# Appendix B – Environmental Management and Monitoring Plan (EMMP) for Etas Subdivision

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This is Annex B of the Environmental Impact Assessment (EIA) Report has been prepared for the VARS project, Component 1 Etas Subdivision, in accordance with the **Environmental Protection and Conservation Act [CAP 283]** and the **EIA Regulations Order No. 175 of 2011**.

**Submission of Comments:**

Written comments and concerns about the project or the EIA report can be submitted to the VARS Project Management Unit (PMU):

**Physical Address:**
Ministry of Lands and Natural Resources – Resource Centre – Project Management Unit - George Pompidou

**Email:** eso@vars.vu

**Phone:** 555 1551 or 774 9233 – for information

**Deadline for submissions:**

Written comments and concerns about the project or the EIA **report MUST BE SUBMITTED NO LATER THAN 15 AUGUST 2025**

For further information or clarification please contact the VARS PMU through the email or phone numbers above.

# 1 Contents

## 1. Introduction

This Environmental Management and Monitoring Plan (EMMP) is prepared for the Etas Subdivision works under Subcomponent 1.1 of the Vanuatu Affordable and Resilient Settlements (VARS) Project. The EMMP aligns with the Environmental Protection and Conservation (EPC) Act and EIA Regulations Order No 175 of 2011, as well as the World Bank Environmental and Social Framework (ESF). The EMMP integrates mitigation and monitoring measures to address potential environmental and social impacts associated with the subdivision development. The goal is to ensure that impacts are reduced to acceptable levels and, where possible, as low as reasonably practicable, while ensuring alignment with international good practice in environmental and social sustainability.

## 2. Project Description

The Etas Subdivision is a pilot 130-lot residential development on a 10-hectare greenfield site in Etas, located approximately 7 km east of Port Vila. The subdivision includes residential lots, internal roads, drainage, parks, green spaces, utilities (water, electricity), and sanitation infrastructure.

The project will use a local head contractor and local suppliers wherever feasible, with construction materials sourced from licensed suppliers on Efate. The subcontractor for power and water is intended to be the local utility provider, UNELCO, who will source certain key materials from France. Temporary construction impacts such as increased traffic, dust, and noise are expected but will be managed through standard mitigation measures.

In accordance with instructions from the Department of Environmental Protection and Conservation (DEPC), a Contractor's Environmental Management and Monitoring Plan (CEMMP), with site-specific mitigation measures, and regular monitoring and reporting will be enforced to ensure compliance with national regulations and international safeguards.

## 3. Mitigation Measures

### 3.1 Summary of Impacts

The Etas Subdivision project presents a range of environmental and social risks that require comprehensive mitigation throughout all phases of the project. In addition to direct construction impacts, the project also faces risks from associated facilities and **cumulative impacts** resulting from planned and future developments in the area.

**Environmental Impacts**:

- Erosion and sedimentation during earthworks
- Air quality degradation from dust, vehicle emissions and material handling
- Noise and vibration from machinery and equipment

- Waste generation and management challenges, including hazardous waste
- Risks from ancillary activities such as material extraction, concrete batching, laydown areas and equipment maintenance
- Potential impacts to vegetation and soil stability, particularly on the escarpment edge
- Potential loss of culturally significant trees
- Low risk but potential for UXO (Unexploded Ordnance) risk, requiring chance find procedure

**Social Impacts**:

- Disruption from construction-related traffic, particularly for schoolchildren and nearby communities
- Occupational health and safety (OHS) risks for workers
- Community health and safety risks, including exposure to dust, noise, and unsafe traffic conditions
- Risks of sexual exploitation, abuse, and harassment (SEAH), particularly with the influx of construction workers
- Social disruption or grievance escalation without effective communication and redress mechanisms
- Low risk but potential for Cultural or Heritage finds, requiring chance find procedure
- Post-construction risks related to inadequate maintenance of public infrastructure or unmanaged informal settlement expansion

**Associated Facilities and Cumulative Impacts**

- Increased traffic and service demand from future residential and commercial developments outside project scope
- Strain on public waste, drainage, and water systems due to new connections from associated developments (e.g., community markets, homes built by private owners)
- Encroachment into open green space or sensitive areas if not managed through urban planning mechanisms

Mitigation strategies for these cumulative and associated risks are embedded in this EMMP and will be recommended for uptake by relevant authorities (e.g., SPGC, MoLNR) and incorporated into the project's capacity-building initiatives.

### 3.2 Mitigation Measures

Mitigation measures are categorized by project phase and presented in the mitigation tables. In all phases, the requirements of this EMMP, EIA, and CEMMP must be embedded in bid documentation, contractor TORs, and contract terms, including enforcement mechanisms.

**Design Phase**

- Retain significant vegetation including **banyan trees** and **mature trees**, prioritizing slope stability, biodiversity and cultural value.
- Design will maintain **20% of site as open green space** with erosion control and biodiversity preservation objectives. The National Land Subdivision Policy is minimum 10% of the site as passive green space and Etas, as a pilot, seeks to model a higher standard.
- Align roads with topography to minimize earthworks and sediment movement.
- Integrate sustainable urban drainage systems and on-site sewage treatment solutions as per Vanuatu Building Code.
- Consider risks from associated facilities development pressures in spatial planning and stormwater modelling.
- Prepare for potential cumulative traffic, runoff and waste management impacts from non-project developments.
- Incorporate EIA, EMMP and CEMMP requirements into bid documentation and contract terms.

**Tender and Contractor Selection Phase**

- Require each bidder to submit a preliminary **Contractor EMMP (CEMMP)** showing understanding of EIA and EMMP requirements.
- Evaluate bidder qualifications based on experience with environmental and social compliance.
- Mandate nomination of a qualified **Environment & Social Officer and Health and Safety Officer and a Community Liaison Officer** by successful contractor.
- Embed all EIA, EMMP/CEMSP conditions into bid documentation and contracts.

**Pre-Construction Phase**

- Approve CEMMP at least **21 days prior to site mobilization**; subplans are to include:

    - Labour Management Plan (LMP) – includes grievance mechanism
    - Environment Management and Controls Plan (EMCP)
    - Site Decommissioning and Restoration Plan (DRP)
    - Traffic Management Plan (TMP)
    - Earthworks Management Plan (EMP)
    - Quarry Management Plan (QMP)
    - Community Liaison Plan (CLP)
    - Waste Management Plan (WMP)
    - Contractors Safety Plan (CSP) – includes occupational health and safety (OHS)
    - STI and Sexual Exploitation, Abuse and Harassment (SEAH) Prevention Plan
- Conduct pre-mobilization site inspections to validate sensitive receptor mapping and layout for batching plant, stockpiles, spoil, and laydown areas.
- Verify arrangements for **site sanitation**, **access to water**, and **secure waste disposal**. Note that **workers camp is prohibited**.
- Conduct **pre-construction training on grievance procedures and safety and environment training** with all workers and subcontractors
- Conduct **pre-construction STI/SEAH prevention training** with all workers and subcontractors, facilitated by an external specialist.
- Confirm delineation of **material sourcing and spoil disposal areas**, avoiding sensitive locations and waterways.
- All permits (e.g., excavation permit, quarry licenses) must be secured and integrated into the CEMMP.

**Construction Phase**

- **Erosion and Sediment Control (ESC)** measures implemented before earthworks: silt fences, drains, and slope stabilization.
- **Air and noise suppression**: water trucks for dust suppression, noise-reducing mufflers on machinery, restrict working hours to between 07:00 and 18:00 hours.
- **Traffic Management Plan (TMP)** enforced: speed limits, detour signage, flaggers at key crossings, especially where children commute.
- **Waste Management Plan (WMP)** enforced: segregation of solid waste, safe handling of hazardous materials, and legal disposal only.
- **Environment Management and Control Plan (EMCP)** enforced: EMCP will include site specific operation plans and procedures for laydown and concrete batching,

crushing by the contractor. These plants will require the contractor to apply for and secure all permits and licences under Vanuatu laws

- Implement **Labour Management Plan (LMP)** and enforce the **Code of Conduct (CoC)** for all workers.
- **SEAH prevention** includes:
    - Quarterly training and awareness sessions
    - Zero-tolerance policy visibly posted on-site
- **Grievance Mechanism operationalized through VARS Help Desk.** The VARS Help Desk enables any and all project stakeholders to raise a request for information or design change, complaint or grievance either through the Help Desk Form (either directly or through a third party such as a community leader, Chief or Church leader), via phone call to the Help Desk phone or via email. The Help Desk form is available with the Community Liaison Committees, Chiefs of target settlements and online on the MoLNR website. In addition to the Help Desk run by the PMU, the Contractor will have a Community Liaison Officer (CLO) on site throughout the project and the CLO phone contact will be published on all signage and information materials.
- Signage posted and grievance procedures explained to surrounding community and CLO record keeping and oversight.
- **Contractors Safety Plan (CSP)** enforced: The occupational health and safety plan and program will include emergency procedures for site safety, evacuation and other safety mechanisms for natural disasters, disease outbreaks, civil unrest, serious accidents and others. Daily toolbox talks and routine OHS drills conducted by the contractor's OHSO.
- **Quarry Management Plan (QMP):** The contractor is strongly encouraged to use existing, legally permitted quarry sites. If new sites are developed a QMP will be required. The QMP outlines the contractor's obligations for managing the environmental and social risks associated with the sourcing and use of quarried material for the Etas Subdivision.
- Subcontractors and suppliers (including equipment and materials suppliers) are required to comply with all EIA, EMMP and CEMMP requirements

**Operation Phase**

- Handover of roads, drainage, streetlights, and waste stations to Shefa Provincial Council with maintenance responsibilities defined.
- Recommend integration of cumulative impact mitigation (e.g., coordinated drainage maintenance, planning controls for infill development) into SPGC operations.

- Promote establishment of a **residents' committee** to oversee neighbourhood waste, safety, and infrastructure needs.
- Continue public awareness around safe wastewater disposal, management of green space and SEAH prevention.
- Support ongoing use of the Help Desk for emerging concerns.

### 3.3 Mitigation Tables

**Mitigation Measures will apply to all contractors and subcontractors, including material and equipment suppliers.**

| POTENTIAL RISK OR IMPACT | ADDRESSED IN: | ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES | COSTS | RESPONSIBLE | SUPERVISOR |
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| **DETAILED DESIGN & TENDER PHASE** | | | | | |
| Climate change adaptation & resilience | Design Docs | Slope cuttings designed to appropriate angles for the site with benches and bench drains, including temporary drainage where required during bulk earthworks taking into account potential overland flows during storm events.<br>Provision of internal drains and culverts designed for increased flows from houses and other constructed surfaces and include protection against scour.<br>Roadside drains designed for increased flows and run-off from the roads, footpaths and adjacent slopes with lined drains provided where required to avoid erosion.<br>Excavation of the soakage and infiltration basin and provision for any overflows during storm events.<br>The layout of the subdivision must allow for onsite sewage treatment in line with Vanuatu Building Code requirements.<br>Address potential cumulative runoff impacts from associated facilities and future infill in drainage modeling and sizing.<br>Road design includes concrete and gravel, with no asphalt or bitumen road construction. | Part of DSS contract costs | DSS | PMU |
| **Environmental and Social management** EIA and EMMP | EIA, EMMP, Safeguards Instruments and Tender Docs | EIA prepared assessing baseline and potential risks and impacts of the project<br>EMMP prepared setting out performance standards, outcomes and management controls for all environmental and social risk management required for construction to set out Requirements | Part of DSS contract costs | DSS | PMU |

