PACIFIC AVIATION INVESTMENT PROGRAM

Solomon Island Roads and Aviation Project (SIRAP)

Honiara International Airport (HIR), Environmental and Social Management Plan (ESMP), Guadalcanal

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Quality Information

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Contents

Glossary and Abbreviations

AC	Asphalt concrete
ACM	Asbestos Containing Material
AGL	Aeronautical Ground Lighting
AP	Affected Person/People
ARFF	Aircraft rescue and firefighting
ATC	Air Traffic Control
CARs	Civil Aviation Rules
CESMP	Contractors Environmental and Social Management Plan
ECD	Environmental and Conservation Department
ESMF	Environmental and Social Management Framework
FOD	Foreign Object Debris
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome
IA	Implementing Agency
ICAO	International Civil Aviation Organisation
IFC	International Finance Corporation
GBV	Gender Based Violence
IUCN	International Union for Conservation of Nature
LAeq	Equivalent Continuous Level
MCA	Ministry of Communication and Aviation
MID	Ministry of Infrastructure and Development
MOWP	Method of Works Plan
NGOs	Non-government organisations
OHS	Occupational Health and Safety
OP	Operational Policy
PAIP	Pacific Aviation Investment Program
PAPI	Precision Approach Path Indicator
PCCSP	Pacific Climate Change Science Program
PER	Preliminary Environmental Report
PESMP	Project Environmental and Social Management Plan
PIB	Public Information Bulletin
PPE	Personal protective equipment
PSC	Project Steering Committee
PST	Project Support Team

PWD	Public Works Department
RFS	Rescue Fire Service
RWY	Runway
SIG	Solomon Island Government
STD	Sexually transmitted diseases
SWM	Solid Waste Management
SWMP	Solid Waste Management Plan
TFSU	Technical and Fiduciary Services Unit
TMP	Traffic Management Plan
TWY	Taxiway
VHF	VHF communications equipment
VOR	VHF Omnirange
WB	World Bank

Executive Summary

The Pacific Aviation Investment Program (PAIP) is funded by the World Bank (WB), participating countries, and other donor partners with the development objective to: (i) improve the safety, security, efficiency, management and environmental sustainability of airports, and (ii) improve regional harmonization of aviation safety standards. As part of the regional PAIP, aimed primarily at improving airport safety and security across the Pacific, the Solomon Island Road and Aviation Project (SIRAP) has been established. Through SIRAP, the Solomon Island Government (SIG) and the WB are working together to improve operational safety and oversight of air transport, and strengthen the climate resilience of the road and aviation sectors in the Solomon Islands (SI). The participating islands in SI are:

- Honiara International Airport (HIR) located in Honiara, Guadacanal.
- Munda Airport (MUA) located in Munda, New Georgia Island.
- Existing road network on Malaita Island.

SIRAP is a Category B project under WB environmental and social screening guidelines and requires the development of a site specific Project Environmental and Social Management Plan (PESMP). Due to the nature of the project it is expected that environmental impacts will be site specific, few if any are irreversible, and mitigation measures can be readily designed and implemented. The PESMP is required to identify and assess environmental and social issues associated with the proposed activities, and develop mitigation and management measures consistent with World Bank requirements.

This PESMP focuses on upgrading works at Honiara International Airport on Guadalcanal and includes information on mitigation, monitoring, responsibilities and institutional capacity. The majority of potential adverse impacts will occur during the construction phase of the SIRAP. However, given the scope and nature of the works, mitigation measures should be able to alleviate or lessen any potential negative impacts. The key potential impacts that are being mitigated are:

- Sourcing of aggregate materials
- Solid waste generation
- Hazardous materials handling and storage
- Community disruption during construction activities.
- Transport of equipment and materials from the port and around the island.
- Safety hazards for workers and users of the facilities where upgrades are occurring.
- Water demand management for freshwater resources.

This PESMP is designed to address these issues through:

- Implementation of this PESMP through the Contractor's ESMP (CESMP) and associated Code of Practice documents included in Appendix E & F.
- Regular supervision and monitoring of the implementation of the PESMP (refer PESMP monitoring plan).

1 Introduction

1.1 Background

The Pacific Aviation Investment Program (PAIP) is funded by the World Bank (WB), participating governments and donor partners. It has the development objective to (i) improve the safety, security, efficiency, management and environmental sustainability of airports, and (ii) improve regional harmonization of aviation safety standards. The SIG and the WB are preparing a project to improve operational safety and oversight of air transport and associated infrastructure, and strengthen the climate resilience of the road and aviation sectors in the SI and as such the Solomon Island Roads and Aviation Project (SIRAP) has been established as part of the PAIP.

The Solomon Islands is the Pacific's largest archipelagic nation, extending some 1,500 km from east to west and consisting of nearly 1,000 islands, the largest of which include Guadalcanal, Malaita, and New Georgia (in Western Province). The country is bordered by Papua New Guinea to the west, Nauru to the north, Tuvalu and Fiji to the east, and Vanuatu to the south. It has an estimated population of 599,419 in 2016, the second largest in the Pacific following Fiji. Over 70% of the country's population, dispersed across some 90 inhabited islands, is residing in Malaita Province, Guadalcanal Province, Western Province, and Capital Territory of Honiara. The country has among the lowest population densities in the world.

The Solomon Islands has a total of 28 airports: eight are government-owned airports including Honiara (which is also interchangeably used with Honiara), Munda and Gizo, and 20 are community-owned airports including Auki. Among these, Honiara is the only international airport in the country. The Ministry of Communication and Aviation (MCA) is responsible for policy development and operation and maintenance (O&M) of the airports, whilst the Civil Aviation Authority of Solomon Islands (CAASI) is responsible for safety and security regulation. For some years, aviation reform has been underway with the assistance of New Zealand to improve operation efficiency of major airports. The key reform agenda includes separation of O&M responsibilities from MCA. In September 2016, SIG established Solomon Islands Airports Corporation Limited (SIACL), a state-owned enterprise under MCA. It is planned that Honiara, Munda and Gizo Airports are transferred into SIACL's management in early 2018.

As the only international airport in the country, Honiara International Airport plays an essential role for Solomon Islands, linking it to Australia, Fiji, Kiribati, Nauru, PNG and Vanuatu through international flights, while also connecting the capital to outer islands as the national hub. The upgrading of Honiara International Airport has been given priority in the recent national plans. Nevertheless, the airport infrastructure and facilities are outdated, poorly maintained and do not meet market expectations. In fact, the condition of the apron and taxiway at the airport has deteriorated to the point where some airlines are purportedly considering halting flights for safety reasons—something which happened in Vanuatu in 2016, causing major damages to the economy. Furthermore, there is a concern over vulnerability to natural disasters, as demonstrated by airport closure in April 2014 due to partial submergence of the airport areas by floodwater.

