **Cultural Heritage** – refers to refers to tangible forms of cultural heritage, such as tangible property and sites having archaeological (prehistoric), paleontological, historical, cultural, artistic, religious values, and unique natural features that embody cultural values, such as sacred groves, water bodies, or hills.
- **Project Affected Persons** – those people who are directly affected by Project activities, generally inhabiting land or with connections to land nearby.
- **Intangible Cultural Heritage** – forms of cultural heritage include cultural knowledge, innovations, activities and practices of communities embodying traditional lifestyles.
- **Test pit** – a small pit excavated to examine a site and ascertain the nature, location, depth and extent of any archaeological remains, usually as a preliminary to a full-scale excavation.

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Appendix A

CULTURAL HERITAGE GAZETTER

Appendix A – Cultural Heritage Gazetteer

(n.b. GPS co-ordinates for sites are not provided in this gazetteer but can be shared on a ‘need-to-know’ basis)

Site ID	Type	Sub-type	Historical Period	Location	MASL	Sensitivity (low / medium / high / very high)
RHPP-AR-01	Archaeological	Fortress – Kalai Kofir	16 – 18 C	Pandovchii Agba	1,250	Low
RHPP-AR-02	Archaeological	Fortress – Kalai Shokhon / Mir	18 – 19 C	Magzori Sir	-	Medium
RHPP-AR-03	Archaeological	Fortress – Kalai Dahana	18 – 19 C	Dahana	-	Low
RHPP-AR-04	Archaeological	Mound – mound at Dahana	4 – 6 C	Dahana	-	Medium
RHPP-AR-05	Archaeological	Fortress – Kalai Bacha	Unknown	Navdonak	-	Medium
RHPP-AR-06	Archaeological	Fortress – Kalai Dukhtarak A	Unknown	Navdonak	-	Medium

Site ID	Type	Sub-type	Historical Period	Location	MASL	Sensitivity (low / medium / high / very high)
RHPP-AR-07	Archaeological	Fortress – Kalai Dukhtarak B	Unknown	Navdonak	1,356	Medium
RHPP-AR-08	Archaeological	Fortress – Kalai Shule	Unknown	Shule	1,366	Medium
RHPP-AR-09	Archaeological	Fortress – Kalai Shakhrisab	Unknown	Shakhrisab	1,308	Medium
RHPP-AR-10	Archaeological	Fortress – Kalai Shohindara	Unknown	Shohindara	1,280	Medium
RHPP-AR-11	Archaeological	Tower – possible site of Dalhana Watchtower	Unknown	Dalhana	-	Medium
RHPP-AR-12	Historical	Building – Lughuri poyon Mill	19 – 20 C	Lughuri poyon	-	Medium
RHPP-AR-13	Archaeological	Fortress – Kalai Imlok	10 – 12 C	Darband	-	Very High
RHPP-AR-14	Archaeological	Settlement – location of historical site	Unknown	Mehrobod (formerly Komsomolobod) / Furudgoh, Nurobod District	-	Medium

Site ID	Type	Sub-type	Historical Period	Location	MASL	Sensitivity (low / medium / high / very high)
RHPP-AR-15	Archaeological	Tower – Sarihisor Watchtower	18 – 20 C	Sorihisor, Baljuvon District	-	Medium
RHPP-AR-16	Archaeological	Fortress – Ruiob Fortress	18 – 19 C	Khatlon region, Baljuvon District	-	Medium
RHPP-AR-17	Archaeological	Fortress – Shindara Fortress	18 – 19 C	Khatlon region, Baljuvon District	-	Medium
RHPP-AR-18	Archaeological	Fortress – Guldara Fortress	18 – 19 C	Guldara, Baljuvon District	-	Medium
RHPP-AR-19	Archaeological	Fortress – Mulokoni Fortress	18 – 19 C	Mulokoni, Baljuvon District	-	Medium
RHPP-AR-20	Archaeological	Finds – Mulokoni archaeological finds, including flint splinter	6 – 4 millennium BCE	Mulokoni, Baljuvon District	-	Low
RHPP-AR-21	Archaeological	Settlement – abandoned settlement at Chashmanato	Unknown	Chashmanato, Rogun District	-	Medium
RHPP-AR-22	Archaeological	Unidentified – square stone with pitted side	Unknown	Tagov Detai, Baljuvon District	-	Low

Site ID	Type	Sub-type	Historical Period	Location	MASL	Sensitivity (low / medium / high / very high)
RHPP-AR-23	Archaeological	Settlement – abandoned settlement at Tagov Detai	1 – 4 C	Tagov Detai, Baljuvon District	-	Medium
RHPP-AR-24	Archaeological	Settlement – remains of an abandoned settlement located on a platform above the Vakhsh River	Unknown	Kavlokho, Nurobod District	-	Medium
RHPP-AR-25	Archaeological	Settlement – remains of an abandoned settlement in mountainous terrain	Unknown	Labi Jar, Nurobod District	-	Medium
RHPP-AR-26	Archaeological	Settlement – potential remains of an abandoned settlement in mountainous terrain	Unknown	Unknown, Rogun District	-	Medium
RHPP-AR-27	Archaeological	Settlement – potential remains of a cluster of abandoned structures in mountainous terrain	Unknown	Unknown, Rogun District	-	Medium
RHPP-AR-28	Archaeological	Structure – potential remains of structures located on low ground	Unknown	Dehai Amirbek, Rasht District	-	Low

Site ID	Type	Sub-type	Historical Period	Location	MASL	Sensitivity (low / medium / high / very high)
RHPP-AR-29	Archaeological	Structure – potential remains of structures in mountainous terrain	Unknown	Darband City, Nurobod District	-	Low
RHPP-AR-30	Archaeological	Structure – potential remains of abandoned structures in a valley	Unknown	Darband City, Nurobod District	-	Low
RHPP-AR-31	Archaeological	Structure – potential remains of structures on a plain	Unknown	Roghuni poyon, Nurobod District	-	Low
RHPP-AR-32	Archaeological	Structure – potential remains of multi-rooms structure	Unknown	Darband City, Nurobod District	-	Low
RHPP-AR-33	Archaeological	Agricultural – possible remains of field systems	Unknown	Numerous (see Appendix A15-E, Drawing A15-2)	Numerous	Low
RHPP-AR-34	Archaeological	Agricultural – possible remains of lynchets	Unknown	Numerous (see Appendix A15-E, Drawing A15-2)	Numerous	Low
RHPP-AR-35	Archaeological	Agricultural – possible remains of terraces	Unknown	Numerous (see Appendix A15-E, Drawing A15-2)	Numerous	Low

