Environmental and Social Management Plan (ESMP)

Demolition of Government of Vanuatu – Ministry of Lands and Natural Resources Offices

15 Dec 2025

FOR PUBLIC DISCLOSURE

Prepared by the VARS PMU on behalf of the Vanuatu Ministry of Lands and Natural Resources

Contents

Executive Summary

This Environmental and Social Management Plan (ESMP) has been prepared to guide the safe and compliant demolition of four existing buildings within the Ministry of Lands and Natural Resources (MoLNR) complex in Port Vila, Vanuatu.. Under ESS1, paragraph 11, the demolition works are an Associated Facility because they: (i) aren't financed by the VARS Project; (ii) are directly and significantly linked—occurring on the same site and enabling VARS-funded construction; and (iii) are essential for project viability and wouldn't occur without the project. Therefore, per ESS1 paragraph 10, the Government of Vanuatu must ensure the Associated Facility complies with relevant ESS requirements to the extent it has control or influence over the demolition.

The proposed works involve mechanical, non-blasting demolition following manual salvage and stripping activities. While the buildings are currently unoccupied, the site is located in an active urban area, requiring careful management of occupational health and safety, hazardous materials, waste handling, traffic, dust, noise, and community safety. Screening and laboratory testing did not identify asbestos-containing materials (ACM) in accessible building elements; however, residual risk remains in underground services, fill materials, and inaccessible voids.

Key environmental and social risks associated with the demolition include potential exposure to hazardous materials (including asbestos if encountered), worker injury, dust and noise nuisance, traffic disruption, waste mismanagement, and risks to nearby businesses and road users. These risks are assessed as moderate and site-specific, temporary in nature, and fully manageable through the application of good international industry practice (GIIP) and the mitigation measures defined in this ESMP.

Priority mitigation measures include: implementation of a mandatory pre-demolition intrusive asbestos survey and Asbestos Register; strict stop-work and clearance requirements should ACM be identified; application of task-specific occupational health and safety controls in accordance with the OHS Management Plan (Annex 5); controlled demolition sequencing; dust suppression and noise management; traffic management and public safety controls; licensed transport and disposal of all demolition and hazardous waste; and environmental monitoring and reporting. Mechanical demolition may only proceed once all asbestos-related clearance conditions are met and documented.

Implementation responsibility for the ESMP rests with the Ministry of Lands and Natural Resources (MoLNR) as Project Proponent. Technical oversight of demolition activities, including approval of demolition methodologies, traffic management arrangements, asbestos risk controls, and compliance with the ESMP, will be provided by the Ministry of Infrastructure and Public Utilities (MIPU) through the Public Works Department (PWD), acting in its capacity as the government's technical authority for public infrastructure works. Regulatory oversight, statutory approvals, inspections, and clearance certification are provided by the Department of Environmental Protection and Conservation (DEPC). Contractors are responsible for implementing the ESMP through a Contractor Environmental and Social Management Plan (CESMP), subject to technical review and acceptance by PWD/MIPU and regulatory approval by DEPC and including compliance with the Asbestos Management and Control Plan (Annex 2), the Occupational Health and Safety Management Plan (Annex 5), and Emergency Spill and Incident Response procedures. A Project Help Desk and grievance mechanism will be maintained to manage community enquiries and complaints during implementation.

1. Introduction

1.1 Project Overview

The Ministry of Lands & Natural Resources (MoLNR) is undertaking the demolition of a select portion of the government complex located at George Pompidou, Port Vila. The buildings identified for demolition are structurally deteriorated, no longer compliant with safety and operational standards, and lie within the footprint of the proposed new MoLNR Headquarters to be financed under the Vanuatu Affordable and Resilient Settlements (VARS) Project.

The project involves two primary aspects to the demolition scope:

1. **Salvaging Works** – systematic removal and recovery of reusable building materials, equipment, and fixtures to maximise resource use, reduce waste, and support government asset management objectives.
2. **Demolition Works** – controlled dismantling and removal of remaining structures, foundations, services, and debris to clear the site for redevelopment.

These activities represent essential enabling works to support the GoV's broader objective of modernising public infrastructure and improving the safety and resilience of government facilities.

1.2 Project Ownership and Governance

The demolition works are fully financed by the Government of Vanuatu. MoLNR, as Project Proponent, will ensure that demolition activities are implemented in accordance with the ESMP, with technical oversight provided by PWD/MIPU and regulatory oversight by DEPC. Funding is available through approval granted by the National Recovery Committee (NRC) under the Ministry of Internal Affairs – Department of Urban Affairs and Planning (DUAP). Procurement of a combined salvage and demolition contractor will be managed by the Ministry of Finance and Economic Management (MFEM) following national procurement procedures.

Regulatory oversight will be provided by relevant government agencies including:

- the Department of Environmental Protection and Conservation (DEPC),
- the Public Works Department (PWD),
- the Port Vila City Council (PVCC), and
- the utility service provider (UNELCO).

The VARS Project Management Unit (PMU) supports MoLNR through preparation of this ESMP and management of the Grievance Redress Mechanism (Help Desk). Once awarded, the Contractor is responsible for implementing all works in full compliance with this ESMP, applicable permits, and national regulations.

1.3 Purpose of the Demolition

The primary purpose of the demolition is to clear the site for the construction of a new, modern, and climate-resilient MoLNR Headquarters building. The works will:

- remove unsafe and outdated structures;
- provide a clean and stable platform for further geotechnical investigation and design;
- eliminate risks associated with deteriorated buildings; and
- support improved public service delivery through upgraded facilities.

In accordance with the World Bank's Environmental and Social Standard 1 (ESS1), paragraph 11, these demolition works are classified as an Associated Facility because they meet the following criteria: (i) they are not funded as part of the VARS Project; (ii) they are directly and significantly related to the project, as they occur on the same site and are a prerequisite for the VARS-financed construction; and (iii) they are necessary for the project to be viable and would not be undertaken if the project did not exist. Accordingly, ESS1 paragraph 10 applies; the Government of Vanuatu (Borrower) will ensure that this Associated Facility meets relevant ESS requirements to the extent that the Borrower has control or influence over the demolition works.

1.4 Objectives of the Environmental Social Management Plan (ESMP)

The ESMP aims to ensure the salvage and demolition works are carried out safely, responsibly, and in compliance with all applicable national and World Bank Environmental and Social Framework (ESF) requirements. The key objectives are:

1. **Regulatory Compliance**
   Ensure all works comply with national environmental, OHS, and waste legislations and aligned with World Bank ESF requirements.
2. **Minimise Environmental Impacts**
   Identify and manage potential impacts through appropriate mitigation and monitoring.
3. **Ensure Safe Demolition Practices**
   Promote safe engineering methods, protect structural integrity during works, and safeguard workers and the public and private sector from demolition-related hazards.
4. **Effective Solid Waste and Hazardous Material Management**
   Segregate, handle, transport, and dispose of all waste streams responsibly, while maximising salvage and resource recovery.
5. **Protect Community Wellbeing**
   Minimise disruptions from noise, dust, traffic, access restrictions, and service interruptions, and maintain clear communication with stakeholders.
6. **Strengthen Worker Health and Safety**
   Ensure workers are trained, equipped, and supervised, and that all activities meet required OHS standards and emergency preparedness measures.
7. **Monitoring, Reporting, and Accountability**
   Establish clear roles, responsibilities, monitoring indicators, and reporting procedures to ensure compliance and continual improvement.
8. **Enable the New MoLNR Headquarters Construction**
   Deliver a safe, clean, and construction-ready site that supports the World Bank–funded development.

1.5 Scope

This ESMP applies to all salvage and demolition-related activities undertaken within the site. The scope covers the full sequence of works required to safely and responsibly clear the site in preparation for the construction of the new MoLNR building. Specifically, this ESMP applies to:

• Pre-Demolition Preparation

- Site establishment, fencing, signage, and security.
- Utility disconnection (electricity, water, sewer, telecommunications).
- Hazard identification, surveys, and material testing (e.g., asbestos, structural assessments).
- Establishment of storage, exclusion, and waste segregation areas.
- Mobilisation of plant, equipment, and workforce.

• Salvaging and Material Recovery

1. Controlled removal of reusable building materials, fixtures, fittings, furniture, and equipment.
2. Inventory and secure storage of salvaged government assets.
3. Handling, lifting, and transportation of recovered items.

• Demolition Works

- Controlled dismantling of structures, roofs, internal partitions, external walls, utilities, and foundations.
- Mechanical demolition methods as required.
- Dust, noise, and vibration control during active demolition.
- Temporary access and traffic management within and around the site.

• Waste Management and Transportation

- Segregation of demolition waste to prevent comingling of non-hazardous and hazardous waste (general waste, metals, concrete, timber, green waste and waste that is either a listed hazardous waste (e.g. Batteries, pesticides, mercury-containing equipment, e-waste) or exhibits hazardous waste characteristics (Toxic (e.g. asbestos), Reactive (reactive metals), Ignitable (waste oils and solvents) or Corrosive (acids and alkalines).
- Temporary storage, bunding, and secure containment of hazardous waste as defined above.
- Contractor's handling, treating, and disposing of hazardous waste are reputable and legitimate enterprises, licensed by the relevant regulatory agencies and following good international industry practice for the waste being handled. Ensuring compliance with applicable local and International Regulations.
- Legal transport of hazardous and non hazardous waste to approved and appropriately licensed disposal and recycling facilities.

- Documentation of waste handling and disposal records. Hazardous waste should be labelled, including the identify and quantity of the contents, hazards, and shipper contact information. Providing shipping document (e.g. shipping manifest) that describes the contents of the load and its associated hazards in addition to the labeling of the containers. The shipping document should establish a chain-of-custody using multiple signed copies to show that the waste was properly shipped, transported and received by the recycling or treatment/disposal facility.

• Environmental and Social Safeguard Measures

- Implementation of mitigation, monitoring, and emergency response procedures.
- Worker health and safety management.
- Stakeholder communication and public safety measures.

• Site Reinstatement and Demobilisation

- Removal of debris, equipment, and temporary site facilities.
- Final clearing, grading, and stabilisation of the ground surface.
- Restoration of drainage pathways and environmental protection measures.
- Handover of a clean, safe, and construction-ready site for the design and development of the MoLNR Headquarters building.

2. Project Description

The Government of Vanuatu, through the MoLNR and the VARS PMU, intends to construct a new MoLNR Headquarters within the George Pompidou precinct in central Port Vila. The proposed building footprint overlaps with four existing structures that require demolition to prepare the site. These demolition works are therefore considered an **Associated Facility** to the World Bank–financed headquarters construction and must align with relevant ESF requirements.

The demolition works include structural dismantling, removal of underground services, waste management, hazardous materials handling, and temporary site controls. These works must be carried out with strict attention to environmental protection, occupational health and safety (OHS), and surrounding community safeguards given the proximity of the site to active government facilities, sensitive receptors and public access routes.

2.1 Location and Site Description

The demolition site lies within the central Port Vila urban area, under the Ministry of Lands and Natural Resources compound.

- **Coordinates:** between 168.3139°E – 168.3148°E and 17.7329°S – 17.7332°S
- **Approximate Area:** ~0.29 ha
- **Surrounding Environment:** Government offices, paved roads, and urban utilities.
- **Access:** Primary Road frontage along the southern boundary.

2.2 Buildings and Structures to Be Demolished

The structures scheduled for salvage and demolition include three office buildings and one laboratory constructed using mixed materials:

Building 1 MoLNR Resource Centre: is a single storey structure approximately 3.5m high and measuring 21m x 15m. The building is structurally sound and in good condition with interior refurbishments done in 2023. Interior refurbishments will be salvaged as part of the works contract.

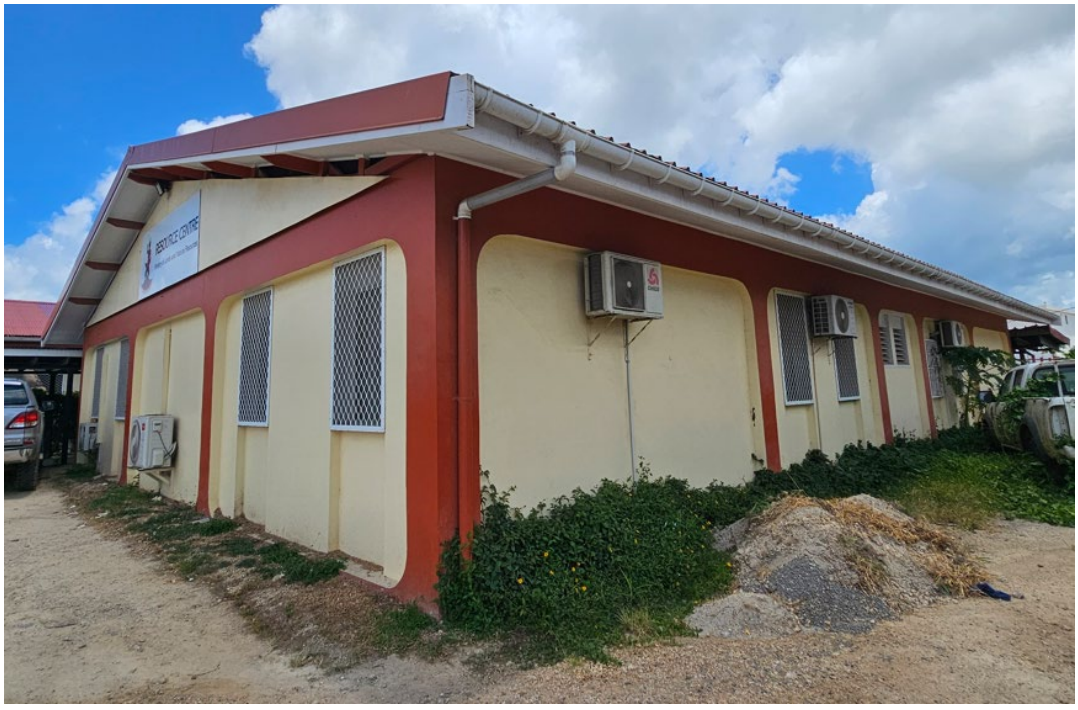


Figure 2. Building 1. MoLNR Resource Centre

Building 2 Shefa Provincial Health Vector Disease Control: is a 2-storey structure built into an embankment and measuring 28m x 24m. The topographic profile of the embankment is illustrated in Figure 3 below. The building sustained earthquake damage and shows internal cracks (Figure 5 & 6).

The building has been fully stripped of all roofing materials, windows, doors and all salvageable material.

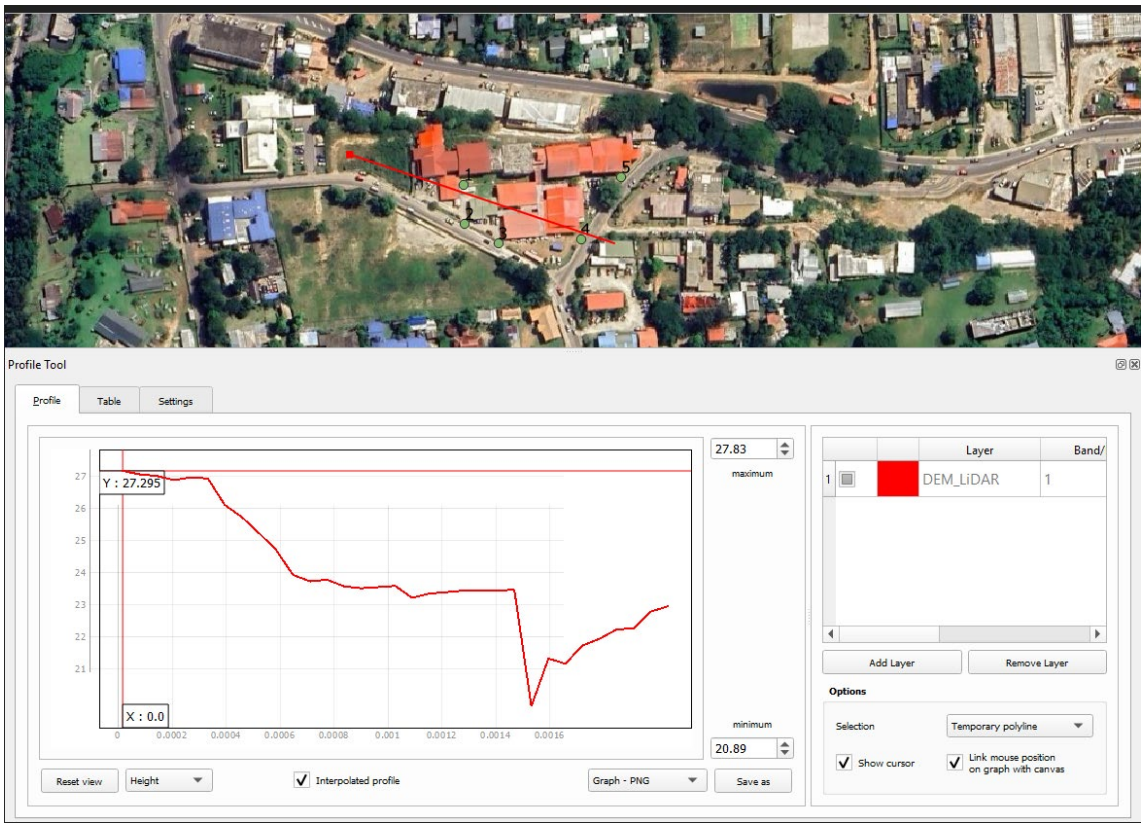


Figure 3. Topographic Profile of the Site

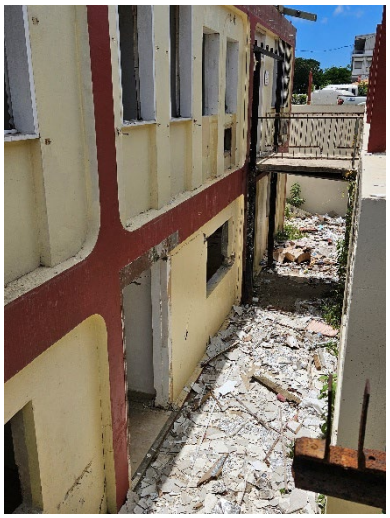


Figure 4. Building 2. Shefa Provincial Health – western exterior

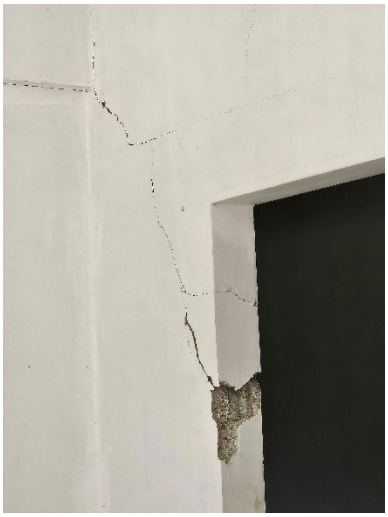


Figure 5. Building 2. Shefa Health - interior

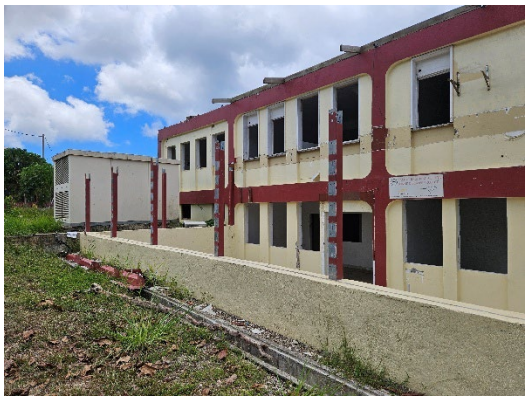
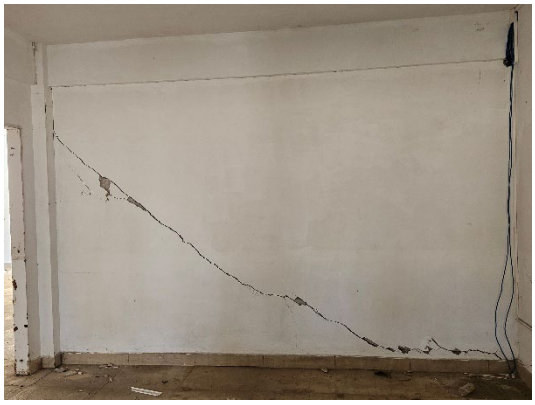
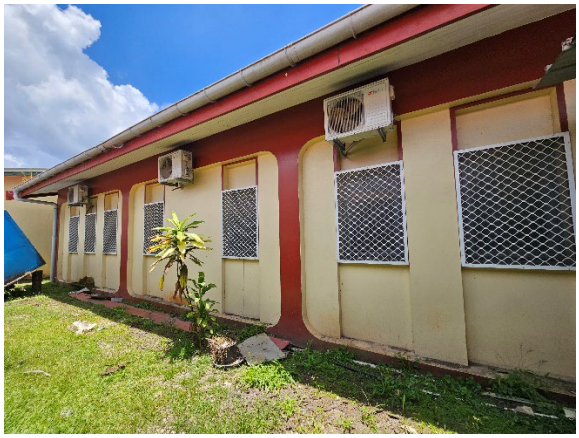


Figure 6. Building 2 - eastern exterior



Building 2 – interior crack

Building 3 Geology and Mines Offices: is a single storey structure, constructed in 1995, measuring approximately 3.3m high and measuring 24m x 14m. The building is worn but no major structural issues.