The proposed investments at HIR include: (i) 5cm overlay of existing runway (including some drainage improvements); (installation of airfield ground lighting for runway (AGL); (iii) construction and equipage of new air traffic control (ATC) tower; (iv) construction of rescue fire service (RFS) vehicle station; (v) installation of Automatic Weather Observation System (AWOS); (vi) installation of Very Small Aperture Terminal (VSAT) communications systems; (vii) installation of Automatic Dependent Surveillance-

Broadcast (ADS-B) ground stations and aircraft equipage; and, (viii) provision of equipment for improved power supply; (ix) procurement of passenger handling equipment including that required for persons with disabilities.

The presence of unexploded ordinance (UXO) from the second world war is a risk at both HIR and MUA. The activities include: (i) UXO Specialist to develop technical requirements for UXO survey and removal, undertake technical reviews of all UXO Contractor pre-project documentation, and oversee the work of the UXO Contractor; and, (ii) UXO Contractor to conduct UXO survey and removal of any identified UXO as required at Honiara and Munda airports.

In order to progress to the appraisal stage of the proposed SIRAP, a site specific Project Environmental and Social Management Plan (PESMP) is required to identify and assess environmental and social issues associated with the proposed activities, and develop mitigation and management measures consistent with WB safeguard requirements.

1.2 Environmental and Social Management Plan Objectives and Scope

SIRAP is a Category B project under WB OP4.01 Environmental Assessment, and under the PAIP Environmental and Social Management Framework (ESMF) structure for safeguards instruments, a site specific PESMP is required. Due to the nature of the project it is expected that the majority of the environmental and social impacts will be site specific, few if any are irreversible, and mitigation measures can be readily designed and implemented.

The objective of the PESMP is to provide a framework for managing the airport upgrade works in a manner that incorporates the principles of environment sustainability according to the SIG legislation and World Bank safeguard operating policies while minimising potential adverse effects on the local community and the environment.

To achieve this objective the PESMP outlines the mitigation measures required for avoiding or minimising the potential impacts of the works and provides a monitoring program to confirm effectiveness of the required mitigation measures. Roles and responsibilities are clearly defined for all stages of the project works and execution of project works. The PESMP also provides the details of how the community and stakeholders are to be engaged and the mechanisms for ongoing consultation and communication.

This PESMP (or approved updated versions) will be included in all bidding documents and form the basis of the CESMP which will detail the practical implementation of the mitigation measures identified in this PESMP. The PESMP is a dynamic document which should be updated to include any variation from the current scope or addition of newly identified impacts and mitigation measures that may arise through the bidding and contracting process (if not addressed in the CESMP) or consultation. The mitigation measures associated with the impacts identified above are detailed below.

This PESMP is limited to the scope of works for HIR as described in Section 2 of this document and addresses impacts and mitigation measures identified at each stage of the project's execution, namely detailed design, construction and operation. The final scope of works for this project have yet to be confirmed and this PESMP will be updated once those decisions have been made in preparation for tender. An updated version of this PESMP will be included in the bidding documents and will form the basis of the CESMP. The mitigation measures identified in this PESMP form the minimum requirement

for reducing impacts on the environment as a result of works associated with the project. The CESMP will be prepared by the contractor, approved by the Supervision Engineer and disclosed prior to commencing civil works.

1.3 Environmental Safeguards Document Hierarchy and Development

At its inception in 2011, PAIP had an ESMF which outlined the key steps and procedures in screening and assessment of environmental and social issues related to the PAIP (generally). The ESMF set out the principles, rules, guidelines and procedures to assess the environmental and social impacts. It contained measures and plans to reduce, mitigate and/or offset adverse impacts and enhance positive impacts, provisions for estimating and budgeting the costs of such measures, and information on the agency or agencies responsible for addressing project impacts. It defined roles and responsibilities, and provided guidance for the Implementing Agency (IA), Executing Agencies (EA) (respective country's ministries) and the respective countries Civil Aviation Authorities for developing the environmental and social safeguards documents in compliance with respective WB safeguards operational policies (namely OP/BP4.01, OP/BP4.12, OP/BP4.10) and respective country system environmental and social safeguards requirements. It has guided the preparation of this PESMP.

This PESMP is a dynamic document which is updated as and when project scope, detailed designs or further information becomes available (e.g. because of consultation with stakeholders and the general public) or when there are changes to the project which will impact on the public, thus creating a hierarchy of document versions as the project progresses. At any one time there is only one PESMP which is considered current and applicable to the project. As of August 2018, the Version B of the HIR PESMP is considered to be the current version.

The diagram below shows the hierarchy of environmental and social safeguards instruments culminating in the development of the CESMP which specifically details how the contractor will implement the requirements of the PESMP and the higher-level instruments, policies and country safeguards systems. Issues, impacts and mitigation measures identified in superseded PESMPs are incorporated into subsequent versions unless they have been addressed through design or other means, in which case this is identified in the PESMP.

The Contractors are required to comply with this PESMP and use it to identify and guide what mitigation measures need to be implemented. The CESMPs will document implementation and specific measures that will be used based on their construction methodology (if different from that identified in Section 2). The CESMP is, in turn, a dynamic document and must be updated as and when scope, design or circumstances change. The finalised PESMP should be included with the procurement bid documents for the HIR works.

