



REDUCTION OF LANDSLIDE VULNERABILITY BY MITIGATION MEASURES PROJECT

Site Specific Environmental and Social Management Plan

**Site No. 202
Court Complex - Morawaka**

Matara District

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Prepared for:



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Abbreviations

AIIB	Asian Infrastructure Investment Bank
CEA	Central Environmental Authority
DFC	Department of Forest Conservation
DS	Divisional Secretary
DWLC	Department of Wildlife Conservation
EH & S	Environmental Health & Social
E&SU of PMU	Environmental & Social Unit of Project Management Unit
ESMF	Environmental and Social Management Framework
SSE & SMP	Site Specific Environmental and Social Management Plan
ESMP	Environmental and Social Management Plan
GN	Grama Niladhari
GOSL	Government of Sri Lanka
GSMB	Geological Surveys & Mines Bureau
NBRI	National Building Research Institute
RHS	Right Hand Side
LHS	Left Hand Side

1. Introduction

1.1 Project overview

The Government of Sri Lanka has received a loan from the Asian Infrastructure Investment Bank (AIIB) to mitigate and rectify unstable slopes in high-risk areas, especially in the 13 districts of the 06 provinces of the country, under the Reduction of Landslide Vulnerability by Mitigation Measures Project (RLVMMP). The project requires to be implemented in accordance with environmental and social safeguards and mandates of the AIIB and those of Sri Lanka. Considering the nature of project actions and its implementation, an Environmental and Social Management Framework (ESMF) has been prepared as required by the AIIB environmental and social safeguard policy.

The purpose of the Environmental and Social Management Framework (ESMF) is to provide a guide for the application of AIIB safeguards and national environmental and social mandates during the implementation of project actions. The project implementing agency (NBRI) is expected to ensure implementation of environmental and social management plans prepared under the ESMF during all phases of project implementation so that the impacts on the environment and community are minimal.

During the scoping exercise, it was revealed that the environmental & social setting, and health & safety conditions are more site specific, and require to be addressed specifically to site conditions. Therefore, the ESMF has recommended a site-specific environmental and social assessment followed by Site Specific Environmental and Social Management Plans (SSE & SMP) for each site. The SSE & SMP gives planning, design, construction, and operation phase environmental, social, and health & safety management measures to be considered in the project Implementation.

This is the site-specific environmental and social management plan for **the failed slope behind the court complex building, Morawaka, Matara District**, selected for mitigation under RLVMMP. This plan has been prepared by an in-depth environmental and social assessment to:

- i. Identify sensitive environmental and social elements in the project influence area
- ii. Identify significant environmental and social impacts due to project actions
- iii. Propose mitigation measures
- iv. Decide appropriate environmental and social monitoring requirements specific to this project
- v. Study relevant environmental regulations and procedures to be followed during project implementation, specific to the site

1.2 Intended users

The document provides an in-depth insight into site-specific environmental and social issues associated with the proposed project and the mitigation measures, and intends to be used by the landslide mitigation design team, the PMU, and the contractor in the implementation of the Environmental and Social Management component of the project. The SSE & SMP is published on the project website (<https://rlvmmp.lk/>) and can be viewed by a wide range of interested parties (public, stakeholder organizations) can be utilized by the contractors for the project and will form the basis of site-specific management plans that will be prepared by the contractors as part of their Site Specific Environmental and Social Management Action Plans (SSE-SMAP) prior to commencing works.

2. Description of the project

2.1 Name of the project

Rectification of **Site No.202** for the failed slope behind the court complex building, Morawaka, Matara District.

2.2 Location details

The proposed mitigation site considered under Kotapola South (242/A) GN division belongs to the Kotapola DS division, Matara District, Southern Province.

GPS references of the site - 6.282210°N and 80.545877 °E

Nearest town and accessibility to the site - Kotapola is the nearest town, and it is a small town in the Matara District of the Southern Province, Sri Lanka. The mitigation site at the Court Complex is located approximately 2.0 km from Kotapola town and about 2.5 km from the well-known religious site, Getabaruwa Raja Maha Viharaya. The site can be accessed via a small access road connected to the Galle–Deniyaya–Madampe Highway (A17). *Ref. Figure 1: Accessibility map to the mitigation site*

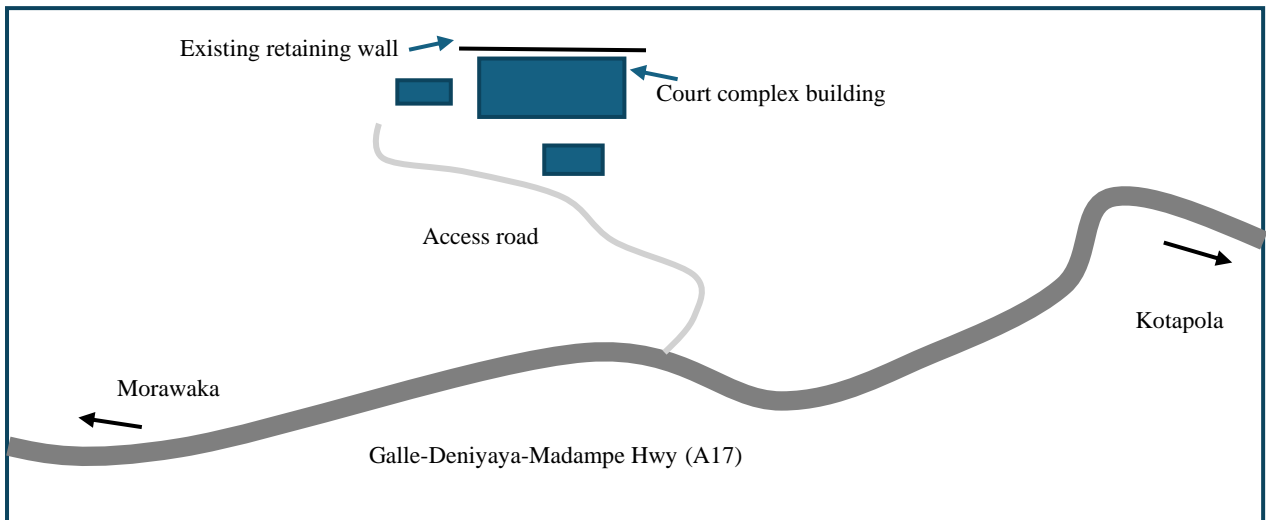


Figure 1: The accessibility to the mitigation site

2.3 Topography and land ownership

The location is situated approximately 2.0 km from Kotapola town, at an elevation of 200–400 m above mean sea level. The failed slope section spans an approximately 30 m. In terms of land ownership, both the failed slope area and the downslope area are owned by the Divisional Secretariat of Kotapola while the upper land is privately owned and cultivated with tea and cinnamon. *Refer to Figure 2, Google image of the proposed landslide mitigation sites, the surrounding environmental features, and service infrastructure.*