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| | | included in tender documents and EMMP as part of the supplementary specifications.<br>Key personnel to include E&S Safeguards Officer tertiary qualified and experienced (10+ years).<br>Tender must require commitment to environmental and social standards by all subcontractors (e.g. UNELCO for water and power provision).<br>Include recommendation that government agencies responsible for associated facilities adopt relevant safeguards. | | | |
| **PRE-CONSTRUCTION PHASE** | | | | | |
| Site Induction | EIA/ EMMP<br>CEMMP | Selected contractor visits site.<br>Identification of hazards, sensitive receptors, points of note for CEMMP.<br>Chance finds procedures in place for cultural heritage and unexploded ordinance. | Part of construction and DSS contract costs | DSS/ PMU | PMU |
| Materials sources | EIA/ EMMP<br>CEMMP | Contractor identifies licences/ permitted sources and obtains copies for CEMMP. | Contract costs | Contractor | DSS |
| Equipment and Plant locations | EIA/ EMMP<br>CEMMP | **Contractor presents CEMMP** and all subplans including **Environment Management and Control Plan (EMCP)** for approval 21 days prior to commencement of construction.<br>Contractor seeks approval for proposed locations for materials processing, crushers, concrete batching. Note that no asphalt required in construction.<br>DSS to consider suitability of proposals and recommend approval or changes.<br>Once approved, contractor to obtain all licences permits etc required. | Contract costs | Contractor<br>DSS | DSS<br>PMU |
| E&S Risk Management capacity | CEMMP | Contractor confirms personnel responsible for environmental and social safeguards, including suitably qualified and experienced Occupational Health and Safety (OHS) member.<br>DSS reviews and approves or rejects. | Contract costs | Contractor<br>DSS | DSS<br>PMU |

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| General E&S Risk Management | CEMMP | A description of the CEMMP and a list of the subplans is set out in the CEMMP section of the EMMP. The CEMMP will address all environmental and social risks that must be avoided, mitigated or minimised and managed through the mobilisation, construction and demobilisation phase.<br>The CEMMP will address all matters and requirements set out in the EMMP.<br>The CEMMP will map and set out all identified sensitive receptors, haulage routes, the intended programme of works, site services, plant and equipment.<br>All required permits (DEPC, Landscape, Quarry Permit) will be in place and conditions integrated into CEMMP and subplans prior to commencement of works.<br>The CEMMP including all required sub-plans will be prepared by the nominated key personnel member submitted for approval by DSS and PMU at least 21 calendar days prior to commencement of works (mobilising to site).<br>Specific requirements to be included within sub-plans are set out under the Mobilisation, Construction and Demobilisation section of these EMMP tables.<br>Site signage will be ordered in advance after approval of the DSS and PMU as specified in the tender documents. Signs will show: name of the project, name and contact details of the Community Liaison Officer and DSS; and include details on how to make a complaint.<br>Employees and contractors must be made aware of the importance of environmental protection and must receive appropriate training prior to commencing work on site.<br>Full safeguards record keeping and management controls, inspections, monitoring etc to be prepared and in place for mobilisation. | Contract costs | Contractor<br>DSS<br>PMU | |

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| **MOBILISATION, CONSTRUCTION & DEMOBILISATION** | | | | | |
| **Mobilisation** (before main contract works commence)<br>Preparation<br>E&S Risk Management | CEMMP<br>EMCP | Plant, equipment, offices, workers facilities etc. to be set up and approved through the **Environmental Management and Control Plan (EMCP**).<br>Site Signage to be erected before mobilisation to site.<br>Site fencing secured entry and exits established before all works commence and throughout the construction period.<br>Locations for storage, stockpiles on and off site to be agreed with DSS in advance.<br>Protected trees and 'no go' areas for workers confirmed with DSS on site and fenced or clearly marked and signposted.<br>All environmental protection measures and CEMMP sub plans put in place and operational ahead of any civil works commencing.<br>**Traffic management plan (TMP)** implemented for all vehicles and mobilisation to site including 5km/hour speed limit on site.<br>Temporary drainage, silt and other controls put in place ahead of mobilisation and establishment of plant, equipment and other facilities.<br>Community Liaison Officer appointed prior to mobilising plant, equipment and machinery to site.<br>Community and stakeholder consultation shall take place at commencement of mobilisation and at least 10 days before any civil works start.<br>All workers, subcontractors and suppliers to be made aware of and trained in environmental protection, OH&S and community relations and safety and grievance mechanism before commencing work on site.<br>**Contractors Safety Plan to and Labour Management Plans** implemented an enforced. | Contract costs | Contractor | DSS |

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| | | All workers must sign codes of conduct etc with records kept before commencing work on site.<br>Contractor will engage an approved service provider to deliver STI & SEAH prevention training for all workers.<br>All workers training to be repeated at a minimum quarterly over the works period. | | | |
| **Bulk Earthworks Land and Geology:** Sedimentation, deposition, soil and land stability | CEMMP **Earthworks Management Plan (EMP)** | Minimise erosion and design erosion protection measures according to international good practice standards, including incorporation of effective climate resilient drainage systems (soakage pits) and consideration of surface flow paths.<br>EMP to include a bulk earthworks programme to be approved by DSS.<br>Contingency planning in the EMP must detail soil erosion prevention measures in event of storm or heavy rain event.<br>All cut to fill locations and earthworks and topsoil storage areas to be identified in the EMP and protection measures put in place.<br>No bulk earthworks to commence unless protection measures are in place.<br>Protection measures to be effective at all times and improved or upgraded as required to avoid erosion, deposition or land instability.<br>Chance finds procedures in place for cultural heritage and unexploded ordinance. | Contract costs | Contractor | DSS |
| **Throughout Construction** Community Health & Safety | CEMMP<br>TMP<br>CLP<br>GRM | **Community Liaison Plan (CLP) and Traffic Management Plan (TMP)** approved as part of CEMMP is to be implemented throughout the construction period.<br>Contractor will ensure:<br>• Site fencing, security and signage is in place and maintained throughout construction phase.<br>• All project vehicles must not exceed 20 km/hour along Etas Road. | Contract costs | | |

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| | | • TMP includes pedestrian safety/management along the length of Etas Road and include separating pedestrians and traffic and provision for overseeing school children walking to and from school.<br>• Arrangements for schoolchildren are to be presented to the Principal at Etas School before construction works start. Reminders or changes to be communicated to the school.<br>• Shefa Provincial Council, Shefa PWD and the police must be informed in writing 7 days in advance, of any road works which may cause, or have the potential to cause, any significant interruptions or changes to normal traffic patterns. This includes any diversions.<br>• Pedestrian diversion routes must be clearly marked.<br>• Damage to private property shall be recorded and DSS informed of every incident with compensation paid to owner.<br>• Complaints register to be kept and all complaints reported to DSS on a weekly basis as part of standard safeguards reporting.<br>• GRM to be used for grievance or complaints require redress. | | | |
| **Throughout Construction** Community grievances | CLP | The contractor will develop a **Community Liaison Plan (CLP)** setting out the key local, community and other contacts required for effective local stakeholder engagement.<br>• The CLP will be consistent with the project Stakeholder Engagement Plan.<br>• CLP to set out proposed meeting schedules with community representatives and stakeholders.<br>• The CLP will set out the rules, restrictions and requirements of surrounding communities, including the Etas School, roadside vendors and users of the Etas Road regarding the work programme and workforce behaviour.<br>• The Contractor shall provide a suitably qualified and experienced Community Liaison Officer (CLO) for the implementation of the CLP and the projects' Grievance Redress Mechanism (GRM). | Contract costs | | |

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| | | • The Contractor's CLO will be fluent in English and Bislama and will live or have lived in the Etas area.<br>• Public consultation and disclosure communication is to be completed at regular intervals with full involvement of the CLO to ensure that the public are fully aware of the VARS works.<br>• Consultation should include all aspects of the project.<br>• Consultation shall include raising awareness of the project GRM, how to complain and how complaints will be managed.<br>• The CLP shall set out how the contractor will operate the grievance response mechanism, including keeping records on all grievances, time to resolve and resolution.<br>• Adequate consultation must take place with all neighbouring households adjacent to the project site at least 10 days prior to commencement of works.<br>• VARS DSS will be the Contractors key facilitator for all consultations.<br>• Signage should be used in public areas around the VARS project site advising the complaints procedure and contact details of key project individuals responsible for responding to issues raised. | | | |
| **Throughout Construction**<br><br>**Damage to built environment**<br>Assets and infrastructure | EMCP & CLP | Contractor CEMMP to include procedures for rapid notification to the responsible authority (PWD for roads, UNELCO for utilities, PVCC for Bouffa landfill).<br>As a result of VARS construction activities, any damage to assets or infrastructure (including public roads) must be reported to DSS and rectified at the expense of the Contractors.<br>GRM complaints on damage to assets to be recorded in GRM register including resolution and details of the repair or compensation for the assets. | Contract costs | Contractor | DSS & PMU |
| **Throughout Construction**<br>Road traffic community and worker safety | CEMMP<br>TMP | Traffic safety measures will be set out in the **Traffic Management Plan (TMP)**. Requirements will include:<br>All project vehicles must not exceed 20 km/hour along Etas Road and 5km/hour within the construction site. | Contract costs | Contractor | DSS |

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| | | All project vehicles will be kept in roadworthy condition and driven by fully licenced and experienced drivers.<br>All drivers to be trained in the requirements of the TMP.<br>TMP includes pedestrian safety/management along the length of Etas Road and include separating pedestrians and traffic and provision for overseeing school children walking to and from school.<br>Pedestrian diversion routes must be clearly marked.<br>Road signs must be clearly visible, unobscured by vegetation and have a surface clean from any excessive dust or dirt.<br>Barricades must be erected and maintained in front of all obstructions or roadside excavations.<br>Temporary detours, approaches, crossings and intersections must be clearly indicated and delineated by guide markers.<br>Traffic control measures must include traffic controllers with “SLOW” and “STOP” signs at both ends of sections of works when road is reduced to single lane.<br>Road signs must be clearly visible, unobscured by vegetation and have a surface clean from any excessive dust or dirt.<br>Barricades must be erected and maintained in front of all obstructions or roadside excavations.<br>Shefa Provincial Council, Shefa PWD and the police must be informed in writing 7 days in advance, of any road works which may cause, or have the potential to cause, any significant interruptions or changes to normal traffic patterns. This includes any diversions.<br>Where appropriate, employ flag operators on the road to prevent traffic accidents or allow entry and exit of heavy vehicles or oversize equipment or plant. The workers shall have relevant safety equipment and training.<br>Effectively monitor TMP measures on a weekly basis and update TMP where necessary. | | | |

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| | | Contractor to report on adherence to speed limits and use of haulage routes in monthly reports. | | | |
| **Throughout Construction**<br>OH&S | CEMMP<br>CSP<br>TMP | The **Contractor Safety Plan (CSP)** is to be developed on World Bank EHS Guidelines and best international practice. The approved CSP will be fully implemented across all operations and at all times. This includes always having a safety officer with suitable qualifications available during construction.<br>The CSP will ensure:<br>All workers have undergone suitable induction training on OHS with regular training over course of project.<br>Responsibilities and authorities a for OH&S are in place.<br>Health and safety documentation is in place includes all areas of the project (e.g. drivers).<br>Incident reporting and investigation is aligned with World Bank ESIRT requirements. CEMMP to include approved and enforced Labour Management Plan and Safety Plan.<br>All OH&S requirements are in place on the construction site.<br>First aid training is provided as required to nominated site workers.<br>First aid kits and services available on site e.g. stretcher, vehicle transport to hospital.<br>First aid kits located in communal areas or marked areas.<br>Workers trained in HIV/AIDS and sexually transmitted disease (STD) awareness.<br>Usage of drugs and alcohol on construction site is prohibited.<br>Hazard assessments of all works activities.<br>All lights and cautionary signs are in place in all hazardous areas.<br>Set out safety inspection procedures.<br>The PPE is always available and in use. This may require providing on-site storage for workers allocated PPE.<br>The Contractor will ensure adequate supply of water for construction and sanitation and potable water for all personnel. | Contract costs | Contractor | DSS & PMU |

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| | | The Contractor will provide gender segregated sanitation facilities for all workers that will be kept clean at all times. | | | |
| **Throughout Construction** Damage to Biological environment, Natural Habitats | EMCP<br>EMP | The contractor will minimise damage to the biological environment (flora and fauna) throughout the construction period**. Earthworks Management Plan (EMP) and Environmental Management and Control Plan (EMCP)** to be enforced. This includes ensuring:<br>Workers are prohibited from poaching or collecting firewood in areas around the site.<br>Escarpment area and all standing trees are to be retained and workers advised on the need to preserve these features. Removal of trees through DSS approval only.<br>Limit any areas to be cleared to the minimum agreed workable area.<br>Vegetation to be removed without use of herbicides/ pesticides.<br>Extent of permanent vegetation clearance will be described in CEMMP based on the construction plans and approved by the DSS.<br>Any additional trees that may be required to be removed can only be removed after agreement of the DSS and PMU<br>Contractor's machinery operators to work within clearly marked boundaries. | Contract costs | Contractor | DSS |
| **Throughout Construction** Damage to land, erosion and deposition, instability | EMP | Project earthworks and excavation will continue after the Bulk Earthworks are completed. Erosion and sediment control must be maintained throughout the construction period. The EMP will include these protection measures to cover all general site works and excavations apart for bulk earthworks.<br>Erosion control and protection measures will be in line with international good practice standards, including incorporation of effective climate resilient drainage systems (soakage pits) and consideration of surface flow paths. Contingency planning in the EMP must detail soil erosion prevention measures in event of storm or heavy rain event.<br>The following protection measures shall be undertaken by the contractor throughout the construction period:<br>Minimise cleared ground to the area where earthworks are planned. | Contract costs | Contractor | DSS |