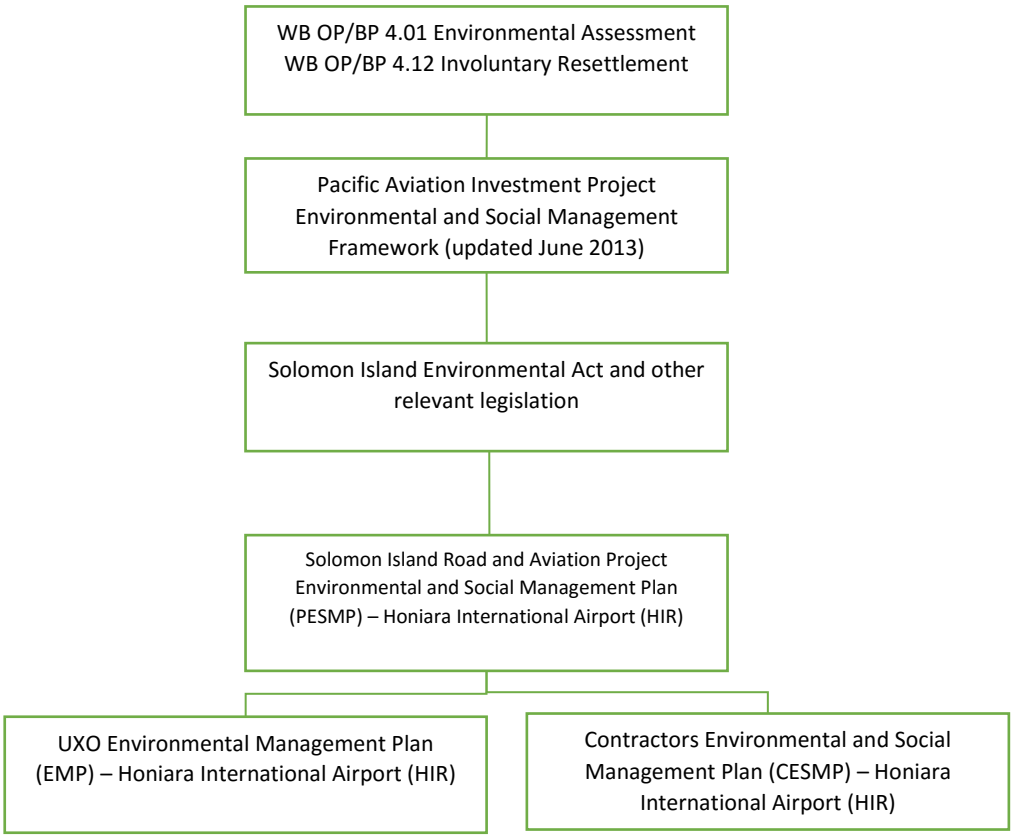


Figure 1: Environmental Safeguard Document Hierarchy

1.3.1 JICA Honiara Airport Investments

The Japanese International Cooperation Agency (JICA) signed a Grants Agreement (GA) with the SIG in June 2018, to provide grant aid for the improvement of the Honiara Airport. The investments for JICA financing include:

i) Rehabilitation of the existing taxiway and apron;
ii) Expansion of the international/domestic apron;
iii) Construction of a new connecting taxiway;
iv) Installation of new apron and taxiway lighting system;
v) Renovation of the existing international terminal building;
vi) Construction of an international departure passenger terminal building;
vii) Construction of a flood protection dike;
viii) Rehabilitation of existing drainage system; and,
ix) Installation of relevant equipment (e.g., X-ray scanner), etc.

It is planned that the JICA project will be completed in September 2021. The WB's SIRAP works would compliment JICA's investments, ensuring that the airport meets all the regulatory compliance requirements.

The JICA safeguard policy has allocated their project to be a Category B (project has mild adverse risks that would likely be reversible) and an environmental and social impact assessment has been compiled as part of their Preparatory Survey for The Project for Improvement of Honiara Airport.

As the JICA and WB projects are likely to be implemented concurrently and the projects will physically interact at various points there is a need to support the SIG through the MCA in managing the preparation and implementation of the environmental and social safeguard aspects of both investments. The main objective is to ensure effective implementation of safeguards management (i.e. avoidance, minimising and mitigation). Within this context, it is therefore critical that the safeguards policies of both projects are aligned. In meeting the intended objective, the following approaches have been agreed by both funding agencies and SIG:

a) SIG (facilitated by TFSU Safeguard Specialists) will develop a gap analysis of both WB and JICA safeguard policies (Appendix A).
b) The outcome of the gap analysis will serve as inputs for a joint safeguards agreement on approach for effective implementation of environmental and social safeguard aspects.
c) A standalone ESMP (this report) has been prepared for activities and investments carried out at HIR under SIRAP; parallel to the preparation of the safeguard instrument for JICA investments, ensuring effective alignment with the joint agreement.
d) At the implementation stage, it is highly recommended to (i) establish regular communications and monitoring mechanism on implementation progress of safeguard-related actions, and (ii) conduct joint annual supervision mission on the implementation of safeguard measures.

1.3.2 UXO Environmental Management Plan

There is anecdotal belief that unexploded ordinance (UXO) were cleared from HIR, however no evidence has been found for this, so the project will also undertake a UXO survey at HIR and finance clearance if any UXO are found. As there are linkages between the JICA and WB HIR investment projects, the UXO survey will also cover the apron and taxiway areas. A standalone UXO Environmental Management Plan (EMP) is being developed by a UXO specialist for the survey and removal of any UXO. On completion, the UXO EMP will be integrated into this HIR PESMP prior to the release of bid documents.

1.4 PESMP Methodology

Using the previous PAIP PESMP template safeguard documents, the pre-appraisal PESMP for HIR has been developed based on similar scopes of work undertaken under this Program and has been verified by a site visit to HIR in March 2018.

Proposed scope of works and the current airport condition have been extracted from the technical report produced by aviation specialists during this site inspection. Potential impacts and mitigation measures have been extracted from similar PAIP projects and the JICA HIR feasibility study and have been made suitable for the receiving environment of the SI.

Consultations with MCA, MID CPIU and ECD have been held to discuss specific impacts with particular focus on areas such as community consultations, country safeguard systems and aggregate sourcing. At this stage in the project preparation, some consultations have been undertaken.

This PESMP is a dynamic document that can inform the design and be modified accordingly as the design is finalised (and subsequently reissued). At this stage of the HIR preparation process, there are some technical recommendations on the minimum requirements for the rehabilitation works needed, however the final scope has yet to be confirmed. These will be addressed and updated in this PESMP once project appraisal has been completed and before the project reaches the bidding stage.

2 HIR Upgrade Description of Works

2.1 Overview of Proposed Works

The SIRAP HIR infrastructure investments is proposed to consist of the following primary tasks:

a) 5cm overlay of existing runway (including drainage improvement):
b) Installation of energy efficient airfield ground lighting (AGL);
c) Construction and equipage of new air traffic control (ATC) tower;
d) Installation of AWOS
e) Installation of VSAT communications systems
f) Installation of ADS-B ground stations and aircraft equipage; and,
g) Provision of equipment for improved power supply.

The investments would also include consulting services for design and supervision runway works, AGL and ACT tower.

It is also proposed that there would also be investments in institutional strengthening and project implementation support. For the aviation sector under SIRAP, this support is proposed to consist of:

a) Training needs analysis and safeguards training package delivery;
b) Airport Operating Training;
c) Airport Regulatory Training;
d) Preparation of a strategic plan for the sustainability of Solomon Airlines
e) Airport Master Planning Studies for both Munda and Honiara Airports;
f) Preparation of an Aviation Sector Strategy; and,
g) Technical support to CAASI.

At the time of the development of this PESMP the proposed scope of works are in the concept stage in preparation for project appraisal. No detailed scope, design or plans have been developed for HIR works and this PESMP will be updated with additional detail in preparation for the release of bid documents.