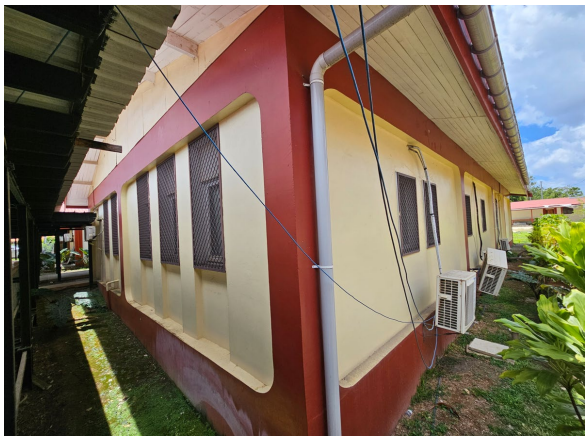


Figure 7. Building 3 Geology & Mines Office - northern exterior (left) and western/southern exterior (right)

Building 4 Geology and Mines Laboratory: is a single storey structure, constructed in the late 1990's, measuring approximately 2.5m high and measuring 16m x 12m. The building its worn but no major structural issues.

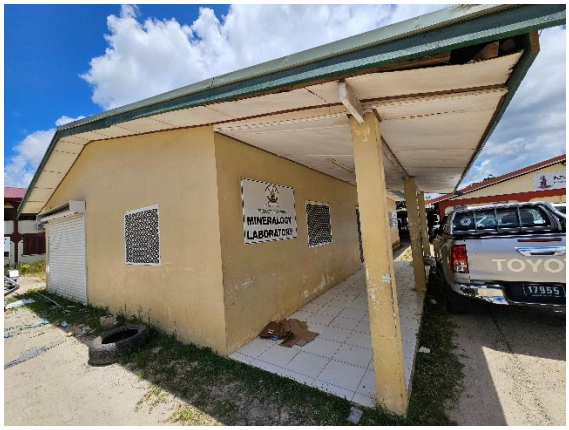


Figure 8. Building 4. Geology & Mines Lab - southern exterior (left) and western/southern exterior (right)

All buildings were constructed using mixed materials of reinforced concrete (RC) structural walls, beams, and floor slabs with embedded steel reinforcement and corrugated iron roof sheeting supported on timber trusses and framing.

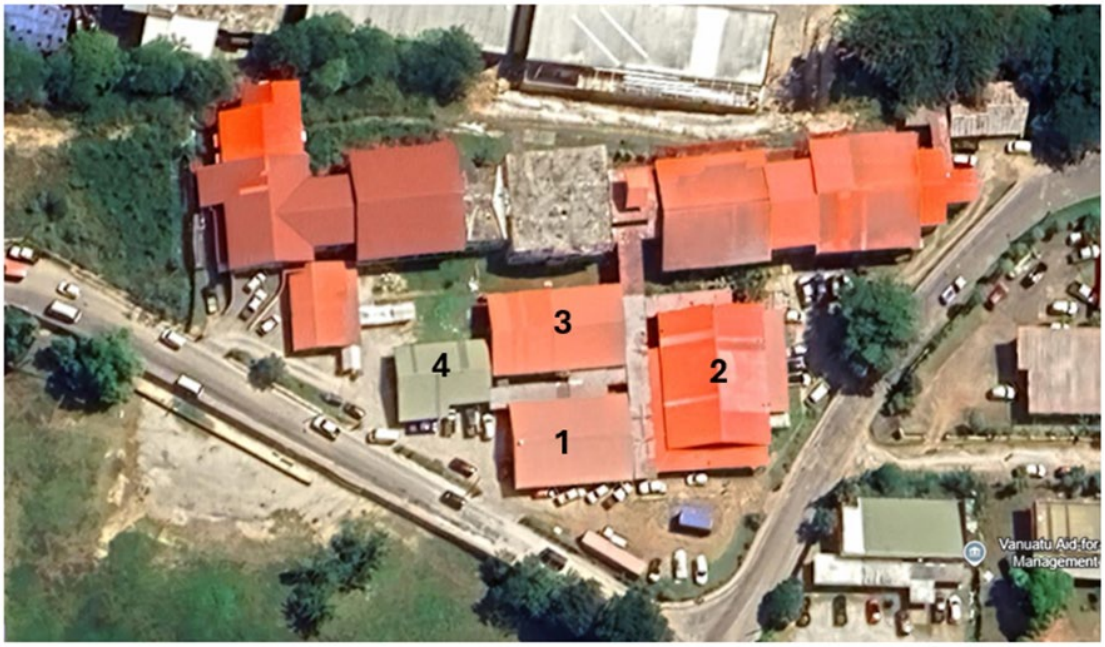
- Ancillary reinforced concrete elements such as retaining walls, steps, ramps, aprons, and ground slabs; and
- Underground and surface utilities servicing the buildings, including water supply, sewer/stormwater, electrical conduits, and telecom lines.

Asbestos samples (refer **Annex 1) were taken from the soffit linings of each of the buildings in the complex and testing indicated that the four buildings within the scope do not contain ACM.** These buildings are of late 1990's construction. However, floor tiles sampled from the older **Department of Lands (DoL)** building contains ACM in floor finishes and is **excluded** from the demolition scope.

Demolition of the multi-storey buildings located behind Buildings 1–4 is **excluded** because of their position at the top of a 20-m cliff and the high ESF risk profile. Demolition of these buildings will require:

- Large exclusion zones and rockfall protection;
- Temporary closure of business houses below;
- A socioeconomic survey and compensation for income loss; and
- A full asbestos removal control plan and associated specialist supervision.

These buildings will be addressed under a future, separately funded demolition package. **This ESMP applies only to the four low-risk buildings within the new headquarters footprint** (refer to Figure 9 below).



Building 1: Resource Centre

Building 2: Shefa Health – Vector Disease Control

Building 3: Geology and Mines Office

Building 4: Geology and Mines Laboratory

Figure 9: Scope of buildings to be demolished.

2.2 Scope of the Salvage and Demolition Package

1. **Utilities disconnection** and removal of underground electrical infrastructure, water services, transformer units, and associated UNELCO assets located within the scope of demolition.
2. **Salvage** of reusable building materials, fixtures, fittings, furniture, and equipment. This will involve an inventory of salvaged government assets.
3. **Demolition of all designated MoLNR buildings** located *within* the approved Headquarters development footprint.
4. **Removal of associated site infrastructure**, including foundations, ground slabs, small retaining structures, perimeter fencing, pavements, and hardstand areas that conflict with the new building layout.
5. **Identification, isolation, and safe removal or relocation of underground services**, including water, stormwater/sewer lines, electrical conduits, and communications infrastructure.
6. **Segregation, loading, transport, recycling, and disposal** of demolition waste, including e-waste and potential hazardous waste at authorised facilities in accordance with Department of Environmental Protection and Conservation, Port Vila City Council requirements.

   As an **Associated Facility** to the World Bank–financed VARS Project, waste transporters, recycling operators, and disposal facilities engaged under this package are expected to **meet the applicable Environmental and Social Standards (ESS)** and to

apply relevant Environmental, Health, and Safety Guidelines (EHSGs), to the extent that the Borrower has control or influence over such entities, including through contractual requirements, permitting conditions, and supervision arrangements

7. **Implementation of temporary site controls**, including safety barriers, fencing, dust suppression, noise management, drainage protection, access controls, and traffic management.

All demolition activities **must use mechanical, non-blasting methods**, as required by the national permitting authorities.

Hazardous materials management must follow:

- **Annex 2: Asbestos Control and Management Plan (ACMP)** for unexpected ACM finds, and
- **Annex 3: Chance Find Procedure** for any cultural heritage or hazardous material discoveries.
- **Annex 5: Occupational Health and Safety Plan.**

2.3. Key Assumptions and Risks

The demolition approach and ESMP recognise several important assumptions and associated risks:

2.3.1 Hazardous Materials Risk

Asbestos samples (refer **Annex 1) were taken from the soffit linings (eaves) of each of the buildings in the complex and testing indicated that the four buildings within the scope do not contain ACM.** These buildings are of late 1990's construction and therefore are less likely to contain ACM. However, ACM may still be encountered in underground pipes, service ducts, or concealed cavities. Any such discovery must follow the Asbestos Control and Management Plan (Annex 2) and the stop-work protocols described therein. Worker protection measures associated with hazardous materials are governed by the Occupational Health and Safety Management Plan (Annex 5).

Testing of floor tiles sampled from the older **Department of Lands (DoL)** building contains Chrysotile (White Asbestos) in floor finishes and is **excluded** from the demolition scope.

ACM Test Results (refer Annex 1) were as follows

Table 1. ACM Test Results by Building

Sample Name	Sample Category	Weight (g)	Asbestos Presence / Absence
Building 1. Resource Centre	Cement product – soffit lining	7.23	Asbestos NOT detected
Building 2. Shefa Health	Cement product – soffit lining	8.38	Asbestos NOT detected
Building 5. Dept of Lands	Ceramic floor tile & levelling compound	29.1	Chrysotile (white asbestos) detected
Building 6. MoLNR	Cement product – soffit lining	8.40	Asbestos NOT detected

Building 3. Geology & Mines	Cement product – soffit lining	9.59	Asbestos NOT detected
Building 7. Ministry of Health	Cement product – soffit lining	6.22	Asbestos NOT detected

2.3.2 Service Uncertainty

Underground service records may be incomplete or inaccurate. Demolition activities could encounter unknown or incorrectly mapped utilities. The MoLNR is in consultation with the water and power services provider – UNELCO – to confirm any electrical infrastructure, water services, transformer units, or associated UNELCO assets located in or near the site. The contractor will be required to.

1.Secure and comply with all required national/local permits, utility clearances, and permit-to-work authorizations; maintain a permit-to-work log.

2.Coordinate with utility owners (e.g., UNELCO) to confirm as-builts/locations, isolation and lock-out needs, supervision, and any utility-specific authorizations.

3.Before mobilizing heavy equipment, detect and prove services (EM locating, trial pits/potholing) and document mark-outs/scans; obtain an approved method statement within the Contractor ESMP

2.3.3 Sensitive Receptors

The demolition site is located within an active government precinct and near several sensitive receptors including:

- Six private residences
- One church
- One school
- Business houses to the north, at a lower elevation

Potential risks include restricted access, public safety hazards, dust, noise, and traffic congestion.

Engagement with these stakeholders will follow the ESF principles described in **Section 9 – Stakeholder Engagement and Grievance Redress**.

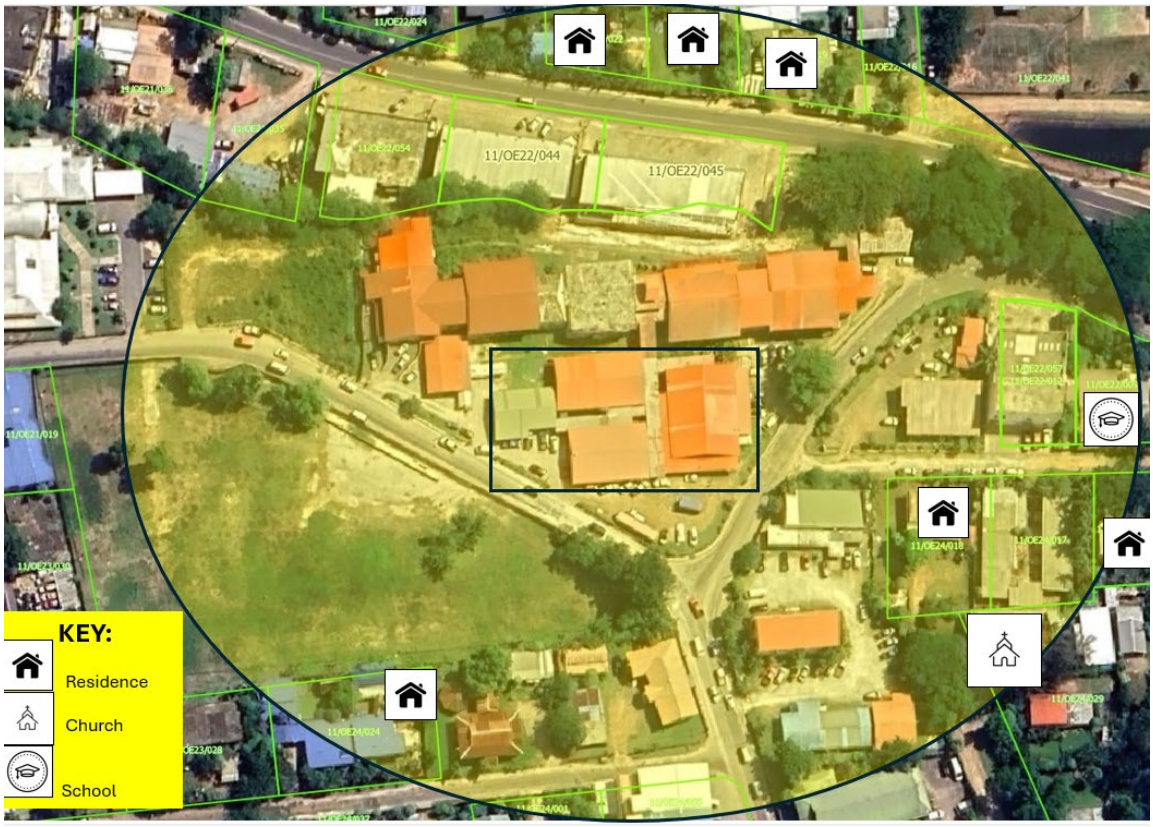


Figure 10. Sensitive Receptors within 100m of Demolition Site

2.3.4 Proposed Demolition Methodology

The demolition works will follow a structured, phased approach consistent with international best practice for reinforced concrete and mixed-material buildings.

Phase 1 – Pre-Demolition Planning and Approvals

- Preparation of a full Demolition Work Plan / Method Statement, including risk assessments, safe work method statements (SWMS), emergency response procedures, and a Traffic Management Plan.
- Structural walkdowns to confirm stability and safe sequencing.
- Hazardous materials survey and removal plan.
- Utility detection from service provider (UNELCO) and additional verification using EM locators and trial pits as required.
- ACM sample testing to qualified laboratory (already conducted – refer Annex 1).
- Stakeholder notification to MoLNR departments and units, adjacent agencies, sensitive receptors, and regulators including DEPC and Port Vila City Council.

Phase 2 – Site Establishment and Isolation

- Setup of secure perimeter fencing, hoarding, warning signage, and access control gates.
- Establishment of exclusion zones and pedestrian diversions.
- Disconnection and verification of all electrical, water, sewer, stormwater, and telecommunications services.

Phase 3 – Soft Strip / Internal Removal and Salvage

- Removal of non-structural elements such as doors, windows, ceilings, partitions, internal joinery.
- Hand removal of roofing iron and timber framing where feasible.
- Removal of service lines (electrical, plumbing, air conditioning).
- Segregation of metals, timber, concrete, and e-waste.
- Removal of any identified ACM by licensed specialists before mechanical demolition begins.

Phase 4 – Structural Demolition (Mechanical – Blasting is not permitted)

Given the reinforced concrete construction, demolition will follow a top-down, controlled, mechanical sequence:

- Progressive removal of upper-level elements downwards.
- Avoidance of uncontrolled collapse.
- Use of excavators (20–35 tonne) with hydraulic breakers, pulverisers, and shears.
- Use of skid-steers or small excavators for internal/limited-access zones.
- Cranes used only when necessary for large sections or heavy lifts.
- Separation and stockpiling of steel reinforcement for recycling.

Ensure active stakeholder communication and noise monitoring throughout the demolition.

Phase 5 – Substructure, Foundations, and Underground Services

- Mechanical breakup and removal of slabs, footings, and foundations within the demolition footprint.
- Excavation and removal of redundant underground services.
- Capping of live services as required.
- Backfilling and compaction of excavated areas.
- Proof-rolling to confirm suitable formation level for construction.

Phase 6 – Waste Handling, Recycling, and Disposal

- On-site segregation of concrete rubble, metal, timber, general waste, e-waste and hazardous waste.
- Concrete may be reused as engineered fill subject to suitability testing.
- All ACM, lead paint waste, and other hazardous materials must be:
    - double-bagged or wrapped,
    - labelled,
    - transported by licensed personnel, and
    - disposed of at approved hazardous waste pathways.
- Use of covered trucks to control dust and prevent debris loss.

Phase 7 – Site Clean-Up and Handover

- Fine grading and levelling of the site to the required platform level.

- Removal of temporary fencing and controls (where not needed by the construction contractor).
- Submission of a Demolition Completion Report, including waste records, service disconnection confirmations, and as-built information.

3. Policy, Legal and Institutional Framework

This section outlines the national policies, legislation and institutional arrangements guiding the demolition of the MoLNR complex. Although the demolition is financed entirely by the Government of Vanuatu, it is classified as an **Associated Facility** to the World Bank–financed MoLNR Headquarters under the VARS Project. As such, relevant elements of the World Bank **Environmental and Social Framework (ESF)** apply to the planning and implementation of these works.

This framework ensures that demolition activities are legally compliant, risks are identified and managed, and administrative procedures such as permitting, reporting, and oversight are properly applied.

3.1 National Policy Framework

Vanuatu's national development and climate policies guide government-led infrastructure activities and mandate risk-informed planning across all stages of project delivery. These policies require that environmental protection, public health, safety, and waste management are integrated into salvage and demolition planning and implementation.

Table 2: National Policies Relevant to the Demolition Works.

Legislation / Standard	Authority	Relevance to the Demolition Works
Environmental Protection & Conservation Act (CAP 283)	DEPC	Regulates environmentally hazardous activities; requires permits and oversight for demolition and waste handling.
Waste Management Act No. 24 of 2014	DEPC	Establishes rules for controlled waste categories, including asbestos waste.
Waste Management Regulations (2018)	DEPC	Defines hazardous waste and outlines transport and disposal requirements.
Public Health Act (CAP 234)	Ministry of Health	Regulates public health risks from airborne contaminants and hazardous materials.
Occupational Health and Safety (OHS) Regulations	Department of Labour	Mandates safe work practices, PPE requirements, and worker protections.
SOP – Asbestos Management for Demolition Works	DEPC	DRAFT SOP establishes a unified national framework that governs how asbestos must be identified, handled, removed, transported, and disposed of during demolition works.

These policies collectively require that demolition works incorporate appropriate environmental and safety controls. Where asbestos or other hazardous materials may be encountered, the procedures outlined in **Annex 2 – Asbestos Control and Management Plan** must be followed.

3.2 Legal and Regulatory Framework

Demolition works in urban areas are governed by legislation regulating environmental protection, public health, worker safety, and waste management. These include the Environmental Protection and Conservation Act (CAP 283), the Pollution Control Act, the Waste Management Act, the Public Health Act, the Work Health and Safety Act, and PVCC municipal by-laws.

Table 3: National Legislation Applicable to Demolition.

