

Integrated Rurban Development and Climate Resilience Project,

Ministry of Agriculture, Live Stock, Land and Irrigation.

ABSTRACT

ESR and EMP for Proposed Rehabilitation works at Kalu Ulpath Wewa and Excise Wewa in the Kithuluthuva Village of Hingurakgoda ASC Division, Polonnaruwa.

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1. General Introduction

The Kalu Ulpatha Wewa (also spelled Kaluulpath Wewa) and Excise Wewa are significant minor irrigation reservoirs located in the 31 – Singhegama GND of the Kithuluthuva village of Hingurakgoda Divisional Secretariat of the Polonnaruwa District.

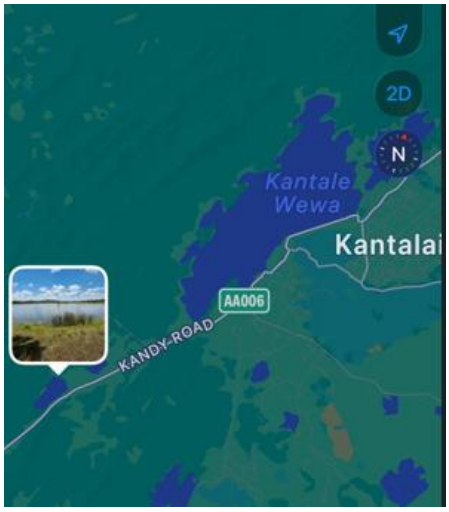


*Figure 1: Site map showing **Kalu Ulpatha Wewa** and its proximity to **Excise Wewa**, located just ahead toward **Kantale Wewa.***

As part of the ancient agricultural landscape of the North Central Province, both tanks function within the larger Ellangawa where Kanthale wewa also included, providing a vital water source for the community and local biodiversity. The Kanthale wewa is the nearest large tank. While both tanks are smaller tank compared to the "Giant Reservoirs" of Polonnaruwa, both represents the ancient engineering philosophy of "cascading," where water is used and reused multiple times as it flows through the catchment area.

The water of the both tanks is primarily used for paddy cultivation during both the *Maha* and *Yala* seasons. Both farmer organizations[1] say, the tanks serve as a storage point of the interconnected tank, which is then distributed to the downstream paddy fields. The Maha season gets enough water via the tank, but during the Yala season, the tank water becomes limiting factor for the paddy farming. At present no OFC[2]s are not cultivated using the water of the both tanks due to limitations of the water availability.

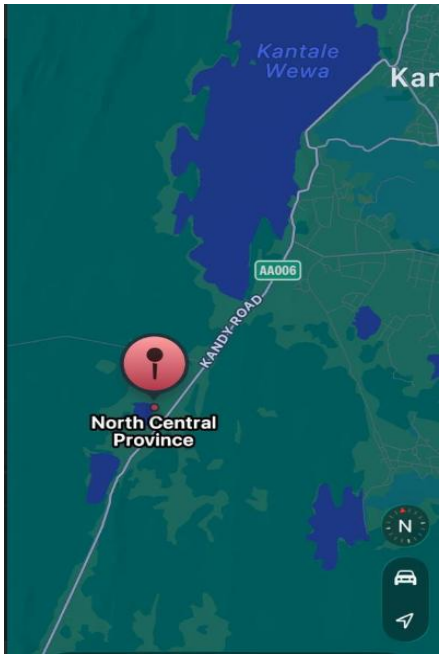


Figure 2: The location of the Excise Wewa Excise Wewa, positioned between Kalu Ulpotha Wewa and Kantalai Wewa, adjacent and parallel to the A-6 Highway.

[1] Kalu Ulpath Wewa Abhimani Farmer Organization and Ran Datha Farmer Organization of the Excise Wewa
[2] Off season cultivations

1.1. Ecological Significance:

Based on consultations with local farmers and field observations, the basic ecological profile of the project area is characterized by the following:

- The Anavilundawa Reserve Forest is observed outside the High Flood Level (HFL) of both tanks (Figures 3 and 4) and remains excluded from the project impact zone.



Figure 3: The upper catchment area of the Kalu Ulpatha Wewa is covered by the Anawilundava reserved forest[3]



Figure 4: The Anawilundawa Reserved forest can be observed beyond the catchment of the Excise Wewa[4].

[3] The Kalu Ulpatha wewa and its associated infrastructure are situated outside the statutory limits of the Reserve Forest.

[4]While this FR sits outside the project impact zone, a specific forest patch marked by FD boundary posts can be observed at the beginning of the tank bund, adjacent to the downstream right bank canal of the Excise Wewa.

- The command areas/paddy fields associated with both tanks are subject to frequent incursions by the **e**lephants (*Elephas maximus*).

Both tanks serve as vital hydration points and seasonal habitats for these megaherbivores. Other notable mammalian fauna identified within the impact zone include: Spotted Deer (*Axis axis*), Sambar Deer (*Rusa unicolor*), and Wild Boar (*Sus scrofa*), porcupine (*Hystrix indica)*.

- The ecosystems support a diverse range of bird species.

Significant populations of water birds (waders and waterfowl) utilize the tank habitats, while various terrestrial birds occupy the surrounding scrublands and catchment areas. A preliminary survey of the floral composition indicates an absence of invasive alien species. No populations of invasive terrestrial or aquatic plants were observed within or in the immediate periphery of either tank.

- No apex predators in the project impact zone

It is confirmed that apex predators and specific large mammals, such as the Sloth Bear (*Melursus ursinus*) and Sri Lankan Leopard (*Panthera pardus kotiya*)—the island's apex predator— have not been recorded within the project area. But local residents reported the presence of crocodiles in both tanks, describing them as "lengthy" specimens. Based on descriptions provided by the farmers, the species is identified as the **Mugger Crocodile** (*Crocodylus palustris*; known locally as **Hela Kimbula**). According to the farming community, these individuals frequently migrate between **Kantalai Wewa**, **Kalu Ulpotha Wewa**, and **Excise Wewa.**

Unlike most of the tanks visited, both of these tanks possess an interceptor zone (Kattakaduwa) located below the tank bund, which remains free of encroachments (Figures 5 and 6). This zone features a fringe of trees—including Kumbuk (*Terminalia arjuna*), Palu (*Manilkara hexandra*), Mee (*Madhuca longifolia*), Nuga (*Ficus benghalensis*), Kon (*Schleichera oleosa*), and Tamarind (*Tamarindus indica*)—which serves to mitigate evaporation and acts as a windbreak. Additionally, waterlogged areas were observed along both interceptor zones, contributing to enriched biodiversity within the ecosystem.



Figure 5: Kattakaduwa zone of Kalu Ulpotha Wewa



Figure 6: Kattakaduwa of Excise Wewa

Boundary posts of the Wildlife Conservation Department are visible downstream of **Excise Wewa (Figure 7)**, specifically at the start of the tank bund opposite the spillway area. Consequently, statutory clearance must be obtained from the Department of Forest Conservation. Although the forest area is not expected to be directly impacted by project activities, the official name and status of the protected area must be verified. Local farmers suggest the area may be part of the **Anavilundawa**; however, this must be formally confirmed with the Department.



Figure 7: Boundary demarcation of the Department of Wildlife Conservation is seen nearby the Excise Wewa.