2.1.1 Current Situation

Honiara International Airport in Honiara is the only international airport in the Solomon Islands and plays an essential role linking it to Australia, Fiji, Kiribati, Nauru, PNG and Vanuatu through international flights, while also connecting the capital to outer islands as a national hub through domestic flights. The upgrading of HIR has been given priority in the relevant national plans as the airport infrastructure and facilities are outdated, poorly maintained and do not meet market expectations. In fact, the condition of the apron and taxiway at the airport has deteriorated to the point where some airlines are purportedly considering halting flights for safety reasons – something which has happened in Vanuatu causing major damage to the economy. Furthermore, there is a concern over vulnerability to natural disasters, as demonstrated by airport closure in April 2014 due to partial submergence of the airport by floodwater.

HIR is located 8 kilometers from the capital Honiara along the poorly maintained Kakum Highway. It was built in 1942 during the Second World War and on its completion, control of the airstrip was the focus of months of fighting in the Guadalcanal campaign. The field was abandoned after the war but was reopened in 1969 as a modernized civilian airport. In the late 1970s the runway was expanded and lengthened and in 1999 more upgrade works were undertaken.

2.2 Alternatives

At this early stage in project preparation, as the final scope of works is unknown, there has not yet been an assessment of the alternative options. Once the final scope is known and alternative options discussed, this section will be updated prior to the release of any bid documents.

The 'no action' alternative would result in the further degradation of the runway and decrease the operational effectiveness of receiving international flights potentially leading to airlines withdrawing their services to Honiara. The 'no action' alternative would certainly cause negative impacts to the socio-economic environment of the Solomon Islands and is not considered an appropriate option.

2.3 Construction Methodology

At the pre-appraisal stage the final scope of works and technical requirements and related construction methodologies of the HIR works are unknown. The PESMP will be updated with any new information prior to the release of any bid documents for design, supervision or construction works.

2.3.1 Method of Works Plan (MOWP)

The Method of Works Plan (MOWP) is a required document by Civil Aviation Authority of the Solomon Islands (CAASI) and MCA for any major construction works within the boundaries of an airport. The MOWP sets out the operational requirements for maintaining a functioning airport throughout the construction process. It includes the concessions and alternative arrangements that may need to be made (e.g. alternative aircraft parking apron) and staging of the construction process while ensuring the safety and security of all personnel, the community and aircraft and continued operation of the airport throughout construction works.

2.3.2 Equipment

Specialised equipment such as the asphalt plant and materials may need to be imported for the SIRAP project. It is likely that general construction equipment such as excavators and rollers can be sourced locally. All cargo, whether air or ship, will need to be processed in accordance with SIG quarantine and customs laws which require fumigation (proof of) of materials and equipment and declarations by personnel (specifically regarding communicable diseases).

2.3.3 Aggregate Supply

Large volumes of basalt and coronous aggregate will be needed to complete the pavement works with smaller volumes required for runway lighting, air navigational aids, etc. The sources and estimated volumes of the different type of aggregate and materials required for these works will be stipulated in the relevant CESMPs.

One of the main sources of aggregate for building and road works in Honiara is from the Lungga River which runs along the western end of the HIR runway. Sand and gravel from the Lungga River are often used as the main aggregate source for other development aid funded projects such as the Asian Development Banks Transport Sector Development Project. While some of the source river gravel material is basalt and is suitable for road surfacing it is unlikely that it would be of acceptable grade for the surface layers of the runway. It is therefore expected that aggregate will need to be imported from

approved international sources. The contractor will be required to present specific management plans within the CESMP for the sea and land transportation of these materials from the origin to the project site, especially the landing facility. These plans will be approved by the Supervision Engineer.

Apart from the aggregate sourced from the Lungga River, there are several aggregate mining companies in Honiara which hold Building Materials Permits for the extraction of aggregates and can supply graded aggregates for the HIR works.

Accessible sources of suitable aggregate materials will need to be identified in the CESMP and approved by the Supervision Engineer and extracted under current Building Materials Permit. In case these are not available, or it is more cost effective, aggregate may be purchased from licensed operators in Honiara or imported, subject to approval of the operator by the Supervision Engineer. No brand new quarries will be opened for the HIR works.

2.3.4 Laydown Site

The laydown site(s) (sometimes referred to as construction camp) generally will consist of the project offices, storage areas, stockpile sites, asphalt plant and associated facilities. The proposed location and required number of laydown sites and the location of the asphalt plant are not yet known. The final selected locations should be on SIG or MCA property and, if feasible, should be located in close proximity to the airfield.

Potential locations for laydown sites will be screened during the detailed design phase of the project and updated in this PESMP. Screening will include noise, dust, wastewater production, vibration and increased traffic. These are all impacts which can negatively affect communities and sensitive receptors will need to be considered when identifying the location of the construction camp and laydown areas. The final laydown location(s) will be made by the Contractor and approved by the Supervision Engineer based on the screened sites in the PESMP. Any asphalt plants will be sited at least 300m from the nearest residential settlements and at least 150m from any body of water. The final size and location(s) will be described in the CESMP.

While the first option should be to locate the laydown site(s) on SIG or MCA property, it may be necessary to locate the sites on privately owned land. In this instance, a short-term lease would need to be arranged with the identified landowner(s) following the procedure outlined in Appendix L (Laydown sites). Approval of these details will be required by MCA, custom owners and leaseholders (if necessary) with final approval from the commissioner of Lands and documented in the CESMP before the laydown site(s) can be set up.

Laydown site(s) size should be kept to a workable minimum, be fenced and materials and equipment kept secure to prevent access and use by non-authorised personnel. Should the laydown site(s) be located outside of the HIR security perimeter the hiring of a local security firm to provide security for the area is recommended.

Prior to the establishment of the asphalt plant, consideration should be made on where the asphalt plant is to be located as it can produce nuisances such as noise and a mercaptan odour. If located away

from communities, the social impacts should be minimal. The location will be clearly noted in the CESMP and subject to WB clearance.

Planning and management of the laydown site(s) will follow all requirements of the PESMP and implementation of these mitigations, along with any additional mitigations identified by the Contractor, will be detailed in the CESMP.

2.3.5 Workers Camp

It is unlikely that there will be a need for a residential workers camp for these works. Should a contractor wish to establish a workers camp, and the workers camp is not on MCA or other SIG land or not at a pre-existing workers camp, appropriate land lease arrangements should be made and approved by the Supervision Engineer in conjunction with MCA. The Commissioner of Lands will approve the rate of the lease. The necessary steps required in the IFC/WB Workers Accommodation: Process and Standards Codes of Practice which includes GBV, HT, and CAE (Appendix F and Section 7.11.4) should be followed. Should a workers camp be required then these guidelines must be adhered to and updates made to the PESMP and CESMP as appropriate.

A Workers Camp Management Plan would be required from the Contractor as an appendix to the CESMP. Particular attention should be paid to visitor management, sanitary water systems and waste management.