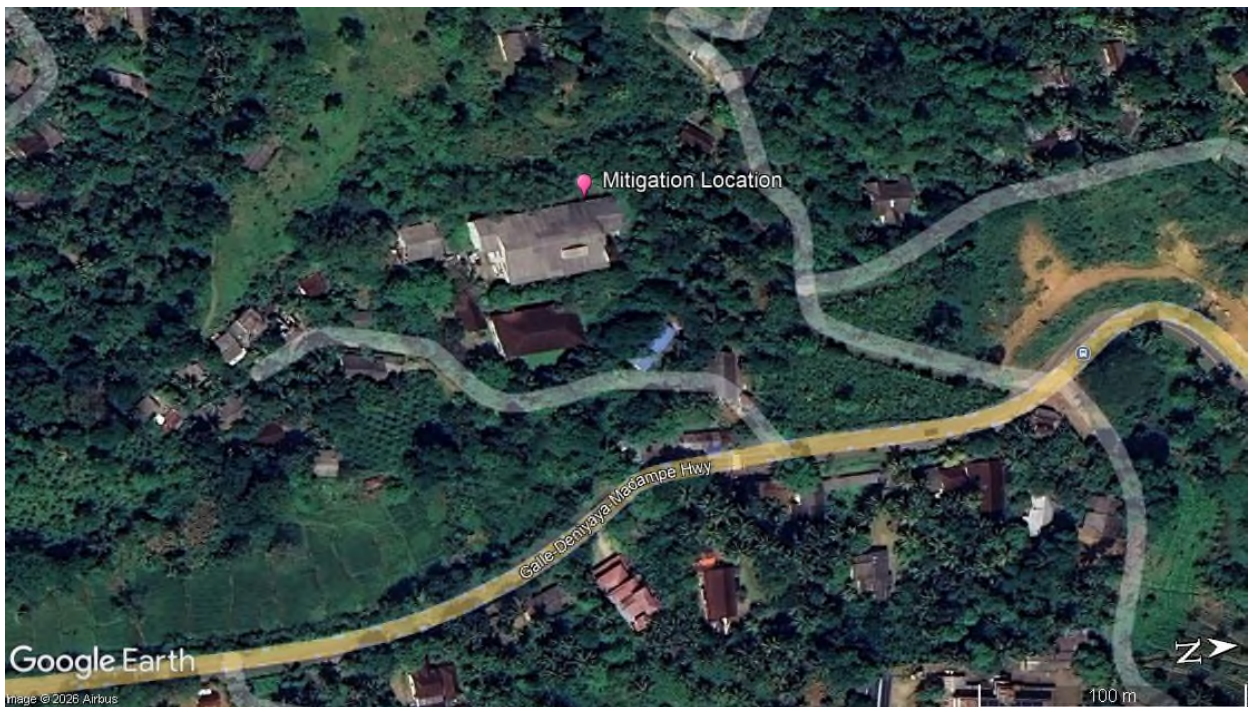


Figure 2: Google image of the proposed landslide mitigation site, the surrounding environmental features, and service infrastructure.

2.4 Meteorology of the area (Kotapola)

Annual rainfall – 2,524 mm to 3,771 mm

Annual temperature – 25.31°C- 30.75°

2.5 Demographic features of the area

According to census and statistics reports in Sri Lanka (2024), the Mitigation site belongs to Kotapola South (242/A) Grama Niladhari, which has a population of 1675 (female: 871; male: 804).

(Source: <https://www.statistics.gov.lk/Population/StaticalInformation/GNDReports#>)

3. Landslide hazard incident details

3.1 Account of the incident

The main cause of the slope instability behind the Morawaka Court building was the unsafe vertical cutting of the slope and the construction of a high retaining wall for the three-storey court building. Construction activities for the court complex commenced in 2015. After several years, signs of instability began to emerge, including slope failures and the formation of cracks in the retaining wall. These conditions indicated an increasing risk of landslide occurrence within the area.

Due to the potential danger posed by the unstable slope, court operations were suspended in 2020 as a safety precaution. Subsequently, the court activities were temporarily relocated to another building near Getabaruwa Raja Maha Viharaya. *Refer to Fig 3: Google image, land use, risk elements and the photographs of special features of the location*

3.2 Effects and consequences of landslide

The slope failure behind the Morawaka Court Complex could have resulted in several serious effects and consequences, affecting the building, the surrounding environment, and public safety. The possible impacts were the movement of soil and instability of the slope, which could cause cracks in walls, foundation settlement, deformation of structural elements, and weakening of the overall stability of the three-storey court building. The unstable slope and possibility of landslides posed a significant threat to judges, court staff, lawyers, police officers, and the general public visiting the court premises. Falling debris or sudden slope collapse could lead to injuries or loss of life. Due to safety concerns, court activities had to be suspended and temporarily relocated. This would have caused delays in legal proceedings and inconvenience to the public. The retaining wall and nearby infrastructure, such as drainage systems, access roads, utility lines, and surrounding buildings, may have been damaged by slope movement.

3.3 Description of any remedial measures already undertaken to reduce the potential risk

At the request of the Ministry of Justice, Officials from the National Building Research Institute (NBRI) inspected this location. The objective of the inspection was to carry out a preliminary assessment of the impacts of slope instability, evaluate existing site conditions, and identify the requirements for long- term mitigation measures.

3.4 Evacuations

Due to the high risk, the building has already been evacuated. Upon completion of the proposed mitigation works, the Morawaka Court Complex is anticipated to support the daily operations of approximately 50 staff members, 30 lawyers, and 300–500 clients, thereby enhancing the functionality and accessibility of the facility.

3.5 Resettlement (progress)

There is no requirement for a project-based resettlement programme for this site.