However, as **depicted** in **Figure 12**, there is no forest cover remaining along the tank bund or within the specific areas where the **proposed interventions** will take place.

2. Proposed Rehabilitation Works

Table 1: Rehabilitation of Kalu Ulpath Wewa at Hingurakgoda ASC Division, Polonnaruwa District

Item No	Description of the works	Unit	Quantity
1	**Improvement of Tank Bund**		
1.1	Clearing and Grubbing Secondary Growth Jungle clearing by machinery	Acrs	5.43
1.2	Felling, removing, uprooting, and disposing of trees with a girth of 0.3-0.6m by machinery	nos	5.00
1.3	Demolishing small-sized anthills (1 m^3 - 2 m^3) in the tank bund, including removing queen ant & debris outside the site, and applying suitable pesticides (chemical) & filling the cavity with earth	nos	30.00
1.4	Demolishing large-sized anthills (2 m3 - 8 m3) in the tank bund, including removing queen ant & debris outside the site and applying suitable pesticides (chemical) & filling the cavity with earth	nos	5.00
1.5	Stripping top soil cut 0-1.5m lift 1.5m haul 15m by machinery	Cum	1137.00
1.6	Earth excavation & forming bund cut & 1ÏÍft up to 1.5 m & spread 30 m by machinery (B - hoc) including Catering & Compaction (For Benching).	Cum	302.00
1.7	Burrow earth from burrow areas, cut 0-10' lift 10'haul 3/4 mls by machinery	Cum	4,169.00
1.8	placing & comp. earth in dam incl. watering (wat. haul 1.5 mile by machinery	m^3	632.00
1.9	Furnishing & placing gravel wearing surface, Haul 5 miles, including loading by machinery	Cum	363.00
1.10	Slope preparation of the existing tank bund as directed	Sqm	2,000.00
1.11	Furnishing & placing gravel bedding & comp. gravel in dam, below the riprap incl. watering (ivat. haul 1.5 mile.). Haul 5 miles, including loading by machinery	Cum	150.00
1.12	Furnishing & placing 18" rip-rap Ham 5-mile incl. Loading by machinery	Cum	3,626. 00
2	**Construction of cushion walls for 0-F049 spill**		
2.1	Cleaning & Chipping the existing concrete wall	L/day	4.00
2.2	1 '2:4 (well graded upto3/4") ct.conc. cxcl. formwork lift 0-5' haul concrete max. 100', cement 158 mls, (150 mls Lorry & 8 mls T-T) aggregate 5mls & water 1.5 mls by machinery	Cum	64.00
3	**Construction of Main Canal & Field Canal in RB Sluice**		
3.1	Clearing and Grubbing Secondary Growth Jungle clearing by machinery	Acrs	1.02
3.2	Stripping top soil cut 0- 1.5m lift 1.5m haul 15m by machinery	Cum	254.00

3.3	Common excavation and spoil to waste or fill material. - Cut 0.3 ft. lift up to 3ft spread 100 ft by machinery	Cum	2,746.00
3.4	Burrow earth from burrow areas, cut 0-10' lift 10’ haul 1/2 mls Placing & comp. earth in canal incl. watering (wat. haul 1.5 mile.) by machinery	Cum	5,045.00
3.5	1:2:4 (well grafied upto3/4”) ct.conc. excl. formwork lift 0-5' haul concrete max. 100', cement 158 mis, (150 mls Lorry & 8 mls T-T) aggregate 5mls & water 1.5 mls by machinery	Cum	2214.00
4	**Construction Of Farm Turnout Structures for RB Canal**		
4.1	Earth excavation in canal/foundation and spoil to waste or dump cut 0.0m-1.0m lift up to 1.0m spread 30m by manually	Cum	4.00
4.2	Borrow earth from borrow areas, cut 0-10' lift 10' haul 1J4 mls Placing & comp. earth in around structures incl. watering (wot. haul 1.5 mile.) by machinery	CAT	36.00
4.3	1:2:4 (well graded upto3/4") ct.conc. excl. formwork lift 0-5' haul cocrete max. 100’, cement 158 mls, (150 mls Lorry & 8 mls T-T) aggregate 5m1s & water 1.5 mls by machinery	Cum	7.00
4.4	1:3:6 (well graded upto11/2") ect. cone excluding formwork lift 0-5' haul cocrete max. 100', cement 158 mls, (150 mls Lorry & 8 mls T-T), aggregate 5mls & water I.5 mls by machinery	Cum	10.00
5	**Rehabilitation of the Access Road of the tank bund**		
5.1	Stripping top soil cut 0-1.5m lift 1.5m haul 15 m by machinery	Cum	160.00
5.2	Burrow earth from borrows areas, cut 0-10’ lift 10' haul 3/4 mls by machinery	Cum	293.00
5.3	Placing & comp. earth in dam incl. watering (wat.haul 1.5 mile.) by machinery	Cum	293.00
5.4	Common excavation and spoil to waste or fill material. - Cut 0-3 ft. lifl up to 3 ft. spread 100 ft by machinery	Cum	74.00
6	**Improvement works for RB & LB Sluice**		
6.1	Demolishing and removing the existing passaral and removing debris away from the site	Item	Allow
6.2	1:2:4 (well graded upto3/4") ct.cone. excl. formwork lifts 0-5' haul concrete max. 100’, cement 158 mls, (150 mls Lorry & 8 mls T-T) aggregate 5mls & water 1.5 mls by machinery		
7	**Construction of a retaining wall for spill water dividing structure**		
7.1	Common excavation and spoil to waste or fill material. - Cut 0-3 ft. lift up to 3 ft. spread 100 ft by machinery	Cum	15.00
7.2	1:2:4 (well graded upto3/4") ct. conc. excl. formwork lifts 0-5' haul cocrete max. 100', cement 158 mls, (150 mls Lorry & 8 mls T-T) aggregate 5m1s & water 1.5 mls by machinery	Cum	8.00
7.3	Burrow earth from burrow areus, cut 0-10' lift 10' haul 1/4 mls Placing & comp. earth in around structures incl. watering (wat. haul I.5 mile.) by machinery	Cum	240.00

8	**Construction of Tractor Crossing**		
8.1	Earth excavation in canal/foundation and spoil to waste or dump cut 0.0m- 1.0m lift up to 1. 0 m spread 30m by manually	Cum	5.00
	1:3:6 (well graded upto11/2") ct.conc excluding formwork lift Q-5' haul concrete max. 100', cement 158 mls, (150 mls Lorry & 8 mls T-T), aggregate 5mls & water I.5 mls by machinery	Cum	1.00
	1:2:4 (well graded upto3/4") ct.cone. excl. formwork lifts 0-5' haul concrete max. 100', cement 158 mls, (150 mls Lorry é 8 mls T-T) aggregate 5mls & water 1.5 mls by machinery	Cum	11.00
9	**Miscellaneous**		
	Mobilization and demobilization of machinery	Item	Allow



Items 1.3 and 1.4 of **Table 1** refer to the demolition of "ant hills"; these should be corrected to **"termite hills."** However, it is suggested that these hills be relocated to another area as guided by the Environmental Management Plan (EMP).

Additionally, **Table 2** lists a considerable number of termite hills (**70**). While a count of this magnitude was not observed during the field visit, it is possible they are located underground.