2.3.6 Haul Routes

The haulage routes between HIR, the laydown sites(s), any quarries and the cargo port have not yet been determined. These will be designed by the Contractor once these ancillary sites have been confirmed. For any imported aggregates and equipment, the Contractor will assess the feasibility of any alternative offloading points (e.g. the construction yard at RWY 24, across the river (Figure 2) which avoids the main Kakum highway given the poor condition of this road and the high levels of congestion often experienced.

Figure 2: Example of construction yard with aggregate offloading at RWY 24.

All other transport must occur on the existing road network and measure undertaken to prevent accidents, dust, spillages, noise and vibration nuisance. Deviations from the nominated access routes will not be tolerated. Access to work areas can be via the airfield, so long as the route is approved by MCA and identified in the MOWP.

A Traffic Management Plan will need to be developed for all landside traffic following the prescriptions in this PESMP and presented as an appendix to the CEMSP.

2.3.7 Waste Management

Solid waste in the form of general waste, recyclable and non-recyclable inorganic waste, organic biodegradable waste, hazardous waste and construction waste will be generated by project activities.

In addition to the above waste streams, disused material will be generated in the form of asphalt millings concrete rubble and surplus materials from excavations. Most of the clean fill material can either be used to backfill areas where old equipment or infrastructure has been removed or as a resource (e.g. crushed asphalt and basecourse material) for general use by MCA or PWD and the community.

The Contractor must develop a Solid Waste Management Plan (SWMP) (Section 7.10) for all generated waste streams, to be submitted as an appendix of the CESMP for clearance by the Supervision Engineer. At all times, the Contractor is responsible for the safe and sound disposal of all solid waste generated by the Works.

There is no reticulated sewer network on the island, septic tanks are utilised. Therefore, if access to existing airport facilities are not available, any temporary toilets and disposal or treatment of wastewater will need to be in accordance with the ECD, Supervision Engineer and MCA (site location) advice.

2.3.8 Occupational Health and Safety (OHS)

All occupational health and safety requirements as per WB EHS and SIG law must be in place and workers trained in necessary procedures (e.g. spill response plan). The OHS Management Plan Guidelines in Appendix E have been designed to reinforce existing SIG health and safety law and must be applied to all aspects of the SIRAP project

For the purposes of the project, in addition to the national OHS standards the employer is adopting a guidelines for occupational health and safety based on good international industry practice. To be qualified for bidding contractors will be required to have in place an occupational health and safety management system which is compliant with, or equivalent to, OHSAS 18000 (http://certificationeurope.com/ohsas-18000-health-safety-managment-standards/) and is acceptable to the client. The contractor shall specify which occupational health and safety standards are to be applicable to the project, and provide evidence of application of such standards on a project of similar size and complexity during the past 5 years. The standards to be adopted may include those of Australia, Canada, New Zealand, the EU and the US, which are referred to in the World Bank Group EHS Guidelines.

Civil works shall not commence until the Supervision Engineer has approved the OHS plan, the Safety Officer is mobilized and on site, and staff have undergone induction training. Details of the expected content of the OHS Plan and expected practices of the Contractor with regards to health and safety are stipulated Guidelines in Appendix E and summarized in section 6.3.1.

2.3.9 Duration and Timing of Construction Activities

The timeframe and duration of these works are, as yet, unknown. Once the construction contract is awarded, a detailed working plan showing the staging of the works for each working shift is to be submitted to MCA prior to any works commencing. The staging of the works is to be in coordination between MCA, the Contractor and Supervision Engineer to eliminate disruptions to flight schedules and to ensure safety of all parties is maintained at all times.

Normal working hours in the Solomon Islands are Monday to Saturday, 8am to 6pm. Working on a Sunday or Public Holiday is not recommended and would likely only be approved if urgently required for safety purposes and with the approval of the Supervision Engineer. It is expected that the runway pavement works will need to be completed outside of normal working hours, including overnight, to work around flight schedules to ensure safe operations of the airstrip for incoming and outgoing aircraft. All flight and construction scheduling must be coordinated with air operators through MCA as documented in the MOWP.

3 Policy, Legal and Administrative Framework

3.1 National Requirements

The SIG has a well-established regulatory framework that provides measures to protect and preserve the environment. Legislation concerning the protection and preservation of the environment is found in a number of acts and is the responsibility of a number of different ministries according to their focuses, they are detailed below:

3.1.1 The Environment Act and Regulations

The Environment Act 1998 (the Act) and Environment Regulations 2008 (the Regulations) make provision for the conservation and protection of the environment. The Act provides for an integrated system of development control, environmental assessment and pollution control including; prevention, control and monitoring of pollution including regulating discharge of pollutants to air, water or land and reducing risks to human health and prevention of degradation of the environment; Regulating the transport, collection, treatment, storage and disposal of waste and promoting recycling, re-use and recovery of materials in an economically viable manner; and Complying with, and giving effect to, regional and international conventions and obligations relating to the environment.

The Second Schedule of the Act lists prescribed developments for which consent from the Environment and Conservation Division (ECD), accompanied by an environmental assessment reported as either a public environmental report (PER) or an environmental impact statement (EIS), is required. All prescribed developments require a “screening” or “scoping”, to see what form/level of environmental assessment is required. Most prescribed developments require a PER, while major projects such as logging, mining, or large scale tourism or infrastructure developments, will need a more detailed appraisal which includes technical, economic, environmental and social investigations and consultations with stakeholders, presented in an EIS.

The Regulations extend the requirements of the PER/EIS to include; (a) social impact on the surrounding communities; (b) ensuring public participation; (c) spelling out employment opportunities for Solomon Islanders; (d) a demographic impact assessment; (e) health impact assessment; (f) gender impact assessment; (g) noise impact assessment; (h) state whether any of the above would have short- or long-term harmful effects on the environment. The Director may have other requirements that will need to be fulfilled, notifying applicant of any additional requirements within 31 days after notifying the applicant.

3.1.1.1 Development Consent Application

Using Form 1 (as set out in Section 17 of the Act) send a written application to the Director of ECD. This must be accompanied by a standard fee and must include all of the information requested and requiring a ruling on the type of environmental assessment that will be required (PER, EIS or waiving of the requirement). Within 30 days the Director of ECD will reply to advise of the final requirements for the assessment of the development.

If an EIS is required, the Director will organize a Public Meeting allowing at least 30 days for people to access the reports, in order to discuss results of the assessments and hear objections from those that attend. For a PER, no public meeting is required. Within 14 days of the Public Meeting, or publication of

a PER, the Director will issue a Development Consent, with or without conditions, or decline the application for development consent. The Director issues the Development Consent, if satisfied that all requirements will be met, using Form 5. This may be subject to additional conditions of implementation set by the Director. The Development Consent will require the deposit of an environmental bond of a sum to be determined by the Director. The developer will bear all costs associated with mitigating any adverse environmental impacts and may also be charged for the monitoring requirements attached to the development consent. Costs incurred by ECD of monitoring a development will be paid to ECD by the applicant for an Environmental Inspector, or according to the costs charged by an external person or body.