Legislation / Regulation	**Key Requirements / Applicability**
Environmental Protection and Conservation Act (EPCA) [CAP 283]	Environmental approvals, screening, mitigation measures, pollution control, and monitoring.
Pollution (Control) Act [CAP 234]	Controls dust, noise, discharges, waste emissions, and potential contamination during demolition.
Waste Management Act 2014	Requirements for handling, segregation, transport, and disposal of waste and hazardous materials.
Public Health Act [CAP 234]	Controls public health risks including dust, sanitation, noise nuisances, and waste storage.
Work Health and Safety Act No. 7 of 2019	Mandates safe demolition methods, PPE, worker protection, hazard management, emergency procedures.
Fire and Emergency Services Act	Fire safety requirements and emergency response preparedness.
Municipalities Act & PVCC By-laws	Demolition permitting, noise limits, waste disposal rules, traffic and access control.
Vanuatu Building Code	Establishes structural safety obligations for controlled demolition.
Other Applicable Regulations	Includes hazardous waste guidelines, PWD standards, and utility provider requirements.

In addition, hazardous materials management—including the identification, safe removal, and disposal of asbestos—must comply with **Annex 2 (Asbestos Control and Management Plan)**. Any unexpected discovery of hazardous materials, cultural heritage, or unexploded ordnance must follow the stop-work and notification requirements in **Annex 3 (Chance Find Procedure)**.

3.3 International Framework – World Bank Environmental and Social Framework (ESF)

Although the demolition is not financed by the World Bank, it is an enabling activity for the World Bank–funded MoLNR Headquarters and therefore subject to relevant ESF requirements.

As an Associated Facility, the demolition must demonstrate consistency with ESS1, ESS2, ESS3, ESS4, and ESS10 through the application of this ESMP and its supporting annexes.

Table 4: World Bank Environmental and Social Standards (ESS) Relevant to the Works.

ESS	Relevance to Demolition Activities
ESS1 – Assessment and Management of E&S Risks	Identification and mitigation of environmental and social impacts from demolition. Including the application of the mitigation hierarchy.
ESS2 – Labor and Working Conditions	Worker safety, training, fair labor conditions, and OHS management and compliance.
ESS3 – Resource Efficiency & Pollution Prevention	Waste minimisation, dust and noise control, hazardous materials management.
ESS4 – Community Health and Safety	Control of public risks, traffic management, exclusion zones, vibration/noise impacts.
ESS10 – Stakeholder Engagement	Communication, information disclosure, and public/stakeholder notifications.

3.4 Institutional Arrangements and Responsibilities

Effective implementation of the ESMP relies on coordinated action among government agencies, municipal authorities, the contractor, and the MoLNR. Roles include oversight, permitting, compliance monitoring, waste management, public safety, and stakeholder engagement.

The VARS PMU has supported the project owner, MoLNR, through preparation of this ESMP and through asbestos testing of material samples throughout the MoLNR Complex. MoLNR is responsible to coordinate demolition and salvage activities and ensures compliance with national requirements. MoLNR submitted its demolition request to the Department of Urban Affairs and Planning (DUAP), which hosts the National Recovery Project Management Unit.

DUAP has prepared a submission paper to the National Recovery Committee (NRC) requesting funding for a combined salvage and demolition contract, with a target of securing approval before the Christmas break.

Once NRC approval is obtained, the process will proceed as follows:

1. **State Law Office (SLO)** – Review and approve demolition of government assets.
2. **DEPC -** Review environmental permit application, issue approval, and monitor compliance.
3. **MFEM** – Procure and award the combined salvage and demolition contract.
4. **PVCC** - Oversee municipal permitting, waste disposal controls, and urban safety requirements.
5. **Contractor -** Responsible for carrying out the salvage and demolition works in accordance with the CESMP, based on this ESMP, the environmental permit, the municipal permit and regulatory requirements.

6. **VARS PMU –** Operate the VARS Help Desk to ensure workers, government officers and the general public have access to a grievance redress mechanism (GRM).
7. **PWD** – Technical oversight and authority to ensure implementation and monitoring of the CESMP.

Table 5: Institutional Responsibilities for ESMP Implementation.

Institution / Agency	Responsibilities
MoLNR (Project Owner)	Overall project oversight, coordination, and compliance with national permit and regulatory requirements. Provide site access; support coordination with neighbouring government offices; endorse site-specific demolition schedules; participate in stakeholder engagement.
DUAP / MIA	Secures funding approval through the National Recovery Committee
SLO	Approves disposal of government assets
MFEM	Procure and award the combined salvage and demolition contract.
DEPC / MCCA	Environmental regulator, responsible for approvals, inspections, enforcement action if required, issuance of asbestos clearance certification, compliance monitoring.
PVCC	Demolition permit approval, signage, noise regulation, waste disposal and traffic management oversight.
PWD / MIPU	Technical oversight and authority, reviews and clears: demolition methodology, CESMP, traffic management plan, asbestos risk controls (technical aspects), review reports on behalf of the project proponent.
Utilities (UNELCO)	Safe disconnection, relocation, and protection of utilities.
Contractor	Implementation, monitoring, and reporting as per the approved CESMP that is based on this ESMP.
Licensed Hazardous Waste Specialist (if required)	Provide safe removal, packaging, and disposal; maintain hazardous waste manifests; ensure compliance with hazardous waste guidelines.
Labor Force	Follow site OHS procedures; wear PPE; report hazards, unsafe conditions, and incidents; comply with exclusion zones and traffic rules.
Community and Surrounding Government Offices	Provide feedback; report disturbances or complaints; engage through communication and grievance mechanisms.
Police / Emergency Services (if required)	Support traffic control, road safety, and emergency response; respond to incidents requiring public safety intervention.

VARS PMU	Support to MoLNR through preparation of the ESMP, initial ACM testing, management of the Help Desk grievance mechanism, and worker induction on grievance redress and code of conduct.
World Bank	Reviews ESMP.

4. Baseline Environmental and Social Conditions

The MoLNR Office Complex demolition site is located within the central urban area of Port Vila, occupying approximately 0.35 hectares within a long-established government precinct. The area is highly modified, dominated by administrative buildings, paved surfaces, car parks, and municipal utilities. No additional baseline environmental or social studies are required given the urban context, low ecological sensitivity, and temporary nature of demolition impacts.

4.1 Physical Environment

4.1.1 Topography

The site is gently sloped (approximately 3–5%) from south to north, with elevations ranging between 21.5 m and 24.5 m above sea level. This gradient directs surface runoff toward an existing northern drainage channel, highlighting the need for temporary erosion and sediment controls during demolition. The generally level platform created by previous site preparation provides favourable access for machinery and material handling, reducing the risk of instability during demolition operations. Minor micro-topographic variations—such as depressions, compacted areas, or historical construction cuts—may temporarily hold water during rainfall events and should be monitored to avoid pooling or localised erosion.

4.1.2 Drainage

Surface drainage on and around the site is characterised by overland flow paths that feed into the municipal stormwater network. The demolition footprint does not contain natural streams or wetlands; however, road drains and peripheral channels must be protected from sediment, debris, and hazardous waste. During heavy rainfall, overland flow may intensify, making silt controls and debris management essential. The northern drainage corridor forms part of a broader urban catchment that discharges toward the coastal zone of Port Vila Harbour, which is situated 324m from the demolition site. Maintaining clean, unobstructed drainage lines is critical to preventing downstream sedimentation and urban water quality impacts. Past construction on and around the site has created a mostly impervious surface, increasing runoff velocity and reducing infiltration potential.

4.1.3 Soils and Subsurface Conditions

The soils consist mainly of calcareous urban soils and mixed fill from previous construction activities. Erosion risk is low due to the gentle slope and existing hard surfaces. While no contaminated soils have been identified, legacy construction materials (including asbestos and lead-based paint) may be present within structures or underground services and are addressed through hazardous materials controls outlined in Section 6 and Annex 2.

The underlying geological substrate in central Port Vila typically consists of uplifted coral limestone, which is structurally stable and provides good bearing capacity for heavy machinery. The presence of compacted artificial fill suggests that subsurface conditions are unlikely to present geotechnical constraints during demolition, though care will be needed when breaking foundations or excavating to avoid disturbance of potential contaminants embedded in the soil profile.

4.1.4 Surface Water, Groundwater and Flood Risk

There are no surface water bodies within the demolition footprint. Flood risk is low due to site elevation above the coastal floodplain. Although groundwater data is unavailable, spill

prevention measures remain necessary because stormwater drains ultimately connect to marine receiving environments.

4.1.5 Ambient Air Quality

- Air quality: Generally good, affected locally by vehicle emissions and nearby construction.

Demolition is expected to generate increased dust levels.

4.1.6 Noise

Noise levels reflect a typical urban environment influenced by traffic and normal government office activity:

- Background noise: 45–55 dB(A) (traffic, human activity).

Demolition is expected to cause short-term elevated noise levels.

4.1.7 Climate and Rainfall

Port Vila experiences a tropical maritime climate with high humidity, temperatures averaging 23–30°C, and annual rainfall of 2,300–2,500 mm. Prevailing winds are southeast trade winds (~15–25 km/h). The wet season (November–April) may increase runoff and sediment mobilisation, requiring careful scheduling of demolition works and maintenance of erosion controls. Worker heat stress management is also required due to climatic conditions.

4.1.8 Flora

Vegetation on site is predominantly modified and ornamental. This includes scattered shade trees such as *Delonix regia* and *Terminalia catappa*, low shrubs, and maintained lawn areas. No native forest, protected species, or sensitive habitats are present. Minor trimming or removal may be required for access; however, where feasible, mature trees providing shade should be protected from machinery damage.

4.1.9 Fauna

Faunal presence is limited to common urban species such as myna, silvereye, dove, gecko, skink, and common insects. No threatened or protected species are known to occur. A brief pre-demolition inspection for nesting birds or small fauna in roof spaces is sufficient.

4.2 Social Environment

4.2.1 Land Use and Sensitive Receptors

The demolition footprint is located entirely on government-owned land used for administrative purposes. Surrounding land uses include government offices, with sensitive receptors noted as six private residences, one church, and one school located within 100 m of the site perimeter as shown in Figure 3 below. It is anticipated that the sensitive receptors may be impacted by noise, minor interruptions to traffic flow and increased safety risks from the introduction of heavy machinery.

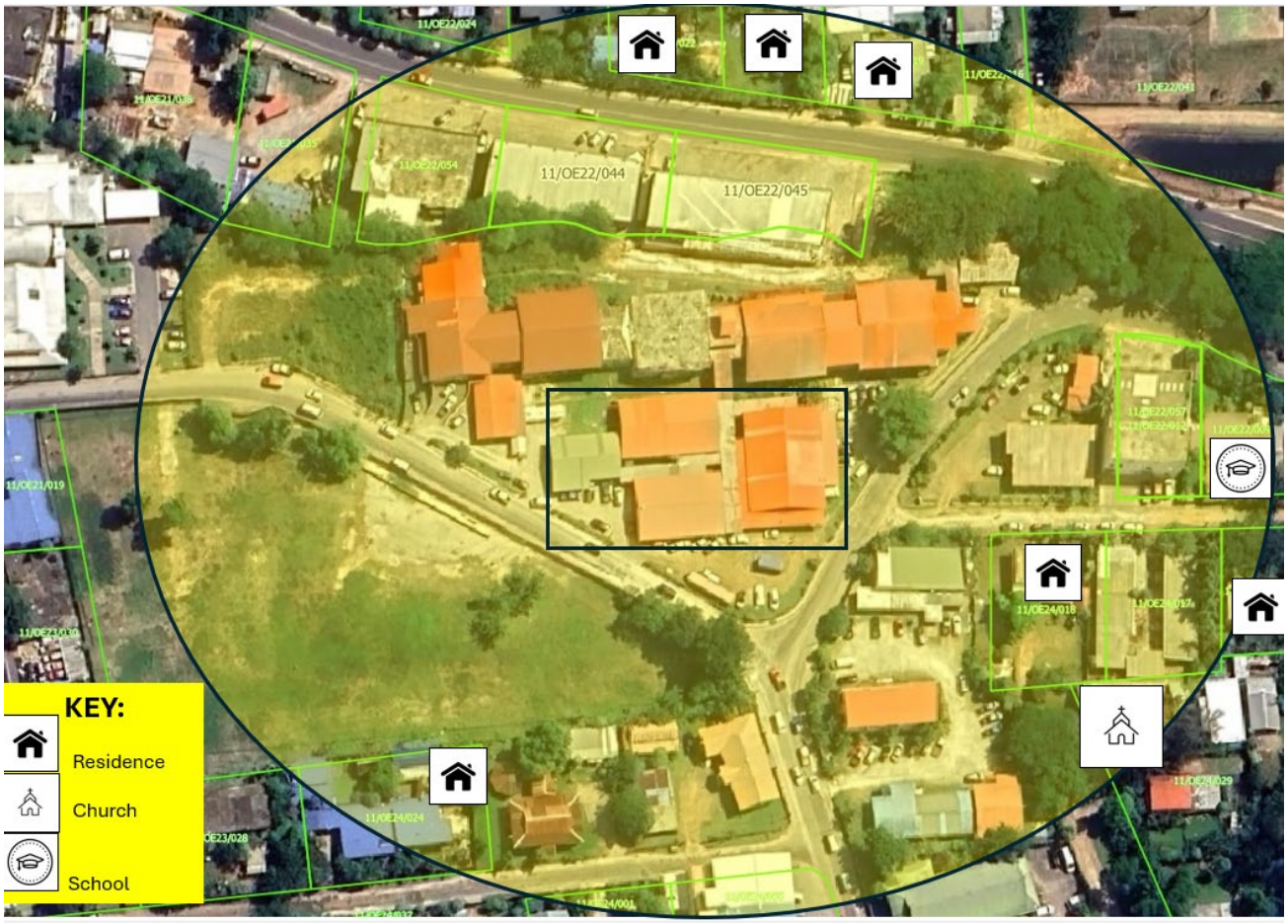


Figure 11. Image showing scope of demolition in black rectangle and 100m radius in black shaded oval with Sensitive Receptors marked.

No residential households, businesses, or informal users are located within the demolition footprint. **No land acquisition, involuntary resettlement, or economic displacement applies**, and ESS5 is not triggered.

4.2.2 Population and Demographic Context

The area has a high daytime population comprising government staff, service users, and pedestrians. These groups may experience temporary inconvenience from noise, dust, or access restrictions during demolition.

4.2.3 Livelihoods and Economic Activity

Economic activity in the vicinity is dominated by public sector operations and small businesses. Demolition works are not expected to disrupt livelihoods beyond temporary nuisance impacts such as reduced walkability or short-term traffic disruption.

4.2.4 Public Infrastructure and Services

The demolition site is serviced by municipal utilities—including water, electricity, drainage, and telecommunications—and is integrated into the established road and pedestrian network. Within the site there is an underground (no overhead) electrical infrastructure including two transformer units and two electricity meters. There is an underground water supply system, which drains into a single, large underground septic and soakage system. The water and

electric utility provider, UNELCO, has been notified of the demolition and will work directly with the demolition contractor to map utilities. There are no underground gas services.

Essential public services located in proximity to the site include government offices, bus and taxi routes, and a school and a church. Utility mapping and maintenance of safe pedestrian and vehicle access, will be essential to prevent disruptions to public service delivery during demolition.

4.2.5 Traffic and Road Safety

The demolition site fronts a paved, two-lane, road with significant pedestrian and vehicle traffic. Peak traffic of approximately 160 vehicles per hour is anticipated from 7:30 to 8:30 in the morning and 4:30 to 5:30 in the afternoon. Demolition activities will introduce heavy vehicles into this environment, increasing safety risks. A Traffic Management Plan is therefore required and addressed under Section 6.

4.2.6 Cultural Heritage

The Vanuatu Cultural Centre has confirmed that no known archaeological or cultural heritage sites have been identified within or near the demolition footprint. Nevertheless, a chance-find procedure applies in accordance with Annex 3 should artefacts or remains be encountered.

4.2.7 Health and Safety Context

Public and worker health and safety risks include dust and hazardous waste exposure, noise/vibration, fire/electric hazards, falling debris, accidents, and interaction with demolition machinery.

4.2.8 Stakeholders

Key stakeholders include government employees, neighbouring ministries, nearby residents, school and church users, business operators, road users, and pedestrians. Engagement with these groups is addressed under Section 9.

4.2.9 Stakeholder Consultations To-Date

Consultations undertaken during ESMP preparation are summarised in Table 6. These consultations confirm regulatory requirements, sensitive receptor locations, and mitigation expectations.

Table 6. Consultations undertaken in preparation of the ESMP

Date	Name of Organization (Govt etc.)	Meeting Objective
29 October 2025	Department of Environment Protection & Conservation (DEPC)- Damien Hinge- Compliance Officer, Trevor Muerifar- EIA officer, Pete Bringans- Building + Roofing Vanuatu.	Asbestos Legislation, Protocols and Survey
5 November 2025	Geology and Mines Unit- MoLNR- Camillia Bani- Commissioner of Mines.	Results of the bore testing/geotechnical investigation
11 November 2025	Vanuatu Cultural Centre- Iarawai Philip.	Determine if tabu or heritage sites located within 100m of Demolition site- George Pompidou

17 November 2025	Public Works Department- Road Administrator- Nathan Tabi- Road Administrator + Team.	Process and Requirements for Demolition work
17 November 2025	MOLNR- Corporate Services Unit- Jay Hinge- Executive Officer	Funding and resources for Demolition
17 November 2025	Port Vila City Council (PVCC)- Manses Fatdal- Senior Planner.	Process, Permits and Approvals
18 November 2025	Geology and Mines Unit- MoLNR- Camillia Bani- Commissioner of Mines	Investigation Report for George Pompidou
19 November 2025	Port Vila City Council- Manses Fatdal- Senior Planner.	Process, Permits and Approvals
24 November 2025	MOLNR- Corporate Services Unit- Jay Hinge- Executive Officer.	Follow up on Funding and resources for Demolition
28 November 2025	Public Works Department- Safeguards- Ann Tosiro- Senior Safeguards Officer, Sophia Smith- Social Safeguards officer.	Traffic Management during Demolition
28 November 2025	Department of Water Resources- Erie Sami-DoWR Staff & Wastewater Task Force Member.	Septage System in the George Pompidou Compound
1 December 2025	Port Vila City Council- Manses Fatdal- Senior Planner.	Collect Permit from PVCC
2 December 2025	UNELCO	Enquire about Process for utilities during demolition works.
2 December 2025	Department of Urban Affairs and Planning- Mark Vaughan.	Gather information on previous demolitions in Port Vila.

Table 7: Summary Table – Environmental & Social Baseline.

Environmental and Social Aspects	Observation	Implications for Demolition
Elevation	21.5–24.5 m ASL	Low flood risk; minor runoff movement
Slope Direction	South → North	Install downslope runoff and sediment controls
Drainage	Urban drainage channel north; roadside drains	Protect drains; prevent wash water discharge
Soil	Calcareous fill; possible legacy contaminants	Screen for asbestos/lead; manage spoil
Groundwater	No data available	Strict spill prevention
Air & Noise	Urban baseline; moderate traffic noise	Dust suppression; noise limits

Climate	Tropical wet/dry; heavy rain Nov–Apr	Plan works in drier periods; maintain erosion controls
Vegetation	Scattered non-native ornamentals	Minimal removal; protect landscaping
Fauna	Common urban species; no sensitive fauna	Pre-demolition nest/fauna check
Land Use	Government administrative precinct	No displacement; access management required
Population Exposure	Government staff, visitors, pedestrians	Notify users; manage dust/noise; secure site
Livelihoods	Public sector, small businesses, transport	Maintain access; temporary traffic arrangements
Public Infrastructure	Roads, utilities, drains	Avoid service disruptions; protect assets
Traffic	Busy urban road frontage	Traffic management plan required
Cultural Heritage	No known sites	Implement chance-find procedures
Health & Safety	Public proximity	Strong safety & security controls, fencing, exclusion zones, signage, hazardous materials control, emergency preparedness
Labour Management and OHS	Ensure safe, fair working conditions	Make demolition safe for workers via LMP, OHS plans, training, PPE, supervision, worker GM.