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| | | Clearly mark the areas to be cleared in advance.<br>Earthworks during heavy rainfall or when the ground is waterlogged are prohibited.<br>Chip or otherwise process cleared trees etc. for use as mulch on site.<br>Topsoil to be stockpiled onsite.<br>Temporary erosion control measures and runoff/sediment control structures around cleared areas immediately after clearing.<br>Reinstate cleared areas as soon as possible.<br>Mulch batter slopes before planting.<br>Plant slopes with grasses and other plants suitable for preventing erosion as soon as works are completed at each location on the site.<br>Keep construction vehicles on defined tracks within the site.<br>Re-vegetate disturbed areas that will not include further civil works as soon as practicable (loosen ground; apply topsoil; seed or plant as necessary) in accordance with the decommissioning plan in the CEMMP. | | | |
| **Throughout Construction**<br>Damage to land, erosion and deposition, instability.<br>Pollution. | EMCP<br>EMP | Runoff/sediment control structures must be maintained so that they continue to control sediment loads. Stormwater discharge from site drainage must not cause erosion or deposition on neighbouring land<br>The following activities are prohibited within 30m from any site stormwater drain:<br>Storage of fuels, lubricants or other hazardous materials.<br>Refuelling of machinery.<br>Overnight storage of machinery<br>Discharge of waste .<br>Soakaways for sanitation facilities.<br>Machinery must be serviced and maintained to a standard that prevents the leakage and spillage of oil, fuel, lubricants and other contaminants.<br>Spill response plan developed and training completed for all construction workers.<br>Spill response kits available at all locations where fuel is stored. | Contract costs | Contractor | DSS |

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| **Throughout construction** Environmental impacts from works site storage and facilities, waste | EMCP<br>WMP<br>Site Specific Plan | The site facilities and storage areas should be managed to ensure that environmental impacts are minimised. This includes the controls set out below.<br>The following must be located at least 30m from any drain:<br>Storage of fuels, lubricants or other hazardous materials.<br>Refuelling of machinery.<br>Overnight storage of machinery.<br>Discharge of waste.<br>Soakaways for sanitation facilities.<br>Stockpiles (excluding excavated materials for immediate reuse in project site) must be located:<br>On clear, even, firm, well-drained ground and in locations where they can be clearly identified.<br>At least 30 m from any drain.<br>Fencing may be required around specific stores (e.g. hazardous substances) to prevent access by unauthorised personnel.<br><br>Secure, well-constructed areas at work sites to clearly marked for solid waste collection, machinery maintenance, hazardous substance storage and toilet facilities for workers.<br><br>Laydown site(s) will include hard stand areas which have protection from wind and (where appropriate) rain, bunding (hazardous substances), clean water diversion drains, and allow for complete containment, collection and treatment of wastewater from concrete production and machinery maintenance. | Contract costs | Contractor | DSS |
| **Throughout construction Impacts om human and built environment:** Influx of Labour & | LMP | The contractor will be required to produce a **Labour Management Plan (LMP)** for the VARS works to describe:<br>Local and International recruitment strategy<br>Worker training program<br>Worker Orientation and Induction details<br>Cultural protocols and expectations<br>Standards of behaviour and disciplinary procedures. | Contract costs | Contractor | DSS |

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| Worker Management | | The contractor will ensure the following with regards to labour management:<br>Maximise the number of local workers.<br>Note that development of a workers camp is prohibited.<br>Preference should be given to a local recruitment process, only relying on workers from overseas for vacancies which cannot be filled locally.<br>The LMP will include a list of roles along with required qualifications or experience and the planned recruitment strategy for that role (i.e. local or regional/overseas).<br>The LMP will adhere to Vanuatu legislation, with particular respect to the list of reserved occupations, which form part of the Labour (work permits) Act [CAP 186].<br>The Contractor will provide justification for any roles not filled locally.<br>Work permits will only be granted for workers with skills unavailable in Vanuatu.<br>International workers must undertake specialised work that cannot be done by locals otherwise work permits will be cancelled and return home within 48 hours of notification by the DSS.<br>All project staff recruited from overseas are subject to visa approval.<br>In accordance with the World Bank's Standard Procurement Documents (SPDs), the contractor shall submit a satisfactory **Code of Conduct** (CoC) to address the responsibilities of the individual, the management and the company towards the safeguards requirements of the Project, the prevention of GBV and the adherence to all OHS requirements.<br>The CoC will be developed by the contractor reviewed and approved by the DSS.<br>The CoC will contain obligations on all Contractor's Personnel (including sub-contractors and day workers) with measures to address the social impacts of the project. | | | |

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| | | All Project workers will be required to undertake HIV, GBV and SEA prevention training and sign the CoC prior to commencement of works.<br>The CoC will be easily understood and signed by each worker to indicate that they have:<br>received a copy of the code;<br>had the code explained to them;<br>acknowledged that following the CoC is a condition of employment; and<br>advised that violations of the CoC can result in serious consequences, up to and including dismissal, or referral to legal authorities.<br>A copy of the CoC shall be displayed in a location easily accessible to the community and project affected people. It shall be provided in languages comprehensible to the local community, Contractor's Personnel, Employer's Personnel and affected persons.<br>Workers will work between the hours of 0700 H and 1800 H and paid based on the number of hours worked.<br>Provisions for overtime pay will also be included in work contracts.<br>Management of workers is expected to include no work on a Sunday (or Saturday for LDS Church members) or on Public Holidays. | | | |
| **Throughout construction**<br>Water and soil pollution | CEMMP<br>EMCP<br>WMP | The contractor will minimise, mitigate or avoid any water and soil pollution.<br>Controls include:<br>Developing a spill response procedure and provide training to all contract workers on how to implement it quickly and effectively.<br>The procedure will be included in the EMCP and hard copy posted at all chemical and fuel storage locations and in all vehicles.<br>Spill kits to be available at all places where fuels and hazardous substances are stored and vehicles refuelled.<br>The contractor's Waste Management Plan (WMP) will include management of wastewater. | Contract costs | Contractor | DSS &DWR |

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| | | Sanitation treatment system (e.g. removal of waste to landfill or industry standard treatment system) is to be approved by the DSS prior to implementation. | | | |
| **Throughout Construction**<br><br>Air pollution, noise and vibration nuisance | EMCP<br>EMP<br>TMP<br>CLP | The contractor will minimise and mitigate all air pollution and noise and vibration nuisance. Controls will be included in the relevant CEMMP subplans.<br>Controls include:<br>All vehicles and plant to be maintained and avoid excess particulate of fumes.<br>All open areas to be watered if dust is causing a nuisance offsite.<br>Watering along the Etas road during dry conditions to avoid dust nuisance for road users and pedestrians.<br>Any concrete batching asphalt or bitumen plant will be subject to a site specific management plan that will require mitigation of any dust, fumes and odours.<br>Building materials and wastes must be covered during transport.<br>Cover or wet down stockpiles containing fine material (e.g. sand and topsoil) if it is causing a dust nuisance.<br>All surfaces should be constructed to their final design as quickly as practicable.<br>Keep work areas clean with regular sweeping.<br>Dust masks and personnel protective equipment must be available and used by workers during dust generating activities.<br>The use of hydrocarbons or other hazardous substances for dust suppression is prohibited.<br>Burning of cleared trees, any plastics or other wastes is prohibited.<br>Plant will be located within centre of the site or screened behind bunds to act as a noise barrier.<br>Minimise nuisance from noise, closer to residences. Advertise working hours at the site entrance. | Contract costs | Contractor | DSS |

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| | | Regularly check and maintain machinery, equipment and vehicle conditions to ensure appropriate use of mufflers, etc.<br>Workers in the vicinity of sources of high noise shall wear necessary protection gear rated for the situation they are being used.<br>Signage to outline complaints procedure (GRM) and contact details of recipient of complaints (e.g. phone number, physical address and email).<br>Noise impacts shall not exceed 45 dBA at the closest residential or other sensitive social receptors. The closest sensitive receptors are the closest residences to the active works. | | | |
| **Throughout Construction Physical Environment:** Sources of aggregate material | CEMMP<br>QMP | The contractor will ensure locally sourced aggregate is sourced under appropriate permit from approved licensed quarry sources and are operating in accordance with GoV law.<br>The contractor will ensure:<br>No aggregates will be extracted from rivers or beaches for the VARS project works.<br>Should the contractor quarry its own materials, then all required licences and permits must be obtained and a **Quarry Management Plan (QMP)** developed as per the requirements of Quarry Management Act.<br>The QMP must be included as a subplan under the CEMMP and will be subject to approval from the DSS. | Contract costs | Contractor | DSS |
| **Throughout Construction**<br><br>Waste generation & management | CEMMP<br>WMP<br>EMCP<br>EMP | The contractor is responsible for the safe disposal of all waste generated by the works. CEMMP and will identify contractor staff responsible for implementing and monitoring waste management.<br><br>A Waste Management Plan (WMP) is to be developed as part of CEMMP to cover management and disposal of all wastes (liquid and solid). WMP will include the following requirements.<br>Strictly no dumping of project waste or rubbish. | Contract costs | Contractor | DSS |

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| | | Description of all solid and liquid wastes generated by the works and detail the approved disposal methods along with permissions.<br>Segregation of wastes with clearly signed areas for waste collection, recycling and off-site disposal.<br>Segregated waste must avoid cross contamination, (eg mixed with hazardous substances).<br>Awareness training in WMP for all staff as part of general safeguards training.<br>Wastes are to be disposed of at Bouffa landfill site unless there are restrictions on some types of hazardous wastes.<br>Confirmation from the Port Vila City Council (PVCC) on the types of wastes to be received at the Bouffa Landfill.<br>A sanitary system for workers to prevent fouling of surrounding soils.<br>A separate washdown area is required for machinery or material with oil or fuel residue and treated through an oil water separator.<br>Wash water to be treated and can only discharge to land at a rate not exceeding the infiltration rate of the ground (i.e. no ponding or runoff).<br>The WMP should adhere to the GoV Environmental Health Act and follow the requirements in this EMMP.<br>Contractor to identify licensed disposal facilities and any export permits or conditions for export of waste.<br>Any empty drums/containers will either be disposed of at Bouffa Landfill on Efate or will be removed offshore and either returned to supplier or disposed of in a legally approved facility outside Vanuatu.<br>**D**evelop and implement a Spill Prevention and Response Plan, including readily available spill kits, emergency contact protocols, and containment procedures.<br>Inspect hazardous material storage and handling areas weekly for leaks, damaged containers, or improper disposal. | | | |

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| | | Prohibit on-site burning or burial of hazardous materials or contaminated containers.<br>Any waste that cannot be safely and correctly disposed of in Vanuatu is to be disposed of offshore in permitted or licensed facilities.<br>The export of any hazardous waste must be in compliance with the Basel and Waigani Conventions and any relevant laws enacted by source and the recipient countries.<br>Unless otherwise instructed by the DSS, all surplus materials not required during the defects liability period shall be removed from the site and the country.<br>Burning of cleared trees, vegetation, any plastics or other wastes is prohibited. | | | |
| **Throughout Construction Physical, human and built environments** Hazardous substances | CEMMP EMCP, CSP and WMP Spill Response Procedure | Hazardous substances shall be correctly managed at all times. Documented procedures for handling storage and disposal will be prepared based on the types of the hazardous materials. Hazardous wastes will be similarly managed through enforcement of the **Waste Management Plan (WMP),** which will contain Spill Response Procedures.<br>The following will be required:<br>Where possible project fuel will be obtained from local commercially available sources.<br>All fuel on site is to be stored in self-bunded containers within designated areas that are designed to store and facilitate operations associated with it (e.g. re-fueling).<br>All fuels, lubricants, chemicals and hazardous substances must be clearly labelled.<br>Safety data sheets (SDS) for each hazardous substances stored or used.<br>Signage to be posted in storage areas identifying all chemicals present.<br>Other hazardous substances to be stored in self-bunded tanks or drums.<br>Some substances may be store in bunded, hard stand or designated areas only with DSS permission. | Contract costs | Contractors | DSS |