Regarding the **Kalu Ulpotha Wewa**, the **(BoQ)** initially specified the removal of five trees. However, during the field visit, it was decided to preserve the previously identified **Tamarind** tree and the **Palue** (Ceylon Ironwood). Consequently, only **three trees**, as depicted in **Table 3**, shall be removed from the tank bund.

Figure 8: large size termite colonies have established alsong the tank bund of Kalu Ulpotha Wewa.

In **Table 2**, the **BoQ** for the **Excise Wewa** refers to **Item No. 1.3**: "Felling, removing, and uprooting of 20 trees (girth 0.3–0.6 m) and disposal using machinery."

However, field visits revealed that the **tank bund** is currently free of trees (Figure: 9). Since no tree removal is required for the bund rehabilitation works, **Item No. 1.3 should be omitted from the BoQ.**

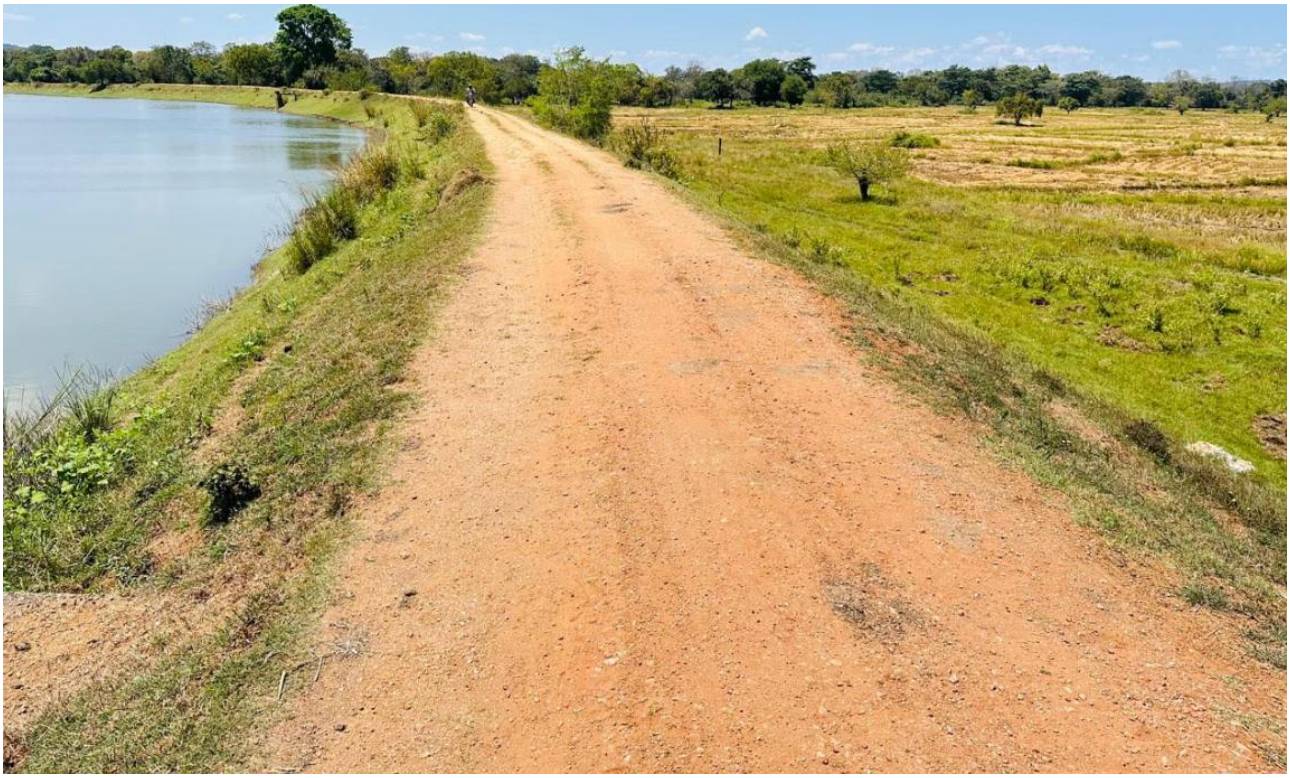


Figure 9: The bund of the Excise Wewa is clear and free of trees.

Table 2: Rehabilitation of Excise Wewa – Kithuluthuwa in Polonnaruwa District

No	Description of the works	Unit	Quantity
1	**Improvement of Tank Bund**		
1.1	Clearing and Grubbing Secondary Growth Jungle clearing by machinery	Acrs	9.00
1.2	Demolishing Small Size Anthills (1 m3 - 2 m3) in the tank bund, including removing queen ant & debris out	nos	70.00
1.3	Felling, removing, uprooting, and disposal of trees girth 0.3-0.6m by machinery	nos	20.00
1.4	Stripping top soil cut 0-1.5m lift 1.5m haul 15 m by machinery	m^3	1873.00
1.5	Earth excavation & forming bund cut & lift up to 1.5 in & spread 30 in by machinery (B-hoe), including Watering A Compaction (For Benching).	m^3	1133.00
1.6	Borrow earth from borrow areas, cut 0-10' lift 10' haul 1/2 mls Placing & comp. earth in canal incl. watering (wat. haul 1.5 mile.) by machinery	m^3	9324.00
1.7	Placing & comp. earth in dam incl. watering (wat. Haul) 5 miles by machinery	m^3	9324.00
1.8	Furnishing & placing gravel wearing sui-face Haul 5 miles including Loading by machinery	m^3	632.00
2	**Construction of LB Sluice HPT 1'0" Dia. at chainage 365.60m and the repairing of RB Sluice**		
2.1	Demolishing and removing the existing old sluice and removing debris away from the site	Item	Allow