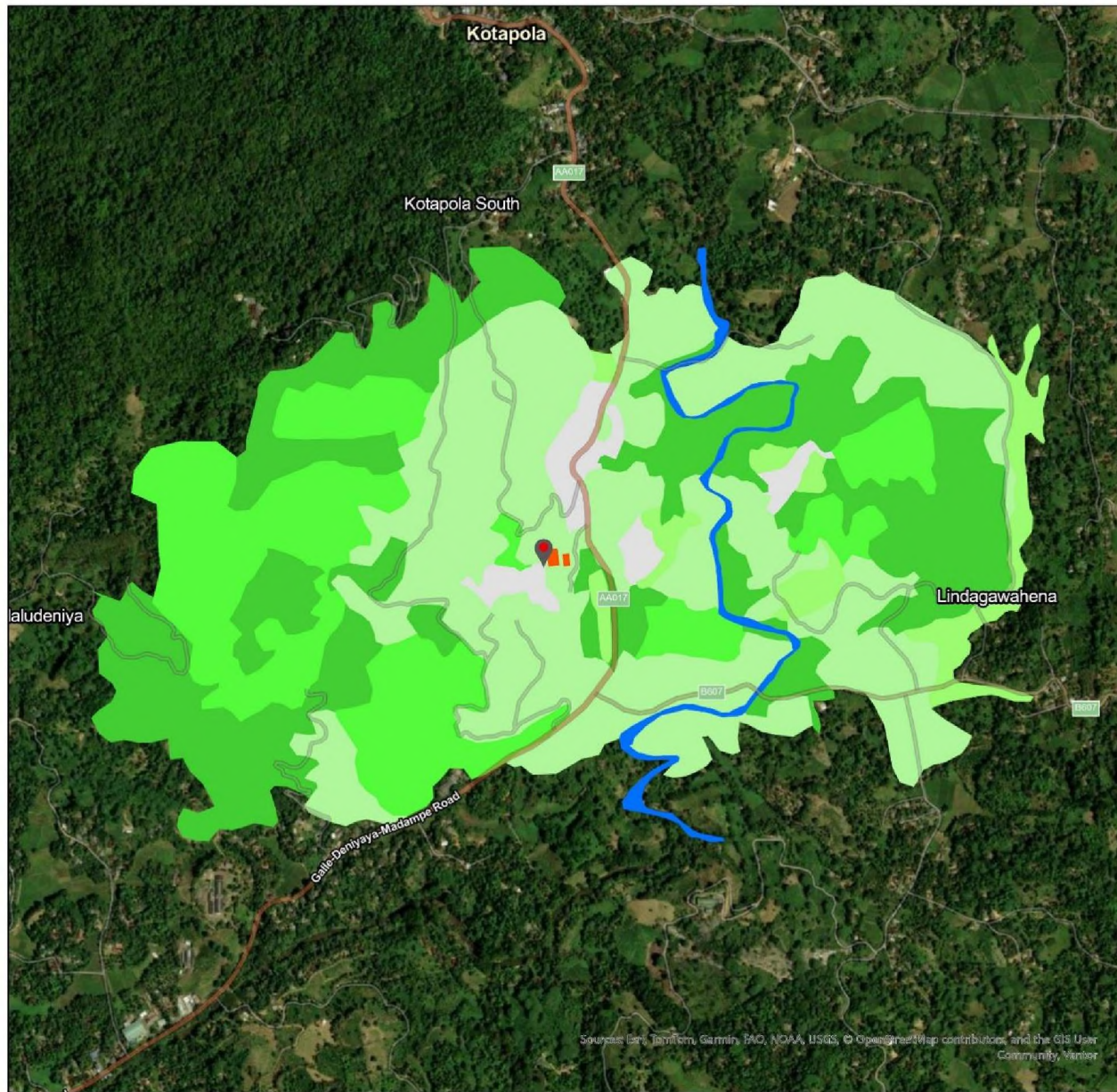


Figure 3: Google image, land use, risk elements and the photographs of special features of the location

4. Description of the area of the landslide/slope failure and areas adjacent to the landslide, and the current level of risk

4.1 Area of the landslide

The area at risk includes the three-story court building and the surrounding premises of the court complex. According to the geologists of the National Building Research Institute (NBRI), the three-storey court building was exposed to a high level of risk due to the slope failure occurring behind the retaining wall.

Several cracks were observed in both the retaining wall and the court building, indicating structural distress associated with slope instability. In addition, ground tension cracks were identified in the upper slope areas above the unstable section, further confirming the possibility of continued ground movement and potential landslide activity. As a result, the court staff and members of the public using the premises were exposed to significant danger, particularly during periods of extreme weather and heavy rainfall.

Water supply lines are observed close to the retaining wall. The upper slope area of the unstable section mainly consisted of cinnamon and tea cultivation lands, which may also have influenced the slope condition through changes in surface drainage and soil stability.

4.2 Areas adjacent to the landslide

The area adjacent to the landslide site, including the court complex, is characterized by several important features of functional, religious, and historical significance. The Kotapola town is located approximately 2.0 km away from the court complex, while the well-known religious site Getabaruwa Raja Maha Viharaya is situated about 2.5 km from the affected area.

Getabaruwa Raja Maha Viharaya is considered a historically and culturally significant religious place in the Matara area. Many devotees from surrounding regions visit the temple to worship and seek blessings for various personal and social activities.

The upslope and downslope areas surrounding the unstable slope consist of different land-use types, including cinnamon cultivation, tea plantations, home gardens, and mixed vegetation. These land-use practices may influence the surface drainage conditions and slope stability characteristics of the area.

Refer to Fig. 4: Google image, land use, risk elements, and the photographs of special features of the location

4.3 Current level of risk

The current level of risk at the slope failure site behind the Morawaka Court Complex remains considerably high for the nearby community due to the continued instability of the slope and the presence of visible structural and ground deformation features. Cracks observed in the retaining wall, court building, and upper ground surface indicate ongoing slope movement and the potential for further failure, particularly during periods of heavy rainfall and extreme weather conditions. The risk is not limited to the court premises alone, as surrounding areas with residential properties, cultivated lands, access roads, and public gathering places may also be affected by possible landslide activity. Therefore, continuous monitoring, proper drainage management, slope stabilization measures, and restrictions on unsafe land-use activities are essential to reduce the level of risk to the nearby community and infrastructure. Therefore, it is essential to mitigate the risk around this site.

5. Description of the works envisaged under the project

The project aims to implement slope stabilization solutions for reducing recurrent disruptions and ensuring safer operations in the future within the Court complex, Morawaka. The proposed mitigation works will include slope reinforcement, retaining structures, surface drainage improvement, and erosion control measures.

6. Brief description of the surrounding environment with special reference to sensitive elements that may be affected by the project actions and damaged elements

The elements and services at risk during the project implementation are;

- i. Three-storey court building
- ii. Road traffic, commuters, and pedestrians
- iii. Staff of (permanent & temporary) and the public in the court complex
- iv. Upslope cinnamon and tea cultivation
- v. Current services of the court complex

(Ref. Fig.4 Sensitive elements that may be affected by the project actions and damaged elements)



Figure 4a: View of the court complex building



Figure 4b: Retaining wall and the upslope area



Figure 4c: Upslope view of the unstable area



Figure 4d: Behind the risk area of the court complex



Figure 4g: Crack in the retaining wall



Figure 4h: Retaining wall and drainage behind the court building



Figure 4i: Vegetation of the area



Figure 4j: Cracks in the wall

Figure 4: Sensitive elements that may be affected by the project actions and damaged elements of mitigation site

7. Identification of social and environmental impacts and risks related to the works

7.1 Positive impacts

The proposed mitigation measures for the unstable slopes will help stabilize the existing slope failures and strengthen the retaining wall system, thereby improving the overall safety of the court complex area. As a result, the three-storey court building, court staff, and the general public using the premises will be protected from potential slope instability and landslide-related hazards. In addition, commuters and pedestrians using nearby roads, as well as occupants of surrounding houses and their cultivations, will be safeguarded from possible damage and danger associated with future slope movements.