Site ID	Type	Sub-type	Historical Period	Location	MASL	Sensitivity (low / medium / high / very high)
RHPP-AR-36	Paleontological	Fossil – dinosaur footprints	145 – 66 million years ago	Rogun	-	High
RHPP-AR-37	Archaeological	Structure – poorly preserved ruins/settlement, pottery	19 C	Khakimii poyon, Nurobod District	1,337	Low
RHPP-AR-38	Archaeological	Fortress – poorly preserved ruins of the fortress, ceramics	18 – 19 C	Mehrobod, Nurobod District	1,318	Medium
RHPP-AR-39	Archaeological	Fortress – Kalankok Fortress, poorly preserved ruins, ceramics	18 – 19 C	Sari Ju, Nurobod District	1,276	Medium
RHPP-AR-40	Archaeological	Fortress – ruins, ceramics	18 – 19 C	Roghuni poyon, Nurobod District	1,320	Medium
RHPP-AR-41	Archaeological	Fortress – Gumushkala Fortress ruins, ceramics	18 – 19 C	Dakhani gumush, Nurobod District	1,310	Medium
RHPP-AR-42	Archaeological	Fortress – Yapoloki Fortress ruins, ceramics	Early medieval	Yapoloki, Rasht District	1,315	High

Site ID	Type	Sub-type	Historical Period	Location	MASL	Sensitivity (low / medium / high / very high)
RHPP-AR-43	Archaeological	Early Stone Age lithic scatter	40-50 thousand years ago	Vahdat	1,294	Medium
RHPP-AR-44	Archaeological	Late Stone Age lithic scatter	6-4 thousand years ago (?)	Sari Ju	1,252	Medium
RHPP-AR-45	Archaeological	Late Stone Age lithic scatter	6-4 thousand years ago (?)	Yakhch	1,299	Medium
RHPP-AR-46	Archaeological	Fortress – Kalai Chungi Zubaid	Unknown	Zarda	-	Medium
RHPP-CR-01	Cultural and sacred	Cemetery	Modern	Khakimii bolo	-	High
RHPP-CR-02	Cultural and sacred	Burial – Oftobkhuja Tomb	17 – 18 C	Khakimii bolo	-	High
RHPP-CR-03	Cultural and sacred	Burial – Mohtobkhuja Tomb	17 – 18 C	Khakimii bolo	-	High

Site ID	Type	Sub-type	Historical Period	Location	MASL	Sensitivity (low / medium / high / very high)
RHPP-CR-04	Cultural and sacred	Burial – Bobokhuja Tomb	18 – 20 C	Khakimii bolo	-	High
RHPP-CR-05	Cultural and sacred	Mosque	Modern	Khakimii bolo	-	Low
RHPP-CR-06	Cultural and sacred	Cemetery	Modern	Khakimii poyon	-	High
RHPP-CR-07	Cultural and sacred	Mosque	Modern	Khakimii poyon	-	Low
RHPP-CR-08	Cultural and sacred	Mosque	Modern	Khumrogh (formerly Kumok or Qumoq)	-	Low
RHPP-CR-09	Cultural and sacred	Cemetery	Modern	Khumrogh	-	High
RHPP-CR-10	Cultural and sacred	Burial – Hazrat Shamsiddinkhoja Tomb	16 – 17 C	Khumrogh	-	High
RHPP-CR-11	Cultural and sacred	Burial – Tomb of Sayedawazi Kozi	16 – 17 C	Khumrogh	-	High

Site ID	Type	Sub-type	Historical Period	Location	MASL	Sensitivity (low / medium / high / very high)
RHPP-CR-12	Cultural and sacred	Cemetery	Modern	Obiboriki bolo	-	High
RHPP-CR-13	Cultural and sacred	Spring	Modern	Obiboriki bolo	-	High
RHPP-CR-14	Cultural and sacred	Mosque	Modern	Obiboriki bolo	-	Low
RHPP-CR-15	Cultural and sacred	Mosque	Modern	Obiboriki poyon	-	Low
RHPP-CR-16	Cultural and sacred	Mosque	Modern	Lughuri poyon	-	Low
RHPP-CR-17	Cultural and sacred	Cemetery	Modern	Lughuri poyon	-	High
RHPP-CR-18	Cultural and sacred	Burial – Tomb	18 C	Lughuri poyon	-	High
RHPP-CR-19	Cultural and sacred	Spring	Modern	Obiboriki poyon	-	High