2.2	Earth excavation or borrow and spoil to waste or fill material- Cut 10-15 ft lift up to 15ft spread 100 ft	m^3	147.00
2.3	Earth excavation in canal/foundation and spoil to waste or dump cut 0.0 m-1.0 m lift up to 1.0m spread 30m by manual	m^3	8.00
3	**Improvement of the Earth Channel line with Gravel Road**		
3.1	Clearing and Grubbing Secondary Growth Jungle clearing by machinery	Acres	1.00
3.2	Stripping top soil cut 0-1 .5m lift 1.5m haul 15m by machinery	m^2	1360.00
3.3	Common excavation and spoil to waste or fill material. Cut 0-3 ft. lift up to 3 ft. spread 100 ft by machinery	m^3	1443.00
3.4	Borrow earth from borrow areas, cut 0-10' lift 10' haul 1/2 mls Placing & comp. earth in canal incl. watering (wat. haul 1.5 mile.) by machinery	m^3	4162.00
3.5	Placing & comp. earth in dam incl. watering (wat.haul 1 .5 mile.) by machinery	m^3	4162.00
3.6	Furnishing & placing gravel wearing Surface Haul 5 miles, including Loading by machinery	m^3	490.00
4	**Construction of Farm turn-out structure**		
4.1	Earth excavation in canal/foundation and spoil to waste or dump cut 0.0m-1.0m lift up to 1 .0m spread 30m by manually	m^3	5.00
4.2	Burrow earth from borrow areas, cut 0-10' lift 10' haul 1/4 mls Placing & coup. earth in around structures incl. watering (wat. haul 1.5 mile.) by machinery	m^3	53.00
4.3	1 :2:4 (well graded upto3/4") ct.cone. excl. formwork lift 0-5' haul concrete max. 100', cement 158 mls, (150 mls Lorry & 8 mls T-T) aggregate 5m1s & water 1.5 mls by machinery	m^3	10.00
4.5	1 :3:6 (well graded upto11/2") ct.conc excluding formwork lift 0-5' haul cocrete max. 100' , cement 1 58 mls. (150 mls Lorry & 8 mls T-T), aggregate 5mls & water 1 .5 mls by machinery	m^3	4.00
5	**Construction of Concrete Channel lining. LB**		
5.1	Earth excavation in canal/foundation and spoil to waste or dump cut 0.0m-1.0m lift up to 1 .0m spread 30m by manually	m^3	22.00
5.2	1:2:4 (well graded upto3/4“) ct.conc. excl. formwork lift 0-5' haul cocrete max. 100',cement 158 m ls, (150 mls Lorry & 8 mls T-T) aggregate 5mls & water 1.5 mls by machinery	m^2	40.00
6	**Construction of tractor Crossing**		
6.1	Earth excavation in the canal/foundation and spoil to waste or dump cut 0.0m- 1.0m lift up to 1.0m spread 30m by manually	m^3	2.00
6.2	1 :3:6 (well graded upto I 1/2")ct.conc excluding formwork lift 0-5' haul cocrete max. 100' , cement 158 mls, (150 mls Lorry & 8 mls T-T), aggregate 5mls & water 1.5 mls by machinery	m^3	1.00
6.3	1:2:4 (well gi aded upto3/4") ct.conc. excl. formwork lift 0-5' haul cocrete max. 100’, cement 158 mls, (150 mls Lorry & 8 mls T-T) aggregate 5mls & water 1.5 mls by machinery	m^3	31.00
7	**Construction of HP Culvert**		
7.1	Common excavation and spoil to waste or fill material. - Cut 0-3 ft. lift up to 3 ft. spread 100 ft. by machineries	m^3	4.00

7.2	1:3:6 (well graded up to I 1/2" ct.conc.excl. formwork as in lift 0-5' haul cocrete max. 100', cement 158 mls, (150 mls Lorry & 8 mls T-T), aggregate 5mls & water 1 .5 mls by machinery	m^3	6.00
8	**Spill repairing and clearing**		
8.1	Clearing and Grubbing Secondary Growth bungle clearing by machinery	Acres	2.50
8.2	Earth excavation in canal/foundation and spoil to waste of dump cut 0.0m-1.0 m lift up to 1.0m spread 30m by manual	m^3	17.00
8.3	1:2:4 (well graded upto3/4") ct.conc. excl. formwork lift 0-5' haul concrete max. 100', cement 158 mls, (150 mls Lorry & 8 mls T-T) aggregate 5mls & water 1.5 mls by machinery	m^3	20.0



Figure 10: The sluice of Kalu Ulpotha wewa proposed to be rehabilitated with a cushion wall and retaining wall for spill water dividing structure.



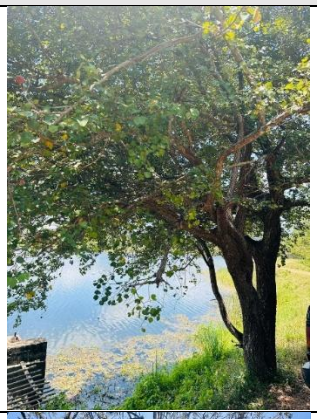
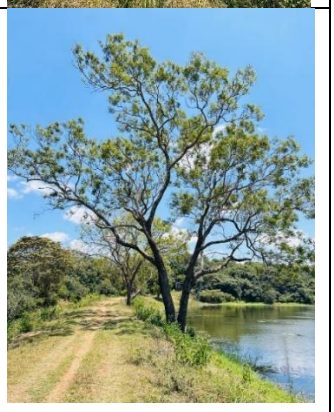
Figure 11: Spill gates were established at the Kalu Ulpotha wewa.

Figure 10 and 11 shows the spill and spill gates of the Kaluulpotha wewa, no renovation works are proposed at the spill gates but the spill will be renovated as illustrated in Table 1.



Figure 12: RB slice of Excise Wewa proposed to be rehabilitated.

Table 3: Tree removal list – Kalu Ulpath Wewa

No	Scientific Name	Diameter @ the DBH - cm	Coordinates	Photo	Justification
1	*Bauhinia racemosa* (Maila)	78	$8^0$17’30’’N $80^0$55’51’’E		These three trees remain along the upper stream of the tank bund. For the bund rehabilitation works, it need to add new soil to the slope and press it down firmly with rollers. If the tree stays, the machines cannot pack the soil evenly around the trunk, leaving "soft spots" that weaken the bank. Large construction vehicles and rollers need a clear, flat path to work safely. The tree is in the way and would block these machines from doing the job. If these tress leave the trees and roots under the new soil, the roots will eventually rot. This creates hollow tunnels inside the bank, which can cause water to leak through and eventually lead to the bank collapsing.
2	*Azadirachta indica*	27	$8^0$17’29’’N $80^0$55’52’’E		
3	*Azadirachta indica*	23 & 32 (two branches)	$8^0$17’25’’N $80^0$56’1’’E		

4. Impact Matrix Code

Table 4: Impact Metrix Code

Risk Level	Nature of Assessment/Impact-Based Criteria	Mitigation Based Criteria
High Risk	The subproject will be classified as 'High risk' if: The sub project is expected to cause significant, severe, long-lasting, or permanent damage to the natural, physical, or social environment, cannot be mitigated or; ○ Sub-projects that involve significant conversion or degradation of critical natural habitats such as sensitive ecosystems (e.g., wetlands, primary forests, protected areas). ○ The effects extend beyond the project site, potentially impacting entire regions or even neighboring provinces. ○ The risks of the sub project are novel, complex, or the project involves specialized or hazardous processes that are difficult to manage. ○ Sub projects involving large-scale use of hazardous materials, significant air emissions, or large volumes of untreated industrial waste. ○ Sub projects that significantly alter major hydrological systems, such as large dams or barrages, which can affect river flow, aquatic biodiversity, and downstream communities. ○ Sub projects requiring the physical displacement or economic displacement (loss of land, assets, or access to resources) of a large number of people. ○ Sub projects impact on Indigenous Peoples/Vulnerable Groups ○ Sub projects that negatively affect the land, natural resources, culture, or livelihoods of Indigenous Peoples or other significantly vulnerable populations, often requiring Free, Prior, and Informed Consent (FPIC). ○ Major construction activities or infrastructure that poses severe risks to the health, safety, and security of surrounding communities (e.g., large-scale labor influx, major traffic hazards, or structural risks). ○ Destruction or significant damage to nationally or internationally recognized physical cultural resources or heritage sites.	Mitigation necessitates meticulous planning and the implementation of high-tech, costly design solutions. Even with such measures, residual effects are likely to persist.
Substantial Risk	The Subproject will be classified as a substantial risk intervention if it will directly lead to the following; ○ Activities that could lead to invasion or spread of weeds and feral animals or the use of toxic chemicals, intensive use of pesticides.	Mitigation is feasible and effective, requiring