Furthermore, the implementation of proper slope stabilization and drainage control measures will significantly reduce the risk of future landslides in the area.

7.2 Negative impacts

The mitigation works are generally confined to already failed land area. Therefore, negative impacts are much localized and also limited to the construction period.

Table 1: Negative impacts and their level of significance

Impacts during the construction period	Level of Significance
7.2.1 Hydrological and water quality impacts	
<p>7.2.1.1 Impacts of the drainage pattern of the area</p> <p>The mitigation works in this site will focus largely on the upslope unstable area. Disruption to existing surface and sub-surface drainage patterns in the area is envisaged with the project implementation. Most of the designs consider surface and subsurface drainage management. That involves the extraction of water, both surface and subsurface. Therefore, during the rainy season, heavy water flow is expected. Water inundation of the existing drainage is expected. An increase in water through the unstable slope may intensify the risk of slope failures in the unstable section. This is considered a highly significant impact.</p>	<p>Highly Significant</p>
<p>7.2.1.2 Water pollution and impacts on surface water quality</p> <p>During the slope excavation, the removal of debris can generate high sediment-laden runoff. There could be a possibility to pollute two streams that flow in the nearby area. Improper disposal of oils and other harmful substances/contaminants from machinery, leakages from temporary storage tanks solid waste, and wastewater disposal/dumping could occur, causing adverse impacts on quality of the water. Since there are no water streams nearby, the water pollution and impacts on surface water quality is considered as insignificant.</p>	<p>Insignificant</p>
<p>7.2.1.3 Erosional impacts</p> <p>The project activities will open the slope for surface erosion during the construction phase. The existing surface and sub-surface drainage patterns or destroyed drains in the area will be disrupted during the construction phase. Therefore, the erosional impacts are significant.</p>	<p>Significant</p>
<p>7.2.1.4 Open defecation and waterborne infections</p> <p>The possibility of open defecation could not occur because there are not covered with high dense vegetation area around the court complex. Faecal contamination to the streams will not be expected during construction due to open defecation of the contractor's workforce.</p>	<p>Insignificant</p>
<p>7.2.1.5 Impacts on the downstream water uses</p> <p>Since there are no water courses nearby, the impact is insignificant</p>	<p>Insignificant</p>

<p>7.2.1.6 Impacts on groundwater table and groundwater quality</p> <p>The addition or mixing of construction materials, including cement and grout, with subsurface water flows could lead to temporary water quality degradation and the accumulation of unwanted substances. During the construction period, hazardous waste from chemical substances, wastewater from construction activities, and discharge from onsite septic systems may negatively impact groundwater quality. The localized impacts may occur due to groundwater table drawdown while reducing the groundwater storage.</p>	Significant
<p>7.2.1.7 Impacts on water or wetlands</p> <p>Improper disposal of oils, chemicals, solid waste, or wastewater from machinery and worker sites, along with leaks from temporary storage tanks, could contaminate surface runoff flowing through the culvert at the base of the slope, adversely affecting water quality at the discharge point.</p>	Insignificant
7.2.2 Environmental Impacts	
<p>7.2.2.1 Noise and vibration impacts</p> <p>Noise and vibration are expected from construction equipment. Noise and vibration impacts are highly significant as the construction is carried out. Even though the functions of the court complex are temporarily evacuated to another place, a few officers and civil defense officers who are currently on duty and staying in buildings may be significantly affected. Daytime operation of machinery and vehicles may disturb residents of the nearby houses.</p>	Highly Significant
<p>7.2.2.2 Air pollution impacts</p> <p>Construction activities that contribute to air pollution include land clearing, operation of diesel engines, demolition, burning, and the storage, transportation, and disposal of construction materials and waste. During construction, high levels of dust are typically generated from concrete, cement, wood, stone, and silica. Officers will be affected by the dust generated during the construction phase. Air pollution resulting from these activities is likely to affect road commuters as well as nearby households, particularly during dry periods.</p>	Highly Significant
<p>7.2.2.3 Solid waste disposal issues</p> <p>Haphazard disposal of solid waste; various types of waste, such as litter, food waste, and construction waste, will be generated and may be stored or disposed of on-site. The littering, haphazard storage, and disposal of solid waste in and around the court premises will create inconveniences to the workers and the neighboring community. Waste can pollute the soil and leave various environmental impacts if a proper disposal mechanism is not in place during the construction period.</p>	Significant
<p>7.2.2.4 Explosive hazards and hazardous materials</p> <p>As there are no large, weathered rocks adjacent to the mitigation location no need for rock blasting.</p>	Insignificant
7.2.3 Biological /Ecological Impacts	
<p>7.2.3.1 Effects of important wildlife habitats</p> <p>There is no forest reserve within the project influence area. Important wildlife habitats may not be impacted due to the construction activities, such as high noise generation activities.</p>	Insignificant
<p>7.2.3.2 Effects on Fauna & Flora</p> <p>The majority of the trees found in the area are not endemic, threatened, or identified in the Red List of IUCN. Therefore, the important Fauna & Flora species may not be impacted.</p>	Insignificant