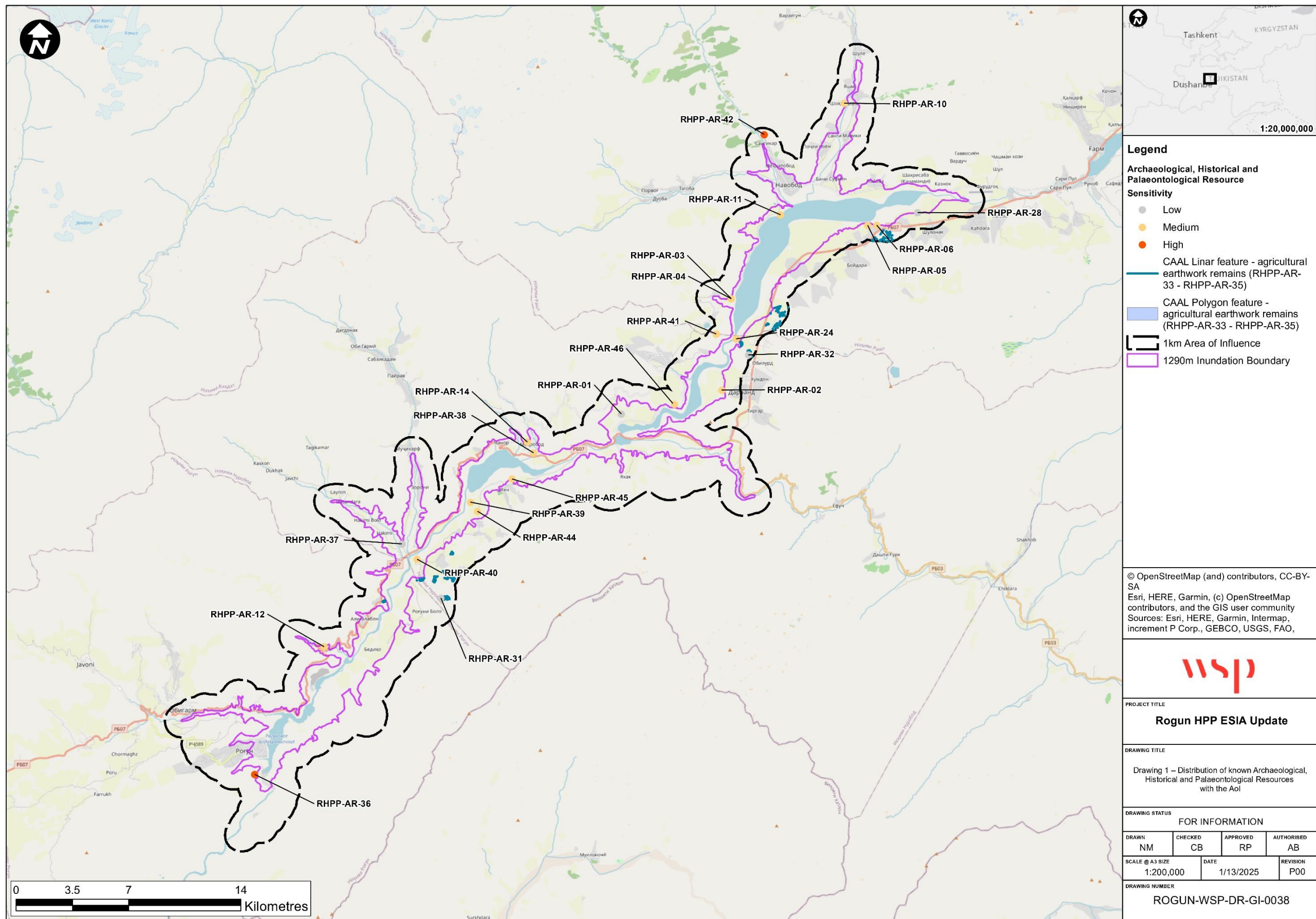
Site ID	Type	Sub-type	Historical Period	Location	MASL	Sensitivity (low / medium / high / very high)
RHPP-CR-20	Cultural and sacred	Burial	18 – 19 C	Khakimii bolo	-	High
RHPP-CR-21	Cultural and sacred	Cemetery	18 – 19 C	Pandovchii Agba	-	High
RHPP-CR-22	Cultural and sacred	Mausoleum – Xazrati Khujai Paron	Modern	Pandovchii Agba	-	High
RHPP-CR-23	Cultural and sacred	Mosque – no longer in use	Modern	Bulbuldara	-	Low
RHPP-CR-24	Cultural and sacred	Mazar – Vakhobiddin	Unknown	Zarda	-	High
RHPP-CR-25	Cultural and sacred	Cemetery	Unknown	Margzori Sir	-	High
RHPP-CR-26	Cultural and sacred	Cemetery – Oromgoh	Unknown	Sari Kosh	-	High
RHPP-CR-27	Cultural and sacred	Burial – Mazori Domullobacha	Modern	Bedikho, Rogun District	-	High

Site ID	Type	Sub-type	Historical Period	Location	MASL	Sensitivity (low / medium / high / very high)
RHPP-CR-28	Cultural and sacred	Burial – Mazori Sangi Dushokha	Ancient	Bedikho, Rogun District	-	High
RHPP-CR-29	Cultural and sacred	Burial – Mazori sha x id	Ancient	Bedikho, Rogun District	-	High
RHPP-CR-30	Cultural and sacred	Burial – Mazori sha x id	Unknown	Bedikho, Rogun District	-	High
RHPP-CR-31	Cultural and sacred	Burial – Mazori Chorma-zak chashma	Unknown	Bedikho, Rogun District	-	High
RHPP-CR-32	Cultural and sacred	Burial – Mazori Bibi-Otun	Ancient	Mehrobod, Nurobod District	-	High
RHPP-CR-33	Cultural and sacred	Tree – Chanor	Unknown (ancient)	Mehrobod, Nurobod District	-	High
RHPP-CR-34	Cultural and sacred	Burial – Mazori Ashoni Asrori	Unknown	Aligalaboni bolo, Rogun District	-	High
RHPP-CR-35	Cultural and sacred	Burial – unknown tomb	Unknown	Aligalaboni bolo, Rogun District	-	High

Site ID	Type	Sub-type	Historical Period	Location	MASL	Sensitivity (low / medium / high / very high)
RHPP-CR-36	Cultural and sacred	Burial – unknown tomb	Unknown	Aligalaboni bolo, Rogun District	-	High
RHPP-CR-37	Cultural and sacred	Museum – Boqi Rahimzoda	Modern	Sangi Maliki, Rasht District	-	Low

Appendix B

DRAWINGS



Appendix C

EXAMPLE CONSULTATION AND SITE MONITORING REGISTERS

Table 17-1 – Example consultation register: cultural heritage management

Date of meeting	Location of meeting	Attendees from RHPP Project Team	Local community representatives	Issues discussed	Actions required (by date)	Date of next meeting

Table 17-2 – Example site monitoring register: cultural heritage management

Site name and location	Date of monitoring	Nature of monitoring	RHPP Project Team members	Local community representatives	Findings	Actions required	Date for follow up

Appendix D

TEMPLATE CHANCE FIND PROCEDURE

1. INTRODUCTION

- 1.1.1. WSP has been commissioned by the Project Management Group for Energy Facilities Construction under the President of the Republic of Tajikistan (PMG) to prepare an Environmental and Social Impact Assessment (ESIA) for the Rogun Hydropower Project (RHPP) in Tajikistan, in accordance with both Tajik law and international best practice guidelines (World Bank Environmental and Social Standard (ESS) 8 (2017)).
- 1.1.2. WSP's associated Cultural Heritage Management Plan (CHMP) identified the requirement for the preparation of a Chance Find Procedure (CFP) template to be produced, in order to proactively manage the potential disturbance of any cultural heritage resources accidentally encountered during Project activities.
- 1.1.3. A Chance Find is defined by the World Bank Environmental and Social Standard (ESS) 8 as: **'any unanticipated discovery or recognition of cultural heritage. Most often, chance finds occur during the construction phase of a project'** (ESS8, 2018). This CFP template provides the appropriate framework for the creation and implementation of a CFP to be followed during construction or operational phases of the Project. The CFP should be implemented through the Project Environmental and Social Management Plan (ESMP) and disseminated to all relevant parties on site who are involved in the construction processes.
- 1.1.4. Tangible cultural heritage resources may include archaeological surface scatters (e.g., pottery sherds and lithic scatters), prehistoric settlement activity, and remains of historic and religious buildings, both above ground and subsurface. Accidental damage, destruction, or disturbance of archaeological resources due to the Project could result in the permanent, irreversible loss of resources of potential regional, national and international significance.