Given the scope of works for Honiara Airport and the Category B rating, it is expected that a PER will be the requirement which will be developed based on this PESMP. The conditions of the resulting Development Consent will be included in the CESMP.

3.1.2 Lands and Titles Act

The Land and Titles Act (1988 and amended in 1996) is the legislation that consolidates the law relating to the tenure of land, registration of interests in land, and compulsory acquisition of land. Part V of the Act deals with the purchase or lease of customary land by private treaty, and compulsory acquisition of land. Acquisition of customary land is usually only undertaken for non-public works such as gold mines, oil palm plantations, or hotels. For public works requiring location on customary land, the implementing agency typically consults with the members of a line and any other person who claims an interest in the land. For public works the land is not acquired as such, it is gifted or contributed following an extensive period of consultation and agreement through signing of a Memorandum of Understanding (MOU). The MOU waives the customary interest in the land in lieu of the public infrastructure (wharves, roads, schools, clinics and other public utilities).

Two articles of the Constitution also provide for compulsory acquisition. Article 111 which states that in regard to land which has ceased to be customary land, Parliament may; (i) provide for the conversion into a fixed-term interest of any perpetual interest in such land held by a person who is not entitled to hold such a perpetual interest (as defined by Article 110); (ii) provide for the compulsory acquisition where necessary of such land or any right over or interest in such land; and (iii) prescribe the criteria to be adopted in regard to the assessment and payment of compensation for compulsory acquisition (which may take account of, but need not be limited to, the following factors: the purchase price, the value of improvements made between the date of purchase and the date of acquisition, the current use value of the land, and the fact of its abandonment or dereliction). In respect of customary land, in Article 112, the Constitution, allows the compulsory acquisition of customary land or any right over or interest in it, as long as there have been negotiations with the owner(s) of the land, right or interest prior to the acquisition, the owner(s) have a right of access to independent legal advice, and the interest in the acquired land is limited to a fixed-term interest.

3.1.3 Other Acts

Relevant articles from other Acts governing these proposed works are listed below. It is the responsibility of the Contractor to ensure that they are familiar with and compliant to these Acts.

Mines and Minerals Act (1996)	Definitions: "building materials" means clay, gravel, sand and stone used for buildings, roads or other construction purposes
	Definitions: "landowner" in relation to a registered interest means the person in whose name the interest is for the time being registered; and in relation to customary land, means the person or persons who is or are according to current customary usage, regarded as the owner or owners of the land;
	Definitions: "open cast mining" means surficial mining or quarrying of minerals exposed either at the surface or after removal of overburden;
	Part VIII: Building Materials, **65.** -(1) Each applicant for a building materials permit shall specify in a written application to the Director- *(a)* his full name, address or, in the case of an application by a partnership or other association of persons, the full names, addresses and nationalities of all partners or of all such persons, or, in the case of an application by a corporate body, the registered name and address of such body and the full names and nationalities of the directors and the full name and nationality of any shareholder who is the beneficial owner of more than five per cent of the issued capital; *(b)* a plan of the area, which shall not exceed half a square kilometre, for which the permit is sought; *(c)* the proposed plan for mining the building materials; and *(d)* such other information as the Director may require. (2) Each application shall be accompanied by the written consent to the issuance of the permit of the landowners in the area for which application is made, which consent may include such terms and conditions relating to surface access fees and compensation for damage as may have been agreed between the applicant and the landowners. (3) Each application shall be accompanied by payment of such application fee as shall be prescribed.
River Waters Act (1964)	**5.** Any person who, except under and in accordance with the terms and conditions of a permit issued under this Act- *(a)* by means of a ditch, drain, channel, pipe or any other means whatsoever, diverts any water from a river; *(b)* fells any tree so that it falls into a river or river bed; *(c)* in any manner obstructs or interferes with a river or river bed; *(d)* builds any bridge, jetty or landing stage over or beside any

	river; *(e)* damages or interferes with the banks of any river; or *(f)* contravenes any order made under section 4 of this Act, shall be guilty of an offence and without prejudice to the provisions of section 6, shall be liable to a fine of two hundred dollars or to imprisonment for six months or to both such fine and such imprisonment: Provided that nothing in this section shall apply to the diversion of water by any person for domestic purposes.
	8.-(1) The Minister or, subject to the directions of the Minister, any inspector may in writing grant permits authorising, subject to the provisions of this Act and any regulations made thereunder and to such terms and conditions as shall be therein specified, any of the acts specified in paragraphs *(b), (c), (d)* and *(e)* of section 5.
Safety at Work Act	Purpose: an act to provide for the health, safety and welfare of persons at work and to protect persons against risks to health or safety arising out of or in connection with the activities of persons at work; to impose specific requirements in respect of certain articles and substances that are a potential source of danger; to make minor amendments of the labour act and the workmen's compensation act; and for connected purposes. Provides detailed regulations governing duties of dangerous machinery (article 19), electrical installations (article 20), flammable substances (article 22), and training (schedule 1)
Labour Act	**13.**-(1) Subject to any lower maximum number of hours of employment applicable to him by virtue of any regulation, rules, contract or agreement negotiated on his behalf - *(a)* the normal weekly hours of any worker shall not exceed forty-five hours; *(b)* the normal daily hours of work of any worker in an industrial or agricultural undertaking shall not exceed nine hours; *(c)* a worker whose hours of work exceed six hours daily shall be given a break of at least thirty minutes arranged so that the worker does not work continuously for more than five hours; *(d)* hours of work and breaks from work shall be so arranged as not to require the worker's presence at the place of work for more than twelve hours daily; *(e)* a worker shall be given a weekly rest of at least twenty-four continuous hours, which shall, where practicable, include