7.2.4 Social and Economic Impacts	
<p>7.2.4.1 Impacts on agriculture within the area to be remedied/ immediately to the site</p> <p>There are cinnamon and tea cultivation immediately adjacent to the area to be remedied. Tea cultivation and tea leaf plucking activities may have temporally impact due to the mitigation activities.</p>	Significant
<p>7.2.4.2 Cracks in the building due to vibration impacts</p> <p>The three-storey court building is at risk due to the construction activities and may experience cracks in the building due to vibration impacts.</p>	Significant
<p>7.2.4.3 Losing access to land and future development activities</p> <p>The mitigation works will be concentrated on the court complex area, and the upslope mitigation site is private land. Hence, there will be a significant impact on the landowners concerning losing access to the land or loss of valuable uses.</p>	Significant
<p>7.2.4.4 Impacts on livelihood/ business and income activities</p> <p>The tea and cinnamon plantation of the upslope area would be interrupted during the construction phase. Hence, the impact on the income would be temporarily affected.</p>	Significant
<p>7.2.4.5 Impacts on service provision (water supply, sewage, electricity)</p> <p>An electricity line and water supply lines run across the upper part of the unstable slope, and may be at risk if further slope movement occurs during construction. Any damage or disruption to these lines could affect the power and water supply to nearby households and court complex operations.</p>	Highly Significant
<p>7.2.4.6 Effect due to loss of infrastructure and safety</p> <p>During the construction phase, the access road of the court complex will be obstructed by frequently moving machinery, loaders, trucks, etc.</p>	Significant
<p>7.2.4.7 Work camps and lay-down site requirements</p> <p>The campsite will be selected in the neighbourhood of the community. If proper camp management is not in place, it may result in several labour issues, social issues with the community, conflicts for shared resources with the community, nuisances, and management of waste, etc. If temporary camps are built in the proximity of the site, management of solid waste and sewage will be an issue.</p>	Significant
<p>7.2.4.8 Relations between workers and staff/people living in the vicinity of the site and the possibility of disputes</p> <p>The construction workers at this site will be from different social backgrounds and from different geographical areas, often living in poverty. Usually, they are with poor educational and social background. Such communities may have a wide range of social issues that cause distress in the neighbouring community. Although the workers who would engage in such issues will be rare, even a few possibilities cannot be ignored.</p>	Highly Significant
<p>7.2.4.9 Workers' safety during construction</p> <p>The workers may not be exposed to the risk of falling from the upslope. The constructions are carried out in a very limited space. They may also face the risk of falling from the unstable slope. The heavy construction machinery may be used in limited workspaces. The risk of hazards from vehicles and construction machinery accidents is also highly significant at this site. Contractors may engage underage workers (children) for construction work, which is risky and can result in serious accidents and injuries.</p>	Highly Significant

<p>7.2.4.10 Need for people to enter or cross the site</p> <p>Excavation machinery, loaders, trucks, etc., will be used in the mitigation site premises where the community and staff are moving. There is no special need for the nearby community to enter the site for other purposes. Construction may use materials such as metal aggregates, steel, etc., which can be injurious under improper storage and handling. However, unauthorized entry of ordinary people may occur due to intentional or unintentional purposes, and they may be at risk due to operating machinery, vehicles, electricity, or blasting materials. Specially the building (Production room) where the case exhibits are stored is located adjacent to the three-storey building. Therefore, entry into that area should be strictly prohibited to the unauthorized persons.</p>	<p>Highly Significant</p>
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8. Site Specific Risk Analysis

Table 2: Site specific risk analysis

Risk	Affected group	Risk level
1. Facing accidents when working in a limited space	Workers	Very high
2. Transporting materials and machineries	Workers	Low
3. Throw out disposals (litter, bottles, and food) to the construction site from the commuters of the road and trains.	Workers	high
4. Facing road accidents during construction at night time	Workers	Low
5. Accidents from the construction activities and materials placed in the limited space	Workers	High
6. Water inundation in the unstable area	Workers	Very High
7. The wasps' attacks during the construction phase	Community nearby Workers	High
8. Injuries due to rock particles due to explosions/ blasting	Workers Community nearby	Low
9. Work adjacent to electrified lines, signal lines	Workers	High
10. Site Working – Working in poor visibility	Workers	High
11. Lone Working	Workers	High
12. Emergency evacuation	Workers	High
13. Extreme weather conditions (wind, rain etc.)	Workers	High

9. Significant Environmental and Social Impacts

Environmental, social impacts or risks that will require special attention on the part of NBRI.

9.1 Priority Health and Safety Issues. Specific H&S concerns that require measures that go beyond the standard contractual requirements for contractors

The health and safety issues pertinent to these sites are significant as the workers have to work on an unstable slope with a risk of falling. Such common E & HS issues have been discussed in the **ESMF**.

Worker safety requirements in the construction sites are more detailed under 2003 5: Safety equipment and clothing in the section 2003: Working conditions and community health and safety in the Bidding document.

9.2 Child labour & forced labour

Child labor & Forced labor is detailed under 2003.3 under section 2003: Working conditions and community health and safety in the Bidding document.

10. Environmental Social Management Plan (ESMP)

Measures to manage and or mitigate the impacts and risk. Especially the significant impacts and risks identified in sections 7 & 8. This section will include the specific recommendations and requirements of the ESMP for the design stage, construction phase, and maintenance operation phase.

10.1 Resettlement action plan

There is no project-based resettlement in this site. These houses may have some impacts in the form of structural damage during the project actions due to ground vibration induced by heavy machinery operation. (The scheme of compensation, in case of damage to structures due to project, should be arranged, (Refer 2002.2.17) utilities and roadside amenities in contracts requirement to ESMP.

10.2 Evacuation of people

Project-based evacuations are not required for the mitigation location.

10.3 Procedure for removal of damaged structures, facilities, and infrastructure (consent from owners to remove the articles)

There are no damaged structures, facilities, or infrastructure (consent from owners to remove the articles)

10.4 Requirement for compensation for loss of property /uses due to project actions

There is no requirement for compensation for loss of property /uses due to project actions

10.5 Public awareness and education- needed for the following areas

Programs to inform and educate people in the vicinity about the risks posed by the unstable land section located within the court premises, especially the staff of the court, nearby residents, and commuters using the nearby road

10.6 Design-based Environmental/ Social Management considerations

The site is located in an aesthetically beautiful, environmentally sensitive natural environment in a rural setup. Hence, the following environmentally and socially significant design considerations are recommended. *Refer to Table 3; Design stage Environmental & Social considerations*

Table 3: Design stage Environmental & Social considerations

Design feature	Recommended level of consideration for this site
<p>i. Natural resource management and resource-optimized designs</p> <p>Project-specific designs should be considered to eliminate mass clearing of vegetation and the minimum number of removals of grown tree species. Sufficient emphasis should be made to consider conservation of trees if important tree species are found. However, the downslope vegetation of the site was destroyed due to soil movements.</p>	High