GN11.1. A chance find is any unanticipated discovery or recognition of cultural heritage. Most often, chance finds occur during the construction phase of a project. Such finds include, for example, the discovery of a single artifact, an artifact indicating the presence of a buried archaeological site, human remains, fossilized plant or animal remains or animal tracks, or a natural object or soil feature that appears to indicate the presence of archaeological material.

- 1.1.5. WSP's experts have undertaken a baseline study of the Project Area of Influence (AoI) to identify and establish the significance of cultural resources and to determine the potential for previously undiscovered resources to occur throughout the AoI.

1.2. NATIONAL AND INTERNATIONAL GUIDELINES

- 1.2.1. For the purposes of the following CFP, 'cultural heritage' is defined in accordance with ESS8 (2016):
- "...movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Tangible cultural heritage may be located in urban or rural settings, and may be above or below land or under the water"; and
 - "...practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artifacts and cultural spaces associated therewith, that communities and groups recognize as part of their cultural heritage, as transmitted from generation to generation and

constantly recreated by them in response to their environment, their interaction with nature and their history”.

1.2.2. ESS8: Cultural Heritage (2016), defines the following objectives in relation to cultural heritage:

- To protect cultural heritage from the adverse impacts of Project activities and support its preservation.
- To address cultural heritage as an integral aspect of sustainable development.
- To promote meaningful consultation with stakeholders regarding cultural heritage.
- To promote the equitable sharing of benefits from the use of cultural heritage.

1.2.3. Furthermore, ESS8 (2016) states the following in relation to cultural heritage management:

- The requirements of ESS8 apply to cultural heritage regardless of whether or not it has been legally protected or previously identified or disturbed.
- The Borrower will implement globally recognized practices for field-based study, documentation and protection of cultural heritage in connection with the Project, including by contractors and other third parties.
- Where necessary, due to the potential risks and impacts of a project, the environmental and social assessment will involve the participation of cultural heritage experts. If the environmental and social assessment determines that the Project may, at any time during the Project life cycle, have significant potential risks and impacts on cultural heritage, the Borrower will engage cultural heritage experts to assist in the identification, valuation assessment and protection of cultural heritage.

1.2.4. ESS8 (2016) defines a CFP as a method to effectively manage the risk of encountering previously unidentified cultural heritage:

“A chance finds procedure is a project-specific procedure which will be followed if previously unknown cultural heritage is encountered during project activities. It will be included in all contracts relating to construction of the project, including excavations, demolition, movement of earth, flooding or other changes in the physical environment. The chance finds procedure will set out how chance finds associated with the project will be managed. The procedure will include a requirement to notify relevant authorities of found objects or sites by cultural heritage experts; to fence-off the area of finds or sites to avoid further disturbance; to conduct an assessment of found objects or sites by cultural heritage experts; to identify and implement actions consistent with the requirements of this ESS and national law; and to train project personnel and project workers on chance find procedures.”

1.3. REVIEW PROGRAMME

1.3.1. This CFP is intended for review on an annual basis so that the content can be refined to consider experiences learnt and adapt to any significant new phases of Project activity.

1.3.2. The annual review must also:

- Confirm or update the contact details of the Project Cultural Heritage Management Team (CHMT; defined in the CHMP) for the coming year; and
- Update the CFP Flow Diagram (Appendix A) as required.

1.3.3. An example of annual review registers is presented in Appendix B.

2. BACKGROUND

2.1. EXISTING BASELINE CONDITIONS

- 2.1.1. The baseline of cultural heritage resources was undertaken by WSP as part of the ESIA. The baseline study focused on identifying and recording the full suite of visible tangible and intangible cultural heritage resources that were found to exist within the AoI. The AoI for cultural heritage includes the footprint of the Project and associated components, including the Rogun HPP dam and associated construction area, the reservoir area at full supply level (FSL), access roads, ancillary facilities and other core infrastructure, and all villages and settlements that are currently undergoing resettlement (i.e., under RAP 2). A 1 km buffer incorporating the key Project components listed above has been used to define the AoI.
- 2.1.2. The Cultural Heritage chapter of the ESIA identified 27 archaeological, historical and paleontological resources within the AoI, including fortress sites, abandoned settlements, and fossilized dinosaur footprints. A total of 37 cultural and sacred resources were identified within the AoI. These included cemeteries and burials, mosques, and springs. Examples of archaeological surface scatters identified within the AoI are shown in **Figures 1 – 3**.



Figure 1 – Pottery fragments recovered from the surface at Kalankok Fortress, Sari Ju village (T. G. F., 2023)



Figure 2 – Ceramic fragments recovered from the surface at the fortress near Roghuni poyon (T. G. F., 2023)



Figure 3 – Stone tools identified on a terrace near Vahdat (T. G. F., 2023)

- 2.1.3. There is a high potential for further, as yet unknown, archaeological, historical and paleontological resources to exist within the Project footprint and surrounding Aol, particularly in the locations not previously subject to systematic archaeological investigation.
- 2.1.4. In line with World Bank ESS8, the implementation of a CFP is necessary to mitigate any accidental damage of both surface and sub-surface archaeological, historical and paleontological resources, i.e., to provide a mechanism to address discoveries during Project activities when a Cultural Heritage Expert is not present. The CFP will also apply to paleontological receptors which may be identified during the construction phase.