5. Environmental and Social Risks and Impacts

The demolition of the MoLNR Office Complex will generate environmental and social impacts typical of medium-scale demolition works in an urban administrative setting. Based on the baseline conditions described in Section 4, the majority of impacts are **temporary, localised, and reversible**, occurring primarily during active demolition and waste removal. With appropriate mitigation and monitoring measures in place, significant or long-term adverse impacts are not anticipated.

Table 8: Environmental and Social Impact Assessment for Demolition Works.

Category	Description of Potential Risks and Impacts	Likelihood / Magnitude	Receptors
Air Quality (Dust & Emissions)	Short-term increases in PM10/PM2.5 dust and silica dust at and beyond the site boundary during active demolition and debris loading; potential asbestos fibre releases if ACMs is present and mishandled.	Likely; Moderate	Nearby office workers, visitors, pedestrians, nearby residences, workers
Noise & Vibration	Elevated dB(A) levels from breakers and trucks, and ground vibration (mm/s) affecting adjacent buildings.	Likely; Moderate	Government office workers, pedestrians, nearby residences, school and possibly church goers
Soil & Land Contamination	Changes in turbidity of nearby drains as a result of runoff carrying fines; localized soil contamination from fuels or legacy hazardous materials.	Possible; High if uncontrolled	Workers, environment
Surface Water / Drainage	Sediment, debris, or hazardous waste entering roadside drains or the downstream stormwater channel.	Possible; Moderate	Urban drainage system; downstream receiving environment
Waste Generation	An increase in solid waste volumes creating temporary stockpiles and frequent haul trips. Debris will include concrete, brick, plaster, timber, metals, and glass, with hazardous fractions (possible asbestos, lead paint, mercury lamps, refrigerants, oils, possible PCBs) requiring segregation and licensed disposal. Expect short-term boundary dust increases during handling.	Certain; High	Bouffa landfill system, waste handlers. Bouffa landfill is a licensed waste disposal site, operated by the Port Vila City Council. DEPC have designated an ACM disposal area within Bouffa if required. If ACM is found and the ACM plan activated then further assessments will be conducted to ensure the receiving cells at BL are suitable for ACM. Upgrade works maybe required.
Vegetation & Fauna	Removal of ornamental trees/shrubs; disturbance of minor fauna (birds, reptiles).	Possible; Low	Urban vegetation, common fauna

Traffic & Access	Temporary impacts confined to demolition and hauling periods, with heavy vehicle movements, lane/footpath closures, and rerouted paths will raise peak traffic and reduce local capacity relative to baseline. Pedestrians and nearby users may face longer travel times and intermittent queuing; emergency access needs careful planning to avoid obstruction.	Likely; Moderate	Road users, pedestrians, public transport
Community & Public Health & Safety	Risks from dust, noise, falling debris, or unauthorised access to the site, Road Traffic Accidents (RTAs) from heavy construction traffic.	Possible; High	General public, local community, government staff, visitors
Worker Health & Safety	1.Structural instability and collapse: Partially demolished or damaged elements can fail unexpectedly, causing crush injuries or fatalities. Baseline risk increases with any pre-existing building damage or hidden defects; 2.Falling objects and debris: Overhead hazards from tools, materials, and demolition fragments can cause head, eye, and extremity injuries without strict exclusion zones, chutes, toe-boards, and PPE; 3.Working at heights: Increased fall-from-elevation risks from scaffolds, ladders, roofs, and edges of partially demolished structures; requires fall prevention plans, barriers/rails, and harness systems; 4.Heavy machinery and vehicle movement: Collision/crush risks from excavators, loaders, and trucks due to limited operator visibility, backing movements, and mixed traffic; increases need for	Possible; High	Salvage and demolition workers

	segregation, trained flaggers, speed limits, and high-visibility PPE; 5.Dust, noise, and vibration: Elevated exposure to particulates (including respirable silica), nuisance and hearing-loss risks from demolition equipment, and vibration impacts; the baseline must capture sensitive receptors and require controls (wet methods, barriers, maintenance, hearing protection, scheduling); 6.Hazardous building materials: Potential presence of asbestos-containing materials, lead-based paints, mercury in electrical components, and PCBs; baseline requires pre-demolition surveys, selective removal by trained personnel, task-specific PPE and regulated disposal; Electrical and utilities hazards: Contact with live wiring and un-isolated services (water, gas) can cause electrocution, fire, or flooding; baseline must include utility mapping, lockout/tagout, and isolation procedures;		
Utility Disruption	Accidental damage to underground or overhead utilities	Unlikely; Moderate	Government offices, service users
Social and Livelihood Impacts	Temporary inconvenience due to noise, dust, access restrictions	Possible; Low	Nearby residents, businesses, service users

Cultural Heritage / USO (Chance Finds)	Chance discovery of cultural materials or UXO during excavation.	Unlikely; Low	Vanuatu Cultural Centre or Vanuatu Military Force (VMF)

5.1 Summary of Impact Significance

The identified impacts are characteristic of short-duration demolition works in an urban setting and do not involve land acquisition, displacement, or permanent livelihood loss. The most significant risks relate to **public safety (ESS4)** and **worker health and safety (ESS2)**, both of which are addressed through strict site controls, exclusion zones, controlled demolition methods, and compliance with OHS requirements.

5.2 Residual Impacts

With full implementation of the mitigation and monitoring measures outlined in Sections 6 and 7, **residual environmental and social impacts are expected to be minor and acceptable**. No residual impacts requiring additional assessment, offsetting, or long-term management have been identified.

6. Environmental and Social Mitigation Plan

This section sets out mitigation measures to avoid, minimise, or manage the environmental and social impacts identified in Section 5. Measures follow the mitigation hierarchy of **avoidance, minimisation, control, and management**, and are consistent with national regulations and relevant World Bank Environmental and Social Standards, particularly ESS2, ESS3, ESS4, and ESS10.

Mitigation measures are organised by project phase—**Pre-Demolition**, **Demolition**, and **Decommissioning**—to reflect the sequencing of risk controls and good international practice. This approach ensures that risks are identified and mitigated before works commence, actively managed during demolition, and fully addressed through site clean-up and close-out activities.

Public risk (ESS4) will be mitigated through assessment of community risks from demolition—structural instability of adjacent buildings, flying debris, dust/noise/vibration, traffic disruptions, hazardous waste transport, fire/electric hazards—and design proportionate mitigation in ESMPs/CHS plans using the mitigation hierarchy.

The contractor will establish exclusion zones and secure perimeters; schedule works to minimize public exposure; issue advance public notifications; provide safe pedestrian rerouting, traffic and road safety management, and signage; coordinate with authorities for permits and emergency response

Control dust and emissions (wet methods, coverings), manage noise/vibration (time windows, monitors), and monitor impacts on vulnerable groups; implement emergency preparedness (sirens, drills, clear evacuation procedures) and community GRM for concerns/complaints

Worker safety (ESS2) will be ensured through preparation and implementation of a contractor OHS plan aligned with WBG EHS Guidelines, covering task-specific method statements (e.g., manual demolition, mechanical demolition), hazard identification, and controls for falls, struck-by, utilities isolation, dust/silica, noise, vibration, and handling of hazardous materials (e.g., asbestos, lead paint).

Workers will receive training on safe systems of work (e.g., sequencing, scaffolding/edge protection, machine operation, lock-out/tag-out for electrical and gas), emergency rescue (confined space, collapse), and incident reporting; provide and enforce PPE (respirators, eye/face, hearing, gloves, safety footwear).

All mitigation measures are **mandatory** and form part of the Contractor's obligations under the demolition contract.

Table 9: Mitigation Measures for Identified Environmental and Social Impacts

A. Pre-Demolition Phase				
Impact / Issue	**Mitigation Measure**	**Responsibility**	**Timing**	**Monitoring Indicator**
Community risks (ESS4) – proximity of public, adjacent buildings	Assess community health and safety risks associated with demolition, including structural instability of adjacent buildings, falling debris, dust, noise, vibration, traffic disruption, hazardous waste transport, and fire/electrical hazards; apply mitigation hierarchy in ESMP and Community Health & Safety (CHS) measures	Contractor Technical review by PWD	Prior to mobilisation	Risk assessment documented and approved
Public access and safety (ESS4)	Establish secure site perimeter with fencing, hoarding, warning signage, lighting, and controlled access; define exclusion zones and no-go areas	Contractor Technical review by PWD	Prior to site establishment	Perimeter secured; no unauthorised access
Traffic and pedestrian safety (ESS4)	Prepare and obtain approval for Traffic Management Plan (TMP); identify safe pedestrian rerouting, crossings, and traffic control measures; coordinate with PVCC and police where required	Contractor Technical review by PWD	Prior to demolition	TMP approved and implemented to plan; notifications issued
Community awareness & notifications (ESS4)	Provide advance public notifications to neighbouring offices, residents, school, church and businesses on schedule, risks, contact points, and GRM	MoLNR / Contractor	Prior to works	Records of notifications
Utilities and fire/electrical hazards (ESS4 & ESS2)	Map and verify underground and overhead services; isolate and lock-out/tag-out utilities; coordinate with UNELCO and service providers	Contractor Technical review by PWD & UNELCO	Prior to works	Utility clearance certificates

Hazardous materials baseline (ESS3 / ESS2 / ESS4)	Conduct hazardous materials surveys and testing; confirm ACM status; prepare contingency measures in line with Annex 2 (ACMP)	Contractor / Licensed Specialist Technical review by PWD & DEPC	Prior to demolition	Survey reports; approvals in place
Erosion and sediment control (ESS 3)	Install and maintain sediment controls if appropriate (e.g., silt fences, sediment socks, gravel berms) at downslope boundaries and around drainage inlets; protect stockpiles with covers and perimeter controls; use wheel-wash or stabilized site entries; prevent discharge of sediment-laden water; inspect and repair controls daily and after rainfall	Contractor; Technical review by PWD	Throughout demolition	No visible sediment leaving site; controls inspected daily and after rain; records of maintenance
Worker preparedness (ESS2)	Conduct OHS induction and task-specific briefings; train workers on safe systems of work, emergency response, incident reporting, and GRM	Contractor Technical review by PWD	Prior to mobilisation	Training and induction records
Permits and approvals	Secure all demolition, environmental and municipal permits	MOLNR/Contractor Technical review by PWD & DEPC	Prior to works	Valid permits on site

B. Demolition Phase

Impact / Issue	**Mitigation Measure**	**Responsibility**	**Timing**	**Monitoring Indicator**
Public safety – falling debris & structural instability (ESS4)	Maintain exclusion zones; control demolition sequencing; prohibit public access beneath active works; protect adjacent structures	Contractor Technical review by PWD	Throughout demolition	No public safety incidents

Dust and emissions (ESS4 / ESS2)	Apply wet methods, misting, and debris dampening; cover trucks; suspend works during high winds; monitor boundary dust	Contractor Technical review by PWD & DEPC	Daily	Dust observations; complaints log
Noise and vibration (ESS4 / ESS2)	Restrict high-noise works to 0700–1800; maintain equipment; monitor noise at sensitive receptors; adjust sequencing if limits approached	Contractor Technical review by PWD & DEPC	Throughout	Noise logs; compliance with hours
Traffic and road safety (ESS4)	Implement TMP; use signage, barriers, marshals; schedule haulage to reduce peak exposure	Contractor Technical review by PWD	Throughout	No traffic incidents
Waste Management (ESS3 / ESS4)	Waste management will follow the mitigation hierarchy (avoid, reduce, reuse, recycle, dispose), with a preference to salvage and reuse materials in the construction of the new MoLNR Headquarters where feasible and appropriate. Residual solid waste is to be disposed of in a licensed sanitary landfill., Segregate hazardous waste and manage as per the hazardous waste management plan; transport using licensed carriers; apply consignment note (manifest) system; dispose at licensed facilities	Contractor Technical review by PWD & DEPC	As required	Manifests; disposal receipts
Emergency preparedness (ESS4 & ESS2)	Maintain emergency response procedures (collapse, fire, spill, electrical incident); coordinate with emergency services; conduct drills where feasible	Contractor Technical review by PWD	Throughout	Emergency equipment in place; drills recorded
Community GRM (ESS10 / ESS4)	Operate VARS Help Desk; respond promptly to dust, noise, access or safety complaints	Contractor / VARS PMU	Throughout	GRM register updated

Worker safety – demolition activities (ESS2)	Implement OHS Plan aligned with WBG EHS Guidelines, including method statements for mechanical and manual demolition; manage risks from falls, struck-by hazards, plant operation, utilities, dust/silica, noise, vibration	Contractor Technical review by PWD	Daily	OHS inspections; incident records
PPE enforcement (ESS2)	Provide and enforce PPE: respirators, eye/face protection, hearing protection, gloves, safety footwear, fall-arrest systems	Contractor	Daily	PPE compliance checks
Hazardous materials exposure (ESS2)	Apply Annex 2 ACMP if ACM encountered; licensed removal; air monitoring; clearance certification prior to continuation	Contractor / Specialist	As required	Clearance certificates
Cultural heritage / UXO (ESS8 / ESS4)	Implement stop-work and notification procedures per Annex 3	Contractor	As needed	Protocol followed

C. Decommissioning / Site Close-Out Phase				
Impact / Issue	**Mitigation Measure**	**Responsibility**	**Timing**	**Monitoring Indicator**
Residual public safety risks (ESS4)	Remove remaining hazards; dismantle exclusion zones only once site is safe; restore pedestrian and traffic access	Contractor Technical review by PWD	Post-demolition	Site safety inspection

Waste due diligence (ESS3)	Confirm all waste streams (including hazardous) have been transported and disposed at licensed facilities with full documentation	Contractor Technical review by PWD & DEPC	Close-out	Final waste receipts
Site clean-up and reinstatement	Remove temporary facilities, fencing, signage; reinstate drainage and surfaces	Contractor Technical review by PWD	Post-works	Clean site confirmation
Worker demobilisation safety (ESS2)	Safe removal of camps, equipment, and temporary services	Contractor Technical review by PWD	Demobilisation	No incidents
Final reporting	Submit Demolition Completion Report (waste, OHS, incidents, GRM)	Contractor Technical review by PWD & DEPC	Close-out	Report accepted

6.1 Integration with Other ESMP Components

Mitigation measures in this section are supported by:

- **Annex 2 – Asbestos Control and Management Plan**, governing all asbestos-related risks;
- **Annex 3 – Chance Find Procedure**, governing unexpected discoveries;
- **Annex 5 – Occupational Health and Safety,** outlines the measures to protect workers' health and safety during the demolition activities; and
- **Section 9 – Stakeholder Engagement and Grievance Redress**, ensuring timely communication and response to concerns.

Failure to implement these measures may result in suspension of works by the supervising authorities.

6.2 Feasibility and Residual Risk

All mitigation measures are standard, feasible, and appropriate for the scale and context of the demolition works. With implementation of these measures, residual risks are considered low and acceptable, requiring no additional mitigation beyond routine monitoring.

7. Monitoring Plan

7.1 Approach and Objectives

Monitoring during demolition will focus on **high-risk activities**, **downwind and downslope receptors**, and **periods of elevated risk** (e.g. façade removal, heavy haulage, high winds, and rainfall events). Monitoring is designed to:

Verify effective implementation of mitigation measures;

Detect exceedances early and trigger corrective action;

Protect community health and safety (ESS4) and worker health and safety (ESS2); and

Provide auditable records for regulatory oversight and World Bank review.

Monitoring combines instrument-based measurements, visual inspections, photo-based checklists, and community feedback, supported by clear numeric or observable trigger levels for action.

Table 10: Environmental and Social Monitoring Plan.

A. Air Quality, Noise, Vibration and Runoff (ESS4/ESS2/ESS3)				
Aspect	**Monitoring Method**	**Location & Frequency**	**Trigger Level**	**Corrective Action**
Dust (PM10 / PM2.5)	Handheld PM10 monitor; visual observation	Downwind site boundary; daily during demolition and continuously during façade removal or high winds	Exceeds local standard or visible dust plume beyond boundary	Increase wet suppression; slow or stop works; cover loads; adjust sequencing
Wind conditions	Portable wind gauge	Downwind boundary; daily and prior to dusty works	Sustained winds > agreed site threshold	Suspend high-dust activities
Noise	Class-1 sound level meter	Nearest sensitive receptors (residences, school, church); weekly and during high-noise activities	Exceeds permitted daytime limits or repeated complaints	Adjust work methods; temporary barriers; reschedule works
Vibration	Portable vibration monitor	Adjacent buildings closest to demolition	Exceeds guideline PPV limits	Modify demolition technique; reduce breaker intensity
Stormwater / runoff	Visual inspection; turbidity check after rain	Roadside drains and downstream channel; after rainfall	Visible sediment plume or blockage	Clean drains; reinforce silt controls; halt works if needed

B. Waste, Hazardous Materials and Utilities (ESS3/ ESS2 / ESS4)				
Aspect	**Monitoring Method**	**Frequency**	**Trigger Level**	**Corrective Action**
Waste segregation	Daily photo-based checklist	Daily	Mixed waste observed	Stop loading; re-segregate; retrain crew
Waste transport & disposal	Review waste manifest and disposal receipts	Weekly	Missing or incomplete records	Suspend hauling until compliant

Hazardous waste / ACM	PPE checks; containment inspection; manifest review	Daily during handling	Breach of containment or PPE	Stop work; isolate area; remediate
Chain of custody	Consignment note reconciliation	Weekly	Incomplete manifests	Escalate to PMU; corrective action
Utilities protection	Permit-to-dig; marked services inspection	Before excavation	Utility strike or near-miss	Immediate stop-work; investigation
Target	—	—	**Zero utility strikes**	Escalation under ESIRT if required

C. Traffic, Public & Community Safety and Site Controls (ESS4)

Aspect	Monitoring Method	Frequency	Trigger Level	Corrective Action
Truck movements	Gate log / truck count	Daily	Exceeds TMP limits	Reschedule haulage
Vehicle speed	Spot checks	Daily	Speeding observed	Enforce limits; retrain drivers
Pedestrian safety	Visual inspection; photos	Daily	Unsafe crossings or barriers	Immediate correction
Fencing & signage	Photo-based checklist	Daily	Gaps or damaged fencing	Repair immediately
Emergency readiness	Equipment and access check	Weekly	Equipment missing or blocked	Rectify before works continue

D. Worker Health and Safety (ESS2)

Aspect	Monitoring Method	Frequency	Trigger Level	Corrective Action
PPE compliance	Visual checks; photos	Daily	Non-compliance observed	Stop task; retrain

Toolbox talks & Training	Attendance records	Daily	Missed briefing	Conduct before work
High-risk tasks	Supervisor presence	Continuous	Unsafe practice	Immediate stop-work
Incidents / near misses	Incident register	Ongoing	Any LTI or serious near miss	Investigate; ESIRT if required

E. Community Engagement and GRM (ESS10/ESS4)				
Aspect	**Monitoring Method**	**Frequency**	**Trigger Level**	**Corrective Action**
Help Desk usage	Review GRM log	Weekly	Repeated dust/noise complaints	Adjust controls/schedule
Community check-ins	Informal briefings	Weekly	Escalating concerns	Targeted mitigation
Response time	Log review	Continuous	Delayed acknowledgement	Immediate follow-up

7.2 Calibration, Reporting and Oversight

All monitoring instruments will be calibrated in accordance with manufacturer guidance.

- The Contractor will maintain **daily photo-based inspection records** covering dust suppression, fencing, silt controls, waste segregation, PPE compliance, and traffic management.
- **Weekly monitoring summaries** will be shared with PWD and DEPC.
- Any exceedance of trigger levels will be recorded, investigated, and corrective actions documented.
- Serious incidents or repeated non-compliance may trigger escalation in accordance with **Annex 4 – ESIRT Notification Protocol**.

7.3 Close-Out Monitoring and Documentation

At completion of demolition, the Contractor will submit a **Demolition Completion Report**, including:

- Final air, noise, vibration and drainage inspection results;
- Waste disposal records and reconciled manifests;
- Hazardous material and asbestos clearance certificates (if applicable);
- OHS performance summary; and
- GRM close-out status.

No site handover will occur until close-out checks confirm that environmental and safety risks have been adequately addressed.