<p>ii. Site Planning</p> <p>During site planning it is necessary to be cautious about possible re-activation of slope failures and movements of soil masses. Also, the site is in a very limited space around court building area. It should not be installed in the danger zones of the slides. It is very necessary to keep trained flagman or safety officer during the construction period and proper communication between contractor’s workforce and community.</p>	<p>Very High</p>
<p>iii. Habitat connectivity and animal trails</p> <p>If large fractions of vegetation are required to be cleared in ecologically fragile habitats as for permanent structures or for access, or if deep drains etc. are to be made the designs should include habitat connectivity features, animal trails and vegetation strips etc. even if the impacts are localized.</p>	<p>Low</p>
<p>iv. Conservation of water resources</p> <p>If extraction of water is involving as a mitigation measure, as the extracted water is in good quality and yield it can be considered as a source of water for nearby houses.</p>	<p>High</p>
<p>v. Aesthetically compatible design considerations</p> <p>The designs in aesthetically sensitive environments should consider structures that blend with natural environment to keep the visual pollution to minimum. As the tourism industry is one of the major economic growth points for the project area, greening could be used in construction activities to develop the area as a tourist attraction. Service of landscape architects may be important for the design of suitable mitigation structures.</p>	<p>High</p>
<p>vi. Consideration of green environmental features</p> <p>As many of the mitigatory works are carried out in ecologically sensitive habitats, it is recommended to consider green environmental designs as much as possible in the designs e.g.: use of local vegetation for erosion control, combination of plants to sustain species diversity in the environment, avoiding inclusion of potentially invasive species & etc.</p>	<p>High</p>
<p>vii. Conservation of social and Cultural features</p> <p>The local cultures and heritages are strengthened by their close connections to the natural environment that sustains them. Therefore, the project actions should be carried out considering historical importance, local culture and social aspects, providing opportunities to reinforce them during the project actions.</p>	<p>Low</p>
<p>viii. Workers/ commuters and community safety</p> <p>Due to the proximity to the high slope people may face accidents especially with the workforce during the construction phase. Unauthorized entries and ignorance may cause severe accidents around the site. Activation of slides may occur during construction phase and may pose threat to workers, and community. Therefore, design-based safety considerations such as berms, safety nets etc. should be considered.</p>	<p>Very high</p>
<p>ix. Erosion control structures</p> <p>In drainage management, water is extracted and conveyed through culverts. During rainy season the flow in these drainage structures can be significantly high and this may cause stream bed erosion. Hence the design should adequately consider flow speed breakers to reduce erosive flows entering natural streams. This should be an inclusive part of the design if there are streams and culverts in the proximity of the mitigation site.</p>	<p>Low</p>

<p>x. Low post maintenance and operation designs</p> <p>The mitigation should consider passive techniques such as gravity drains for drainage management. Correct pipe diameters, pore diameters and laying angles should be considered to avoid clogging of drains. Low maintenance structures and designs such as designs to withstand erosive forces, sediment trapping systems etc. should be considered if drain water is expected to be directed to natural streams. The materials used for structures should be chosen carefully to withstand weather conditions with high durability. Designs should specially consider corrosion prevention techniques if steel structures are used.</p>	High
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10.7 Mitigation of impacts during the construction phase

10.7.1 Construction contractors' requirement to comply with environmental and social management during the construction phase

Measures to manage and to mitigate the environmental and social impacts are generally common to all landslide mitigation sites. Such impacts are largely attributed to activities in the construction phase. The mitigation of impacts therefore becomes an obligation of construction contractor. NBRI has prepared a comprehensive document on “*contractors’ requirement to comply with Environmental and Social Health and Safety (ES & HS) management during the construction phase*” to be included in construction contractors’ bid document. The main sections are summarized below (Table 3) indicating the degree of relevancy for this site. For details ESMP for construction contractors should be referred. Refer to Table 4; Contractor requirement to comply with ES & HS

Table 4: Contractor requirement to comply with ES & HS

Reference No. as per construction contractors obligation to ESMP	Item	Relevant to the project
2002. Environmental and Social Monitoring		
2002.2 1)	Storage on site	Highly Relevant
2002.2 2)	Noise and Vibration	Highly relevant (staff of the court, estate workers)
2002.2 3)	Cracks and damages to the buildings	Not relevant
2002.2 4)	Disposal of waste	Relevant (workers and community nearby)
2002.2 5)	Disposal of refuse	Highly relevant (community nearby)
2002.2 6)	Dust control	Highly relevant (community nearby, workers)
2002.2 7)	Transport of Construction materials and waste	Highly Relevant
2002.2 8)	Water	Highly Relevant
2002.2 9)	Flora and Fauna	Relevant
2002.2 10)	Physical and cultural resources	Not relevant
2002.2 11)	Soil Erosion	Relevant
2002.2 12)	Soil Contamination	Relevant
2002.2 13)	Borrowing Earth	Relevant
2002.2 14)	Quarry Operations	Not relevant
2002.2 15)	Maintenance vehicles and Machinery	Relevant
2002.2 16)	Disruption to public	Highly relevant (community nearby, commuters)
2002.2 17)	Utilities and roadside amenities	Highly relevant
2002.2 18)	Visual environment enhancement	Relevant
2002-5. Environmental Monitoring	Baseline surveys (air, water, noise, vibration, crack surveys)	Refer site specific monitoring plan
	Surveys during construction (air, water, noise, vibration, crack surveys)	Refer site specific monitoring plan

	Surveys during operation phase	Refer site specific monitoring plan
	Reporting and maintenance of records	Relevant
2003. Working Conditions and Community Health and Safety		
2003.2	Safety organization and communication	Highly relevant (unsafe slope, heavy machinery)
2003.3	Child Labor and Forced Labor	Relevant
2003.4	Safety reports and notification of accidents	Low
2003.5	Safety Equipment and Clothing	Highly relevant
2003.6	Safety inspections	Highly relevant
2003.7	First Aid Facilities	Highly relevant
2003.8	Health and safety information and training	Highly relevant
2003.9	Plant equipment and qualified personnel	Relevant
<p>Relevant: The section is relevant to the site as a common ESMP applicable to any site</p> <p>Highly relevant: The contractor should pay special emphasis in the preparation of environmental method statements to ensure that the relevant ESMP is implemented specific to the site</p> <p>Possibly relevant: This ESMP will be triggered if the site come across with relevant aspect during project implementation</p> <p>Not relevant: The section may not be relevant to this site under disclosed conditions</p> <p>Optional: require to be implement if needed only</p> <p>Refer site specific monitoring plan: Contractor is obliged to carry out monitoring as specified in the site specific monitoring plan</p> <p>Reference: Contractors Obligation for implementation of ESMP</p>		

10.7.2 Site Specific mitigation

Given below are the site-specific mitigation measures that the project is expected to implement during the construction period. Refer to Table 5: Site-specific ES & HS mitigation measures