2.2. SCOPE OF APPLICATION

- 2.2.1. The scope of application of the CFP includes the construction of the Rogun Hydropower Project (HPP), in Tajikistan. This includes any extensions which may be added during the lifecycle of the Project. The CFP may be updated as the Project progresses and applies to the following activities:
- Vegetation clearance, topsoil removal and grading – i.e., all ground preparation;
 - Geotechnical, hydrological and environmental investigations;
 - Construction phase activities and related supporting infrastructure, (e.g., services development);
 - Project operation, including maintenance; and
 - Project closure and decommissioning activities, including planting and reclamation.
- 2.2.2. The implementation of the CFP aims to ensure that accidental cultural heritage discoveries are managed in a clear and sustainable fashion throughout the lifetime of the Project, in accordance with international best practice (ESS8) and Tajik legislation.

3. CHANCE FIND PROCEDURE

3.1. OVERVIEW

- 3.1.1. In the context of the Rogun HPP, a Chance Find is defined as ‘**objects of potential cultural heritage significance recovered during any site work, commonly related to archaeological or historical sites, including surface or sub-surface artefacts e.g., ceramic findspots, pottery scatter, ancient burials etc.**’
- 3.1.2. All site workers and all contractors **MUST** have the authorization to halt work if they suspect they may have encountered objects of cultural heritage interest.
- 3.1.3. The process to be followed in the event of a Chance Find is described below, with a summary flow chart provided in Appendix A.
- 3.1.4. No excavation or other intentional disturbance of archaeological sites will occur without the appropriate skills and authorization to do so in accordance with this procedure. Any removal of cultural heritage must be conducted using the best available techniques, advised by relevant authorities, and conducted or supervised by an expert archaeologist.

3.2. RESPONSIBILITIES OF THE EMPLOYER’S REPRESENTATIVE/PMC

- 3.2.1. The Employer’s Representative/PMC is responsible for the implementation of the Project’s CFP.
- 3.2.2. The Employer’s Representative/PMC will ensure all Project personnel in managerial or supervisory roles undergo training on the CFP during the on-site induction. Discussion of the procedure should also be included in toolbox talks. All site-based contractors’ and sub-contractors’ personnel involved in land disturbance should also receive training on the CFP during the on-site induction.
- 3.2.3. Personnel should be made aware of their responsibilities if they identify chance finds during their work. Specifically, they must be aware of legal requirements regarding disturbance to, or removal of, archaeological and paleontological artefacts and feature and must know their reporting responsibilities and lines of communication if the procedure is triggered.
- 3.2.4. The Employer’s Representative/PMC will also be responsible for the annual review and any subsequent update of the CFP during the lifetime of the Project.
- 3.2.5. The Employer’s Representative/PMC is required to contact the CHMT and produce a Chance Find Memo (by email) **within 48 hours** of a Chance Find Notification. This should detail:
- The date and time of the Chance Find;
 - The location (UTM grid reference) of the Chance Find, obtained using a GPS;
 - Details of the discovery team, including names, roles and the nature of activity which was occurring at the time of the discovery;
 - Estimated nature of the artefact/site observed;
 - Temporary protection (demarcation/security) measures implemented (e.g., overnight patrol, if the area is flagged and if the artefact/site has been covered and with what); and
 - The dates of the next steps to be implemented (as set out below) which must be completed **within 48 hours** from the production of the Chance Find memo:
 - The memo must be emailed to the CHMT (see Appendix A for contact details).

- The CHMT will review the memo as a priority and decide on the most appropriate next steps.

3.3. RESPONSIBILITIES OF ALL SITE WORKERS (INCLUDING CONTRACTORS)

- 3.3.1. In the event that a Chance Find is observed and/or disturbed, site personnel will prevent the illegal disturbance of archaeological material by:
- Immediately stopping work in the area of the Chance Find, in a safe manner;
 - Demarcating the location of the discovered artefact or site (*in situ*). This may be done by marking the area with tape or chalk etc.;
 - Photographing the discovery, if possible. This can be done with a mobile phone;
 - Recording the UTM coordinates using a Global Positioning System (GPS)
 - Immediately reporting the discovery to the Employer's Representative/PMC (**within 24 hours**); and
 - Follow any instructions issued by the Employer's Representative/PMC to protect the site, including arranging for security to prevent any loss of removable objects (e.g., overnight).

3.4. RESPONSIBILITIES OF THE PROJECT CULTURAL HERITAGE MANAGEMENT TEAM (CHMT)

- 3.4.1. The CHMT will:
- Review the Chance Find memo as a priority action and respond to the Employer's Representative/PMC within **24-48 hours**;
 - Decide on the appropriate actions that should be undertaken according to best practice and in consultation with the local and/or national regulatory authority and other stakeholders, as appropriate;
 - If required, the CHMT will send representatives to the site to fully evaluate the discovery; and
 - Once the appropriate mitigation actions have been undertaken and completed (e.g., rapid excavation and record, or relocation etc.), the CHMT will notify the Employer's Representative / future PMC.

3.5. AUTHORIZATION TO PROCEED

- 3.5.1. Following evaluation by the CHMT (and if necessary, local/national authority approval, rapid excavation, and recording), the CHMT will notify the Employer's Representative / future PMC that the procedure is complete.
- 3.5.2. The Employer's Representative/PMC will notify the applicable Contractor / Site Manager and update the Project's CFP Register (Appendix B).
- 3.5.3. The Employer's Representative/PMC will issue the authorization to proceed.

3.6. EXCEPTION

- 3.6.1. In the event that the chance find is a small, isolated (singular) object (e.g., a pottery sherd), the Employer's Representative/PMC may use their professional judgement to decide that a Chance Find observed can be sensitively recorded and removed so that the work can continue. In this instance the following steps should be implemented and recorded within a Chance Find memo to detail:

- The date and time of the Chance Find;
- The location (UTM GPS coordinates);
- Photographs of the Chance Find *in situ* (if possible);
- The method and rationale of collection and location of the collected find, including location of appropriate safe storage in the Employer's Representative / future PMC Site Office; and
- The details of the discovery team (names, roles, nature of activity).

3.6.2. As per the normal procedure, the Chance Find memo will be submitted to the CHMT who will in turn collate and notify the local authority, as necessary. These procedures are also outlined in Appendix A which includes contact details for the CHMT.

3.6.3. If the Employer's Representative/PMC cannot conclusively deduce whether or not a Chance Find can be recorded and removed, they should follow the normal CFP.

3.7. SUSPENSION OF WORK

3.7.1. In the event of significant findings, and in accordance with Tajik cultural heritage law, the CHMT may wish to carry out more detailed analysis. In this instance they will propose a scheme of work for Rogun PMG's consideration before taking steps to potentially request the temporary suspension of Project works in the vicinity of the discovery site for an agreed period.