	Sundays or other customary rest days; and *(f)* no worker shall be required to work on a gazetted public holiday or on more than six days in one week, unless such worker is employed in a service to which the Essential Services Act applies or in an occupation in which work on public holidays or customary rest days is expressly provided for in his contract of service. (2) The above limits on hours of work may be exceeded in those processes which by reason of their nature are required to be carried on continuously by a succession of shifts, subject to the condition that the average working hours shall not exceed nine daily and forty-five weekly over a period of three weeks; (3) Workers engaged on shift work shall be given at least twenty-four continuous hours of rest weekly notwithstanding that the incidence of shift rotas may be such that this rest period does not coincide with the normal or customary weekly rest days. (4) In order to ensure continuity of operations an employer may require workers engaged on shift work to remain on duty until relieved by the succeeding shift or until permitted to leave by the supervisor responsible: Provided that such workers shall be paid at overtime rates for any additional hours so worked. (5) The limit on hours of work specified in this section may be exceeded subject to the total hours worked (including hours of overtime) not, without the approval of the Commissioner, exceeding fifty-seven hours in any work weekly or two hundred and twenty-eight hours in any calendar month. (6) The onus of showing the necessity to extend hours of work beyond those provided for in subsections (2) and (5) shall lie on the employer in any particular case and shall be subject to approval by the Commissioner.
	37.-(1) No person shall employ an immigrant or non-indigenous worker unless such worker has obtained from the Commissioner a work permit and the employment relates to the conditions of such work permit. (2) No immigrant or non-indigenous worker whether employed or self-employed shall work in Solomon Islands without a work permit from the Commissioner which shall specify the work which such immigrant or non-indigenous worker may undertake.
	39. Women shall not be employed during the night in any undertaking, except where the night work- *(a)* has to do with raw materials or materials in course of treatment which are subject to rapid deterioration; or …

	(c) is that of a responsible position of management held by a woman who is not ordinarily engaged in manual work; or … *(h)* is not prohibited by an international convention applying to Solomon Islands and is specifically declared by the Minister by order to be work upon which women may so be employed.
	46. No child under the age of twelve years shall be employed in any capacity whatsoever
	47. A person under the age of fifteen shall not be employed or work - *(a)* in any industrial undertaking, or in any branch thereof, except in employment approved by the Minister; or…
	70.-(1) At every place of employment the employer shall provide for all workers such medical attention and treatment with medicines of good quality, first-aid equipment and appliances for the transportation of sick or injured workers as may be required by the Commissioner or a Health Officer.

3.2 Regional Governance

The Provincial Government Act formalised the division of the SI into provinces with Honiara International Airport being in the Guadalcanal Province, just outside of the boundaries of the Honiara City Capital Territory. Each province has an elected Provincial Assembly representing each of the 'wards' in the provinces. The central government has devolved a number of responsibilities to the provincial government, however the exact delineation of authority can be unclear. Schedule 5 of the Provincial Government Act lists the provincial legislative matters as:

Trade and Industry	Local licensing of professions, trades and businesses, Local marketing.
Cultural and Environment	Local crafts. Historical remains. Protection of wild creatures.
Transport	Coastal and lagoon shipping. Provision, maintenance and improvement of harbours, roads and bridges.
Finance	Raising revenue by (a) head tax; (b) property tax; (c) fees for services performed or licences issued by or on behalf of the Provincial Executive (other than services performed or licences issued by them as agent of another); and (d) such other means as may be approved for the purposes of this paragraph by the Minister by order.
Agriculture and Fishing	Animal husbandry. Management of agricultural land. Grants, loans and subsidies in respect of agricultural production. Protection, improvement and maintenance of fresh-water and reef fisheries.
Land and Land Use	Codification and amendment of existing customary law about land. Registration of customary rights in respect of land including customary fishing rights. Physical planning except within a local planning area (within the meaning of the Town and Country Planning Act or an area to which Part IV of that Act has been applied (development areas).
Local Matters	Fire services and fire protection. Waste disposal and cleansing services. Rest houses, eating houses and similar places. Public conveniences.

	Vagrancy. Public nuisances. Cemeteries. Parks and recreation grounds. Markets. Keeping of domestic animals. Building Standards.
Local Government	(1) The constitution, area and general powers and duties of Area Councils and similar bodies, their revenue and expenditure. (2) The making of by-laws by such bodies, that is, laws (a) affecting only the area of responsibility of the body; (b) not having effect until confirmed by the Provincial Executive; and (c) not made for a purpose for which provision is made by, or is or may be made under, any other enactment. (3) To determine by resolution of the Provincial Assembly the salaries and allowances to be paid in respect of area councillors.
Housing	Housing. Regulation of rents.
Rivers and Waters	Control and use of river waters. Pollution of water. Provision of water supplies. (other than urban water supply in areas, prescribed by the Minister under the Solomon Islands Water Authority Act).
Liquor	Liquor licensing
Corporate or Statutory bodies	Establishment of corporate or statutory bodies for the providing of provincial services including economic activity.

3.3 World Bank Policy

The Bank has a series of Operational Policies (OP) and Bank Procedures (BP) relating to environmental and social safeguards (ESS) which outline that project designs are to be informed by appropriate environmental and social assessments. The current policies and procedures for ESS are summarized in the table below, which highlights those that have been triggered and the relevance of the respective safeguard policy for SIRAP. The table shows that there are three policies that are have relevance to SIRAP, and while not all are currently trigger, they will be addressed in this PESMP to account for potential future changes.

OP	Operational Policies	Triggers	Relevance to SIRAP
4.01	Environmental Assessment • Annex A - Definitions • Annex B - Content of an Environmental Assessment Report for a Category A Project • Annex C - Environmental Management Plan	As the governing OP for World Bank safeguards, this OP is triggered for all WB projects.	Category B rating
4.04	Natural Habitats	Land and water areas where (i) the ecosystems' biological communities are formed largely from native plant and animal species, and (ii) human activity has not essentially modified the area's primary ecological functions.	Not applicable.
4.10	Indigenous Peoples	(a) Self-identification as members of a distinct indigenous	Not Applicable

OP	Operational Policies	Triggers	Relevance to SIRAP
		cultural group and recognition of this identity by others; (b) Collective attachment to geographically distinct cultural group and recognition of this identity by others; (c) Customary cultural, economic, social or political institutions that are separate from those of the dominant society and culture; and, (d) An indigenous language, often different from the official language of the country or region	The vast majority of groups resident in the project areas can be considered indigenous Solomon Islanders. Since the vast majority of potentially affected population is indigenous, no separate instrument will be required, but relevant elements of the policy are integrated into project design. Community consultations will be facilitated and documented the National Safeguards Specialist to be employed under the project. Ongoing monitoring and community consultations by the NSS will assess whether broad community support is maintained during implementation. The ongoing community consultation process conducted can be summarized in the ESMPs and Community Consultation Plans. This should ensure that Free, Prior and Informed Consultation is included and that the project will provide benefits that are culturally appropriate to the people. The ESMPs will include analysis of social impacts of the project.
4.11	Physical Cultural Resources	PCR: movable or immovable objects, sites, structures, groups of structure, and natural features and landscapes that have archeological, paleontological, historical, architectural, religious, aesthetic or other cultural significance	Not triggered but any chances to scope or construction methods will be screened through OP4.11
4.12	Involuntary Resettlement	Direct economic or social impacts that are caused by: (a) involuntary taking of land (including non-land assets) resulting in (i) relocation or loss of shelter; (ii) loss of assets or access to assets; (iii) loss of income sources or means of livelihood, whether or not the affected persons must move to another location; or, (b) the involuntary restriction of access to legally designated parks	Not Triggered. No involuntary resettlement expected. Minor temporary land acquisition (laydown sites) may be required but this will be via informed temporary lease arrangements with the customary land owner, or sited on government land.