Table 5: Site specific ES & HS mitigation measures

Mitigation item	Project implementation phase	Responsibility
<p>i. Priority Health and Safety Issues</p> <p>As the workers in the site must work in high-risk conditions, it is imperative to implement recommendations given in section 2003 of contractors' obligation on ESMP under "working conditions and community health and safety". These recommendations should be followed carefully in a proper organization and safety monitoring system.</p> <ul style="list-style-type: none"> • Prepare a special Occupational Health and Safety Management Plan before the commencement of construction activities • Adoption of standard worker safety methods • Provision of personal protective equipment (PPE) such as safety boots, helmets, protective clothing, goggles, etc. • Provision of training and awareness programs to employees • Conducting hazard analysis and plan/provide adequate mitigation measures for such hazards identified, before carrying out major construction activities • If the wasp nest is in the vicinity, it is mandatory to use Evacuation Centres for ensure of workers' safety • Additionally, work should be discontinued for a sufficient time period during the rainy season as working on unstable land will be highly risky in the rainy season. 	Construction	PMU Construction Contractor

<p>ii. Transporting materials and machinery</p> <p>The commuters and the workers should be informed about the material and machinery transportation schedule. The court building or access road must not be damaged due to the material and machineries transportation.</p>	Construction	PMU Construction Contractor
<p>iii. Minimize erosional impacts during construction</p> <p>It is recommended that mitigation works involved with site clearance, slope reshaping, removal of debris, etc., are avoided during the rainy season. This should be considered in the project planning stage. A proper drainage arrangement should be made to prevent overland runoff and sediment-laden water from flowing through the site. Washing the muddy surfaces of moving machinery and an efficient silt trap are mandatory.</p>	Site preparation & construction	Construction Contractor
<p>iv. Invasive species</p> <p>Should be avoided using vegetative erosion control structures. Native plants in the local environment should be chosen for vegetative control. The species used for vegetative control measures needs approval from the relevant authorities.</p>	Construction	Construction Contractor
<p>v. Noise and vibration control</p> <p>The noise and vibration-generating activities may disturb the smooth flow of activities in the nearby houses. Vibration-generating activities should be done within the prescribed limits to avoid damage to structures. Suitable compensation should be made if the cracks are formed or enlarge existing cracks in the court building and infrastructure, due to construction work</p>	Construction	Construction Contractor
<p>vi. Disposal of construction waste</p> <p>The contractor should pay special attention to the disposal of construction waste. Such waste, if generated, should be stored properly without getting washed off and disposed of according to approved procedures by the PMU. Under any circumstances, construction waste should not be released to the court premises. The contractor should obtain approval from the relevant local authority for the disposal of solid waste at approved locations</p>	Site preparation & construction	Construction Contractor
<p>vii. On-site sanitary facilities for the workers</p> <p>The contractor should prepare temporary sanitary facilities for the workforce within the site to mitigate open defecation by the workers.</p>	Site preparation & construction	Construction Contractor
<p>viii. Dust and aerosol control screens</p> <p>The heavy dust-generating activities should be carried out with sufficient care. Adequate water spraying is recommended for this site. Dust screens to cover open vents of the building in the downslope (court building) are recommended.</p>	Site preparation & construction	Construction Contractor
<p>ix. Water and electricity for construction</p> <p>Water for construction should be obtained only from approved places. If the Contractor intends to use electricity from the main electricity line, they should be informed, and the required permission should be taken.</p>	Construction	Construction Contractor
<p>x. Working hours, working in extreme weather conditions, and working in poor visibility</p> <p>The construction activities should be in accordance with the court management. Noise, vibration, and dust generation activities should be carried out after court hearing hours.</p>	Construction	Construction Contractor

An emergency response plan should be established to ensure a rapid, organized, and effective response to emergencies that may arise during construction activities within a public place. If nighttime operations are required to achieve project targets, such work should be carried out with adequate safety measures, with the consent of the Court Management.		
xi. Impact on service infrastructure Electricity and water lines should be relocated before construction starts, per the approval of PMU.	Construction	Construction Contractor
ix. During construction, good housekeeping should be maintained to minimize visual pollution	Site preparation & construction	Construction Contractor
x. Worker's code of conduct Possible disputes between the workforce, officers at the Court Complex, and nearby residents should be avoided by maintaining an agreed code of Conduct.	Construction	Construction Contractor
xi. No entry zone The building (Production room) where the case exhibits are stored is located adjacent to the three-storey building. Therefore, entry into that area should be strictly prohibited.	Site preparation & construction	Construction Contractor
xii. Fire Hazard Contractor should take special measures to prevent possible fire hazard as required by the court management. Electricity if used should be under strict care. Electrical lines should be properly laid and disconnected when not in use	Site preparation & construction	Construction Contractor
xiii. Snake bites, toxic insect bite management, and emergency management of accidents A proper emergency management system for snake bites and toxic insect bites (including awareness on snake bites, safety shoes while at work, first aid on a snake bite, hospitalization, and admission to a correct hospital where snake bite management facilities are available) should be introduced. Accidents are common on these kinds of sites. Proper emergency management units for other accidents (first aid facilities, safety items, hospitalization facilities, and transportation facilities) should be maintained for this site.	Construction	Construction Contractor

10.7.3 Monitoring requirements specific to the site

The following monitoring plan is strongly emphasized during the construction phase, specific to this site. In addition to this, the monitoring procedure indicated in the contractors' obligation to ESMP should also be implemented by the construction contractor. The contractor is expected to indicate in the bid the ESMP procedure to be implemented, along with relevant proof of his competency. The cost for ESMP will require to be indicated as a separate pay item. The environmental and social management method statement is expected to be submitted by the selected construction contractor and to be approved by the PMU unit. *Refer to Table 6; Environmental and Social monitoring plan*

Table 6: Environmental and Social monitoring plan

Monitoring requirement	Parameter	Frequency
i. Baseline monitoring	Water quality	-
	Pre-crack survey for the Court building	Once*
	Ground vibration	Once*

	Air quality: particulate matter	Once*
	Background noise measurement	Once*
ii. During construction	Water quality	-
	Crack survey for the risk houses	If noticeable displacement is observed during construction **
	Ground vibration	During the operation of drilling machinery, boring works, or any works that generate ground vibrations*
	Construction noise	Once a month during heavy noise generation times *
	Air quality particulate matter	Once a month *
iii. Vehicular Emission	All machinery/vehicles operational should have the emission control test certificate as applicable - should be checked by the site ES officer of the consultant	
iv. Monitoring agency	* A competent independent monitoring agency with registration of Central Environmental Authority for all parameters except crack surveys **Crack surveys should be conducted by competent agency acceptable to PMU	
v. Reporting requirements	Stream water quality – Comparison with ambient water quality standards published by the CEA, 2017 Pre crack survey of the nearest building -Professional report Ground vibration -as per the interim standards on vibration for the Machinery, Construction activities and Vehicular movements, CEA Background noise measurement –Extraordinary Gazette No.924.1, May 23,1996, CEA Air quality particulate matter - The National Ambient Air Quality standards stipulated under the Extraordinary Gazette, No. 1562/22 August 15, 2008 -Central Environmental Authority of Sri Lanka.	