3.8. MONITORING PROCEDURES AND KEY PERFORMANCE INDICATORS

3.8.1. The Employer's Representative/PMC will monitor the implementation of the CFP annually during the construction and operational phases of the Project via:

- Reports from the Employer's Representative/PMC's operational departments conducting works and from contractors (e.g., supervising geotechnical engineers, excavators, etc.), who must report on Chance Finds;
- Collation of Chance Finds discovery memos;
- Register of Chance Finds (Appendix B)
- Grievances received related to Chance Finds, and those closed versus unresolved; and
- Log of non-compliances with the CFP and their resolutions.

3.9. SIGN OFF

3.9.1. The CFP has been acknowledged by the following signatories and disseminated to all parties involved in any ground disturbance activity within the Project footprint:

- Employer's Representative / future PMC.....
- Contracting staff (as appropriate)

4. REFERENCES

Law of the Republic of Tajikistan on Culture (2003) as amended by the Law of the Republic of Tajikistan dated December 8, 2003, N63, https://en.unesco.org/sites/default/files/tj_culture1997_rusorof.pdf, (accessed 20/09/2023)

Law of the Republic of Tajikistan on the Export and Import of Cultural Property (2001), https://en.unesco.org/sites/default/files/tj_exportimportcultproperty2001_rusorof.pdf, (accessed 20/09/2023)

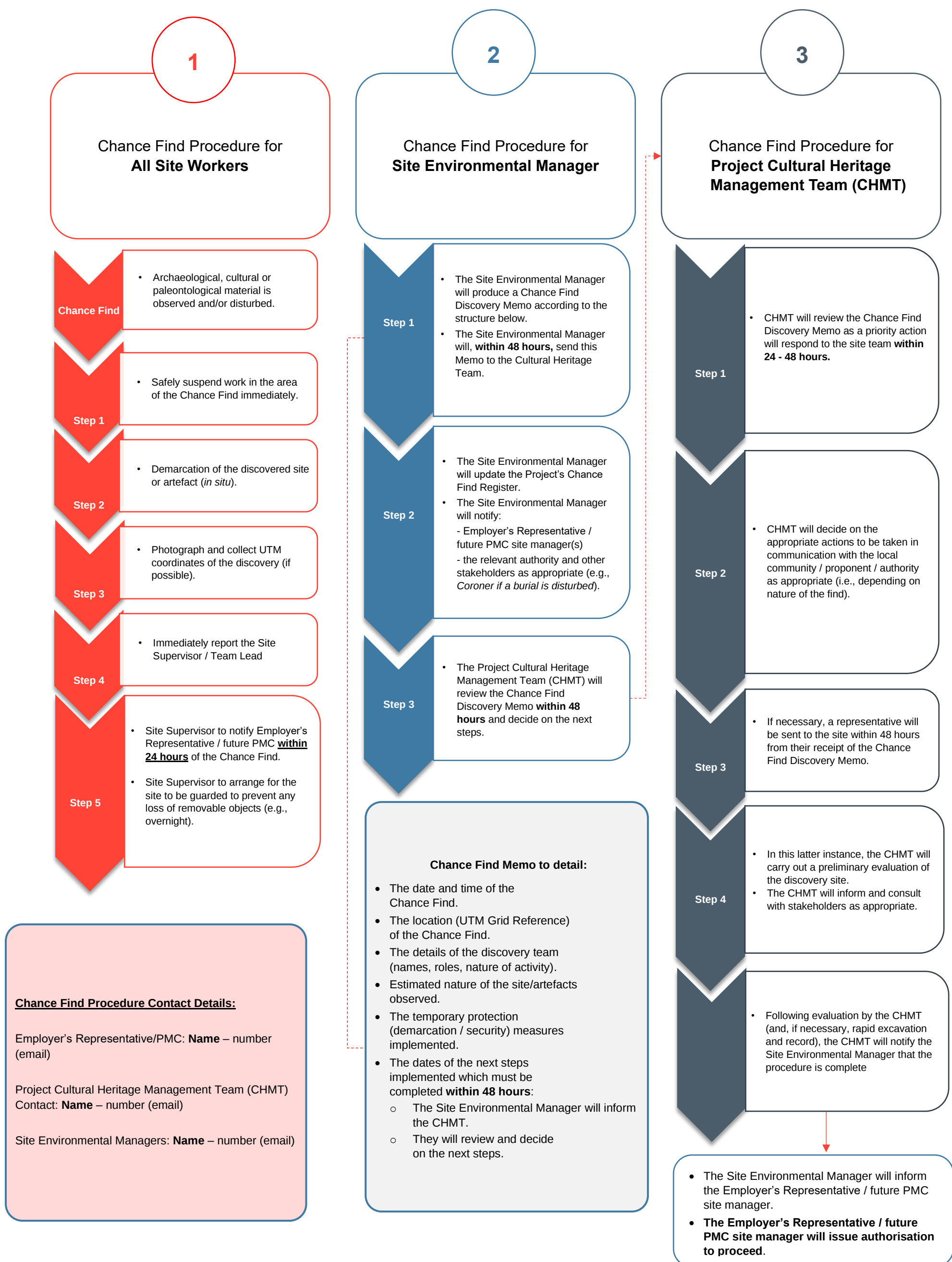
The World Bank (2016) *Environmental and Social Framework (ESS8, Cultural Heritage)* [online] <https://projects.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/environmental-and-social-standards> (accessed 20/09/2023)