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| | | All bunded areas to drain to an oil water separator. Bunds to contain 110% of total volume required to be stored or 25% of total volume if total volume is over 1,000 L.<br>Spill Response Procedure to be developed by Contractor and workers trained in the procedure. The response plan should include details on the use of spill kits and absorbent items to prevent spills entering the receiving sensitive environment (ground, surface water).<br>Provide hazard specific personnel protective equipment to workers directly involved in handling hazardous substances (e.g. chemical or heat resistant clothing, gloves). | | | |
| **Mobilisation and Demobilisation**<br>**Biological environment:** Biosecurity | CEMMP<br>EMCP | The Contractor is to ensure that its activities do not cause biodiversity loss or import or spread unwanted flora or fauna.<br>The contractor will:<br>Arrange for vehicles and machinery to be thoroughly cleaned of all contamination prior to shipping (e.g. soil, rocks, plant material, seeds, etc.).<br>Obtain import permits and quarantine certification prior to export from country of origin.<br>Land all materials or equipment shipped into Efate at the Port in Port Vila to allow GoV Biosecurity and Quarantine Officers to inspect the shipments.<br>Inspect all imported materials (e.g. fill, timber, machinery) for soil, seeds, or plant fragments before use on site.<br>If invasive species are suspected, isolate materials and report immediately to the Department of Biosecurity.<br>Thoroughly clean any machinery or equipment originating within Vanuatu but outside of Efate before its arrival into Efate.<br>Thoroughly clean all machinery etc. on site prior to demobilisation at the completion of project works. | Contract costs | Contractor | DSS |
| **Construction excavation** | EMCP | There is a chance that artifacts including ancient pottery and human remains may be discovered on the site. | Cost TBN | Contractor | DSS<br>PMU, |

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| Cultural significance & chance finds. | | If any of these are discovered then work must stop immediately stop in the location of unearthed artefacts.<br><br>The area to limit access and notify DSS immediately for further instruction. The DSS will inform the PMU and the Vanuatu Cultural Centre to confirm next steps. | | | Vanuatu Cultural Centre |
| **Demobilisation**<br>**Physical Environment:** Site rehabilitation | EMCP<br>EMP<br>Site rehabilitation plan | Contractor is required to include a **Site Decommissioning and Restoration Plan.** The Site Decommissioning and Restoration Plan will be put forward for approval by the DSS. The Plan will include:<br>Requirement to remove all construction materials, wastes and machinery from the site.<br>Restoration measures of all land occupied by contractor and removal of all temporary drains and other protection measures.<br>Scarification of the soil, application of topsoil and re-vegetation.<br>All laydown, storage, and plant areas must be **dismantled**.<br>Temporary drains and erosion control structures removed<br>Spoil heaps or stockpiles flattened or removed based on DSS instruction.<br>Any cleared vegetated area used temporarily by the contractor must be **replanted or allowed to regenerate**, with stabilization measures (e.g., hydroseeding, mulch, native plantings) where needed.<br>All exposed rebar, fencing, stakes, or buried infrastructure must be **removed or clearly marked**.<br>All construction debris, hazardous waste, oils, fuels, surplus materials, and equipment must be **removed from the site** and disposed of at approved facilities.<br>Temporary storage areas for hazardous substances must be **decontaminated and dismantled**.<br>All hazardous materials (e.g., fuel, oils, solvents, bitumen, paint) must be removed from the site, with containers cleaned, labelled, and either | Contract costs | Contractor | DSS |

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| | | reused or disposed of at a government-approved hazardous waste facility.<br>Hazardous storage areas must be decommissioned through surface cleaning, spill containment material disposal, and soil testing (if required), with contaminated soils remediated or removed.<br><br>Ensure temporary signage is taken down, and Help Desk signage is transitioned (if continuing).<br>**Client to hold final payment or performance guarantee until restoration is verified.** | | | |
| **Ancillary Activities**<br>Impacts on physical and human environments | EMCP<br>EMP<br>WMP<br>Site Specific Plans | Separate, site-specific operation plans and procedures will be required should concrete batching, asphalt or bitumen plants be established by the contractor. These plants will require the contractor to apply for and secure all permits and licences under Vanuatu laws.<br>The site-specific operational plans will be developed to ensure these ancillary activities manage and minimise all environmental and social risks from establishment to demobilisation and site restoration.<br>Prior approval from the DSS and PMU is required before establishment of any ancillary activities for the production of concrete, asphalt and bitumen. This includes choice of location for these activities.<br>All erosion control, drainage and measures for managing hazardous substances, wastes etc in the EMMP shall also apply to all ancillary activities.<br>**Concrete production** is to be equipped with settlement tanks/ponds for treatment of slurry and process water. Treatment shall include settling of suspended solids and decreasing the pH of the water. Waste concrete should be allowed to harden before reuse as clean fill. All equipment used in concrete production must be cleaned in designated wash down areas in the construction laydown area, away from surface | Contract costs | Contractor | DSS<br>PMU |

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| | | water, in a bunded impermeable area and shall not be allowed to permeate to ground.<br>Wastewater from concrete cutting, washing equipment or production must be collected and treated (settling and neutralisation through pH adjustment).<br>Waste should be designated in areas that will cause no damage to the vegetation cover or leach into groundwater or surface water (e.g. within construction lay down area on hard surface).<br>Throughout construction and on completion of works (prior to site handover) ensure drains are cleared of sediment and detritus build up on a regular basis and after significant rain events. | | | |
| **OPERATION PHASE** | | | | | |
| **Physical Environment** Groundwater quality | Vanuatu Building Act<br>Vanuatu Building Code<br>Shefa By-laws | Subdivision rules and legislation will ensure that sanitation facilities and septic tanks and soakage fields will be built in compliance with the Vanuatu Building Code. Regular desludging and transfer of the sludge to the city's septage facility will be necessary after some years of use. | Individual house owners | DoLNR<br>Shefa Provincial Council | MIPU<br>Shefa Provincial Council |
| **Physical Environment** Erosion and flooding | Subdivision Maintenance arrangements | Drainage is to be kept free of blockages to avoid, flood, inundation or erosion.<br><br>Management arrangements must ensure that maintenance is frequent and that internal storm drains and adjacent roadside drains are periodically cleared allow rapid dispersal of storm water. | Individual house owners | Shefa Provincial Council | DoLNR |
| **Built Environment** Resilient buildings | Vanuatu Building Act<br>Vanuatu Building Code | The site infrastructure will be constructed to building codes and international standards and should therefore be resilient to at least moderate earthquakes. Individual residential and other buildings on the subdivision will be built to the Vanuatu Building Code which provides for seismic resilience. | Individual house owners | DoLNR<br>Shefa Provincial Council | MIPU<br>Shefa Provincial Council |

### 3.4 Mitigation Table for Associated Facilities

| Project Phase | Associated Facility / Cumulative Impact | Potential Risk or Impact | Mitigation Measures | Costs | Responsible | Supervisor / Referred To |
|---|---|---|---|---|---|---|
| Design Phase | AFs + Cumulative Service Demand | Cumulative stormwater runoff- Future traffic and infrastructure overload- Loss of gren space | - Integrate cumulative runoff modelling into drainage system design, including upstream infill or impervious surfaces.- Reserve and legally secure green space areas to limit encroachment.- Coordinate subdivision layout with potential AF traffic flows (e.g. market, schools).- Recommend Shefa Provincial Council adopt a basic Local Area Plan incorporating drainage, waste, and transport capacity projections.- Include a zoning map and growth control overlays in design package. | Part of DSS contract costs | DSS / PMU | SPGC / DoLNR |
| Tender Phase | UNELCO, market utilities, local contractors | Multiple workstreams clashing- Gaps in safeguards for AF infrastructure providers | - Embed requirement in tender documents that all subcontractors (including UNELCO, equipment rental providers, or utility trenching teams) comply with EMMP/CEMMP.- Require joint pre-construction planning between UNELCO and DSS.- Tenderers to identify known | Embedded in contractor procurement | PMU / Contractor | DSS |

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| | | | third-party infrastructure links and outline coordination plans. | | | |
| Construction Phase | AF utility works (e.g. UNELCO trenching) | - Traffic congestion and access conflicts- UXO risk- Trenching disruption | - Enforce UXO clearance on all utility corridors.- Require UNELCO and any third-party teams to follow TMP, OHS Plan, and WMP.- DSS to convene weekly coordination check-ins during peak construction overlaps.- Apply temporary signage, speed controls, and detours for areas with parallel construction activities. | UNELCO budget / Project monitoring | UNELCO (subcontractor) | DSS / PMU |
| | Market construction & early occupancy | - Informal waste buildup- Unsafe access or stormwater discharge into subdivision drains | - Recommend SPGC enforce construction and waste permits at the AF market site.- DSS to inspect market stormwater tie-in points prior to connection.- Market vendors to be briefed via project awareness team on drainage protection and solid waste segregation.- Recommend early establishment of a Market Users Committee for coordination. | SPGC budget / donor support | SPGC | PMU to provide guidance |
| | Private house builds | - Uncontrolled infill- Septic overload- Increased pedestrian/car traffic- Informal structures | - MoLNR to require simple plot-based Environmental Conditions (building envelope, soak pit setback, tree retention).- Project team to deliver plot-holder environmental induction kits covering erosion, SEAH, and waste practices.- Recommend SPGC | Private owners / MoLNR | MoLNR / SPGC | PMU (awareness & tools support) |

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| | | | formalize a building approval and inspection process with safeguards review. | | | |
| | Green space pressure | - Encroachment- Tree felling- Informal play or dump sites | - Maintain fencing and signage in key open space areas.- Recommend SPGC adopt bylaws for protection and maintenance.- Promote formation of community greening or stewardship group as part of subdivision management training. | Low / awareness program | SPGC / community | PMU |
| Operation Phase | AF use + infill expansion | -Drainage overload- Infrastructure strain (roads, waste) from cumulative growth | - Support SPGC in developing an Integrated Maintenance Plan covering roads, drains, waste, and trees, based on projected growth scenarios.- Recommend inclusion of AFs in waste collection contracts and infrastructure audits.- Establish joint monitoring with SPGC for stormwater hotspots, blockages, or illegal dumping.- Consider SPGC adoption of bylaws to regulate open drains and communal spaces. | SPGC O&M budget | SPGC / MoLNR | PMU (handover phase support) |
| | Continued utility expansion | -Service interruptions or trenching conflicts with O&M | - Require UNELCO and utility operators to formally notify SPGC of any new works.- Include OHS and GRM expectations in MoUs or service agreements.- DSS to assist SPGC | Utility O&M budgets / minor training | UNELCO / Utility Providers | SPGC / DSS |

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| | | | with a Utility Coordination Protocol for long-term integration. | | | |

## 4. Monitoring Measures

DEPC requires that all projects comply with the EPC Act and EIA regulations and this project must also comply with the World Bank environmental and social safeguards policy and conform with World Bank environment and safeguard standards (ESS). In order to achieve this, it requires that an environmental and social assessment is carried out and this EMMP is developed to specifcy monitoring requirements to ensure compliance.

Compliance monitoring will be implemented at 3 levels:

(i) Contractor level through self-monitoring and reporting on compliance with its CEMMP;

(ii) Implementing agency through monitoring and evaluation against the EMMP through the DSS and directly through PMU officers; and

(iii) DEPC and the World Bank through regular monitoring visits.

Further monitoring will be carried out by other regulatory agencies to ensure compliance with various permits and licences.

The EMMP will be included in all bid and contract documentation for project implementation.

### 4.1 Scope and Parameters

Monitoring activities will confirm whether the mitigation measures are working and whether impacts are within acceptable thresholds.