	○ Activities that could dangerously lead to the exposure of sensitive/critical/vulnerable habitats. ○ Construction of large new infrastructure within or directly adjacent (in buffer zones) to protected areas. ○ Illegal Activities as defined specifically under the Forest Ordinance and Fauna and Flora Protection Ordinance. ○ Subprojects, those involve collection of seeds/farming materials from the wild. ○ Sub-projects that may impose changes in land use that restrict access to resources in legally designated parks or protected areas or other common property resources on which local people may depend for livelihood purposes. In addition, as per the screening the subproject will have a majority of large-scale E&S impacts that will cause irreversible damage to the environment and communities.	only moderate design-based and/or operational planning. Residual effects are expected to be nil, minor, or temporary in nature.
Moderate Risk	The subproject will be classified as 'Moderate risk' if: ○ The subproject will have a majority of reversible, small-medium scale E&S impacts, specifically limited to the civil works phase of the project that can be managed by site specific mitigation measures. ○ Require minor land acquisition or restrictions on land use, as a result of which there will be no significant impact on incomes or livelihoods. ○ Subprojects requiring adoption of Abbreviated Resettlement Action Plan (ARAP), Environmental and Social Management Plans (ESMPs) and or E&S Assessment and require further screening in line with the detailed technical designs of the respective subproject.	Mitigation is straightforward and low-cost, and it is expected to fully address the impact. No residual impacts shall remain.
Low Risk	A subproject will be classified as 'Low risk,' if: ○ The Subproject has low-negligible E&S impacts that can be managed via mitigatory codes of practice that will be defined as part of the contractual agreement/memorandums of understanding with project implementing contractors or operators. ○ The Subproject does not require any land acquisition or lead to any impact on incomes or livelihoods. ○ The Sub-project does not require formal E&S assessment, nor preparation of ESMPs and do not have identifiable negative E&S impacts.	No mitigation required or minimal preventive measures sufficient within O & M.

5. Environmental Screening

Table 5: Environmental Screening for the proposed rehabilitation works at the Kalu Ulpath Wewa and Excise Wewa

No	Screening Questions	Yes/No	Scale of Impact	Remarks
1	Will the proposed project involve the **construction of new physical infrastructure or the rehabilitation of existing infrastructure**? Or; Will the project involve any of the following? (Select all that apply) **1.1.** Construction of new physical infrastructure (e.g., buildings, roads, anicuts, canals, sluice gates, pipelines *etc.*). **1.2.** Rehabilitation, expansion, or upgrade of existing physical infrastructure. **1.3.** Will the project activities involve changes to the original design levels of the headworks (Raise the height of tank bund? And/or raise the height or length of existing spill?) that could lead to the inundation of new areas within the catchment?	**1.1. Yes** **1.2. Yes** **1.3. No** **1.4. No**	**Low Risk**	**Rehabilitation of the headworks** and **downstream developments** are proposed for both tanks. The specific scope of work is outlined below: **1.1. New Works** The following new structures and improvements are proposed for both tanks: • Canal Lining • Farm Turnouts • Tractor Crossings • Hume Pipe Culverts **1.2. Canal Rehabilitation and Road Improvements** • General rehabilitation of canals. • Improvements to the existing farm access roads. **1.3. Tank Bed Dredging** • **Dredging of the tank beds is not proposed.**

No	Screening Questions	Yes/No	Scale of Impact	Remarks
	1.4. Dredging of the tank bed and the subsequent disposal of dredged materials? **1.5.** If yes, will the dredged material be disposed of on-site or off-site?? **1.6.** Solid waste management:			
2	Will any of the planned improvements necessitate an artificial lowering of the reservoir's water level? * If the water level will be artificially lowered, please specify the anticipated duration and magnitude of the drawdown.	No	--	Based on discussions held with the Department of Agra Development (DAD) and the Farmer Organizations (FOs there is no intention to lower the tank water levels for t proposed rehabilitation works. Construction activities s only be carried out following the completion of the cultivation seasons.
3	If the water level will be artificially drawn down, please assess the potential impacts on: **16.1. Surface Water:** Will the draw down alter water flows in nearby streams, rivers, or canals, particularly during the dry season? **16.2. Groundwater:** Will the draw down affect the groundwater table or flow in local wells, especially during the dry season?	**No**	--	

No	Screening Questions	Yes/No	Scale of Impact	Remarks
	16.3. Ecology: Is there a risk that this activity will affect the ecology of the tank bed or other important wetlands around and canal systems that depend on it? **16.4**. If a risk is identified, please describe the specific potential impacts on the ecosystem (e.g., impact on aquatic life, changes to vegetation, effects on migratory birds and other fauna).			
4	Will the project cause localized flooding and/or poor drainage during construction?	**No**	--	No such impact is expected.
5	Will the construction and operation of the Project involve actions which will cause physical changes in the locality (topography, land use, changes in water bodies, *etc*.)	**No**	**--**	No such an impact is possible.
6	Will construction of the project cause soil erosion within the site due to steep grade or soil content?	**No**	**--**	The proposed **tank bund renovation** and **canal rehabilitation** works in both tanks involve significant earthworks. However, the risk of significant soil erosion is considered minimal due to the following factors:

No	Screening Questions	Yes/No	Scale of Impact	Remarks
				• The construction design does not require steep embankment cuts, ensuring better structural stability of the slopes. • The prevailing soil profile in the Polonnaruwa region is not predominantly sandy; instead, it consists of cohesive properties that are less susceptible to rapid erosion. • T construction schedule is aligned with the **dry season**. By avoiding periods of heavy monsoon rainfall, the potential for sediment runoff and water-induced erosion is significantly reduced.
7	Will the Project release pollutants or any hazardous, toxic or noxious substances to **7.1.** Air? **7.2**. Nearby surface or groundwater sources? **20.3**. Soil?	**7.1. Yes** **7.2. No** **7.3. No**	Low Risk	The project will generate temporary, localized emissions from the combustion of fossil fuels by construction equipment and project-related vehicles. However, these emissions will not be on a significant scale. While **dust emissions** may occur due to soil disturbance during dry periods, the overall impact is **considered negligible** and insignificant given the limited duration and scope of construction. These activities will not result in the long-term release of hazardous, toxic, or noxious substances. **20.2.** There are no groundwater sources along the project boundary; therefore, no such impact is

No	Screening Questions	Yes/No	Scale of Impact	Remarks
				expected, as interventions are limited to the **surface layers** of the soil.
8	Will the proposed activities cause **8.1**. Noise? **8.2**. Vibration? **8.3**. dust emission? **8.4.** Release of light? **8.5**. Heat energy? **8.6**. Electromagnetic radiation?	**8.1.** Yes **8.2**. Yes **8.3**. Yes **8.4.** No **8.5**. No **8.6**. No	Low Risk	Although the tank bund renovation works will generate noise and vibration, the impact on the local community will be negligible. There is no residential housing unit located within a 100-meter radius of either tank site. Consequently, no significant noise-related disturbances to the public are anticipated during the construction phase. **8.3**. Dust emission will occur with the dry weather and wind action prevails. But in the sense of the community, it is not a concern. However, the gravel and sand access roads may be a source of dust during construction due to vehicle movements, and dust suppression measures should be implemented along them concerning the wildlife. **8.4**. No nighttime works shall be involved under this contract 8.5 & 8.6. No
9	Does the proposed location fall within or border any gazetted protected areas (PAs) designated by the Forest	**Yes**	**Low risk**	The **Anawilundawa Sanctuary** (Reserved Forest) is located beyond the upper catchment of both tanks; however, it remains outside the immediate **project**