8.Budget and Schedule

8.1 Indicative ESMP Budget

The table below presents an indicative budget framework for implementation of environmental and social management measures during demolition. Final costs will be confirmed following contractor procurement and preparation and approval of the C-ESMP. All mitigation and monitoring costs will be included in the demolition contract unless otherwise stated.

The contract is a **lump sum salvage and demolition contract valued at VUV 37,300,000 (USD 326,790)** and is aligned with Public Works Department (PWD) Specifications. Environmental and social management costs are embedded within preliminaries, with Group 1 (General Causes) and Group 2 (Contractor's Establishment) collectively allowing for 10% of the total contract value. The CESMP activity will cover site establishment and safety, dust and noise control, traffic management, waste handling, OHS measures, and stakeholder notifications, with contingency for unforeseen issues managed within this allowance rather than as separate provisional sums. There is an exception made for ACM discovery, which would be subcontracted to a specialist and priced at that time. The **source of funds for Contractor costs are central Government development funds.**

Table 11. Indicative Environmental and Social Management Budget

ESMP Component	Key Activities / Cost Items	Responsibility	Indicative Cost (VUV)	(USD)	Remarks
Site establishment & safety	Fencing, hoarding, signage, exclusion zones, controlled access	Contractor	500,000	4,380	Included in contract
Dust suppression	Water spraying, equipment/hoses, water supply, wet methods, PPE for workforce, air monitoring PM10 checks	Contractor	600,000	5,256	Included in contract
Noise management	Equipment maintenance, PPE for workforce, noise monitoring at nearest receptors	Contractor	400,000	3,504	Included in contract
Traffic management	Traffic Management Plan implementation, signage, marshals	Contractor	600,000	5,256	Included in contract
Waste management	Segregation, loading controls, transport, landfill disposal fees	Contractor	800,000	7,008	Disposal receipts required
OHS measures	Training, inductions, toolbox talks, first aid, supervision (per Annex 5)	Contractor	300,000	2,628	ESS2 requirement
Stakeholder engagement	Notifications, meetings, printed notices	Contractor	80,000	700	ESS10 requirement
Environmental monitoring and reporting	Daily photo checklists, weekly summaries, basic instrument rental/calibration allowance	Contractor	77,000	675	

Contingency	Unforeseen environmental or social issues such as ACM discovery, utility relocation, adverse weather, community constraints	Contractor	373,000	3,267	10% of ES allowance
Total ES-related allowance (embedded in contract)			**3,730,000**	**32,680**	10% of contract value
Hazardous Materials / ACM (if discovered)	Specialist survey, testing, removal, packaging, transport, disposal	Specialist	TBC through Specialist contract		Separate specialist subcontract; priced only if triggered
Grievance management	VARS Help Desk operation	VARS PMU	Covered under VARS		No additional cost
Environmental monitoring	Site inspections, compliance checks	Contractor / PWD/ DEPC/PVCC	Covered under operational budget		Routine monitoring

8.2 Budget Notes

- All ESMP implementation costs are to be embedded within the demolition contract, except where government agencies provide in-kind support.
- Costs related to asbestos removal will only be incurred if ACM is encountered and will follow Annex 2 – Asbestos Control and Management Plan.
- Operation of the Grievance Redress Mechanism (Help Desk) is covered under the existing VARS Project budget.
- The final ESMP budget will be updated once Contractor procurement and CESMP is approved.

8.3 Indicative Implementation Schedule

The salvage and demolition works will be implemented over a short, clearly defined period. Dates are indicative and will be confirmed following contract award. Environmental and social management measures will be implemented throughout the salvage and demolition period, commencing prior to site establishment and continuing until site clearance and handover. Monitoring and reporting will occur on a daily to weekly basis, proportional to risk.

Table 12. Indicative Salvage and Demolition Schedule

Activity	Indicative Timing (Risk-Weighted)	Key Hold Points, Dependencies and Notes
Contract award	February 2026	Subject to NRC approval and completion of procurement process. No site access permitted prior to contract award.
Specialist procurement & permitting (parallel)	Feb–early March 2026 (2–4 weeks)	Advance booking of licensed waste haulers, landfill disposal slots, and (if required) ACM specialists. Obtain demolition permits and traffic control approvals. **Hold point:** all permits confirmed prior to mobilisation.
Pre-mobilisation planning	Late Feb–early March 2026 (1–2 weeks)	Finalisation and approval of Demolition Method Statement, Traffic Management Plan, OHS Plan, Waste Management Plan, and (if triggered) Asbestos Removal Control Plan. **Hold point:** approval of plans.
Contractor mobilisation	Early–mid March 2026 (2–4 days)	Site establishment, fencing, signage, utilities coordination. **Hold point:** written utility disconnection certificates (power, water, telecoms).
Salvage works	Mid March–early April 2026 (10–15 working days)	Manual dismantling and recovery of reusable materials. Duration expressed as a range to allow for weather and sequencing constraints. Weather allowance embedded (≈3–5 days).
Pre-demolition clearance	Late March–early April 2026 (2–5 days)	Structural verification, final utility confirmations, hazardous materials clearance. **Critical hold point:** demolition cannot proceed until written clearance issued (including ACM "clear" or completed removal certification if applicable).
Mechanical demolition	Early–mid April 2026 (5–8 working days)	Controlled, non-blasting demolition of four buildings. Duration includes contingency for rain and unplanned minor delays.
Waste removal & site clean-up	Concurrent–mid April 2026 (3–5 days)	Progressive waste removal by licensed contractors; final site levelling. Dependent on landfill access and haulage availability.
Demobilisation	Mid April 2026 (1–2 days)	Removal of temporary fencing, signage, and controls following PMU inspection.
Final reporting & handover	Late April 2026	Submission of Demolition Completion Report, waste disposal dockets, and clearance certificates.

8.4 Escalation and Schedule Control

Weather delays: If cumulative rain delays exceed five working days, the Contractor must notify the PWD and submit a revised micro-schedule within 48 hours.

Hazardous material discovery: Discovery of suspected ACM triggers immediate stop-work, specialist assessment, and schedule reset subject to regulatory clearance.

Permit or utility slippage: Failure to secure permits or disconnection certificates by the planned hold points will automatically defer downstream activities; no parallel demolition activities are permitted.

Governance: Any milestone slippage exceeding five working days requires escalation to PWD and formal approval of a revised programme.

9. Stakeholder Engagement and Grievance Redress

9.1 Introduction

Stakeholder engagement and grievance redress are essential components of the ESMP for the demolition of the MoLNR Complex. The demolition occurs within a vacant government precinct, however there are business houses, schools and residences within a 100m radius of the demolition site. Therefore, the demolition process will require a formal, transparent, and accessible Stakeholder Engagement and Grievance Redress Mechanism (GRM) to manage concerns from affected business houses, residential homeowners, the public, community, and institutional stakeholders.

The GRM outlined in this ESMP has been aligned with the **VARS Project Help Desk**, which will serve as the GRM for the demolition project. This will ensure that all grievances—environmental, social, safety-related, or administrative—are handled according to the VARS Project's established procedures.

The GRM ensures:

- Consistency with the VARS Project's safeguards framework
- Clear escalation levels and reporting requirements
- High transparency and accountability
- Accessible grievance channels for all community and institutional stakeholders

9.2 Stakeholder Engagement Strategy

Stakeholder engagement will follow VARS Project principles:

- Inclusiveness – all people and ministries potentially affected by demolition works can participate.
- Transparency – regular disclosure of project information.
- Responsiveness – timely feedback and resolution of concerns.
- Accountability – stakeholders know who is responsible and how actions will be taken.

Engagement includes formal notifications, meetings, signage, public and community information sessions, and ongoing communication between government, Contractor, affected ministries, and the general public and the local community.

9.3 Stakeholder Engagement Approach

Table 13: Stakeholder Engagement Table.

Stakeholder Group	Engagement Method	Frequency	Responsibility
Business houses, residences and institutions within 100m of the demolition site	Official memos, email notifications, pre-demolition meeting, Help Desk brochures	Initial + Weekly updates	Project Officer, VARS Social Officer – Help Desk
PVCC	Coordination meetings, waste disposal reporting	Prior to demolition	Contractor, Project Officer
DEPC	Environmental permits and reporting, incident notification	Prior to demolition + as needed	PMU, Project Officer
General public, local community, traffic & pedestrians	Signage, notices, safety barriers	Continuous	Contractor
Demolition Workers	Toolbox meetings, OHS training, briefings	Daily	Contractor
Police & Emergency Services	Traffic and emergency coordination	As needed	Contractor, Project Officer
Hazardous Waste Specialists	Technical coordination meetings	During hazardous removal	Contractor

9.4 Grievance Redress Mechanism (GRM)

The VARS Help Desk is the formal mechanism for managing all concerns related to demolition of the MoLNR Complex, including: (a) requests for information, (b) complaints, and (c) grievances.

The Help Desk aims to:

- provide an accessible way for affected people and institutions to seek information;
- resolve complaints quickly so that they do not escalate into grievances; and
- address and close grievances in a timely, effective and transparent manner that is consistent with the VARS Project Operations Manual and World Bank ESS10.

All concerns related to demolition – environmental, social, health and safety, labour, traffic, access, or damage to property – will be channelled through this Help Desk. The Contractor will

maintain a site-level complaints log and will support claimants to access the Help Desk where needed.

Access Points and Roles

The Help Desk is operated by the VARS PMU Social Team, comprising the Social Environment Specialist (SES), Social Development Specialist (SDS) and Social Officer. The **Social Officer** is the primary focal point and is responsible for: (i) holding the Help Desk phone, (ii) receiving and recording all contacts, and (iii) managing the Help Desk Register.

Stakeholders can lodge issues in several ways:

- completing a Help Desk Form;
- calling the dedicated Help Desk mobile numbers; or
- sending an email to the PMU Help Desk address.

Help Desk Forms will be made available through the demolition Contractor, MoLNR Project Officer, VARS Social Officer and on the MoLNR/VARS website. Claimants can choose to remain anonymous if they wish.

All Contractor staff working on the demolition are required to:

- inform stakeholders about the Help Desk;
- assist claimants to complete forms or make phone/email submissions; and
- immediately pass any received concern to the VARS Social Officer for registration.

Sensitive cases and referrals
Complaints related to Sexual Exploitation, Abuse or Harassment (SEAH) and any issues involving children are treated as **grievances from first contact** and are handled confidentially. In such cases:

- SEAH-related issues are referred immediately to the **Vanuatu Women's Centre (VWC)** for survivor-centred support;
- child-related issues are referred to the **Family Protection Unit** of the Vanuatu Police Force; and
- issues related to cultural heritage or human remains are referred to the **Vanuatu Cultural Centre**.

Process and Timeframes

The Help Desk follows a five-step process aligned with ESS10.

1. **Receive and Assess (within 1 day)**
    - Any MoLNR, VARS or Contractor staff can receive an issue, but the Social Officer is the formal first point of contact.
    - A Help Desk Form is completed, and the issue is classified as:
      A) Request for information or design change;
      B) Complaint; or
      C) Grievance.

- The Social Officer enters the case into the Help Desk Register, assigns a case number and a responsible officer, and identifies any referrals (VWC, Family Protection Unit, Cultural Centre, etc.) as required.

2. **Acknowledge (within 2 days of receipt)**
    - The claimant is contacted (in person, by phone or in writing) to confirm receipt, classification of the issue, and the proposed timeframe for investigation and response.
    - Where a referral agency is involved (e.g. VWC, Family Protection Unit, Cultural Centre), they will be invited to attend a follow-up meeting within one week to advise on next steps.
3. **Investigate (within 1 week of receipt)**
    - The assigned officer undertakes a fact-finding visit, reviews any evidence, and consults with the claimant and relevant stakeholders (e.g. Contractor, MoLNR, PVCC, DEPC).
    - The investigation confirms the nature of the issue and potential corrective actions.
4. **Respond (within 1 week of investigation)**
    - Investigation findings and proposed corrective actions are reviewed internally .
    - The proposed response is discussed with the claimant to agree an appropriate resolution, or to initiate an appeal if the claimant is not satisfied.
5. **Resolve and Close Out (within 1 month of investigation, or as soon as practicable)**
    - Agreed actions are implemented and follow-up is undertaken with the claimant to confirm effectiveness.
    - Once the claimant is satisfied, they sign the Help Desk Form and the case is marked “Resolved” in the register.
    - If the claimant remains dissatisfied, they may be referred to the courts or to the World Bank Grievance Redress Service (GRS). Cases may also be closed as “Unresolved” (where no agreement is reached) or “Abandoned” (where the claimant cannot be contacted for three months).

Timeframes are targets and may be adjusted for complex cases, but all efforts will be made to resolve demolition-related issues as quickly as possible to avoid escalation.

Escalation

If a claimant is not satisfied with the outcome at Social Team level, the issue can be escalated to the Project Manager and/or Director of MoLNR, who may assign a senior officer (or, in exceptional cases, request DG MoLNR sign-off on close-out).

At any time, claimants retain the right to:

- seek independent legal advice or pursue remedies through the courts; and/or

- lodge a complaint with the World Bank GRS.

Documentation, Monitoring and Reporting

The Social Officer maintains a **Help Desk Register** (Excel database) that records all requests, complaints and grievances, including: classification, description, risk rating, referrals, responsible officer, decisions, and final status (Resolved / Unresolved / Abandoned).

The Contractor will keep a site-level complaints log and provide weekly summaries to the PMU; all cases will be entered into the Help Desk Register to ensure a single consolidated record.

Help Desk data will be reviewed periodically to:

- identify recurrent demolition-related issues (e.g. dust, noise, access, traffic, damage to property);
- inform adaptive management and update mitigation measures.

Annex 1. Asbestos sampling and testing report

R J Hill Laboratories Limited
1/17 Print Place
Middleton
Christchurch 8024 New Zealand

0508 HILL LAB (44 555 22)
+64 7 858 2000
mail@hill-labs.co.nz
www.hill-labs.co.nz

Certificate of Analysis

Client:	Vanuatu Ministry of Lands & Natural Resources	Lab No:	4040555	A2Pv1
Contact:	Vanuatu Ministry of Lands & Natural Resources PMB 9007 Port Vila VANUATU	Date Received: Date Reported: Quote No: Order No: Client Reference: Submitted By:	25-Nov-2025 05-Dec-2025 Vanuatu Ministry of Lands & Natural Resources	

Sample Type: Building Material

Sample Name	Lab Number	Sample Category	Sample Weight on receipt (g)	Asbestos Presence / Absence	Description of Asbestos in Non Homogeneous Samples
Resource Centre	4040555.1	Cement Product	7.23	Asbestos NOT detected. Organic fibres detected.	N/A
Shefa Health	4040555.2	Cement Product	8.38	Asbestos NOT detected. Organic fibres detected.	N/A
Dept of Lands	4040555.3	Other #1	29.91	Chrysotile (White Asbestos) detected. Organic fibres detected.	N/A
MOLNR - CSU, DoWR Projects	4040555.4	Cement Product	8.40	Asbestos NOT detected. Organic fibres detected.	N/A
Geo & Mines Office and Lab	4040555.5	Cement Product	9.59	Asbestos NOT detected. Organic fibres detected.	N/A
Ministry of Health	4040555.6	Cement Product	6.22	Asbestos NOT detected. Organic fibres detected.	N/A

Glossary of Terms

- Loose fibres (Minor) - One or two fibres/fibre bundles identified during analysis by stereo microscope/PLM.
- Loose fibres (Major) - Three or more fibres/fibre bundles identified during analysis by stereo microscope/PLM.
- ACM Debris (Minor) - One or two small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
- ACM Debris (Major) - Large (>2mm) piece, or more than three small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
- Unknown Mineral Fibres - Mineral fibres of unknown type detected by polarised light microscopy including dispersion staining. The fibres detected may or may not be asbestos fibres. To confirm the identities, another independent analytical technique may be required.
- Trace - Trace levels of asbestos, as defined by AS4964-2004.

For further details, please contact the Asbestos Team.

Analyst's Comments

#1 Ceramic tile and levelling compound

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Building Material

Test	Method Description	Default Detection Limit	Sample No
Asbestos in Bulk Material			
Sample Category	Assessment of sample type. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	-	1-6
Sample Weight on receipt	Sample weight (approximate). Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.01 g	1-6
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	1-6

This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised. The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked * or any comments and interpretations, which are not accredited.

*Note that Building 3 is outside the scope of demolition for this project

Sample Type: Building Material			
Test	**Method Description**	**Default Detection Limit**	**Sample No**
Description of Asbestos in Non Homogeneous Samples	Form, dimensions and/or weight of asbestos fibres present. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	-	1-6

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed on 05-Dec-2025. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.

Belinda Hughes BSc, PGDipSci
Laboratory Technician - Asbestos

Annex 2. Asbestos Management and Control Plan

1. Purpose and Scope

This Asbestos Management and Control Plan (ACMP) applies to **all demolition, salvage, waste handling, and site restoration activities** associated with Buildings 1–4 within the MoLNR complex.

Although earlier screening and laboratory testing did not identify asbestos-containing materials (ACM) within accessible building elements, **asbestos risk cannot be excluded** in:

- underground services and pipework;
- fill materials;
- foundations;
- ceiling, wall, or service voids;
- other inaccessible or concealed locations.

Accordingly, this ACMP establishes **mandatory procedures and hold points** for asbestos identification, assessment, removal (if required), monitoring, clearance, disposal, and recordkeeping.

Mechanical demolition shall not commence until all asbestos preconditions set out in this ACMP are met and documented.

2. Regulatory and Standards Framework

This ACMP is aligned with:

- World Bank Group Environmental, Health and Safety (EHS) Guidelines;
- World Bank Good Practice Note on Asbestos;
- ILO Convention No. 162 (Asbestos);
- applicable Vanuatu environmental, waste management, and occupational health and safety requirements; and

Where national regulation is silent or incomplete, **GIIP and WB EHS requirements prevail**.

3. Mandatory Pre-Demolition Asbestos Survey and Register

3.1 Intrusive Refurbishment/Demolition Survey

Prior to any demolition or salvage works, the Project Proponent shall commission a **pre-demolition intrusive asbestos survey**, undertaken by a **competent and independent asbestos professional**.

The survey shall:

- include **destructive sampling**;
- cover all buildings, underground services, foundations, and inaccessible voids;
- assume materials contain asbestos **unless proven otherwise**; and
- document sampling locations, methods, photographs, and laboratory results.

3.2 Asbestos Register

The survey shall produce a **project-specific Asbestos Register**, including:

- confirmed ACM locations;
- assumed ACM (where access is not possible);
- material type and condition;
- friability classification; and
- recommended management or removal measures.

Hold Point 1:
No site mobilisation beyond fencing and signage may occur until the intrusive survey and Asbestos Register are completed and approved by DEPC.

4. **Roles and Responsibilities**

The following responsibilities apply to all demolition projects where asbestos is present or suspected.

Stakeholder	**Primary Responsibilities**
DEPC (Regulator)	• Review and approve asbestos-related submissions (surveys, removal plans, disposal proposals) • Conduct compliance inspections throughout demolition. • Issue directives or non-compliance notices when required. • Maintain national asbestos records and project documentation. • Approve and monitor disposal sites for asbestos waste. • Perform clearance inspections and issue Clearance Certificates (or endorse independent clearance certification)
Project Proponent (MoLNR)	• Ensure an asbestos survey is conducted by competent personnel. • Provide resources for safe asbestos removal, testing, and waste disposal.

	• Engage licensed asbestos removalists and qualified consultants. • Ensure all contractors adhere to the ESMP, this ACMP and applicable legislation.
Independent Asbestos Assessor (IAA)	• Undertake intrusive surveys and sampling. • Oversee asbestos removal works. • Conduct air monitoring and clearance inspection. • Issue clearance and re-occupation certificates.
Approved Asbestos Removalist (AAR)	• Perform asbestos removal strictly according to the approved Asbestos Removal Control Plan. • Maintain containment systems, PPE, equipment, and decontamination units. • Document removal volumes, methods, and disposal manifests. • Ensure staff are trained and follow safety procedures. • Immediately notify PWD/MoLNR and DEPC of incidents or unexpected findings.
Demolition Contractor	• Integrate asbestos removal sequencing into demolition methodology. • Ensure no demolition occurs before asbestos clearance is issued. • Maintain exclusion zones, signage, and traffic controls. • Implement dust suppression, emergency procedures, and waste handling protocols.