**Environmental and Social Parameters**

- **Dust levels** (especially near roads and schools)
- **Noise levels** (limit 85 dBA at site boundary)
- **Sedimentation and erosion** at worksites and outfalls
- **Waste disposal practices** (segregation, storage, disposal method)
- **Occupational Health and Safety (OHS)**: incidents, PPE use, training logs
- **Community safety** indicators: blocked paths, traffic management, detour signage
- **Grievance redress records**: number of complaints, time to resolution
- **SEAH training and awareness activities**: dates, attendance

Thresholds include:

- **Dust**: ≥ 200 µg/$m^3$ (trigger additional suppression)

- **Noise**: ≥ 85 dBA (modify machinery or restrict work hours)
- **OHS incidents**: Any serious injury must be reported via **World Bank ESIRT** protocol within 24 hours

### 4.2 Methodology and Frequency

| Parameter | Method | Frequency | Responsible Party |
|---|---|---|---|
| Dust levels | Visual + monitoring device | Daily | Contractor (ESO) |
| Noise | Sound level meter | Weekly | DSS / Contractor |
| OHS performance | Observation, checklists | Daily | Contractor / DSS |
| Waste handling | Site inspection | Twice weekly | DSS / PMU |
| SEAH awareness & training | Attendance records, photos | Quarterly | Contractor / CLO |
| Grievance redress | Review of Help Desk logs | Monthly | CLO / PMU |
| ESC compliance | Site walkovers, photos | After rain | DSS / Contractor |



### 4.3 Monitoring Plan

This plan is to be used as a basis for monitoring compliance with the project EMMP and ensure that impacts as identified in the EIA are avoided, minimised or mitigated.

The DSS and Contractor shall organise a suitable monitoring regime that will include daily, weekly, monthly and quarterly monitoring including system audits to ensure the Contractor is managing its safeguards system and keeping records and all documentation up to date.

Monitoring reports shall be provided to the PMU on demand and in the form specified by the requestors.

| Impact Area: | Monitoring Parameter: | Frequency / Responsibility |
|---|---|---|
| **VARS Design Checklist – PRIOR TO APPROVAL OF FINAL DESIGN PACKAGES** | | |
| Climate Responsive Design | Proposed Slope cuttings designed to appropriate angles for the site with benches and bench drains, including temporary drainage where required during bulk earthworks taking into account potential overland flows during storm events included in design. | Once / PMU |

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| | Subdivision layout allows for sewage treatment in line with Vanuatu Building Code requirements. | |
| General Design | • EIA prepared assessing baseline and potential risks and impacts of the project<br>• EMMP prepared setting out performance standards, outcomes and management controls for all environmental and social safeguards required for construction to set out Requirements included in tender documents and EMMP as part f the supplementary specifications.<br>• Key personnel to include Safeguards specialist tertiary qualified and experienced (10+ years) | Once / PMU |
| **VARS Pre-Construction Checklist – PRIOR TO COMMENCEMENT OF CIVIL WORKS** | | |
| Site Induction | • Selected contractor visits site<br>• Identification of hazards, sensitive receptors, points of note for CEMMP. | Once / PMU |
| Materials sources | • Contractor identifies licences/ permitted sources and obtains copies for CEMMP. | DSS as required |
| Equipment and Plant locations | • Locations assessed and approved all contractor works site locations. | DSS as required |
| E&S Risk Management capacity | • Contractor personnel responsible E&S safeguards and OH&S , are suitably qualified and experienced. | Once / DSS |
| CEMMP | • CEMMP including all required sub-plans has been prepared by the nominated key personnel member submitted for approval by DSS and PMU at least 21 calendar days prior to commencement of works (mobilising to site).<br>• CEMMP complete with all licences permits and approvals. | Once/ DSS |
| Contractor E&S Risk Management preparation | • Site signage reviewed and approved.<br>• Approved site signage ordered in advance.<br>• Safeguards equipment (environment, OH&S, signage etc) ordered in advance.<br>• Code of Conduct reviewed and approved.<br>• Safeguards management system including records, registers, codes of conduct, training materials etc in place before mobilisation. | Once/ DSS & PMU |
| E&S Risk Management capacity | • All workers and staff trained in safeguards requirements | Initially, quarterly thereafter/ DSS |
| **VARS Monitoring Plan – THROUGHOUT MOBILISATION, CONSTRUCTION & DEMOBILISATION** | | |
| Mobilisation and establishment on site | Plant, equipment, offices, workers facilities etc. set up and approved.<br>Site signage erected before mobilisation to site.<br>Site fencing, secured entry and exits established before all works commence (and throughout the construction period). | Once/DSS<br>Weekly/ DSS<br>Quarterly inspections of facilities thereafter or by exception/ DSS |

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| | Storage, stockpiles on and off site in locations and set up as agreed with DSS.<br>Protected trees and 'no go' areas for workers fenced or clearly marked and signposted.<br>• Temporary drainage, silt and other controls in place ahead of mobilisation and establishment of plant, equipment and other facilities.<br>• Community Liaison Officer appointed prior to mobilising plant, equipment and machinery to site.<br>• Community and stakeholder consultation at commencement of mobilisation and at least 10 days before any civil works start.<br>• All workers, subcontractors and suppliers trained in environmental protection, OH&S, community relations before commencing work on site.<br>• Approved service provider delivering HIV/AIDS/STI and Gender awareness training for all workers before or within one month of works commencing.<br>• Repeat training occurring every quarter over the works period.<br>• All workers signed codes of conduct.<br>• Site security in place with controlled entrance and exit to site. | |
| General | • Contractor is undertaking weekly monitoring and reporting using monitoring form approved by DSS in CEMMP.<br>• Community consultation is ongoing as per VARS SEP and contractor's CLP<br>• DSS is undertaking weekly monitoring and reporting.<br>• GRM is in use and any complaints being progressed to resolution.<br>• Non-compliances are being addressed to DSS satisfaction in timely manner. | Weekly / DSS<br><br>Weekly / PMU |
| Waste management | • Approved Waste Management Plan effectively implemented<br>• Waste collection at is secure, well signed and clean<br>• Hazardous waste is stored according to WMP<br>• Good housekeeping around project sites and workers accommodation.<br>• No evidence of waste burning. | Weekly / DSS |
| Community health, and safety | • Approved TMP is effectively implemented.<br>• Required signage is in place.<br>• Public signage of complaints procedure<br>• Signs and fences restrict or direct pedestrians and public where appropriate.<br>• No works taking place at night or on Sunday.<br>• School children being managed along Etas Road.<br>• No damage to public or community infrastructure.<br>• Dust suppression is effective.<br>• Noise is less than stipulated 45bDA at sensitive receptors. | Daily / DSS |

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| Protection of land and geology, sedimentation protection | • Approved EMP is effectively implemented.<br>• Erosion protection measures are all in place and working as intended.<br>• No evidence of construction machinery working outside protected area.<br>• Revegetation occurring once works have finished at sites.<br>• Vehicles and machinery are working in defined areas in line with earthworks plan.<br>• Heavy machinery not used in times of heavy rain or when ground is waterlogged. | Daily / DSS |
| Protection of natural environment | • Construction machinery barriers are in place.<br>• No evidence of construction machinery working outside marked area.<br>• Protected trees remaining undamaged.<br>• No obvious intrusions into the escarpment area. | Weekly / DSS |
| Soil and water pollution | • No visible spills or leaks onto ground or near drains.<br>• Refuelling facilities always with drip trays/ over hard stand.<br>• Spill response procedure with kit in place for storage and waste areas.<br>• No visible spills on soil or uncovered ground.<br>• All drainage, water treatment and soakage systems clear and fit for purpose.<br>• Worker's sanitation facilities in good order and maintained as per design requirements. | Weekly / DSS |
| Hazardous substances storage | • Substances stored within bund on impermeable surface >30 m away from drains.<br>• Spill kit complete and accessible.<br>• Spill training completed.<br>• No evidence of spills on the ground by storage facility.<br>• MSDS available at storage locations, HazChem signage. | Weekly / DSS |
| Occupational Health and Safety | • Workers have access to, and are using appropriate, PPE for the task.<br>• All workers have undergone appropriate OHS training (check records quarterly).<br>• Proper briefing of staff before undertaking work activities.<br>• First aid kits and trained first aiders on site. | Weekly / DSS<br>Quarterly audits/ DSS |
| Extraction of Aggregates | • QMP being effectively implemented.<br>• Daily records of extracted volumes available for inspection<br>• Machinery only working in defined areas approved in CEMMP. | Daily/DSS |
| Workers Facilities | • Facilities clean and tidy<br>• Waste management follows WMP<br>• Potable water, sanitation facilities clean and functional, gender segregated.<br>• Workers Management and Training Plan is being effectively implemented. | Weekly / DSS |

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| | • First Aid kit is fully stocked. | |
| VARS Monitoring Plan: THROUGH OPERATIONAL PHASE | | |
| Drainage system | • Drains are clear of debris and functional.<br>• No erosion or flooding apparent. | Monthly and after storm events / PMU |

## 5. Institutional Responsibilities

The effective implementation of this EMMP requires clear institutional roles and responsibilities, supported by qualified personnel and robust oversight mechanisms. The following entities will play key roles:

| Entity | Role and Responsibility |
|---|---|
| **Government of Vanuatu (GoV)** | Through the Ministry of Lands and Natural Resources as Implementing Agency, GoV will be responsible for overseeing the project and coordinating the project across the government through interagency technical and steering committees.<br><br>The GoV, through the DEPC will require compliance with national regulations, securing necessary permits, and ensuring the project's alignment with national policies.<br><br>The MoLNR will be responsible for the subdivision once works are completed. This includes the marketing and sale of plots and initial site and facilities management and monitoring for any defects and liabilities to be corrected by the contractor. |
| **Shefa Provincial Government Council (SPGC)** | Through a formal arrangement with the MoLNR, the SPGC will take over management and oversight of the operation of the subdivision. This includes undertaking and ensuring suitable funding and resources are available for the operations and maintenance of the subdivision including vegetation management, waste management and collection services, drainage system maintenance and management of common facilities such as streetlighting. The SPGC will be responsible for receiving permit applications for individual plot development (septic treatment, dwellings and other buildings) and ensuring permit conditions are met. The SPGC will also ensure all other legislative requirements are met and ensure the market building (and any other public buildings) are designed and once constructed, signed off by a structural engineer. |

| Entity | Role and Responsibility |
|---|---|
| **Project Management Unit (PMU)** | Tasked by the GoV with overall project coordination, key stakeholder engagement and ensuring the implementation of the project including all environmental and social safeguards. The PMU is resourced with personnel specifically tasked to manage project implementation. The PMU is resourced with experienced National and International Safeguards Specialists (environmental and social) who are responsible for overall monitoring for compliance with the EIA, World Bank policies and GoV legislation. |
| **Design and Supervision Services (DSS)** | Responsible for the development of design, supervision, preparing and responding to the measures set out in this EIA. Responsible for supervision of the construction works including the successful implementation of the mitigations put forward in the EIA, set out in the EMMP and implemented by the contractor. |
| **Contractor** | Prepares and implements the CEMMP (Contractor Environmental and Social Management Plan), including all required subplans. Ensures all workers are trained and compliant with safeguards measures. Appoints a qualified ESO/OHSO to oversee daily implementation. |
| **Environmental and Safety Officer (ESO/OHSO)** | A trained individual employed by the contractor responsible for daily site-level E&S monitoring, compliance with CEMMP, and coordination with DSS and PMU. Maintains records, conducts training, and responds to incidents to ensure worker and community safety through a documented approach set out in the CEMMP and sub plans and procedures. Is on-site for the duration of the project. |
| **Community Liaison Officer (CLO)** | Manages community engagement and runs the on-site Help Desk. Supports the GRM by logging complaints, communicating with the community, and ensuring transparency. Facilitates outreach and SEAH awareness efforts. Is on-site for the duration of the project. |
| **Workers and Subcontractors** | Must attend inductions and follow all E&S site procedures. Required to adhere to the Code of Conduct, report any incidents or hazards, and participate in toolbox talks. |
| **Community & Stakeholders** | Encouraged to participate in feedback to the contractor, DSS and PMU to help minimise social and other impacts. Understanding and use of the project's Grievance Redress Mechanism (Help Desk) for concerns |

| Entity | Role and Responsibility |
|---|---|
| | is also needed to ensure complaints and grievances are dealt with promptly and respectfully. |
| **World Bank Oversight** | Ensuring compliance with its Environmental and Social Framework (ESF) and monitoring project performance through periodic reviews. |