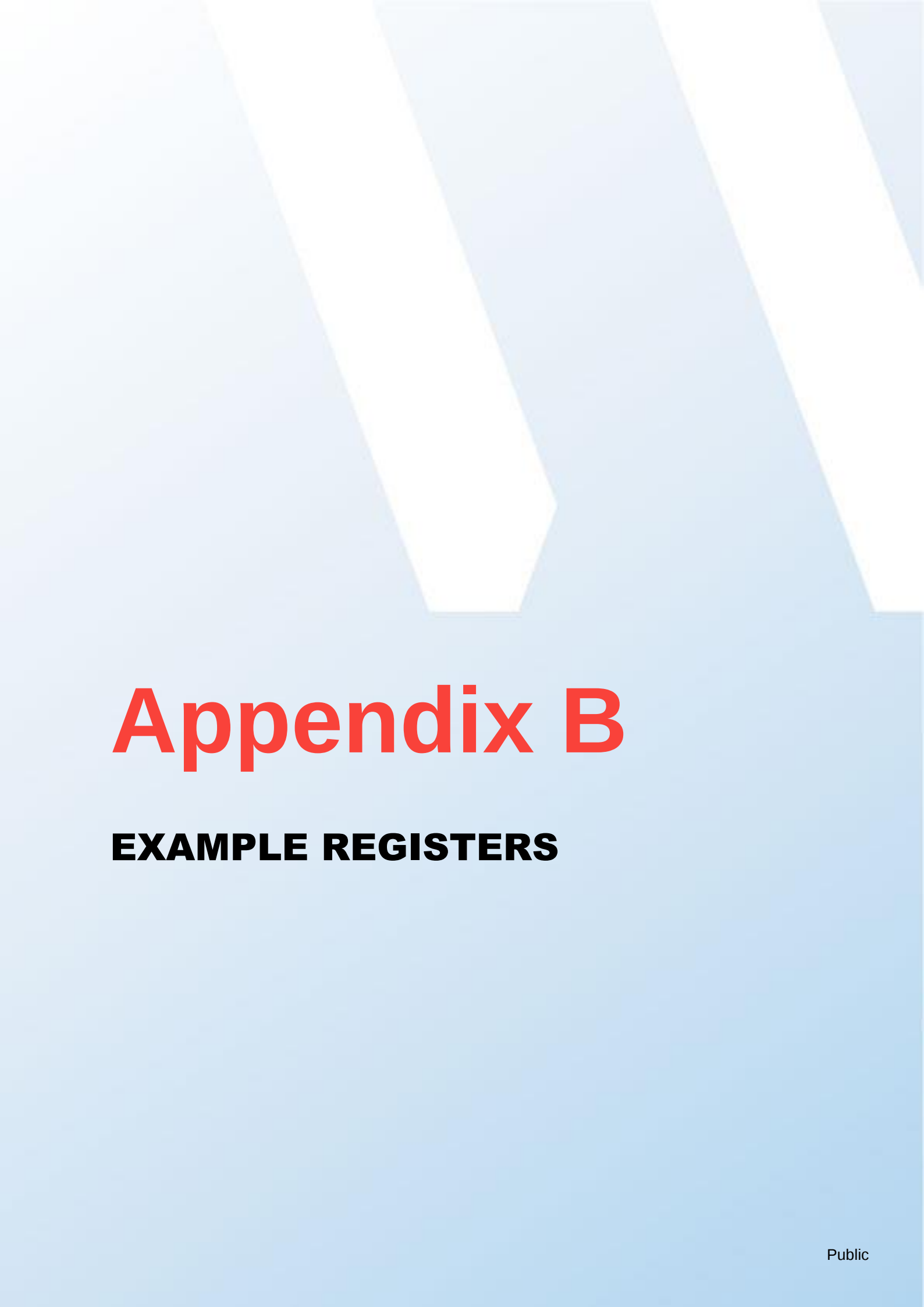
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WSP (2023) *Rogun Hydropower Project environmental and Social Impact Assessment Volume II: Technical Annexes – A15 Cultural Heritage*, unpublished client document

Appendix A

CHANCE FIND PROCEDURE FLOW DIAGRAM





Appendix B

EXAMPLE REGISTERS

Table B-1 Annual CFP Review Register

Date of Review	Period in Review	Review Completed By	Successes	Failings or Grievances Raised	Updates Required	Date Updated	CFP Contacts Confirmed for Next Period	Date of Next Review	Additional Comments

Table B-2 – Register of Chance Find

Reference/ID	Contractor	Activity	Location (UTM)	Date of Chance Find	Nature of Chance Find	Memo Prepared (Y/N)	Advised Mitigation	Authorization to Proceed (and date)	Link to Data Files and Images

Appendix E

CHMP IMPLEMENTATION COST ESTIMATES

CHMP IMPLEMENTATION COST ESTIMATES

The following table details estimated annual costs for the implementation of the CHMP, up to and including 2038 when the maximum inundation level is due to be reached. The costs include staff time, accommodation, subsistence, travel costs and equipment.

Please note the following caveats:

- This is an estimate based on current Project understanding and the existing CHMP draft.
- The programme will need to be updated / re-costed once the final year-by-year inundation schedule is made available (to fully determine which sites are prioritised and in what order for evaluation, according to their MASL location).
- It has been assumed that weather conditions will prevent any site work from approximately mid/late-October to mid-May.
- It is understood that the A. Donish Institute Ethnography Team already has a contract with DFZ to work on the resettlement programme. Therefore, some costs presented below (see Ethnography Task 2) will need to be rationalised against what has already been agreed / costed for, potentially while that programme is adapted to incorporate the CHMP / ESS8 requirements.
- The A. Donish Institute Ethnography Team provided fees which account for increasing costs, so the inflation index has not been applied to these.
- Additional estimates are provided for 'international expert support' (i.e., external consultant to provide initial (short-term) capacity building and best practice assurance re. ESS8, ancient grave relocation etc.) and PMG's internal management plan delivery team.
- The implementation cost estimates do not include the PMG (and supporting parties, e.g., Employer's Representative / Future PC) delivery of the CHMP. An estimate of days required for implementation has been provided instead.