5. Asbestos Removal and Control Measures

5.1 Removal Preconditions

If ACM is identified or suspected:

- all demolition and salvage works shall stop;
- ACM shall be removed before mechanical demolition;
- removal shall be undertaken only by competent asbestos personnel;
- an approved Asbestos Removal Control Plan (ARCP) is mandatory.

5.2 Control Measures

Controls shall be risk-based and include, as applicable:

- negative-pressure enclosures for friable ACM;
- full decontamination units (personnel and equipment);
- wet methods for all asbestos removal;
- HEPA-filtered equipment;
- controlled exclusion zones with authorised access only.

6. Air Monitoring and Clearance

6.1 Monitoring Types

Air monitoring shall be conducted by the Independent Asbestos Assessor and include:

- Background monitoring (pre-works);
- Control monitoring (during removal);
- Clearance monitoring (post-removal).

6.2 Clearance Criteria

Clearance shall be achieved only when:

- airborne fibre concentrations are <0.01 fibres/cm^3; and
- a four-stage clearance process has been completed.

A Clearance and Re-Occupation Certificate shall be issued.

Hold Point 2:
Mechanical demolition shall not commence until written clearance certification is issued.

7. PPE, Training, and Health Surveillance

7.1 Personal Protective Equipment

PPE shall be task-specific and include:

- P3 or equivalent respiratory protection;
- fit-tested respirators;
- disposable coveralls with hood;
- gloves and boot covers;
- defined donning, doffing, and disposal procedures.

7.2 Training and Medical Surveillance

- Workers shall receive competency-based asbestos training aligned with GIIP;
- refresher training shall be provided as required;
- workers exposed to asbestos shall be enrolled in a medical surveillance program.

8. Waste Transport and Disposal

- ACM shall be double-bagged, labelled, and sealed;
- transported only by approved or licensed carriers;
- accompanied by chain-of-custody manifests;
- disposed of only at DEPC-approved facilities.

Prior to removal, the MoLNR shall obtain written confirmation from DEPC and the landfill operator that asbestos waste will be accepted, including burial and covering procedures.

PVCC's role as municipal operator shall be reflected in transport, tipping, and operational arrangements where applicable.

Any transboundary movement of asbestos waste (if ever required) shall comply with the Basel Convention.

9. Emergency Response

In the event of accidental disturbance or release:

- immediate stop-work and cordon;
- evacuation of non-essential personnel;
- notification to DEPC;
- community warning if off-site exposure is possible;
- containment and clean-up;
- post-incident air monitoring and clearance before resumption.

10. Documentation and Recordkeeping

Mandatory records include:

- intrusive survey reports and Asbestos Register;
- DEPC approvals and notifications;
- contractor competence and training records;
- air monitoring data and calibration certificates;
- waste transport manifests and disposal receipts;
- clearance and re-occupation certificates.

Records shall be retained in accordance with WB and GIIP expectations.

11. Audit and Compliance

DEPC shall conduct scheduled and unannounced inspections.
Non-compliance may result in suspension of works, corrective actions, or contract sanctions.

Annex 3: Chance Find Procedure

Cultural heritage encompasses both tangible and intangible heritage recognized and valued at local, regional, national, or global levels. Tangible heritage includes movable or immovable objects, sites, structures, natural features, and landscapes of archaeological, historical, architectural, religious, or other cultural significance. Intangible cultural heritage refers to practices, expressions, knowledge, skills, and cultural spaces that communities recognize as part of their identity and cultural continuity.

The list of negative activity attributes for the project includes any activity that may adversely impact cultural heritage. To safeguard such assets, the following **Chance Find Procedure** shall be applied to all construction and earthworks. These procedures shall also be included in standard bidding documents and enforced during project implementation.

1 Chance Find Procedure for Cultural Heritage and UXO

In the event that items of cultural value or unexploded ordnance (UXO) are discovered during construction, the following steps must be taken immediately:

1. **Immediately stop all construction, earthworks, or land clearing activities** in the vicinity of the chance find.
2. **Delineate and cordon off** the discovered site or area to prevent disturbance.
3. **Secure the site** to avoid theft, damage, or safety hazards:
    - For cultural artefacts and human remains: The Vanuatu Cultural Centre must be notified immediately and they will provide instruction.
    - For suspected UXO: Evacuate the area and **do not attempt to touch or move the item** under any circumstances.
4. **Notify the Site Engineer or Project Management Unit**, who will immediately inform:
    - For cultural heritage: **The Vanuatu Cultural Centre**
    - For UXO: The **Vanuatu Military Force Explosive Ordnance Disposal (EOD) Unit**, via official channels.
5. **Authorities will assess the finding and determine appropriate action**:
    - Cultural heritage specialists will assess, document, and determine the significance and preservation requirements.
    - The EOD Unit will assess and, if required, safely remove or detonate UXO.
6. **No works may resume** in the area of the find until official clearance is provided in writing by:
    - The Vanuatu Cultural Centre for cultural relics and human remains and
    - The **Vanuatu Military Force EOD Unit** for UXO.
7. **All findings and actions taken must be documented**, and any required mitigation measures must be incorporated into the project's environmental and social records.

Annex 4: ESIRT Notification Protocol

List of reportable incidents extracted from Appendix 1 of the ESIRT for evaluation of VARS project incidents.

Fatality: Death of a person(s) that occurs within one year of an accident/incident, including from occupational disease/illness (e.g., from exposure to chemicals/toxins).

Lost Time Injury: Injury or occupational disease/illness (e.g., from exposure to chemicals/toxins) that results in a worker requiring 3 or more days off work, or an injury or release of substance (e.g., chemicals/toxins) that results in a member of the community needing medical treatment.

Acts of Violence/Protest: Any intentional use of physical force, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, deprivation to workers or project beneficiaries, or negatively affects the safe operation of a project worksite.

Disease Outbreaks: The occurrence of a disease in excess of normal expectancy of number of cases. Disease may be communicable or may be the result of unknown etiology. Will be followed by the project and shall remain the responsibility of the DSS to ensure all serious incidents are reported and fully investigated.

Displacement Without Due Process: The permanent or temporary displacement against the will of individuals, families, and/or communities from the homes and/or land which they occupy without the provision of, and access to, appropriate forms of legal and other protection and/or in a manner that does not comply with an approved resettlement action plan.

Child Labor: An incident of child labor occurs: (i) when a child under the age of 14 (or a higher age for employment specified by national law) is employed or engaged in connection with a project, and/or (ii) when a child over the minimum age specified in (i) and under the age of 18 is employed or engaged in connection with a project in a manner that is likely to be hazardous or interfere with the child's education or be harmful to the child's health or physical, mental, spiritual, moral or social development.

Forced Labor: An incident of forced labor occurs when any work or service not voluntarily performed is exacted from an individual under threat of force or penalty in connection with a project, including any kind of involuntary or compulsory labor, such as indentured labor, bonded labor, or similar labor-contracting arrangements. This also includes incidents when trafficked persons are employed in connection with a project.

Unexpected impacts on heritage resources: An impact that occurs to a legally protected and/or internationally recognised area of cultural heritage or archaeological value, including world heritage sites or nationally protected areas that was not foreseen or predicted as part of the project design or the environmental or social assessment.

Unexpected impacts on biodiversity resources: An impact that occurs to a legally protected and/or internationally recognised area of high biodiversity value, to a Critical Habitat, or to a Critically Endangered or Endangered species (as listed in IUCN Red List of threatened species or equivalent national approaches) that was not foreseen or predicted as part of the project design or the environmental and social assessment. This includes poaching or trafficking of Critically Endangered or Endangered species.

Environmental pollution incident: Exceedances of emission standards to land, water, or air (e.g., from chemicals/toxins) that have persisted for more than 24hrs or have resulted in harm to the environment.

Dam failure: A sudden, rapid, and uncontrolled release of impounded water or material through overtopping or breakthrough of dam structures.

Violence on the basis of SOGI: The threat or use of physical force that injures or abuses a person, or damages or destroys property, and that is motivated in whole or in part by the victim's real or perceived sexual orientation, gender identity, gender expression, or sex characteristics.

Discrimination on the basis of SOGI: Discrimination means creating a distinction, exclusion, or restriction which has the purpose or effect of impairing or excluding a person based on their real or perceived sexual orientation, gender identity, gender expression, or sex characteristics from being on an equal basis with others.

Sexual Exploitation: Any actual or attempted abuse of position of vulnerability, differential power or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially or politically from the sexual exploitation of another. In Bank financed operations/projects, sexual exploitation occurs when access to or benefit from a Bank financed Goods, Works, Non-consulting Services or Consulting Services is used to extract sexual gain.

Sexual Abuse: Actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions. In Bank financed operations/projects, sexual abuse occurs when a project related worker (contractor staff, subcontractor staff, supervising engineer) uses force or unequal power vis a vis a community member or colleague to perpetrate or threat to perpetrate an unwanted sexual act.

Sexual Harassment: Any unwelcome sexual advance, request for sexual favor, verbal or physical conduct or gesture of a sexual nature, or any other behavior of a sexual nature that might reasonably be expected or be perceived to cause offence or humiliation to another, when such conduct interferes with work, is made a condition of employment, or creates an intimidating, hostile or offensive work environment. In Bank financed operations/projects, sexual harassment occurs within the context of a subcontractor or contractor and relates to employees of the company experiencing unwelcome sexual advances or requests for sexual favor or acts of a sexual nature that are offensive and humiliating among the same company's employees.

Other: Any other incident or accident that may have a significant adverse effect on the environment, the affected communities, the public, or the workers, irrespective of whether harm had occurred on that occasion. Any repeated non-compliance or recurrent minor incidents which suggest systematic failures that the task team deems needing the attention of Bank management.

Annex 5: Occupational Health and Safety (OHS) Management Plan – Demolition of MoLNR Offices

Introduction and Objectives

This Occupational Health and Safety Management Plan outlines the measures to **protect workers' health and safety during the demolition activities** at the Ministry of Lands and Natural Resources (MoLNR) office site. It has been prepared in alignment with **World Bank ESS2: Labor and Working Conditions** – which addresses worker safety, training, fair working conditions, and OHS management – and with the World Bank Group's **Environmental, Health, and Safety (EHS) Guidelines** for construction and demolition (Good International Industry Practice, GIIP). The plan also complies with **Vanuatu's Work Health and Safety Act No. 7 of 2019** and any applicable OHS regulations, ensuring that requirements for safe work practices, personal protective equipment (PPE), hazard management, and emergency procedures are met or exceeded. Where national standards and World Bank EHS Guidelines differ, the **stricter standard will apply** to ensure the highest level of worker protection.

Purpose: This OHS Plan serves as an annex to the ESMP and will guide the Contractor in developing a detailed Contractor's Environmental and Social Management Plan (CESMP) for demolition. It identifies key OHS hazards anticipated in the demolition works and prescribes **mitigation measures, roles and responsibilities, training requirements, PPE standards, emergency preparedness, incident reporting, and monitoring indicators** needed to achieve safe and compliant demolition. By implementing this plan, the demolition will uphold a "**zero harm**" objective – preventing serious injuries, illnesses, and incidents – and maintain compliance with ESS2 and national law throughout the project.

Key OHS Risks in Demolition Activities

Demolition works involve a variety of **hazardous activities**. This annex summarizes the key OHS risks anticipated for this project, along with corresponding control measures, responsible parties, and monitoring indicators. The major occupational safety and health hazards specific to the MoLNR building demolition include:

- **Working at Heights:** Demolition of multi-level structures and removal of roofing materials will require working on elevated surfaces. There is a **high risk of falls** from roofs, ladders, scaffolds, or open edges if not properly managed. Unprotected ledges or fragile surfaces can lead to serious or fatal injuries.
- **Structural Instability and Collapse:** Partially demolished structural elements (walls, slabs, beams) could become unstable. There is a risk of **uncontrolled collapse** of sections of the building if proper sequencing and temporary supports are not in place. Pre-existing structural weaknesses in the old buildings heighten this risk, requiring careful engineering controls to prevent accidental collapse.
- **Falling Objects and Debris:** During dismantling, tools, materials, or debris can be dislodged or dropped from height, posing impacts to workers below. **Overhead hazards** could cause head injuries or other trauma if exclusion zones and catch platforms are not used. This risk extends to bystanders if the site perimeter is not secured (see also community safety in ESS4).
- **Heavy Machinery Operation and Vehicle Movements:** The use of excavators, loaders, cranes, and trucks introduces **struck-by and crush injuries**. Workers on foot are at risk of being hit by moving plant or reversing vehicles without strict traffic controls and

spotters. Limited visibility, especially during debris loading and haulage, increases the chance of accidents. There is also risk of machinery rollovers or mechanical failures if equipment is operated unsafely.

- **Underground Utilities and Electrical Hazards:** Although utilities should be disconnected, there remains a risk of **accidental contact with live electrical cables or gas/water pipelines** if unknown services are encountered. An unintended utility strike can cause electrocution, fires/explosions, flooding, or release of sewer gases. Overhead power lines near work areas also pose electrocution risks if equipment comes into contact. Strict lock-out/tag-out and utility verification are crucial.
- **Exposure to Hazardous Materials:** While an asbestos survey (Annex 1) indicated no Asbestos-Containing Material (ACM) in the four buildings, demolition can still expose workers to **toxic substances** like lead-based paint, mold, bird guano, or older electrical components with PCBs/mercury. If any hidden asbestos, chemicals, or contaminated soil are encountered, improper handling could harm workers (and the public) via inhalation or dermal exposure. Specialized procedures are needed for **hazardous waste** removal (as detailed in Annex 2: Asbestos Management Plan).
- **Airborne Dust and Particulates:** Demolition of concrete, masonry, and drywall produces significant **dust**, including fine particulate matter and potentially silica dust from concrete. Workers face respiratory hazards if inhaling dust without controls. Nuisance dust can reduce visibility and cause respiratory irritation, while silica dust can lead to silicosis over prolonged exposure. **Dust generation is likely and can be moderate to high without mitigation**. Diesel equipment also generates exhaust fumes.
- **High Noise and Vibration: Intense noise** will be generated by jackhammers, concrete breakers, and heavy machinery (often >90 dBA near sources). Prolonged unprotected exposure may cause hearing loss. Vibration from hydraulic breakers and compactors can affect operators (hand-arm vibration syndrome) and cause fatigue. Blunt trauma or ergonomic injury can result from handling vibrating tools. Vibration can also destabilize fragile structure sections. **Elevated noise levels are almost certain during demolition (rated "Likely; Moderate" in impact assessment)**, requiring controls for both workers and site neighbors.
- **Thermal Stress and Weather Hazards:** Given Port Vila's tropical climate, workers may face **heat stress** (high temperature, humidity, sun exposure) especially when doing heavy physical work in PPE. This can lead to dehydration, heat exhaustion or heat stroke if not managed (through rest breaks, hydration, shade). Rainstorms can create slippery surfaces (increasing slip/trip/fall incidents) and lightning could pose a risk when working outdoors on tall structures. The cyclone season necessitates preparedness for sudden severe weather or site evacuation.
- **General Construction Hazards:** Additional routine hazards include **manual handling injuries** (from lifting heavy debris if mechanical aids are insufficient), **sharp objects or protruding rebar** causing cuts or puncture wounds, trips on uneven rubble, and **use of powered tools** (risk of cuts or amputations without guards). While these are common to all construction/demolition sites, they require careful management via training and supervision.

Risk Assessment: All identified hazards will be subjected to risk assessment before work begins, and control measures will follow the **hierarchy of controls** – aiming to eliminate or substitute hazards where feasible, then implement engineering controls, administrative controls, and PPE as last line of defense. For example, plans have been made to disconnect utilities completely (elimination), design a top-down demolition sequence (engineering control) to minimize collapse risk, enforce safe work practices and training (administrative), and require appropriate PPE at all times.

OHS Mitigation Measures and Control Strategies

To address the above risks, the Contractor will implement a suite of **mitigation measures consistent with GIIP and the World Bank EHS Guidelines** for construction/demolition. These measures are mandatory and the Contractor's site-specific OHS plan (as part of the CESMP) must detail how each will be put into practice. Key control strategies include:

1. Safe Work Practices for Heights and Structural Safety:

- **Engineering Controls for Stability:** Demolition will follow a planned **sequencing** (top-down method) to avoid leaving unstable structures. A structural engineer or competent person will review the demolition methodology to ensure critical supports are only removed when appropriate. Temporary shoring, bracing, or propping will be installed for any elements that could become unstable (such as walls or columns left standing during phased demolition) to prevent unexpected collapse. High-risk activities (e.g., removing key support beams) will only proceed under a **permit-to-work** system with management sign-off and precautionary measures.
- **Fall Prevention for Work at Height:** All work above 2 meters (or the threshold in Vanuatu regulations) will require fall protection. **Scaffolding with guardrails** will be used for access to elevated portions of the buildings, and it must be erected and inspected by certified scaffolders. Where scaffolds or platforms are not practicable (e.g., removing roof sheets or working on edges), workers must use a **personal fall arrest system** (full-body harness and lanyard tied off to secure anchor points). Open edges, floor openings, and stairwells will be barricaded or covered. Ladders will only be used for short-duration access and must be tied off and footed to prevent slipping. A **100% tie-off policy** will be enforced – meaning at any time a worker at height must be protected from falling by guardrail or harness. Supervisors will conduct daily checks to ensure compliance (e.g., no worker on a roof without a harness).
- **Housekeeping and Trip Hazard Control:** Debris will be regularly cleared to keep walkways and work areas free of trip hazards. Reinforcing bars will be bent or capped to prevent impalement injuries. Access routes will be well-defined and lit if needed for early morning or evening work. Good housekeeping reduces accidents and supports safe movement, especially on an uneven demolition site.

2. Control of Falling Objects and Site Security:

- **Exclusion Zones:** The Contractor will establish clearly marked **exclusion zones** beneath any active work-at-height or demolition area. No unauthorized personnel shall enter beneath an area where materials could fall. Ground workers and machine

operators will be kept clear when overhead demolition is in progress. Barricades and warning tape will denote these drop zones.

- **Protective Structures:** Where work is adjacent to areas still in use or where workers must pass below, the Contractor will install overhead protection such as heavy-duty **debris nets, catch platforms, or covered walkways** to intercept falling debris. Similarly, when demolishing higher sections, controlled drop zones or enclosed **rubble chutes** will be used to lower debris rather than tossing materials from height. Any openings in floors will have toe-boards and guardrails to prevent tools or chunks of material from kicking off the edges. All hand tools used at elevation will be secured with lanyards where practicable (tool tethering) to prevent drops.
- **Site Fencing and Public Safety:** A **solid perimeter fence or hoarding** is already planned around the site (Site Establishment phase). This will be maintained throughout demolition to prevent public entry. Signage ("Danger – Demolition in Progress – Keep Out") will be posted at all access points. Security personnel or a guard may be assigned after hours to prevent curious trespassers (given the high public proximity). These measures align with ESS4 for community health and safety but are equally critical for worker safety to ensure only trained personnel are in the hazard zone.

3. Heavy Machinery, Vehicle, and Traffic Safety:

- **Equipment Operation Protocols:** Only trained, licensed operators will run excavators, cranes, and other heavy equipment. All machinery will be inspected daily (pre-start checks for brakes, hydraulics, etc.) and kept in good working order to prevent malfunctions that could endanger workers. Excavator cabs will have protective structures (e.g., falling object protective structures) considering the demolition context. Whenever machinery is working near people, **spotters or flaggers** will be present to guide safe movements and keep everyone out of blind spots. A strict **no-go zone** for workers on foot will be enforced around operating machines, except for the designated signaler.
- **Traffic Management:** The Contractor will implement the approved **Traffic Management Plan (TMP)** (ref. Section 6 of ESMP) to segregate construction traffic and protect both workers and the public and local community. On-site, dedicated routes for dump trucks and equipment will be marked. **One-way traffic flows**, if possible, will reduce the need for reversing. Spotters will oversee any required reversing operations. Speed limits (e.g., 5–10 km/h on site) will be imposed and enforced. High-visibility clothing (reflective vests) is mandatory for all personnel to ensure they are easily seen by equipment operators. Vehicle movements will be restricted during peak pedestrian hours around the site whenever feasible to reduce interface with bystanders.
- **Loading and Cranage Safety:** When lifting large structural pieces or heavy objects, a lift plan will be in place. Cranes (if used) will only be operated by certified crane operators and riggers. All lifting gear will be inspected and rated for the loads. Workers will be kept clear of suspended loads at all times – standing or passing under a suspended concrete panel or steel beam is strictly prohibited. Tag lines will be used to control swinging loads and keep workers at a distance. The objective is to avoid any crush injuries or accidents involving heavy components during salvage and demolition operations.