11. Public and Stakeholder Consultations - the public consultations that have been and/or will be held

11.1 Public Consultations

L.W. Wikramasekara, risk land owner, met and consulted and was informed about the landslide early warning alerts, risk situation, and the activities of the mitigation project.

11.2 Stakeholders involved in the consultations, any recommendations or agreements reached in the consultations

Mr. Dumind Pathirana, Production Keeper of the court complex, was informed about the project activities. He acknowledged the necessity of the mitigation and expressed full support and cooperation for the project.

12. Clearances, no objection, consent and approvals required for the implementation of the project

Table 7: Clearances, no objection, consent and approvals

Requirement / Approval / Institution	Relevance to the project
12.1 Project implementation	
Approval from the District Secretariat	Approval will be required and the proposals need to be presented at the District Coordinating Committee, to which chief minister and stakeholder agencies in the district will also participate. The Officer of PMU will present the project, disclose the project details and various concerns including environmental and social issues will be discussed at this meeting. The issues arising will be addressed in ESMP, the decisions and recommendations taken up at this meeting will be considered in the ESMP.

Approval from the planning committee	The approval from the planning committee of the Kotapola Pradheshiya Sabha.
12.2 Approval from the state lands owners relevant to the project	
Central Environmental Authority	Consent from District Central Environmental Authority is required.
Department of Forest Department of Wildlife Conservation	As there are no forest reservations and wildlife habitats; Department of Forest and Department of Wildlife Conservation approvals are not needed
Geological Surveys and Mines Bureau	Approval will be obtained for for extraction of materials, transportation and disposal of earth, rocks and mineral debris. (If necessary, only).
Kotapola Pradheshiya Sabha	Approvals from Kotapola Pradheshiya Sabha will be obtained for the disposal of waste and plant litter.
Ceylon Electricity Board	Approvals from regional office of Ceylon Electricity Board will be required for power supply for site operation.
National Plant Quarantine Service	Approval from Additional Director National Plant Quarantine Service Katunayake for Director General of Agriculture under the Plant Protect Act No. 35 of 1999 Plant or seed if needed for bio-Project Managed slope mitigation shall be imported into Sri Lanka under the authority and in accordance with the conditions, of a plant importation permit issued.
12.3 Consent/ no objection/ legally bound agreement from the private land ownerships	
Ministry of Justice and Landowner (Private)	Signing a legally bound agreement between the land owners and the project implementing authority, allowing no-objection to remove the structures, access the land, implement construction works, and engage in long-term maintenance works

The tentative timeline for getting approval is given in the table 08.

Table 8: Tentative timeline for getting approvals

Approvals	Month 1				Month 2			
	W1	W2	W3	W4	W1	W2	W3	W4
Project implementation								
<i>Approval from the District Secretariat</i>								
Submission of application	■							
Project briefing		■						
Respond to comments		■	■	■				
Approvals					■	■		
<i>Approval from planning committee</i>								
Submission of application		■	■					
Project briefing			■	■				
Respond to comments				■	■			
Approvals					■	■		
Other approvals								
GSMB		■	■	■				
Ministry of Defense (Depends on the requirement)		■	■	■				
Consent/ no objection from the land ownership	■	■						

13. Grievance redress mechanism for this site

The PMU ES officer is responsible for establishing the grievance redress mechanism for this site for impact communities. (*Reference: Environmental and Social Management Framework for recommended procedure for establishment of grievance redress mechanism*).

14. Information disclosure

It is the responsibility of the PMU to disclose the ES information to following agencies and organizations by indicated modes as a minimum as given in the table. 12

Table 9: Proposed scheme of information disclosure

Information	Proposed agencies	Mode of information disclosure
i. Project plan (site details, design, implementation arrangements)	District CEA, District Secretariat, Divisional secretary, Other district level Agencies, NBRI district office, AIIB	Meetings, District coordination committee, submission of relevant report to sign agreements, approvals and consents.
ii. Environmental and Social Management plan	District CEA, AIIB	Meetings, District Coordination Committee, submission of relevant report to sign agreements, approvals and consents
iii. Monitoring reports (baseline and during construction)	District CEA, AIIB and relevant parties as appropriate	Progress meetings, special meetings, submission of relevant reports
iv. Site inspections for environmental conformance workers health and safety	District CEA, Divisional secretary, Police, Grama Niladhari, District Office NBRI, AIIB and relevant parties as appropriate	Written and verbal communications, submission of relevant reports
v. Decisions taken and progress review meetings pertinent to ES matters	District CEA, Divisional secretary, Police, Grama Niladhari, District Office NBRI, AIIB and relevant parties as appropriate	Meetings, submission of relevant reports
vi. Grievance redress mechanism	Relevant parties, AIIB	Meetings, written and verbal communications

Table 10: Level of information gathered through consulting institutions

Date	Institution	Person contacted for information
27/05/2026	Ministry of Justice and National Integration	Mr. R.M.P.D Rathnayake , Engineer, (0712248664)
22/11/2025	Court Complex, Morawaka	Mr. Duminda Pathirana, Production Keeper (0716893667 / 0412271289)

Annexure I: Images of the consultation during the field visit



*Consultation with Mr. Duminda Pathirana,
Production Keeper of the court complex*

Annexure II: Report on the Stakeholder Consultation

Institution	Name and designation of the contact officer	Concerns raised
Central Environmental Authority		<ul style="list-style-type: none">✓ The Basic Information Questionnaire (BIQ) is needed to fill for the project and submit the application✓ As the proposed project (mitigation) intends to reduce the risk from landslide for an emergency action CEA approval is not needed considering the priority of the project.✓ Before project commence a request indicating the mitigation sites need.✓ If the project is carried out in a sensitive area, even not within a prescribed project, consideration of sensitive area will govern the process.

Annexure III: Study team

Name	Designation	Position in the study
SAMS Dissanayake	Senior Scientist/ESSD/NBRI	Senior Environmental Scientist
Prabath Liyanaarachchi	Scientist/ ESSD/NBRI	Environmental scientist
A.G. Randoombage	Project Assistant	Demographic Data Collection and Report Preparation

Annexure IV: List of References

1. Contractor's obligations for Generic Environmental and Social Management Plan- Sri Lanka Landslide Mitigation Project-AIIB
2. Environmental and Social Management Framework-Sri Lanka Landslide Mitigation Project - AIIB
3. Resettlement Planning Framework- Sri Lanka Landslide Mitigation Project -AIIB
4. Felling Trees (Control) Act by Ministry of Agriculture, Rural Economic Affairs, Livestock Development, Irrigation and Fisheries and Aquatic Resources Development
5. Census and Statistical Report (2012), Department of Census and Statistics