CHMP Implementation Cost Estimates

Task	Responsibility		Cost													Total
			2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	
Archaeology & Palaeontology Task 1: Archaeological evaluation Phase 1 ESTIMATE - receptors within flood zone.	A. Donish Institute			\$ 35,885.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 35,885.00
Archaeology & Palaeontology Task 2: Ongoing visual (non-intrusive) archaeological survey and production of Archaeological Potential Model (APL).	A. Donish Institute		\$ -	\$ 67,600.20	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 67,600.20
Archaeology & Palaeontology Task 3: Archaeological evaluation Phase 2 ESTIMATE - receptors within 250m of flood zone.	A. Donish Institute		\$ -	\$ -	\$ 18,220.08	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,220.08
Archaeology & Palaeontology Task 4: Archaeological excavation of the 5 fortress sites highlighted by A. Donish Institute Archaeology Team: Kalai Mir, Gumush, Mekhrobod, Sangdevor, Kalai Bacha.	A. Donish Institute		\$ -	\$ 226,600.80	\$ 226,600.80	\$ 113,300.40	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 566,502.00
Archaeology & Palaeontology Task 5: Long-Term Environmental Monitoring - upper terrace monitoring programme. NB Scope to include Cultural and Sacred Resources.	A. Donish Institute		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 58,900.00	\$ 58,900.00	\$ 58,900.00	\$ 58,900.00	\$ 58,900.00	\$ 58,900.00	\$ 58,900.00	\$ 412,300.00
Archaeology & Palaeontology Task 6: Preparation of a methodology for and leading the evaluation of palaeontological resources identified within the Aol.	TBC - A. Donish Institute Contact			\$ 5,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,000.00
Archaeology & Palaeontology Task 7: Reporting and publication following completion of the excavation work (archaeology and palaeontology).	A. Donish Institute		\$ -	\$ -	\$ -	\$ 3,500.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,500.00
		Archaeology & Palaeontology Total (without inflation)	\$ -	\$ 335,086.00	\$ 244,820.88	\$ 116,800.40	\$ -	\$ -	\$ 58,900.00	\$ 58,900.00	\$ 58,900.00	\$ 58,900.00	\$ 58,900.00	\$ 58,900.00	\$ 58,900.00	\$ 1,109,007.28
		Inflation Index	1	1.025	1.050625	1.076890625	1.103812891	1.131408213	1.159693418	1.188685754	1.218402898	1.24886297	1.280084544	1.312086658	1.344888824	
		Archaeology & Palaeontology Total (with inflation)	\$ -	\$ 343,463.15	\$ 257,214.94	\$ 125,781.26	\$ -	\$ -	\$ 68,305.94	\$ 70,013.59	\$ 71,763.93	\$ 73,558.03	\$ 75,396.98	\$ 77,281.90	\$ 79,213.95	\$ 1,241,993.67
Ethnography Task 1: Continued consultation in settlements.	A. Donish Institute			\$ 12,040.00	\$ 6,020.00	\$ 6,020.00	\$ 6,020.00	\$ 6,660.00	\$ 6,660.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 43,420.00
Ethnography Task 2: Ongoing field research: collection of data.	A. Donish Institute			\$ 128,360.00	\$ 82,250.00	\$ 91,190.00	\$ 89,950.00	\$ 109,890.00	\$ 125,420.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 627,060.00
Ethnography Task 3: Phases 1 & 2 Museums Programme.	A. Donish Institute			\$ 14,980.00	\$ 5,603.00	\$ 5,603.00	\$ 6,334.00	\$ 74,300.00	\$ 76,050.00	\$ 55,600.00	\$ 55,600.00	\$ 55,600.00	\$ 27,800.00	\$ 27,800.00	\$ 27,800.00	\$ 433,070.00
Ethnography Task 4: Grave relocation (cemeteries).	A. Donish Institute			\$ 57,370.00	\$ 33,080.00	\$ 35,770.00	\$ 39,200.00	\$ 44,480.00	\$ 48,620.00	\$ 53,900.00	\$ 59,920.00	\$ 65,400.00	\$ 65,400.00	\$ -	\$ -	\$ 503,140.00
Ethnography Task 5: Grave relocation (tombs).	A. Donish Institute			\$ 24,620.00	\$ 11,900.00	\$ 12,240.00	\$ 12,860.00	\$ 13,430.00	\$ 14,360.00	\$ 15,280.00	\$ 16,700.00	\$ 17,870.00	\$ 19,100.00	\$ -	\$ -	\$ 158,360.00
		Ethnography Total (with inflation)	\$ -	\$ 237,370.00	\$ 138,853.00	\$ 150,823.00	\$ 154,364.00	\$ 248,760.00	\$ 271,110.00	\$ 124,780.00	\$ 132,220.00	\$ 138,870.00	\$ 112,300.00	\$ 27,800.00	\$ 27,800.00	\$ 1,765,050.00
International Expert Support	TBC			\$ 28,640.00	\$ 23,040.00	\$ 15,680.00	\$ 8,960.00	\$ 6,720.00	\$ 4,480.00	\$ 4,480.00	\$ 4,480.00	\$ 4,480.00	\$ 4,480.00	\$ 4,480.00	\$ 4,480.00	\$ 114,400.00
		International Expert Support Total (without inflation)		\$ 39,840.00	\$ 23,040.00	\$ 15,680.00	\$ 8,960.00	\$ 6,720.00	\$ 4,480.00	\$ 4,480.00	\$ 4,480.00	\$ 4,480.00	\$ 4,480.00	\$ 4,480.00	\$ 4,480.00	\$ 125,600.00
		Inflation Index	1	1.025	1.050625	1.076890625	1.103812891	1.131408213	1.159693418	1.188685754	1.218402898	1.24886297	1.280084544	1.312086658	1.344888824	
		International Expert Support Total (with inflation)	\$ -	\$ 40,836.00	\$ 24,206.40	\$ 16,885.65	\$ 9,890.16	\$ 7,603.06	\$ 5,195.43	\$ 5,325.31	\$ 5,458.44	\$ 5,594.91	\$ 5,734.78	\$ 5,878.15	\$ 6,025.10	\$ 138,633.39
		Grand Total	\$ -	\$ 621,669.15	\$ 420,274.34	\$ 293,489.90	\$ 164,254.16	\$ 256,363.06	\$ 344,611.37	\$ 200,118.90	\$ 209,442.38	\$ 218,022.94	\$ 193,431.76	\$ 110,960.05	\$ 113,039.05	\$ 3,145,677.06

CHMP Implementation Time Estimate - CHMP Delivery

Task	Responsibility		Days													Total
			2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	
• Oversight and management of the implementation of the CHMP. • Responsibility for the annual review and any subsequent update of the CHMP during the lifetime of the Project. • Expert procurement.	PMG and Rogun OJSC			22.5	10	15	10	10	10	10	10	10	10	10	12.5	140
• Delivery of on-site cultural heritage awareness programme.	Employer's Representative (currently Tractabel)			22.5	10	10	10	10	10	10	10	10	10	10	10	132.5
• Consult with PAP regarding any ongoing grievances, compensation programmes etc. • Manage the ethnographic expert team. • Manage the archaeological expert team. • Implementation of the best practice guide for ongoing grave and cemetery relocations, and any related archaeological works.	DFZ - TBC			42	28	28	28	28	28	28	28	28	28	28	28	350
				87	48	53	48	48	48	48	48	48	48	48	50.5	622.5