4. Utilities and Electrical Safety:

- **Utility Detection and Isolation:** Before any excavation or structural demolition begins, **all utilities will be verified as disconnected or de-energized**. The project team is coordinating with UNELCO and other providers to confirm removal or isolation of electricity, water, sewer, and telecom services to the buildings. The contractor must review utility plans and perform on-site **service locating (e.g., electromagnetic scanning and trial potholing)** to detect any underground lines not on record. No mechanical excavation will occur until a permit-to-dig is issued confirming no live services in the area. Overhead power lines near the work zone will be identified, and clearance distances will be maintained; spotters will ensure excavators or cranes do not approach within unsafe distance.

- **Lockout/Tagout (LOTO):** If any electrical circuits or mechanical systems within the structures remain powered during initial salvage (for example, if lights or equipment need to be tested), a strict **LOTO procedure** will be used. This involves shutting off the energy source, locking it in the off position, tagging it to warn others, and testing to verify zero energy state. Only authorized personnel (e.g., a licensed electrician) will handle electrical isolations. All cables will be assumed live until proven otherwise. Workers will use **insulated tools and wear appropriate electrical PPE** (rubber gloves, boots) if there's any potential contact with live electricity.

- **Preventing Strikes:** Excavation for foundations removal will proceed slowly with an operator and spotter watching for any signs of buried utilities (pipes, cables). Hand-digging may be required in sensitive areas. If an unknown service is encountered, work stops and the line is investigated and safely isolated. **No worker shall cut or remove any pipe or wire** unless it has been positively identified and isolated. This avoids electric shock, gas release, or water bursts. The commitment is to **zero utility strikes** – a performance goal where thorough planning and careful execution prevent any accidental damage to services.

- **Electrical Equipment and Tools:** All portable electric tools and extension cords will be regularly inspected; defective equipment will be removed from service. Ground-fault circuit interrupters (GFCIs) will be used for any temporary power supply to protect against shock. Live electrical panels (if any remain during early works) will be guarded. Lighting will be used in dark areas to prevent accidents, but installed in a way that avoids electrical hazards (e.g., using low-voltage lighting or well-protected circuits).

5. Hazardous Materials and Chemical Management:

- **Asbestos and Lead Paint:** Although **no asbestos was identified in the buildings to be demolished (as per Annex 1 test results)**, the OHS plan prepares for the possibility of **unexpected ACM finds** (e.g., in buried pipes or hidden insulation). The **Asbestos Management and Control Plan (Annex 2)** will be immediately activated if any suspect material is encountered. Only trained and certified personnel will handle or remove asbestos. They will use full PPE including disposable coveralls and P2/N95 respirators or higher. The area will be isolated, kept wet to suppress fibers, and cleaned with H-class vacuums. Asbestos waste will be double-bagged, labeled, and disposed of at an approved facility with a chain-of-custody consignment note system. Similarly, if lead-based paint or other hazardous coatings are present, workers will use respiratory

protection and avoid creating dust (e.g., use chemical stripping or wet scraping methods).

- **Other Hazardous Waste:** Old fluorescent light tubes (containing mercury), electrical equipment (possible PCBs in capacitors or transformers), stored chemicals (solvents, fuels), or guano (biological hazard) will be identified during pre-demolition surveys. The Contractor will segregate any **hazardous wastes** and store them in secure, labeled containers (with appropriate bunding for liquids). Removal of hazardous waste will follow **GIIP**: for example, e-waste and PCB-containing equipment delivered to licensed recyclers, chemicals to be shipped to approved disposal sites. All handling will use PPE (gloves, goggles, etc.) appropriate to the hazard. Workers assigned to hazardous removal tasks will receive **task-specific training** (e.g., how to remove and pack fluorescent tubes without breakage). No such materials will be dumped on-site; official **disposal receipts and clearance certificates** will be obtained for all hazardous waste streams.
- **Dust and Fume Control (Air Quality Management):** To mitigate dust hazards to workers: **water spraying** will be used liberally during demolition (e.g., misting the structure while breaking concrete, wetting debris piles, damping down haul roads). A water supply or water truck with hoses will be on hand at all times. Mechanical cutting or grinding will be minimized; when needed, **dust extraction or wet methods** will be applied. For indoor salvaging works, portable exhaust fans may be used to ventilate dust/fumes. Workers exposed to dusty tasks (sawing, jackhammering, sweeping debris) must wear **dust masks or respirators** (at least N95/FFP2 for nuisance dust, and P3 filters if silica dust is generated in significant amounts). Airborne silica is a serious health risk, so concrete demolition will be done with equipment that has built-in water spray when available. Regular breaks and rotation of workers doing heavy dust-generating work will reduce individual exposure. Diesel equipment will be well-maintained to minimize exhaust; where possible, machinery will be shut off when not in use to reduce fumes in work areas.
- **Noise and Vibration Control:** The Contractor will implement a **Noise Control Plan** to protect workers from excessive noise. Practical measures include using modern equipment with noise-dampening features, maintaining machinery (well-lubricated breakers, intact mufflers), and using **temporary noise barriers** (such as plywood or sound blankets on fences) at least around stationary noise sources like generators. Particularly noisy activities (like hammering concrete) will be scheduled in short durations with breaks in between to give relief to workers and reduce continuous exposure. Per the EHS Guidelines, the aim is to keep worker exposure within safe limits (e.g., **below 85 dBA over 8 hours**), so if necessary, administrative controls like limiting the time any one worker uses a jackhammer will be in place. **Hearing protection (earplugs or earmuffs)** will be mandatory for all personnel in high-noise areas or operating loud equipment. Supervisors will carry a sound level meter to spot-check noise levels and ensure hearing protection is adequate. Vibration to workers from tools will be mitigated by using vibration-damped tool models and ensuring workers use anti-vibration gloves or take breaks from vibrating tool use. The potential for vibration to affect neighboring structures is addressed in the ESMP (with monitoring), but from a worker standpoint, awareness and limits on exposure will protect their health.

6. Worker Training, Awareness, and Safe Systems of Work:

- **Induction Training:** Before starting on site, **all workers will undergo an OHS induction** specific to this project. The induction will cover the hazards listed above, the required controls and rules, use of PPE, emergency procedures, incident reporting protocols, and workers' rights and responsibilities under ESS2 and Vanuatu law. Workers will be made aware of the requirements of this OHS Plan, the ESMP, and the Code of Conduct (including basics of labor rights, non-discrimination, prevention of substance abuse at work, etc., as relevant to OHS). They must sign an acknowledgment of the training and agreement to follow safety rules.

- **Job-Specific Training and Method Statements:** For high-risk tasks, the Contractor will prepare **Safe Work Method Statements (SWMS)** or standard operating procedures – for example, a SWMS for "Work at Heights during Roof Removal," "Demolition with Excavator and Breaker," "Handling and Segregating Hazardous Waste," etc. Supervisors will **brief workers ("toolbox talks") daily** on the planned tasks and associated precautions. Before a specific activity begins, the crew involved will be walked through the safe method and have a chance to ask questions ("job safety analysis" discussion). Workers will receive specialized training or certification where required: e.g., working at heights training for those on scaffolds, asbestos awareness training for all, and licensed operation training for machine operators and riggers. Additional refresher or topic-specific toolbox talks will be conducted at least weekly – focusing on any incidents or near-misses that occurred, reviewing correct PPE use, or upcoming non-routine tasks.

- **Supervision and Enforcement:** The Contractor will designate a full-time **OHS Officer / Safety Supervisor** on site responsible for monitoring safety compliance and coaching workers. This person (or team, if large workforce) will conduct routine site walk-throughs, identify unsafe conditions or behaviors, and take immediate corrective action. Frontline supervisors (foremen) are also accountable for ensuring the workers under their direction follow the safety protocols at all times. Any worker found in breach (e.g. not wearing PPE, not following a safe work procedure) will be subject to retraining and disciplinary action if needed, as per the Contractor's policies. A **'safety first' culture** will be promoted where workers feel responsible for both their own safety and their teammates', and are empowered to **stop work** if they observe an imminent hazard. This culture is important to reinforce ESS2 principles on worker safety and grievance (workers can raise safety concerns without fear).

7. Personal Protective Equipment (PPE):
PPE is the last line of defense, but it is **mandatory for all personnel on site at all times**. The Contractor will provide, and workers must use, **appropriate PPE** in line with the hazards:

- **Basic Site PPE:** As a minimum, every worker and visitor on the demolition site will wear a high-visibility vest, a hard hat (safety helmet), safety footwear (steel-toe boots), and safety glasses. Gloves will be worn during material handling or when dealing with sharp objects. This basic ensemble addresses common site risks of falling small objects, foot injuries from stepping on nails or dropped items, and eye injuries from dust or flying fragments.

- **Hazard-Specific PPE:** Additional PPE will be used according to specific tasks:

  - **Respiratory Protection:** N95/P2 dust masks or, in high dust environments, half-face respirators with P3 cartridges will be worn during demolition dust-generating tasks and

when handling any hazardous dust (silica, lead, etc.). If any asbestos is present, full face respirators with P3 filters and disposable coveralls will be used by the removal team as per Annex 2.

- **Hearing Protection:** Earplugs or earmuff hearing protectors are required for anyone within range of loud equipment (jackhammers, breakers, etc.) to prevent hearing damage[69]. The site induction will train workers on proper use of earplugs.
- **Fall Protection Gear:** As noted, full-body harnesses, shock-absorbing lanyards, and other fall arrest gear will be issued to those working at height. This equipment will be inspected regularly and workers trained in its use (including how to self-inspect harnesses and calculate fall clearances).
- **Specialty PPE:** Welders (if any cutting with torches) will have welding shields and gauntlets; chainsaw or grinder operators will have face shields; concrete breakers may use vibration-damping gloves; any hot works will require fire-resistant clothing. For chemical handling (fuel, cleaning agents, hazardous waste), chemical-resistant gloves and aprons will be used as needed.

Enforcement: The **site safety officer and supervisors will enforce PPE compliance strictly**. No worker is allowed on site without the basic PPE, and task-specific PPE requirements will be checked before the task starts (for example, the safety officer will verify all crew demolishing a slab are wearing dust masks and hearing protection). Non-compliance will result in stopping work until corrected. The Contractor will ensure a **stock of replacement PPE** is available on site so that damaged or worn-out gear can be immediately substituted, and so that even short-term visitors (e.g., engineers, inspectors) can be outfitted with PPE.

Roles, Responsibilities, and OHS Management Structure

Contractor: The appointed Demolition Contractor holds primary responsibility for implementing this OHS Plan on the ground. The Contractor's Project Manager shall ensure that all necessary resources (staff, training, PPE, and equipment) are provided for safe work. A designated **OHS Manager/Safety Officer** will be appointed by the Contractor to oversee daily safety performance. This Safety Officer will coordinate risk assessments, maintain the OHS records (induction logs, incident log, inspection checklists), and report OHS performance. The Contractor is responsible for preparing a **Contractor's ESMP (CESMP)** – including a detailed OHS Plan and method statements – for approval by the Project Management Unit (PMU) before starting works. All site personnel employed by the Contractor (and its subcontractors) must comply with the requirements of this Plan and the CESMP. Key Contractor responsibilities include: daily toolbox talks and safety briefings, enforcing PPE use, ensuring workers are licensed/competent for their tasks, providing first aid and emergency response arrangements, and stopping work when unsafe conditions arise. The Contractor will also engage any **specialist subcontractors** required (e.g., a licensed asbestos removalist, if needed, or heavy lift specialists) and ensure they comply with the same OHS standards. They must coordinate with utility companies and local authorities for specific safety permits (e.g., road closure for crane operations).

Supervising Engineer / PMU: The MoLNR, supported by the VARS Project Management Unit and supervision consultants, will monitor the Contractor's compliance. The **PMU Safeguards team** or Engineer's OHS inspector will conduct periodic site inspections and audits of OHS performance. They have the authority to instruct the Contractor to correct any non-compliance

or even suspend work for severe safety violations. The PMU will review and clear the Contractor's CESMP (including the OHS Plan) to ensure it meets ESS2 and EHS Guidelines requirements before work begins. The Engineer/PMU will also verify that the Contractor's personnel are following through on safety commitments (for example, checking that weekly safety reports are submitted, and accidents are properly investigated). In case of any serious incident, the PMU will coordinate **ESIRT notifications** to the World Bank (see Incident Reporting below) and ensure appropriate actions are taken.

Workers and Labor Force: Every worker has an obligation to **follow the safety requirements** and to look out for their own and others' well-being. Workers must attend all required training and toolbox talks, use the PPE provided, and comply with instructions from supervisors regarding safe work procedures. They should report any hazards, near-misses, or incidents immediately to their supervisor or the safety officer. Under this plan and ESS2, workers are encouraged and empowered to raise safety concerns or suggest improvements (via daily briefings or the workers' grievance mechanism) without retribution. The Contractor will maintain a **labor grievance mechanism** (as per the project's Labor Management Procedures) where workers can lodge complaints, including OHS issues, confidentially.

Regulatory Agencies: The **Department of Labour (DoL)** and other relevant authorities (such as Department of Environmental Protection and Conservation for environmental health aspects, and Public Works Department for site safety oversight) may conduct inspections to enforce national OHS laws. The Contractor must cooperate with any such inspections and rectify issues pointed out by inspectors. All necessary permits (like demolition permit from PVCC, if any, and any required notifications to DoL for hazardous work) must be secured by the Contractor. The **World Bank** as the project financier (for the associated new construction) will not directly supervise the contractor's OHS, but expects the Borrower (through PMU) to ensure this plan is executed and to be notified of serious incidents as part of ESF compliance.

A clear **organizational chart** should be established by the Contractor showing lines of responsibility for OHS – from the project manager to the safety officer to foremen to workers – and this should be communicated to all personnel.

Worker Engagement, Training, and Communication

Ensuring all workers are informed and competent is a cornerstone of this OHS Plan, as outlined in Section 6 above. In summary:

- All workers will receive **general OHS induction** and **task-specific training** (e.g., how to safely handle asbestos or operate fire extinguishers). Training will be provided in languages/formats understood by the workforce (with translators if necessary for any workers not fluent in English or Bislama).
- The Contractor will maintain a **training log** with dates, topics, and attendees. Key trainings include: working at heights, hazard communication (explanation of Safety Data Sheets for chemicals), correct PPE usage, emergency drills, and first aid for designated first-aiders.
- **Toolbox Talks & Daily Briefings:** At the start of each shift, short safety meetings will be done to go over the day's work and highlight any particular hazards or changes in site conditions. Recent incidents or near misses will be discussed to learn from them. Workers are encouraged to ask questions and share if they see something hazardous.

- **Signage and Alerts:** Safety signs will be posted around the site as constant visual reminders (e.g., "Helmet and Safety Boots Must Be Worn," "Harness Point," "Authorized Personnel Only"). In high noise areas, signs will remind workers to wear hearing protection. At access gates, a board will display key emergency contact numbers and a summary of site rules.
- **Worker Feedback:** Supervisors and the safety officer will actively solicit feedback from workers on OHS measures – for example, if PPE is uncomfortable or a procedure seems impractical, they will consider adjustments. A safety committee or regular meeting with worker representatives can be established if the workforce is sizable, to discuss OHS issues.
- **No Tolerance for Impairment:** A strict policy will prohibit alcohol or drug use at work, as impairment can lead to accidents. Anyone suspected to be under influence will be removed from site for that day and subject to disciplinary process per the labor management rules.

These steps help create an environment where **safety information flows two-ways** – management provides training and instructions, and workers provide feedback and vigilance – which is essential for an effective OHS system under ESS2.

Emergency Preparedness and Response

Despite preventive measures, accidents or emergencies may occur. This plan includes an **Emergency Response Plan (ERP)** to ensure **prompt and effective action** in the event of an incident. Key elements include:

- **On-site First Aid:** The Contractor will have at least one **qualified first aider** on site at all times (more, depending on workforce size). A first aid station or kit will be established with supplies for treating common construction injuries (cuts, sprains, minor burns) and with equipment for more serious cases (splints, a stretcher). All workers will be informed of the first aid station location and who to contact for first aid. For any injury beyond basic first aid, the protocol will be to stop work and get the injured person to professional medical care or call emergency services.
- **Emergency Contacts and Nearest Clinic:** Emergency phone numbers (ambulance, fire department, police) will be posted visibly. The nearest hospital or clinic (e.g., Vila Central Hospital in Port Vila) is identified for serious injuries; transport arrangements (project vehicle on standby) will be in place to quickly evacuate an injured worker if needed.
- **Incident Response and Communication:** If a serious incident occurs (e.g., severe injury, collapse, fire), the Site Supervisor or OHS Officer will take charge as **Incident Commander** until emergency services arrive. They will initiate an **emergency stop-work alarm** (e.g., an air horn or siren) to evacuate workers from danger if needed. All workers will be trained on the evacuation signal and muster point location during induction. The muster point will be a safe location upwind and away from the structures (for example, a corner of the site or adjacent open area). A headcount will be done at the muster point to account for everyone. The Incident Commander will coordinate any rescue efforts that can be safely conducted (e.g., using fire extinguishers to put out a small fire, or safely freeing a pinned worker if possible).

- **Fire Prevention and Response:** Demolition activities can introduce fire hazards (hot works like torch cutting, fuel storage for machines, electrical short-circuits). The site will maintain **fire extinguishers** of appropriate type (at least ABC dry chemical extinguishers) at critical points: fuel storage area, welding/cutting areas, and site office[88]. Workers involved in any hot work will have a fire watch person and extinguishers on hand. All flammable liquids will be stored in a shaded, ventilated area away from ignition sources, and in proper containers. In case of a fire beyond the incipient stage, workers will evacuate and the fire service will be called immediately.
- **Severe Weather and Natural Disasters:** Given the location, the ERP will also cover scenarios like **cyclones, earthquakes, or heavy storms**. The Contractor will monitor weather forecasts, especially during cyclone season. If a cyclone warning is issued or a severe storm is approaching, demolition work at heights or with cranes will cease and the site will be secured (loose materials tied down, machinery moved to safe positions). An evacuation plan for a cyclone event (if time permits) will be in place – e.g., stopping work well in advance and allowing workers to go home to secure their families, or moving equipment to a safe zone. For earthquakes, workers will be trained to "drop, cover, hold" if one strikes, then evacuate cautiously once shaking stops, checking for injured colleagues.
- **Spill Control:** Though not a typical "emergency" like fire, fuel or chemical spills can pose immediate hazards. Spill kits with absorbent materials will be kept on site. Staff will be trained in using them to contain and clean minor spills (e.g., hydraulic oil leak from an excavator). Major spills or uncontrolled releases (if any hazardous waste was spilled) would trigger evacuation and calling specialized responders.
- **Emergency Drills:** The site will conduct at least one **evacuation drill** during the course of the works to test the response plan. This will help familiarize workers with proper actions and identify any weaknesses in the plan (e.g., alarm not audible in all areas). Observations from drills will be used to improve the ERP.

Overall, this preparedness ensures that if an incident occurs, **injury severity is minimized and escalation is prevented**. It aligns with EHS Guidelines which call for emergency planning (first aid, fire-fighting, evacuation, etc.) on construction sites and ESS2 requirements for safe working conditions including emergency arrangements.

Incident Reporting and Escalation Protocol

All incidents, from minor near-misses to serious accidents, will be systematically **reported, recorded, and investigated** in order to improve safety performance and prevent recurrence.