### 5.1 Institutional Roles and Responsibilities by Design Phase

| Stakeholder | Design Phase | Pre-Construction Phase | Construction Phase | Operation Phase |
|---|---|---|---|---|
| Government of Vanuatu (GoV) | Ensure alignment with national policies; coordinate interagency committees | Coordinate with PMU for permits; enforce regulations | Oversight through PMU; ensure regulatory compliance | Monitor post-construction compliance via MoLNR |
| Ministry of Lands and Natural Resources (MoLNR) | Input into design; plan for subdivision transfer | Prepare for site transfer and permit processing | Monitor progress via PMU; prepare for eventual handover | Manage site transition; oversee plot sales and defects |
| Shefa Provincial Government Council (SPGC) | Engage in planning for future operational handover | Plan O&M resources and systems for handover | Coordinate with contractor on community impacts | O&M of public facilities; process permit applications for individual plot development (septic treatment, dwellings and other buildings) and ensuring permit |

| | | | | |
|---|---|---|---|---|
| | | | | conditions are met |
| **Stakeholder** | **Design Phase** | **Pre-Construction Phase** | **Construction Phase** | **Operation Phase** |
| Project Management Unit (PMU) | Coordinate safeguards planning; review EMMP drafts | Finalize stakeholder engagement; ensure safeguard compliance | Supervise E&S performance; manage grievance redress | Finalize reports; support SPGC transition |
| Design and Supervision Specialist (DSS) | Prepare detailed designs; integrate EMMP requirements | Review and approve CEMMP; conduct baseline checks | Daily supervision; enforce mitigation compliance | Conduct final inspections; close out site activities |
| Contractor | Prepare CEMMP framework as part of bid | Finalize CEMMP and subplans; conduct induction & training | Implement CEMMP and all E&S mitigation measures | Demobilize; address any outstanding defects |
| Community & Stakeholders | Participate in consultations; provide local insights | Receive information; prepare for Help Desk use | Use GRM; report issues to CLO or PMU | Participate in feedback sessions |
| World Bank | Review design and safeguard readiness | Ensure readiness of safeguard systems | Monitor safeguards implementation; conduct field reviews | Review final safeguard outcomes; assess lessons learned |



### 5.2 Capacity Building and Training

Effective safeguards implementation depends on continuous learning and awareness-building at all levels. The following training activities are required by the contractor:

- **Site Induction Training**: Delivered by the contractor to all workers and visitors prior to entry. Covers key EMMP requirements, PPE, OHS protocols, and behavioural expectations.
- **Weekly Toolbox Talks**: Delivered by the contractor as short, focused sessions covering recent incidents, site hazards, and good practice reminders. Topics will rotate (e.g., ladder safety, dust control, heat stress).
- **SEAH and STI Prevention Awareness**: Quarterly sessions facilitated by a specialist facilitator(s) approved by the DSS. Includes Code of Conduct, referral procedures, reporting channels, and community liaison protocols.
- **Labour Management Plan (LMP)**: The LMP also sets out the programme of training for all staff, workers and other personnel including sub-contractors and suppliers on the Environmental, Social, Health and Safety management requirements of the project. This includes site orientation and induction through to tool box and risk assessment training, including protocols for incident monitoring and reporting as well as training in the requirements of the CEMMP and its constituent plans
- **OHS and Emergency Response Training**: ESO/OHSO to deliver training on fire safety, first aid, equipment operation, and incident reporting, refreshed every six months.
- **GRM Awareness**: PMU to provide training for contractor and DSS and PMU on how to manage complaints, track resolution, and escalate sensitive grievances.

### 5.3 Capacity Strengthening Measures

To support implementation, the project will:

- Include the cost of safeguards training in the **CEMMP budget**.
- Require the contractor to appoint a full-time **ESO/OHSO** with qualifications and prior experience.
- Ensure DSS includes safeguards expertise in its team, with a minimum of 2 site visits per week.
- Develop simple **reporting templates** for monitoring data and site inspections.
- Provide translated materials (Bislama and English) for Code of Conduct, SEAH protocols, and grievance procedures.

## 6. Implementation Schedule and Cost Estimation

### 6.1 Schedule and Phase Alignment

The implementation of mitigation and monitoring measures is structured according to the project phases:

| Phase | Key Safeguard Activities |
|---|---|
| **Design** | Incorporate EMMP requirements into technical specifications and bid documents. Conduct baseline screening and preserve green space and trees. |
| **Tender** | Evaluate contractors on safeguards qualifications. Require CEMMP submission with bid or before mobilization. |
| **Pre-Construction** | Approve CEMMP and subplans. Conduct training. Establish Help Desk and finalize resourcing. |
| **Construction** | Daily monitoring by ESO. Weekly reviews by DSS. Full implementation of CEMMP including SEAH measures, TMP, WMP, LMP, conduct training. |
| **Demobilisation** | Site clean-up, decommissioning, waste removal, and reinstatement of disturbed areas. |
| **Operation** | Transfer of responsibilities for infrastructure maintenance. Community engagement on infrastructure use and upkeep. |

### 6.2 Cost Estimation

Safeguards-related costs are embedded across several components:

- **Safeguards Personnel**: ESO/OHSO salary (contractor), DSS safeguard supervision fee, CLO allowance
- **Training and Awareness**: Budget for site induction, SEAH training, toolbox talks
- **Equipment and Materials**: PPE, signage, fire extinguishers, dust control
- **Community Engagement**: Help Desk setup, printed materials, grievance logging
- **Monitoring Tools**: Dust monitors, sound meters, first aid supplies
- **Incident Management**: Reporting materials, ESIRT notifications

**Estimated Safeguards Cost Breakdown** (illustrative):

| Item | Estimated Cost (VUV) |
|---|---|
| ESO/OHSO staffing (18 months) | 2,400,000 |
| Training sessions and first aid materials | 1,000,000 |
| Dust and noise control measures | 750,000 |
| Signage and community info boards | 200,000 |
| Community Liaison Officer (18 months) | 300,000 |
| Community Meetings | 400,000 |
| Contingency (10%) | 455,000 |
| **Total** | **6,005,000 VUV (US $52,600)** |

* **Note**: These values are indicative. Contractors are required to provide detailed safeguard budgets as part of their CEMMP, and these costs must be included in the overall **Bill of Quantities (BoQ)**.



## 7. Integration of the EMMP into the Project

The Environmental and Social Management Plan (EMMP) is not a standalone document but is embedded within the overall planning, design, procurement, and implementation arrangements of the Etas Subdivision works. The integration ensures that environmental and social safeguards are **legally enforceable**, **operationally practical**, and **continuously monitored** throughout the project cycle.

### 7.1 Integration with Design and Procurement

- The EMMP and its associated requirements (including CEMMP guidance and annexed mitigation and monitoring tables) are embedded in the **tender documents and technical specifications** issued to prospective contractors.
- Contractors are **required to review and respond to EMMP requirements** during bid preparation, including presenting their preliminary CEMMP (Contractor's EMMP) for evaluation.

- Bid evaluation includes environmental and social capacity criteria — such as experience managing SEAH risks, implementing occupational health and safety (OHS) systems, and community engagement.
- Successful bidders must submit a full CEMMP, including all required subplans (see Annex 4), no less than **21 days prior to mobilization**. This CEMMP must be approved by the Design and Supervision Services (DSS) team before any site activities can begin.

### 7.2 Integration into Implementation and Supervision

- The EMMP is integrated into the **construction management system**, including:
    - Daily and weekly checklists for environmental and safety compliance
    - Incident response and reporting pathways
    - Site induction protocols and toolbox talk schedules
    - Regular reporting templates for safeguards data
- The **DSS team** supervises the implementation of EMMP measures on-site through weekly inspections, use of the monitoring tables, and ongoing contractor engagement.
- The **PMU** provides strategic oversight, manages reporting to the World Bank, and coordinates third-party or government inspections where required.
- Environmental and social compliance is reviewed during monthly progress meetings and documented in contractor progress reports.

### 7.3 Integration with Community Engagement and Grievance Redress (Help Desk)

- The EMMP's requirements for Stakeholder Engagement and the Grievance Redress Mechanism (GRM) are operationalized through:
    - The appointment of a **Community Liaison Officer (CLO)**
    - The installation of visible **Help Desk signage** at the site entrance
    - Ongoing community updates (flyers, posters, in-person meetings)
- Grievances logged by community members are tracked in a **standardized register**, with required response and resolution timelines monitored by the CLO and PMU.

### 7.4 Post-Construction Integration

- At project close, the DSS and PMU will conduct a **completion audit** of EMMP implementation.

- Any **outstanding corrective actions** (e.g., landscaping, signage, site cleanup) must be completed before demobilization.
- Handover of infrastructure (roads, lights, drains, waste facilities) to the Shefa Provincial Council includes review of maintenance expectations and the final safeguards report.
- PMU will document lessons learned for future subdivisions under the VARS project.

## 8. Annexes

The following annexes support the operationalization of this EMMP and should be read in conjunction with it.

### Annex 1: CEMMP Required Subplans

#### 1. Labour Management Plan (LMP)

**1.1 Objectives**

- Ensure fair, safe, and equitable working conditions.
- Zero tolerance for forced labour, human trafficking and child labour.
- Comply with Vanuatu labour law and ESS2 requirements.

**1.2 Workforce Profile**

- Number and type of workers (skilled/unskilled, national/local, women/youth).

**1.3 Terms and Conditions of Employment**

- Employment contracts
- Working hours, rest breaks, wages, benefits

**1.4 Code of Conduct**

- Signed by all workers
- Includes corrective actions for violations
- Includes anti-harassment, SEAH, and non-discrimination provisions

**1.5 Grievance Mechanism for Workers**

- Confidential, accessible
- Timeframe for resolution

**1.6 Training and Induction**

- OHS, SEAH prevention, environmental practices

**1.7 Occupational Health and Safety**

- PPE, incident reporting, safety briefings

## 2. Waste Management Plan (WMP)

### 2.1 Objectives

- Ensure proper collection, segregation, storage, and disposal of all waste streams.

### 2.2 Waste Inventory

- Expected types: construction debris, domestic waste, hazardous (oils, paints)

### 2.3 Segregation and Storage

- On-site storage bins/labeled skip bins

### 2.4 Disposal Methods

- Legal disposal sites (approved by municipal authorities)
- No burning or dumping

### 2.5 Spill and Incident Response

- Cleanup kits and procedures

### 2.6 Monitoring and Documentation

- Waste logs, disposal receipts, incident reports

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## 3. Traffic Management Plan (TMP)

### 3.1 Objectives

- Ensure safe movement of vehicles, workers, and community members

### 3.2 Traffic Routes and Site Access

- Map showing designated entry/exit points
- Identify school/pedestrian zones

### 3.3 Signage and Speed Controls

- Speed limits, traffic cones, flaggers

### 3.4 Community Safety Measures

- Peak hour restrictions near schools
- Informing public on road changes

### 3.5 Vehicle Inspection and Driver Conduct

- Daily vehicle checks, licensed drivers only

### 3.6 Emergency Access

- Keep clear routes for ambulances/fire services

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**4. SEAH Prevention and STI Awareness Plan**

**4.1 Objectives**

- Prevent sexual exploitation, abuse, and harassment
- Promote STI and HIV/AIDS awareness

**4.2 Code of Conduct and Enforcement**

- Zero-tolerance policies
- Consequences for violations

**4.3 Training and Communication**

- Induction and quarterly refreshers
- Posters/signage in Bislama and English

**4.4 Grievance and Referral**

- Safe and confidential complaint system
- Referral partners (health and protection services)

**4.5 Monitoring and Accountability**

- Attendance logs for training
- Disciplinary records

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**5. Community Liaison Plan**

**5.1 Objectives**

- Ensure two-way communication with local communities
- Prevent and address concerns quickly

**5.2 Community Liaison Officer (CLO)**

- Designated staff member with language and local context skills

**5.3 Engagement Activities**

- Notification of works

**5.4 Help Desk (GRM)**

- Signage at entrance
- Logbook for grievances
- Help Desk Complaint Form

**5.5 Records and Reporting**

- Community & Stakeholder Meeting minutes
- Monthly engagement summaries

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**6. Contractor Safety Plan (aligned with WB EHS Guidelines)**