No	Screening Questions	Yes/No	Scale of Impact	Remarks
	Department (FD) or the Department of Wildlife Conservation (DWC), Department of Archaeology or any other?			**impact zone**. Consequently, the proposed works are not expected to interfere with the protected area. How ever, a forest patch remains at the down stream if Excise Wewa, at the beginning of the tank bund.
10	Is the proposed project location known to contain any species protected under the Fauna and Flora Protection Ordinance, or any other sensitive species of fauna or flora? If yes, please provide details on the species and why they are considered sensitive (e.g., critical for breeding, migration routes, *etc.).*"	**No**	--	
11	Will the proposed project activities cause negative effects on wildlife habitats, populations, corridors or movement?	**No**	--	The project area is identified as a **Human-Elephant Conflict (HEC) zone**. Elephants are encroaching paddy lands frequently during the farming seasons. Additionally, there have been sightings of other common wildlife species within the both tanks' vicinity.
12	Will the proposed project activities cause negative effects on impact on fish migration and navigation?	**No**	--	Such an impact is not expected.

No	Screening Questions	Yes/No	Scale of Impact	Remarks
13	Will the proposed project activities will cause increased risk of wildlife poaching and forest fires?	**Yes**	**Low Risk**	Wildlife may approach the tank for water, particularly during the evening hours, which presents a potential risk for poaching. This risk should be mitigated by establishing appropriate protective measures and monitoring programs.
14	Will tree felling be required for the proposed project activities? If yes, please provide an estimate of the number of trees to be felled and their species.	**Yes**	**Low Risk**	Kalu Ulpotha wewa – 3 trees Excise wewa - no
15	Are there any areas or features of high landscape or scenic value on or around the location which could be affected by construction activity?	**No**		The project site is situated on relatively **flat terrain**, primarily characterized by **human habitation** and **paddy cultivation**. no significant impacts on the natural environment or scenic value of the surrounding environment are anticipated or considered likely as a result of the proposed works.
16	Any invasive fauna or flora presents in the tank or surrounding area?	**No**		There are no aquatic invasive plants found in the tanks or along the canal segment or around the paddy field. No terrestrial invasive plants were also observed along the tank bunds and canal segments.

6. Screening Decision and Recommendation

The proposed rehabilitation works for **Kalu Ulpatha Wewa** and **Excise Wewa** are located within well-established agricultural command areas. The screening process confirms that the project scope is primarily limited to headworks, including bund renovation and specific downstream improvements, as detailed in **Table 1** and **Table 2**.

Based on the Env. Screening done, the findings are summarized below:

Social & Occupational Health: The project involves standard construction-related health and safety risks, which will be managed through the mandatory use of **Personal Protective Equipment (PPE)** and safety briefings. Specific protocols will be implemented to mitigate risks associated with wildlife, particularly to prevent **snake bites** and **elephant encounters**.

Physical Environment: Minor risks of soil erosion and dust emissions are anticipated during the rehabilitation of tank bunds, canal linings, and road gravelling. These impacts are localized and will be mitigated through standard engineering practices, such as regular **water sprinkling** and **systematic compaction**.

Biological Context: Wildlife presence in the project area is somewhat considerable, with evidence of **human-elephant conflict**. Additionally, **crocodiles** inhabit the tanks and may approach the bunds during construction.

Although the proposed works at **Excise Wewa** are not located within or directly adjacent to a designated forest, **forest boundary demarcation posts** are visible in the immediate vicinity. Consequently, **statutory clearance** from the **Forest Department** must be obtained prior to the commencement of work.

To ensure bund safety, three trees will be removed from the Kalu Ulpotha Wewa bund (as justified by engineering requirements). No invasive terrestrial or aquatic species have been recorded in the project area.

Agricultural Continuity: To minimize impact on the farming community, all rehabilitation work shall be scheduled during the **dry season** (post-Yala season) or the **fallow period** between cultivation cycles. This ensures there is no disruption to the irrigation water delivery schedule.

Conclusion

In conclusion, the activities proposed by the **DAD, Polonnaruwa District**, are not expected to cause significant or irreversible environmental damage. The project is recommended for implementation, provided that the standard mitigation measures outlined in the **Environmental Management Plan (EMP)** are strictly followed.

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7. Environmental Management Plan

*Table 6: Envrionmental Management Plan for the Kalu Ulpath Wewa and Exc*ise Wewa – Hingurakgoda ASC Division, Polonnaruwa District

No	Potential Environmental Impacts	Key project activities causing the impacts	Mitigation Measures proposed and action to be implemented by the Contractor	Mitigation Cost	Implementation	Compliance Monitoring
1	Occupational Health and Safety: Risks to workers, particularly the potential for snake attacks during material transport, site access, and construction activities. Dehydration for workers.	**During the site access** **Material transport** **During the work**	1.1. Environment, Occupational Health and Safety Officer (EOHS Officer) shall be employed by the contractor covering the entire work program under this contract. He or she will be responsible for the daily implementation of EMP and SMP[5] (ESMP[6]). 1.2. Implement measures to prevent heat stroke and dehydration during the hot sunny days. Mandatory provision of safe, clean drinking water accessible at all times. It may schedule heavy work for cooler parts of the day (e.g., early morning). Clean food shall be provided for the workers at all times. 1.3. A **temporary workers' shelter** shall be constructed near the site to provide a rest area for the workers. 1.4. Possible risks of snake bites, insect attacks. - safety shoes and/or boots shall be provided for all workers, and their use is mandatory on the worksite	Engineering cost	Contractor	DAD PMU

[5] Social Management Plan
[6] Environment and Social Management Plan

			to protect against snake bites, sharp objects, and other ground hazards. No one shall remain on the site after working hours. 1.5. First Aid and Emergency Response: In the event of an incident (such as a snake bite, insect attack, or any other), a designated sentinel person trained in first aid and emergency response should be kept ready on site. Immediate Hospitalization Protocol: readily available facilities must be established on site for immediate hospitalization, ensuring rapid access to the necessary medical facilities. 1.6. Cooking shall not be allowed on the sites. However, if it is essential to make tea/coffee on site, the following procedure shall be followed. Select a location on bare soil, rock, or gravel, away from overhanging branches, dry grass, or fallen leaves. Create a fire buffer zone by clearing all flammable material (leaves, dry grass, twigs, *etc*.) down to the soil in a circle at least 10 feet (3 meters) in diameter around the fire site. Lay a ground cloth or large piece of foil/rock to protect the ground, then spread a layer of mineral soil, sand, or gravel at least 3-5 inches thick on top. Build the fire on this mound. The fire should be kept small to boil the required amount of water. No kerosene, diesel, or petrol is used to ignite the fire. Use only dead and downed wood that can be easily broken by hand. Never cut wood from standing trees (dead or alive). Gather wood from a wide area to minimize impact or bring it from outside. Keep extra			

			firewood and flammable items well away from the fire buffer zone. Keep a bucket of water (or a large pot of water) and a shovel nearby at all times to quickly extinguish any embers or spreading flames. Never leave the fire unattended, even for a moment. A responsible person must be responsible for supervising the fire until it is completely out. Finally, allow the fire to burn down to fine white ash and small embers. Pour lots of water onto the fire, ensuring all embers, coals, and wood fragments are thoroughly soaked. Do NOT use dirt to put out the fire, as it can smother the flames but insulate hot coals, allowing them to reignite later. Use a stick or shovel to stir the ashes and coals to ensure the water reaches the centre and bottom layers. Drown and stir repeatedly until the mixture is cool to the touch. (The ashes and pit must be cool to the touch before leave the site in the evening. Once completely cool, scatter the ashes and any unburned wood widely over the prepared area to further minimize impact. **1.7**. Ensure all equipment and vehicles are inspected, well-maintained, and operated only by certified and licensed operators. **1.8.** To prevent accidental falls and vehicle-induced collapses, all sites must be clearly demarcated. **Physical Barriers:** Use rigid barricades (e.g., scaffolding pipes or heavy-duty plastic fencing) at a minimum height of **1.1 meters** around the perimeter of the cut, as appropriate.			