- **On-Site Incident Reporting:** The Contractor will implement an incident reporting procedure whereby workers and supervisors report any accident, injury, near-miss, or unsafe condition immediately to the OHS Officer or Site Supervisor. An **Incident Register** will be maintained on-site to log details of each incident (what happened, when, who was involved, what injury (if any) occurred, and initial actions taken). Near-misses (events that could have caused injury but didn't by chance) are also important to capture, as they often foreshadow more serious accidents. The safety officer will conduct or lead an **investigation** for each recordable incident to identify root causes and recommend corrective measures. Findings will be discussed at the next toolbox talk to share lessons learned with the crew.

- **Internal Escalation:** For **serious incidents** – such as a lost-time injury, a fatality, a collapse of structure, a major spill of hazardous material, or any incident with significant consequence – the Contractor's project manager will notify the PMU and supervising engineer **within 24 hours or sooner**. Senior management of the Contractor will also be involved in the investigation. Work in the affected area will stop until a thorough review is conducted and it is safe to resume. The PMU may conduct an independent investigation or review of the Contractor's report.
- **ESIRT Notification (World Bank):** In line with World Bank requirements (ESS1 and ESS2) for Associated Facilities, any **severe incident** will trigger the **Environmental and Social Incident Response Toolkit (ESIRT)** protocol. The PMU will report incidents such as fatalities or life-threatening injuries to the World Bank within 24 to 48 hours, as required. Annex 4 of the ESMP provides the detailed notification procedure and template for such events, including classifying the severity level and subsequent reporting timelines. The Contractor must provide all necessary information to the PMU to facilitate these reports (e.g., incident description, immediate actions taken) and cooperate in any further inquiry. This escalation ensures that high-consequence events receive attention from top project authorities and that remedial actions are shared with stakeholders.
- **Corrective Action and Follow-up:** For each incident, **corrective and preventive actions** will be identified. The Contractor is responsible for implementing these actions promptly and documenting their completion. For example, if a worker was injured by a falling object, corrective actions might include retraining workers on not standing under loads and ensuring better barricading — these actions would be recorded and later audited for effectiveness. The PMU/Engineer will verify that appropriate actions have been taken for serious incidents. Repeated non-compliance or frequent incidents may result in penalties or work stoppage until issues are resolved.
- **Incident Reporting to National Authorities:** In addition to project-level reporting, the Contractor must comply with any local regulatory reporting. Under Vanuatu laws, certain accidents (like fatalities or major injuries) may need to be reported to the Department of Labour or police. The OHS Plan requires the Contractor to be aware of these obligations and fulfill them (e.g., submitting an accident report form to the Labour Commissioner within the stipulated timeframe).

Overall, the goal is a **transparent and learning-oriented incident management system** – one that not only responds to events but uses them to continually improve site safety. By tracking **leading indicators** (like near-misses, unsafe acts) as well as lagging indicators (accidents, injuries), the Contractor and PMU can proactively adjust the safety measures. The incident records will feed into the monitoring metrics discussed next.

OHS Monitoring, Compliance, and Performance Measurement

Monitoring of OHS performance will be carried out to ensure that the measures in this plan are effective and that the project complies with OHS requirements at all times. Both the Contractor and oversight entities have roles in monitoring:

- **Daily Supervision and Inspections:** The Contractor's OHS Officer and site supervisors will conduct **daily safety inspections** of the work areas. This includes checking that: PPE is being worn by all, work methods follow the safe plans, scaffolds and excavations are in safe condition, housekeeping is adequate, and no new hazards have emerged.

Any issues noted (e.g., a barrier tape that fell down, or a worker observed lifting incorrectly) will be corrected immediately. These daily check findings may be noted in a logbook or simple checklist. Additionally, **before work starts each day**, critical equipment (like cranes, excavators) will be inspected for safety by the operator, and any unsafe tool or equipment will be tagged out of use until repaired.

- **Environmental Monitoring with OHS relevance:** While not strictly "OHS," the Contractor will also monitor parameters like **dust levels and noise levels** at the site boundary, which serve both community and worker health purposes. Portable dust monitors (or visual observation if high-tech gear not available) will be used during demolition to ensure dust suppression is adequate; if dust is visibly leaving the site or measurements exceed acceptable levels, work should pause and controls improved. Noise monitoring will be done especially when working near sensitive receptors or if workers report very high noise – ensuring it stays within any stipulated limits (the ESMP suggests daytime only, not exceeding about 3 dB above ambient at receptors). On-site, if noise is extremely high, double hearing protection or greater distancing may be enforced.
- **Periodic Formal Inspections:** The PMU's Safeguards team and/or PWD inspectors will conduct **weekly or biweekly inspections** of OHS compliance. They will use a checklist aligned with this OHS Plan: e.g., verifying all workers have valid ID and PPE, first aid kits stocked, fire extinguishers in place, signage visible, records up to date, and that no obvious hazards are unaddressed. Non-compliances will be documented and given to the Contractor for immediate action, with follow-up checks to close them out.
- **OHS Performance Metrics:** Several **Key Performance Indicators (KPIs)** will be tracked to measure OHS performance throughout the demolition:
    - **Training/Induction Completed:** 100% of workers to be inducted and trained; records of induction maintained.
    - **PPE Compliance Rate:** Target of 100% compliance (measured via daily observation – e.g., any instance of non-compliance is recorded; aim to minimize these to zero).
    - **Incident Frequency:** The number of recordable incidents (and particularly Lost Time Injuries) will be tracked per month. The goal is zero LTIs. If any occur, calculate metrics like Lost Time Injury Frequency Rate (LTIFR) per 200,000 work-hours as a project performance indicator.
    - **Near Miss Reporting:** The number of near misses or hazards reported by workers – higher reporting can indicate a good safety culture. (Encouraging reporting, with a target to log multiple near misses per month, helps preempt accidents.)
    - **Inspections and Toolbox Meetings:** Number of toolbox talks held (target: daily) and safety inspections conducted (target: daily by contractor, weekly by PMU). Achieving these targets shows proactive safety management.
    - **Corrective Action Closure Rate:** Percentage of identified safety issues or audit findings that are closed out within the agreed timeframe (target ~100%).
    - **Work Stoppages:** Number of stop-work orders or safety shutdowns. Ideally zero (with good prevention), but if any, ensure proper resolution before restarting.

- **Occupational Health Indicators:** E.g., results of any health checks if applicable (for long projects, sometimes workers have periodic health exams for hearing, lung function; for this short demolition it might not be done, but if any monitoring of dust exposure or hearing tests are undertaken, results should show no degradation).

These indicators will be compiled in **monthly ESHS reports** by the Contractor to the PMU, summarizing OHS stats: training sessions held, manpower on site, incident updates, safety performance metrics, and any OHS issues encountered. The PMU will include these in progress reports to the World Bank as needed.

Monitoring also involves ensuring that all **control measures remain in place**: for example, checking silt fences (to prevent environmental issues that might indirectly cause worker harm), checking that hazardous waste is stored safely (to protect workers handling it), and so forth. This ESMP's Monitoring Plan already delineates many such checks, including for **worker safety: "review toolbox records; check PPE… daily" with indicator "compliance with safety protocols"**. This OHS Plan reinforces those with additional internal checks.

Finally, **management reviews** of OHS performance will be done: the Contractor's project manager and PMU should periodically review the OHS performance data and determine if any changes to procedures or additional training are needed. For example, if near-misses of a certain type are rising, a new mitigation might be introduced.

All monitoring results and incident records will be kept as part of the project's documentation, and a section in the **Demolition Completion Report** will summarize OHS performance (including man-hours worked vs. injuries, etc.).

Integration with CESMP, ESMP, and Regulatory Compliance

This OHS Management Plan is an integral component of the overall Environmental and Social Management Plan (ESMP) for the demolition project. It will be implemented in conjunction with other relevant plans and procedures to ensure a cohesive approach to Environmental, Social, Health, and Safety (ESHS) management:

- The **Contractor's Environmental and Social Management Plan (CESMP)**, to be prepared by the winning contractor, must incorporate all measures from this OHS Plan. The CESMP will detail the **site-specific methodologies** and schedules for implementing these OHS measures and will be reviewed by the PMU prior to approval. The Contractor will not be allowed to commence physical works until the CESMP (including the OHS provisions) is deemed acceptable to the PMU and, if required, cleared by the World Bank. Implementation of the CESMP will then be monitored by the PMU throughout the project. In effect, this annex serves as the minimum OHS requirements that the CESMP must meet or exceed. Should the Contractor propose alternative safety measures, they must be demonstrably equivalently effective and comply with ESS2 and GIIP.
- **Linkages to Other ESMP Annexes:** Certain specialized risks are handled in dedicated annexes – for example, **Annex 2: Asbestos Management Plan** for asbestos and **Annex 3: Chance Find Procedure** for cultural heritage finds. The OHS Plan links to these by referencing that any asbestos encountered is dealt with under Annex 2 protocols (and those protocols themselves have OHS requirements for handling asbestos). Similarly, if a UXO or cultural artefact is found (a safety risk and heritage matter), work stops and

Annex 3 procedures are followed. Additionally, **Annex 4: ESIRT Notification Protocol** is essentially an extension of the incident reporting section of this OHS Plan for severe incidents. The Contractor and PMU will ensure consistency across these documents (for example, the emergency contacts in the OHS Plan should match those in the ESIRT annex).

- **National OHS Regulations:** The plan is designed to comply with Vanuatu's OHS legal framework – primarily the Work Health and Safety Act 2019 and any subsidiary regulations or codes. This includes ensuring **fair labor practices** as well as safety (e.g., reasonable working hours, worker welfare facilities like toilets and drinking water on site, prohibition of child or forced labor, etc., which are part of ESS2 Labor and Working Conditions). The **Department of Labour's OHS inspectors** (if they visit) should find this plan meets the required standard: workers wearing mandated PPE, existence of safety training, risk assessments for high-risk work, etc. Any country-specific requirement (for example, perhaps a need to notify the Labour Department before high-risk construction work starts, or to display certain labor law information on site) will be adhered to by MoLNR and the Contractor.
- **Alignment with ESS2 and ESS4:** This OHS Plan directly addresses **ESS2 (worker health and safety)**, ensuring that project workers have safe and healthy working conditions. Indirectly, it supports **ESS4 (community health and safety)** because many measures (site fencing, traffic management, debris containment) protect the public as well. By implementing this plan, the demolition works will not only safeguard workers but also minimize the risk of the works causing harm to neighboring communities. This dual benefit is recognized in the ESMP, which notes that worker and public safety are the most significant risk areas and must be tightly controlled.
- **CESMP Implementation and Verification:** Once the CESMP (with this OHS Plan) is in place, the Contractor is contractually obligated to implement it, and the **Supervising Engineer/PMU will verify compliance as part of routine supervision**. The ESMP and contract will specify that failing to adhere to safety requirements can result in penalties or stop-work orders. The Contractor is also typically required to submit regular ESHS performance reports; the PMU will review these and may escalate issues to senior government or World Bank if serious lapses are found.
- **Updates and Adaptive Management:** If site conditions or scope change (e.g., if additional hazards are identified or if new regulations come into force), this OHS Plan may be updated in consultation with the PMU and, if significant, with World Bank no-objection. For instance, if an unanticipated risk emerges (like discovery of asbestos requiring a more extensive OHS approach), the plan will be revised to include additional controls. All workers would then be briefed on the new measures. This iterative approach ensures the plan remains **fit-for-purpose throughout the demolition period**.

By integrating this OHS Plan into the overall project execution, we ensure that **safety is not a standalone concern but embedded in all aspects of the demolition project management**. The result aimed for is a demolition completed **with zero serious injuries or illnesses, full compliance with ESS2 and national laws**, and a workforce that goes home safe and healthy every day.

Summary – Key OHS Risks, Controls, Responsibilities, and Monitoring

The following table provides a concise summary of the primary occupational health and safety risks for the demolition works, along with the mitigation/control measures, responsible parties for implementing those measures, and indicators for monitoring performance and compliance. This serves as a quick reference within the OHS Plan, ensuring all stakeholders are clear on "who does what" to manage each major hazard:

OHS Risk / Hazard	Key Mitigation / Control Measures	Responsible Party	Monitoring/Performance Indicator
Working at Heights (Fall Hazard)	– Use proper scaffolds with guardrails and inspected ladders for access. – 100% tie-off policy with full-body harnesses and lifelines when working at edges. – Secure openings with covers/guardrails; install edge protection on roofs. – Permit-to-work for roof works; dedicated spotters for fall hazard tasks.	Contractor (Site Supervisor & Safety Officer)	**No. of fall incidents: 0** **Compliance checks:** Daily verification that fall protection is used (log of harness inspections, work-at-height permit records).
Structural Collapse/Instability	– Engineering survey of buildings before demo; plan **sequencing/top-down demolition** to maintain structural stability. – Install temporary shoring/bracing for any unstable sections. – Maintain exclusion zones around partially demolished structures. – Involve structural engineer for critical stages; stop work and re-assess if unexpected cracks or movements occur.	Contractor (Project Engineer & Site Supervisor)	**No collapse events** or uncontrolled failures. **Monitoring:** Demolition sequence approved and followed (method statement sign-off); documented inspections of structure integrity at key stages.
Falling Objects (Tools/Debris)	– Establish hard barricaded **drop zones/exclusion areas** under all overhead work. – Use debris chutes or lowered hoisting for material removal at height (no tossing). – Install toe-boards on scaffolds, debris	Contractor (Site Supervisor)	**Incidents of falling debris hitting persons: 0**. **Field observations:** Exclusion zones in place (checked daily); nets/physical protections intact. **PPE compliance:** 100% hard hat usage.

	nets or catch fans on structures to catch falling debris. – All personnel on site to wear hard hats at all times. – Tool tethering for workers using tools at height.		
Heavy Machinery & Vehicle Movements	– Implement Traffic Management Plan: separate routes for equipment, use trained **flaggers/banksmen** for vehicle movements. – All operators licensed; no unauthorized personnel near operating plant. – Backup alarms, flashing lights on vehicles; enforce low speed limits. – High-visibility clothing for all workers on site; daylight-only operation for heavy lifts.	Contractor (Equipment Operators; Traffic Marshal; Safety Officer)	**No vehicle-pedestrian accidents; no machinery collisions**. **Monitoring:** Daily checklist confirms flagger present, cones/barriers in place; vehicle inspection logs maintained. **Records:** Zero incidence of speeding or traffic rule violations (spot checks).
Utility Strikes / Electrical Shock	– Confirm all utilities (power, water, sewer, telecom) are disconnected **before demolition** (get clearance certificates). – Conduct underground cable/pipe scanning and mark all identified services. – Use **LOTO** for any live electrical work; only electricians to handle electrical isolations. – Hand-dig near known utilities; maintain safe distance from overhead lines (demarcate clearance).	Contractor (Project Manager & Site Supervisor; Utility company liaison)	**Utility damage incidents: 0**. **Monitoring:** Permit-to-dig system in use (permits on file for any excavation); checklist item "utilities marked and isolated" signed off pre-work. **Indicator:** No unplanned service outages or electric shocks reported.
Hazardous Materials Exposure	– Perform **hazardous building materials survey** prior to demo (as done for asbestos) and brief workers on findings. – Follow Annex 2 Asbestos	Contractor (OHS Officer; Hazardous	**No cases of illness from hazardous exposure**. **Monitoring:** Confirmation that all hazardous wastes removed with manifests (audit of disposal dockets). **Air monitoring:** If ACM work, air clearance test results

	Management Plan for any suspect ACM: use licensed removalists, wet methods, enclosures, and PPE. – Provide appropriate PPE for handling lead paint or bird droppings (respirators, gloves). – Segregate and store hazardous waste safely: sealed containers, labeled, away from worker areas. – Arrange licensed disposal for hazmat; maintain waste manifests. – Health monitoring for workers if significant hazardous exposure (e.g., blood lead level if lead removal extensive).	Materials Specialist)	meet safe re-entry criteria. **PPE usage:** 100% respirator use during hazardous removal tasks (verified by safety officer).
Dust Generation and Air Quality	– **Dust suppression**: continuous water spraying on demolition fronts and debris piles to minimize airborne dust. – Erect screens or barriers at site boundary to contain dust if needed. – Require dust masks/respirators for workers in high dust areas. – Regularly sweep or wet down access ways; install wheel-wash or rinse for trucks to prevent carry-out of soil/dust. – Monitor particulate levels (visual checks and possibly a dust monitor) and adjust suppression accordingly (stop work if excessive dust until mitigated).	Contractor (Site Supervisor & Workers – everyone responsible to help suppress dust)	**Visible dust escaping site: minimized** (no visible plume crossing boundary). **Monitoring:** Daily log of water suppression (times applied); **Community complaints:** none due to dust (complaint log reviewed weekly). **Worker health:** no cases of respiratory issues; periodic checks show dust levels within guidelines.
Noise and Vibration	– Use well-maintained equipment with mufflers; avoid using multiple loud machines simultaneously near sensitive	Contractor (Site Supervisor; OHS Officer)	**Compliance with noise limits** (e.g., <85 dBA 8-hr for workers; meet any community noise criteria). **Monitoring:** Weekly noise measurements recorded;

	areas. – **Restrict high-noise activities to daytime** (working hours per permit); no nighttime demolition. – Provide hearing protection (earplugs/muffs) and enforce their use for all noisy operations. – Set up temporary noise barriers or acoustic screens especially towards the school/church side. – Monitor noise levels at site boundary; inform workforce of high noise times so they can double up protection or rotate out. – Limit exposure time for vibrating handheld tools; use anti-vibration gloves.		vibration monitoring results if applicable (for structure, as relevant). **Hearing protection use:** 100% during noisy tasks (spot checks). **Feedback:** No worker hearing complaints; no community noise complaints unresolved.
Heat Stress & Weather Exposure	– Schedule heavy manual work for cooler times (morning/evening) in hot months; enforce **rest breaks in shade** and provide drinking water supply on site. – Allow self-paced work and additional breaks on very hot/humid days. – Provide shaded break areas. – Train workers on heat illness signs and quick response (first aiders knowledgeable in treating heat exhaustion). – Monitor weather; halt work during extreme heat waves or if inside structures with poor ventilation gets too hot. – For storms: secure loose materials; stop work at height during high winds or lightning; evacuate if cyclone warning.	Contractor (Site Supervisor; all workers for self-care)	**No heat-related illnesses among workers**. **Monitoring:** Temperature/humidity tracked on site (daily highs noted); work-rest cycle adjusted accordingly (records of any heat stress incidents or adjustments). **Supply check:** Water consumption logs to ensure ample hydration (e.g., X liters per worker per day available). **Emergency drills:** successful execution of weather-related stop work (if applicable).

| **Note:** All measures above are to be implemented in conjunction with regular training, supervision, and enforcement as described in the text. “Contractor” as responsible party implies the Contractor’s project management and safety staff, while oversight by the PMU/Engineer will verify these measures. KPIs such as “zero incidents” are goals; any occurrence will trigger investigation and corrective action as per the Incident Management protocols. |

Conclusion

This Annex OHS Plan provides a comprehensive framework to manage occupational health and safety for the MoLNR offices demolition. By identifying specific risks and detailing targeted mitigation measures in line with **World Bank ESS2 and EHS Guidelines**, it ensures that **worker safety is prioritized** on par with technical and environmental aspects of the project. Responsibilities are clearly allocated, from the Contractor’s duty to implement day-to-day safety measures to the oversight functions of the PMU and authorities. Through training, supervision, and a culture of safety, the project aims to prevent accidents and ill-health. In the event of any incident, robust emergency and reporting procedures (including ESIRT) are in place to respond effectively and learn lessons.

By adhering to this plan, the demolition works can proceed **with minimal risk to the workforce**, ensuring that at project completion, we have achieved the objective of **“no one hurt, no one harmed”** during the demolition. This not only protects the workers and their families, but also contributes to project success by avoiding delays and demonstrating strong ESHS performance consistent with both Vanuatu’s legal requirements and the World Bank’s environmental and social standards. The OHS Plan will be kept as a living document, reviewed regularly, and updated if needed to respond to any changing conditions or new risks. With management commitment and worker cooperation, the MoLNR building demolition can be completed safely, paving the way for new construction on a foundation of sound labor and working conditions.