**6.1 Objectives**

- Prevent accidents and injuries
- Comply with ESS2 and WB EHS Guidelines

**6.2 Site Hazards and Risk Assessment**

- Identify top site risks (falls, trench collapse, equipment)

**6.3 Roles and Responsibilities**

- ESO/OHSO duties
- Worker safety representatives

**6.4 PPE and Site Safety Rules**

- Required PPE by task
- Safety signage

**6.5 Emergency Preparedness**

- First aid kits, fire extinguishers
- Evacuation routes and drills

**6.6 Incident Notification and Investigation**

- Use of WB ESIRT forms
- 24-hour reporting for serious incidents

**6.7 Toolbox Talks and Training**

- Weekly sessions
- Refresher training every 6 months



**7. Quarry Management Plan**

**7.1. Site Selection and Licensing**

- Description of proposed quarry site(s)
- Evidence of landowner consent
- Quarry permit or license documentation
- Baseline environmental conditions

**7.2. Operational Management**

- Hours of operation
- Equipment and methods of extraction
- Blasting (if applicable) and safety protocols
- Site access and security

**7.3. Environmental Management Measures**

- Erosion and sediment control
- Dust suppression (e.g. water spraying, haul road management)
- Noise and vibration control
- Water management (e.g. sediment ponds, drainage)
- Biodiversity and vegetation protection (where relevant)

**7.4. Health and Safety Measures**

- PPE requirements for workers
- Community health and safety (including exclusion zones)
- Emergency preparedness (e.g., spills, accidents)

**7.5. Transport and Haulage Management**

- Truck routing and speed limits
- Load covering and spill prevention
- Traffic management and signage near communities

**7.6. Rehabilitation and Closure**

- Site rehabilitation plan (backfilling, drainage stabilization, revegetation)
- Schedule for progressive closure or final decommissioning
- Handover to landowner or state

**7.7. Monitoring and Reporting**

- Environmental and safety performance indicators
- Frequency of inspections
- Non-compliance procedures and corrective actions
- Reporting to PMU and DSS

**7.8. Roles and Responsibilities**

- Contractor EHS team
- Site supervisor
- External oversight: DSS, PMU, Department of Geology & Mines

## 8. Environmental Management and Control Plan (EMCP)

### 8.1 Objectives

• Ensure systematic implementation of environmental safeguards on site

• Maintain compliance with the EMMP, CEMMP, and ESS requirements

### 8.2 Risk Register and Controls

• Site-specific register of environmental and social risks

• Associated control measures referenced from CEMMP and mitigation tables

### 8.3 Environmental Layout Maps

• Map of site showing sensitive receptors, mitigation structures, temporary facilities

### 8.4 Responsibilities Matrix

• Environmental duties assigned to ESO, OHSO, supervisors, and subcontractors

### 8.5 Emergency Response Procedures

• Actions for spills, erosion failures, UXO finds, and other environmental incidents

### 8.6 Inspection and Reporting Tools

• Weekly environmental inspection checklist

• Incident log and photo documentation

### 8.7 Communication Protocol

• Procedure for notifying PMU, DSS, and subcontractors of incidents or required changes

### 8.8 Plan Review and Updating

• EMCP must be updated as site conditions change or after major incidents

## 9. Earthworks Management Plan (EMP)

### 9.1 Objectives

- Ensure earthworks are executed with appropriate environmental safeguards to prevent erosion, sedimentation, and degradation of natural landforms.
- Stabilize all disturbed areas progressively to prevent runoff, instability, and long-term damage.
- Mitigate adverse impacts to watercourses, drainage patterns, and sensitive receptors during and after earthworks.

**9.2 Scope of Earthworks**

- Applies to all bulk and ancillary earthworks across the project site including:
    - Site clearing and grubbing
    - Topsoil stripping and storage
    - Excavation and filling
    - Slope cutting, grading, and embankment works
    - Temporary haul roads, access tracks, and platforms
    - Spoil disposal, borrow pits, and stockpile management

**9.3 Erosion and Sediment Control**

- Install perimeter bunds, sediment fences, and catch drains before bulk earthworks commence
- Apply staged earthworks to limit exposed surfaces at any one time
- Use sediment traps and basins in high-risk drainage areas
- Regular maintenance and inspection of controls during rainfall events

**9.4 Slope Stabilization and Soil Management**

- Bench and compact fill material in layers to engineering specifications
- Install geotextiles or erosion control mats on vulnerable slopes
- Minimize cut slopes exceeding recommended gradient thresholds
- Protect stored topsoil with tarps or vegetative cover to prevent wind and water erosion

**9.5 Programme and Phasing of Earthworks**

- Submit detailed earthworks schedule and sequencing to DSS and PMU for approval

- Implement advance mitigation works before main earthworks begin (e.g., drainage, fencing, vegetation buffers)
- Clearly delineate 'no-go' areas and environmentally sensitive zones
- Rehabilitate and stabilize sections progressively as works are completed

### 9.6 Rehabilitation of Disturbed Areas

- Scarify and contour exposed subsoil to avoid ponding
- Reapply stockpiled topsoil evenly across disturbed zones
- Seed or plant with appropriate native or locally suitable vegetation
- Monitor vegetation cover and re-seed if germination fails within 2 months

### 9.7 Documentation and Verification

- Maintain a daily site log including photographs, rainfall events, erosion incidents, and corrective actions
- Earthworks checklist submitted for each completed stage with location-specific records
- Weekly reports to DSS including erosion control status and upcoming works

### 9.8 Community Notification

- Advance notification to adjacent land users and communities regarding bulk earthworks start and duration
- Provide contact information for complaints or queries during earthworks

### 9.9 Inspection and Compliance

- Regular inspections by contractor's environmental officer, DSS, and PMU
- Immediate remediation of non-compliance or failures in erosion controls
- Final inspection and certification before transition to construction of permanent infrastructure

## 10. Site Decommissioning and Restoration Plan (DRP)

### 10.1 Objectives

• Ensure full restoration of all land used temporarily during construction

• Safely remove all construction infrastructure and prevent residual impacts

### 10.2 Scope of Decommissioning

• Includes batching plants, laydown areas, spoil and storage sites, drainage, and fencing

• Prohibits abandonment of any equipment, waste, or materials on-site

### 10.3 Removal of Temporary Works

• All materials, waste, and machinery removed from site

• Temporary drains and erosion protection structures dismantled

### 10.4 Land Restoration and Stabilization

• Compacted areas scarified

• Topsoil reapplied to disturbed surfaces

• Revegetation using native or locally suitable species

### 10.5 Documentation and Verification

• Before-and-after photo documentation

• Restoration checklist submitted with completion notice

### 10.6 Community Notification

• Inform nearby communities of demobilization and restoration schedule

### 10.7 Inspection and Handover

• Joint final inspection by DSS and PMU

• Completion certificate required prior to final payment or release of retention

## Annex 2: VARS Code of Conduct

FOR ALL SUBPROJECT CONTRACTOR PERSONNEL TO SIGN

I, _____, agree that while working on the project:

- Follow all the laws of Vanuatu.
- Follow all Contractor occupational health and safety requirements.
- Do not use alcohol or kava or drugs during work time.
- Treat all women and girls, children and men with respect.
- Do not swear at or in front of any community members.
- Do not behave badly towards women and girls in the community. For example, no looking somebody up and down; no kissing, no howling or smacking sounds; no following somebody around; no whistling and catcalls; no giving personal gifts.
- Do not stay in the community after working hours.
- Do not touch or have contact with children (any community members under the age of 18).
- Do not have sex and not try to have sex with members of the communities.
- Consider reporting through the grievance mechanism or to my manager if I believe a fellow worker is not following this Code of Conduct.

With regard to children under the age of 18:

- Tell my manager if any children are in danger.
- Not pass time alone with any children while in the communities.
- Do not invite any children to leave the communities.
- Do not take any pictures or videos of children in the communities.
- Do not hit or swear or yell at any children in the communities.

I understand that if I breach this Code of Conduct, my employer will take disciplinary action which could include:

1. Informal warning.
2. Formal warning.
3. Additional Training.
4. Loss of up to one week's salary.
5. Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months.
6. Termination of employment.
7. Report to the Police if warranted.

Signature: _____

Printed Name: _____

Title: _____

Translated version in Bislama:

RUL LONG WOK BLONG OL WOKMAN BLONG KAMPANI

Mi, _____, agri se taem we mi stap wok long projek bae mi:

- Rispektem evri loa blong Vanuatu
- Rispektem evri okupasonol helt mo sefti rikwaemen blong Kampani
- No tekem alkol o kava o drags long taem blong wok
- Tritim evri woman mo gel, pikinini mo man wetem rispek
- No mas swea long o long foret blong eni memba blong komuniti.
- No mas mekem nogud long ol woman mo gel long komuniti. Olsem eksampol, no lukluk wan man daon kasem antap; no kisim man, no singaot strong o slapem; no folfolem man; no wisil mo singaot; no givim ol pesonol gif.
- No mas stap long komuniti afta taem blong wok.
- No mas yusum ol toelet o go insaed long ol praevet hom long komuniti.
- No mas tajem o gat kontak wetem ol pikinini (eni komuniti memba we i no kasem 18 yia yet).
- No mas gat seks mo no traem blong gat seks wetem ol memba blong komuniti.
- Ripotem long GM (Help Desk) o long maneja blong mi sipos mi ting se wan koleg blong wok i no rispektem ol rul long wok.

Long saed blong olgeta pikinini we oli no kasem 18 yia yet:

- Talemaot long maneja blong mi sipos eni pikinini i stap long denja.
- No mas spendem taem yu wan wetem eni pikinini taem yu stap long komuniti.
- No mas askem eni pikinini blong aot long komuniti.
- No mas tekem eni foto o video blong ol pikinini blong komuniti.
- No mas kilim o swea o singaot strong long eni pikinini long komuniti

Mi harem save se sipos mi no rispektem ol Rul ia, bambae bos blong mi i tekem ol disiplinari aksen olsem:

8. Infomol woning
9. Fomol woning
10. Adisonol Trening
11. No kasem wan wik salari
12. Saspensen long wok (witaot salari), long wan minimam period blong 1 manis kasem wan maksimam blong 6 manis.
13. Finis long wok
14. Ripot long polis sipos i nid

Signeja: _____

Nem: _____

Taetol: _____

## Annex 3: Grievance Redress Mechanism (Help Desk) Process and Log Format

The VARS Project Grievance Mechanism (GM) will be referred to in public as the "Help Desk" and will seek to:
a) respond to requests for information or requests for design change;
b) resolve complaints; and
c) address and resolve grievances in a timely, effective and efficient manner that satisfies all parties involved.

Requests for design change and requests for information are not classified as complaints, though they require follow-up and assurance of satisfaction from the affected party. The project recognizes that requests for design change can add value to the project, ensuring that the needs of stakeholders and affected parties are met. Changes to design can be made through consultation and negotiation and do not necessarily carry the negative connotation of a complaint. A 'complaint' is categorized as an issue that raises negative concern, worry, or otherwise troubles the affected party or parties. A request for information, request for design change or a complaint which is not responded to in a timely or satisfactory manner may escalate into a 'grievance'. Some issues may present immediately as a grievance. For example, the help desk assessment process may immediately assess issues relating to reports of sexual exploitation, assault or harassment (SEAH) as a grievance and may immediately enlist support from the Vanuatu Women's Centre (VWC). Similarly, issues involving children will immediately be referred to the Family Protection Unit of the Vanuatu Police Force.

The Help Desk will provide a transparent and credible process for fair, effective and lasting outcomes. The Help Desk process will seek to build trust and cooperation as an integral component of broader community consultation that facilitates corrective actions. The Help Desk will:

- Provide settlement residents and other interested or affected parties with avenues a) seeking information or requesting a design change, b) raising a complaint or c) resolving any grievance that may arise during the course of the implementation of the Project subcomponents;
- Ensure that appropriate and mutually acceptable redress actions are identified and implemented to the satisfaction of those requesting information or action; and
- Ensure that the Help Desk is linked with existing referral networks for issues related SEAH or issues involving children.