			Warning Signage: Post high-visibility "Deep Excavation" and "Authorized Personnel Only" signs at 10-meter intervals, as appropriate/if required. **Night Visibility:** All delineation zones must be equipped with solar-powered amber flashing lights to ensure visibility during low-light conditions or heavy rain. **Surcharge Loading:** No heavy machinery, excavated spoil, or construction materials shall be placed within **1.5 meters** (or a distance equal to the depth of the cut) from the edge of the excavation. **1.9. Elephant Sentinel:** A dedicated **elephant sentinel** (or lookout person) with local knowledge of elephant behavior and movement patterns must be hired. This person's sole responsibility is to monitor for approaching elephants and alert the workers. **Early Warning System:** The sentinel should be equipped with a communication device (e.g., a horn, whistle, or mobile phone) to provide a clear and immediate warning to all on-site personnel. **Emergency Supplies:** A supply of **firecrackers** should be obtained from the DWC regional office under the recommendation of the Department of Agricultural Development (DAD). These are to be used only in **emergency situations** to deter elephants and should be deployed by trained personnel. **Temporary Electric Fencing:** If recommended by the DWC, a temporary electric fence shall be erected around the immediate work area. The fence must be			

			clearly marked and powered by a low-voltage unit designed for wildlife deterrence. **No Harm Principle:** Under no circumstances shall any elephant be harmed, injured, or killed as a result of project activities. All personnel must be briefed on this non-negotiable principle **1.10. Traffic Management and Public Safety** **Site Access and Haulage** Construction materials will be transported via the **A-6 (Ambepussa–Trincomalee Road)**. As this is a high-speed transit corridor, the following protocols must be strictly enforced: • **Driver Briefings:** All drivers must be formally briefed on defensive driving techniques, strict adherence to national speed limits, and local traffic regulations. • **Scheduling:** To minimize congestion and risk, material haulage should be scheduled during **off-peak hours** (low traffic periods) whenever possible. **2. Safety on Agricultural Roads (Tank Bunds)** Where tank bunds are utilized as agricultural access roads, the following safety measures are mandatory to protect local commuters and infrastructure: • **Signage and Awareness:** Clear, high-visibility warning signs (e.g., **"Construction in Progress," "Caution: Deep Excavation"**) must be installed at least **50 meters** ahead of the work zone from both approach directions. • **Night Safety and Perimeter Control:** Any excavations remaining open overnight must			

			be securely cordoned off using **high-visibility reflective tape**, **orange safety cones**, or **barricades** equipped with amber flashing lights to ensure visibility in low-light conditions. **1.11. Construction Material Management:** ▪ No stockpiling of excavated silt or construction materials on the road surface. Ensure the road remains clear for the passage of vehicles at all times. ▪ Identify a suitable area for temporary material storage near the tank where sufficient space is available, subject to the authority and approval of the DAD. **1.12. Dust and Air Quality Control** **Water Sprinkling:** The contractor must implement regular water sprinkling on the dry canal banks and the road shoulder during active work hours to suppress dust, which can affect the health of villagers and visibility for riders. **1.13. Vehicle Maintenance:** Ensure that all machinery (backhoes, tractors) is well-maintained to prevent excessive smoke emissions or oil leaks onto the public roadway. **1.14. Work Scheduling:** Coordinate with the local **Farmer Organization (FO)** to avoid construction during peak cultivation or harvesting times when vehicle movement (tractors/trailers) might increase temporarily.			

2	Biological Invasion: The risk of spreading invasive terrestrial and aquatic plant species.	Rehabilitation of pond dikes, canal dikes, cleaning/rehabilitation of canals, and Material transportation.	**No terrestrial or aquatic invasive species were observed; therefore, no chance shall be kept to introduce invasives under this contract.** 2.1. None of the chance shall be kept to inoculate aquatic invasives or any other species to the canal segments. 2.2. All tools and machinery (machetes, shovels, vehicle tires, and boots) shall be cleaned before leaving the site. 2.3. Borrow material for farm road rehabilitation works to be brought from properly identified borrow pits and quarry sites; the sites should be inspected in order to ensure that no other form of invasive plant species is being carried with the borrow material. As much as possible, locate burrow sites within a radius of 10Km to the site.	-----	Contractor	DAD PMU
3.	Accumulation and disposal of solid waste due to proposed activities.	Removal of vegetation. Solid waste from construction staff.	3.1. Disposal should be coordinated with the Department of Agrarian Development and the local Farmer Organization (Govi Sanvidhana). 3.2. Always consider surrounding paddy fields. Ad-hoc dumping in one area can cause rapid pollution in the next tank in the cascade. 3.3. No labour quarters shall be allowed on site under this contract on or around the worksite due to elephant encounters. A suitable location shall be find by the contractor. 3.4. Reusable waste, shall be either resold or reused. 3.5. Any hazardous waste must be handled with special care and according to instructions from the local authority.	------	Contractor	DAD

			3.6. The contractor shall document all types and quantities of waste generated, including their removal from the site and their disposal locations, under the supervision of the TO - DAD officer. 3.7. **Food waste must not be discarded** into the surrounding environment under any circumstances. All organic and food-related waste shall be collected in containers and **removed from the site daily**. Strict adherence to this protocol is mandatory to prevent the **attraction of elephants** and other wildlife to the work site, thereby minimizing the risk of human-wildlife conflict and ensuring the safety of personnel. 3.8. There should be no burning of wastes on site. 3.9. Workforce-related solid waste shall be removed from the site on a daily basis. 3.10. Any cleared vegetation shall be removed from the construction sites under the supervision of the DAD before the commencement of proposed interventions in the bund. No debris shall be burned on the site. **Cleared vegetation along the canal may be hand over to the community, for fire woods.** 3.11. All excess material should be moved immediately to a pre-identified disposal site away from the road drainage system to prevent clogging during rainy spells.			
4	Air and Noise Pollution: Impacts related to dust, noise, and vibration.	**Operation of equipment and machinery.**	6.1. Working time for noise/vibration generation activities should be restricted and carried out only from 7.00 am to 5.00 pm. 6.2. All equipment and machinery should be operated of noise not to exceed 75 dB (during	----	Contractor	DAD