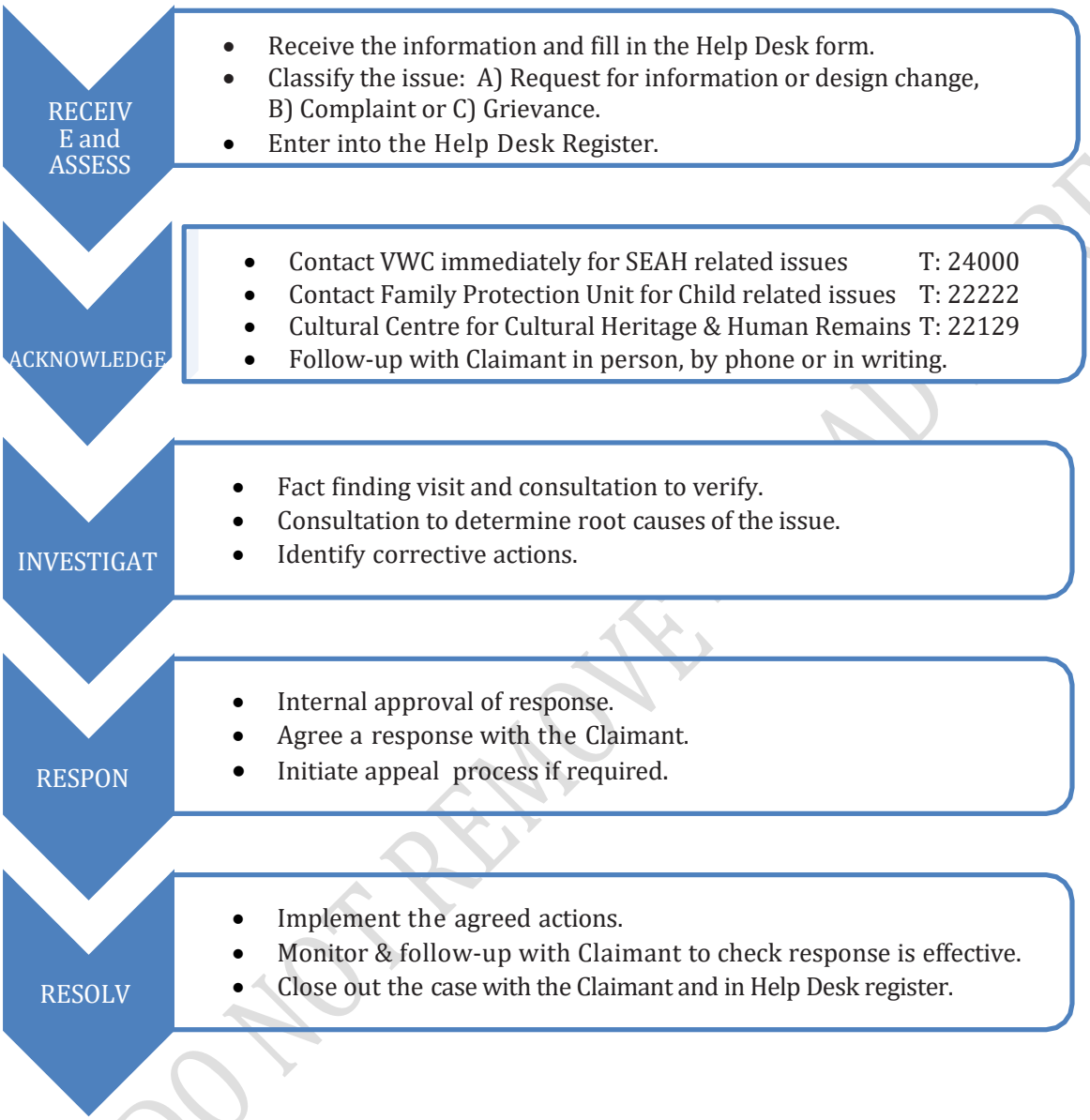
**Help Desk Personnel:** The PMU operates a Help Desk, with dedicated phone lines for both networks to receive a) requests for information or design change, b) complaints and c) potential grievances. The social team of the PMU consists of the Social Environment Specialist (SES), the Social Development Specialist (SDS) and a Social Officer position. The Social Officer is responsible for data entry into the Help Desk Register and always holds and responds to the Help Desk phone. The social team is responsible for promoting Help Desk processes (the Grievance Mechanism) through all stakeholder engagement programs. The social team will manage requests for information or design change, complaints and grievances under the direction of the Project Manager.

**Help Desk Process:** Help Desk processes will follow five key steps to resolve any requests for information, design change, complaints or grievance that arise. If the concerned party is not satisfied with the outcome of the process handled by the Social Team, s/he/they (referred to as the Claimant) can escalate the issue to the Project Manager or the Director of MoL, who will then assign a senior officer to investigate.

The concerned party can elect to raise a request for information or design change, complaint or grievance either through the Help Desk Form (either directly or through a third party such as a community leader, Chief or Church leader), via phone call to the Help Desk phone or via email. The Help Desk form is available with the Community Liaison Committees, Chiefs of target settlements and online on the MoLNR website.

Complaints or grievances relating to SEAH will also be recorded (confidentially) in the Help Desk register. However, SEAH complaints may be complex, sensitive and potentially volatile. Therefore, the VARS Social Team will work under the guidance of the Vanuatu Women's Centre to ensure that concerned parties are immediately offered confidential and professional support. Issues relating to any form of child abuse will be referred to the Family Protection Unit at the Vanuatu Police Force. Issues relating to cultural heritage will be referred to the Vanuatu Cultural Centre.

**HELP DESK PROCESS:**



**HELP DESK IMPLEMENTATION TIMEFRAMES**

Help Desk implementation process includes five key stages: (i) Receive and Assess; (ii) Acknowledge; (iii) Investigate; (iii) Respond; and (iv) Resolve/Close Out.

The intention is to respond to requests and resolve complaints as quickly as possible so that they do not become a grievance, while recognizing that some issues may be assessed as a grievance on presentation.

**(i) Receive and Assess - 1 day**

The first point of contact for requests and complaints will be the PMU Social Officer. However, all members of the PMU will be trained to receive and record requests and complaints or grievances. A Help Desk Form will be completed immediately and shared with the Project Manager the same day, via email if the Project Manager (PM) is not available. In most cases the PM will determine which officer will conduct the investigation. The Social Officer will be tasked with entering the Help Desk Form details into the Help Desk Register. The register will be an Excel database, which will be used to track requests/complaints/grievances through to resolution or close-out.

**(ii) Acknowledgement – within 2 days of receipt**
Requests/Complaints/Grievances will be acknowledged within two days by a response to the Claimant. If the Vanautu Women's Center or Family Protection Unit or Cultural Centre is involved, they will be requested to attend a follow-up meeting to be held within 1 week. The meeting will advise the PMU how best to proceed with the issue.

**(iii) Investigation – within 1 week of receipt**
Investigations may include site visits to determine the scale and impact of the request/complaint/grievance and what options there may be for appropriate responses or resolutions. Investigations should be conducted within 1 week of receipt of the request/complaint/grievance.

**(iv) Respond -within 1 week of investigation**

The Social Officer, or officer assigned to investigate, will communicate the findings of the investigation to the Claimant. The response should be delivered within 1 week of the investigation and include a proposed resolution and seek the approval of the Claimant. If the Claimant is satisfied with the proposed resolution, then the request/complaint/grievance is ready to be resolved.

**(v) Resolve/Close Out – within 1 month of investigation or as soon as practicable**
If the Claimant is satisfied with the proposed resolution and agrees that the issue is resolved, the Claimant will be asked to sign the Help Desk Form and the matter will be considered resolved. The resolution will be recorded in the Help Desk register to reflect that the matter is resolved.

If the Claimant is still dissatisfied with the outcome, they may be referred to the legal process or use the World Bank Grievance Redress System, which is available at any stage to the Claimant. However, courts should be the last avenue for addressing grievances.

If a grievance is dismissed as groundless; the Claimant will be informed of their rights in taking it to the next level. A copy of the decision is to be given to the Claimant in writing and the outcome recorded in the Help Desk Register.

A copy of the decision will be shared with the Director of MoLNR.

A request/complaint/grievance is closed out when no further action can be or needs to be taken. All requests/complaints/grievance should be closed out within 1 month or as soon as possible.

The status will be recorded in the Help Desk Register as follows:

- Resolved – a solution has been agreed and implemented and signed documentation is evidence of this.
- Unresolved – it has not been possible to reach an agreed solution and the Claimant has the option to elevate to the World Bank Grievance Redress System or the Courts.
- Abandoned – cases where the attempts to contact the Claimant have not been successful for three months following receipt of Help Desk Form.

All requests/complaints/grievance will be reviewed for opportunities to help identify and reduce future, similar occurrences across VARS subprojects.

## VARS PROJECT HELP DESK FORM

| Name of Contact | Phone number(s) of Contact | Home address/location of Contact | Date |
|---|---|---|---|
| | | | |
| Name of Claimant | Phone No of Claimant | Home address of Claimant | |
| | | | |

| QUESTION | RESPONSE | |
|---|---|---|
| What is the problem? | | |
| What is the cause? | | |
| When did it happen? | | |
| Has there been impact to: | ◊ Housing<br>◊ Land<br>◊ Business property<br>◊ Personal property<br>◊ Community property | ◊ Cultural Heritage<br>◊ Water Source/Supply<br>◊ Electrical Issue<br>◊ Livestock/crops/trees<br>◊ Other: _____ |
| If land related, what type of land? | ◊ Residential<br>◊ Commercial/Industrial<br>◊ Agricultural<br>◊ Public Land | |
| Is this issue related to: | ◊ Dust<br>◊ Noise<br>◊ Road traffic<br>◊ Safety Issue<br>◊ Environmental concern<br>◊ Other: | ◊ Sexual Harassment<br>◊ Sexual Exploitation Assault<br>◊ Gender-based Violence<br>◊ Non-sexual violence<br>◊ Verbal abuse |
| Do you believe the VARS Project is responsible? Why/Why not? | | |
| Who is involved? | | |
| **What is your proposed solution?** | | |

P: (678) 555 1551 P: (678) 774 9233 E: so@vars.vu

**RESOLUTION:** Once the concerned party is satisfied with the resultion, ask them to sign to show the matter is closed:

Sign: Date:

**Help Desk Form Bislama:**

## VARS PROJEK HELP DESK FOM

| Nem blo kontak | Telefon namba | Hom adres/Ples | Deit |
|---|---|---|---|
| Nem blo Klemen (sapos oli no wantem talem nem I orait) | Telefon blo Klemen | Hom address/Ples blo Klemen | |

| KWESTEN | ANSA | |
|---|---|---|
| Wanem nao hemi problem? | | |
| Wanem nao i mekem se i gat problem? | | |
| Wetaem nao i hapen? | | |
| i gat eni impak long: | ◊ Haos<br>◊ Graon<br>◊ Bisnis propeti<br>◊ Pesonol propeti<br>◊ Komuniti propeti<br>◊ Man / Woman/ Pikinini | ◊ Kaljurol Heritej<br>◊ Wota Sos/Saplae<br>◊ Elektrik<br>◊ Laefstok/kakae/tri<br>◊ Narafala: |
| Sapos hemi isiu blong graon, wanem kain groan? | ◊ Ples we ol man istap liv (residential)<br>◊ Bisnes propeti (commercial/industrial)<br>◊ Karen (agricultural)<br>◊ Pablik | ◊ Narafala: |
| i gat eni isiu long saed blong: | ◊ Dast<br>◊ Noes<br>◊ Rod trafik<br>◊ Sefti isiu<br>◊ Envaeronmentol konsen<br>◊ Narafala: | ◊ Seksuol Harasmen<br>◊ Seksuol Eksploitesen<br>◊ Seksuol Asolt<br>◊ Non-seksuol vaelens<br>◊ Rabis toktok<br>◊ Asoltem Pikinini |
| Yu ting se VARS projek hemi risponsibol? | | |
| Hu ia ipat long problem ia? | | |
| **Wanem nao solusen we yu save givim?** | | |

**SOLUSEN:** Taem we man i glad wetem solusen, askem hem blong saen blong markem se problem hemi finis:

**P:** (678) 555 1551 **P:** (678) 774 9233 **E: so@vars.vu**

## 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: 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.

### 2 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.

These procedures are mandatory and must be included in all construction contracts. The **Site Engineer** shall supervise and ensure that contractors and subcontractors comply fully with chance find protocols.

World Bank supervision missions will record relevant findings and assess compliance. The project's **Implementation Completion Report** will review the effectiveness of cultural heritage and UXO risk management.