		Material storage and transport.	construction) as practically possible. Regular maintenance of all construction vehicles and machinery to meet noise control regulations stipulated by the CEA in 1996 (Gazette Extraordinary, No 924/12). Due to urgent or unavoidable reasons, if the construction activities happen during the nighttime, it is necessary to maintain the noise level below 50 dB.			
5	**Extraction of natural resources**	**Material (soil/earth/gravel) Sourcing**	5.1. The contractor shall source materials from pits/quarries that hold a valid Industrial Mining License (IML) or Artisanal Mining License (AML). Every load of sand, gravel, or soil transported to the site must be accompanied by a GSMB-issued Transport Permit. (Unauthorized transport is a legal offense). If purchasing from a third party, they must hold a Mineral Trading License. 5.2. Sourcing or purchasing of any material that is sourced from any protected areas and/or designated natural areas, is strictly prohibited. Materials cannot be extracted from within the statutory reservations of rivers, streams, or the tanks themselves (usually defined as 60m from a river bank and specific limits from the high-flood level of a tank) unless specifically approved for desilting. 5.3. The contractor is required to ensure that sand, aggregates (if required for this contracts), and other quarry material is sourced from licensed sources or the instructions given by the pond ownership (The Department of Agrarian Services). The contractor is required to maintain the necessary licenses and environmental clearances for all burrow and quarry	-----	Contractor	PID PMU

			material they are sourcing – including soil, fine aggregate, and coarse aggregate. 5.4. If the contractor uses a non-commercial burrow/quarry site or tank bed, the site should be remediated accordingly once material sourcing has been completed. Prior approval shall be taken from the Engineer – DAD. For new borrow pits, under recommendation and approval of the DAD, a **Restoration Plan** must be submitted to the PMU (or else should inform to the PMU for restoration plan). This includes plans for backfilling, slope stabilization, and replanting to prevent the pits from becoming breeding grounds for mosquitoes or safety hazards. 5.5. When there is a requirement, the contractor must submit in writing all relevant numbers and details of prerequisite licenses and their current status to the DAD and/or the PMU. 5.6. To prevent accidents, borrow pits must be finished with slanted edges. This will reduce the danger to both humans and animals.			
6	**Exposing and damaging physical and cultural resources**	**Site preparatory work**	Upon discovery of physical cultural materials of Archaeological importance during construction work, the following shall be carried out; 6.1. Immediately stop the performing activity. (With the approval of the resident engineer, delineate the discovered site area. 6.2. Secure the site to prevent any damage or loss of removable objects. In case of removable antiquities or sensitive remains, a night guard should be present until the responsible authority takes over.	Engineering Cost	Contractor	PID PMU

			6.3. Through the responsible officer of DAD, notify the responsible authorities, the Department of Archaeology, and local authorities within as soon as possible. 6.4. Submit a brief chance find report under the supervision of the DAD officer, within a specified time period, with date and time of discovery, location of discovery, description of finding, estimated weight and dimension of PCR, and temporary protection implemented. 6.5. Responsible authorities would be in charge of protecting and preserving the site before deciding on the proper procedures to be followed. 6.6. An evaluation of the finding will be performed by the Department of Archaeology who may decide to either remove the Physical Cultural Resources (PCR) deemed to be of significance, further excavate within a specified distance of the discovery point and conserve on-site, and/or extend/reduce the areas demarcated by the contractor, etc. This should ideally take place within about 7 days. 6.7. Construction work could resume only when permission is given by the Department of Archaeology after the decision concerning the safeguard of the heritage is fully executed.			
7	**Soil erosion, sedimentation of paddy fields.**	**Construction work including, clearing**	7.1. Installing and maintaining erosion and sediment control measures, such as silt traps, to avoid sediment runoff into the tank and nearby lands and paddy fields, shall be done.	Engineering Cost	Contractor	PID

		surface vegetation **Removal of top soil along the canal segments and farm road.**	7.2. For any activity related to the construction, the excessive clearing of ground vegetation, or the removal of trees shall not be done. 7.3. Avoid stockpiling disposed material such as removed earth from canal rehabilitation works. Those shall be reused or disposed of appropriately as guided by the TO-DAD. 7.4. All exposed soil areas shall be stabilized and re-vegetated as soon as possible on completion of works to prevent potential future erosion.			
8	**Compensation replanting**[7]	**Removal of three trees along the** tank bund of Kalu Ulpotha Wewa	**8.1. Compensatory replanting** shall maintain a **1:5 ratio** for every tree removed. **8.2. Species selection** is subject to the approval of the **DAD**. **8.3.** The **DAD** will facilitate the selection of replanting sites within **DAD-managed lands**. **8.4.** Minimum sapling height shall be **2 feet**. **8.5.** The contractor shall initiate planting at the start of the contract and manage maintenance (watering/monitoring) until project completion, after which the **Farmer Organization** will assume care.	Construction cost.	Contractor FO[8] DAD	PMU
9	**Exposing and damaging physical and cultural resources**	**Site preparatory work**	Upon discovery of physical cultural materials of Archaeological importance during construction work, the following shall be carried out; 9.1. Immediately stop the performing activity. (With the approval of the resident engineer, delineate the discovered site area.	---	Contractor	DAD PMU

[7] If the **Department of Agriculture Development (DAD) Engineer** determines that additional plant removal is required during the project implementation period, a **replanting ratio of 1:5** shall be strictly maintained. All replanting activities, including subsequent maintenance and monitoring, must be conducted in accordance with the protocols specified in the **EMP**.

[8] Farmer organization.

			9.2. Secure the site to prevent any damage or loss of removable objects. In case of removable antiquities or sensitive remains, a night guard should be present until the responsible authority takes over. 9.3. Through the responsible officer of DAD, notify the responsible authorities, the Department of Archaeology, and local authorities within as soon as possible. 9.4. Submit a brief chance find report under the supervision of the DAD officer, within a specified time period, with date and time of discovery, location of discovery, description of finding, estimated weight and dimension of PCR, and temporary protection implemented. 9.5. Responsible authorities would be in charge of protecting and preserving the site before deciding on the proper procedures to be followed. 9.6. An evaluation of the finding will be performed by the Department of Archaeology who may decide to either remove the Physical Cultural Resources (PCR) deemed to be of significance, further excavate within a specified distance of the discovery point and conserve on-site, and/or extend/reduce the areas demarcated by the contractor, etc. This should ideally take place within about 7 days. 9.7. Construction work could resume only when permission is given by the Department of Archaeology after the decision concerning the safeguard of the heritage is fully executed.			

10.	Water Quality Degradation: Tank water pollution stemming from construction materials and runoff.	**From the machinery, vehicles, and stores. Cement/concrete works.**	10.1. Fuel or lubricants shall not be stored anywhere on the site. 10.2. Store all oil and lubricant containers (including drums, tanks, and static plant equipment like generators) in a larger container. 10.3. Regularly inspect equipment, hoses, and storage containers for leaks, drips, or signs of wear. 10.4. Designate and use a safe area for vehicle and equipment fueling and maintenance that is away from the water body and surrounding forest patches. 10.5. If a contamination happens, use absorbent socks, granular absorbents, or temporary barriers to immediately surround the spill and prevent its spread. 10.6. Clean up the spilled area in an appropriate manner, and dispose of it appropriately under consultation with the Local Government Authority (LA - Pradeshiya Sabha). 10.7. Reporting to the DAD and the PMU on the event should be performed.	Engineering Cost	Contractor	DAD PMU