OP	Operational Policies	Triggers	Relevance to SIRAP
		and protected areas resulting in adverse impacts on the livelihoods of the displaced persons.	

The SIRAP HIR Project is a category B project under WB environmental and social screening guidelines and requires development of the project specific PESMP. Due to the nature of the project it is expected that environmental impacts will be site specific, few if any are irreversible, and mitigation measures can be readily designed and implemented. In accordance with the WB Operational Policy 4.01 Environmental Assessment for this PESMP includes information on mitigation, monitoring, capacity development and training, and implementation costs. The PESMP outlines the potential environmental impacts and the measures needed to prevent, minimise, mitigate or compensate for adverse impacts and improve environmental performance of the project.

The PESMP is a dynamic document which must be updated as consultation and detailed designs of the project components are finalised to ensure currently unanticipated impacts and revised mitigation measures are addressed. Effective implementation of the PESMP is a requirement of the funding agencies and local legislation so monitoring is an integral component of implementation. A Monitoring Plan is included in Section 9.1 and Appendix C of this PESMP. This PESMP is to form part of the bidding documents for contract(s) awarded under the SIRAP and will form the basis of the Contractor's CESMP.

All works completed for the SIRAP project should be completed in compliance with the Environmental and Social Safeguard Instruments for Pacific Island Countries (World Bank, October, 2014) and the IFC Environmental, Health, and Safety Guidelines (2007)[1].

[1] International Finance Corporation, 30 April 2007. Environmental, Health, and Safety General Guidelines, http://www.ifc.org/wps/wcm/connect/554e8d80488658e4b76af76a6515bb18/Final%2B-%2BGeneral%2BEHS%2BGuidelines.pdf?MOD=AJPERES

4 Natural and Social Environment

This baseline of existing conditions has been carried out based on site visit to Honiara, field observations and a number of secondary sources.

4.1 Physical Environment

4.1.1 Location and Geography

The Solomon Islands is the Pacific's largest archipelagic nation, extending some 1,500 km from east to west and consisting of nearly 1,000 islands, the largest of which include Guadalcanal, Malaita, and New Georgia (in Western Province). The country is bordered by Papua New Guinea to the west, Nauru to the north, Tuvalu and Fiji to the east, and Vanuatu to the south.

Honiara International Airport is located on Guadalcanal Island, 7km to the east of Honiara along the Kakum Highway on the northern side of the island. The island is approximately 150km long and 50km wide and lies between the New Georgia Sound and the Solomon Sea. A central rugged range with high peaks and deep valleys runs in a general east-west direction along the lower southern section of the island whose location directs the majority of the island's drainage to the north coast via the rivers. A large outwash coastal plain has formed along the north coast from material carried out of the range by northern flowing rivers including the Lungga River which is bounds one end of the HIR airfield. The city of Honiara and the HIR airfield are located on this coastal plain.

Figure 3: Geographic location of Guadalcanal Island and Honiara

The long term deposition of sediment by the rivers coming from the highland regions have created alluvial plains which are still expanding with the rivers moving and dividing within their own deposits which range from clays to coarse gravel. This is typical of the Lungga River. The river contains gravel beds within their channels which are composed of 70% volcanic materials and 30% limestone materials. The lower section of the Lungga River is used as a source of aggregate for building and road materials for Honiara.

4.1.2 Climate

Guadalcanal has a climate that is largely controlled by the seasonal movement of the equatorial trough. The temperature and humidity in the Solomon Islands is relatively high and uniform with the former ranging from 22°C to 31°C throughout the year. The most variable of the climactic elements across the provinces is rainfall which can be abundant each month and is variable based on the different topographic features of the islands. Climate data for HIR shows a mean annual rainfall of 1,858mm. The north coast of Guadalcanal, November to March, is considered to be the wet season with 68% of rain falling during this period and averaging 250mm per month with the dry season averaging 100mm per month.

From about January to March, the equatorial trough is usually found close to, or south of the Solomon Islands, and this is a period of west to north-westerly monsoonal winds. The heaviest rainfall at most places also occurs at this time. From May to October, the trough moves to the Northern Hemisphere so the Solomon Islands comes under the influence of the south-westerly trade winds which can bring heavy rainfall, especially to the western sides of the islands. The transition months between these dominant weather patterns usually bring more frequent periods of calmer winds.

Thunderstorms are relatively common across the Solomon Islands, especially over the larger and more mountainous islands, building up inland on many afternoons and, if winds are favourable, drifting towards coastal areas. Peak thunderstorm period is between December and March.

A number of tropical low pressure systems occur each year over the Solomon Islands at times when the equatorial trough is in the vicinity, but few of these develop into tropical cyclones. The average frequency of cyclone occurrence is between one to two per year, although these tend to develop southwards and tend to be early in their life cycle meaning they are relatively small but can, never the less, cause serious damage to infrastructure, crops and water supply.

4.1.3 Water Resources

Water resources in the Solomon Islands range from sizable rivers to small streams from high mountainous and dense rainforests to rainwater harvesting and thing freshwater lens of underground aquifer of the small low-lying atolls and islets[2].

The Lungga River on the western boundary of the airfield has a catchment area of 388km and is the largest river in Guadalcanal. Flow records are available for the Lungga River and these are measured at the main road bridge just before HIR. Records (Table 1) are shown below for 1965 to 2000.

Table 1: Mean Monthly Discharge Records for Lungga Rover (1965-2000).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
Mean	57	63	64	43	33	19	20	19	21	31	34	45	37
Min	21	24	29	23	14	9	7	5	8	7	12	7	5
Max	172	121	137	83	132	39	32	46	48	80	53	140	172

Source: Division of Water Resources, Min of Natural Resources.

[2] IWCM diagnostic report

Discharge is greatest in February and March at the later end of the wet season, and then declines during the dry season. Flow starts to increase in October until reaching its peak in March. Cyclones occurring during December to March are responsible for the extreme maximum discharges during this period with cyclone influence still being apparent in May.

A second watercourse, Alligator Creek, runs along the eastern end of the airfield and is the product of the high water table on the alluvial plan and drains the area between the Lungga River and the Tenaru River further to the east. Being mainly ground water fed, the Alligator Creek is expected to exhibit less seasonality in its flow regime, though it will experience high flows during local flood events. Small swampy wetlands and shallow surface ponds occur at the head of the Alligator Creek at the base of the foothills.

During the dry season, both waterways are only slightly turbid but during the wet season, the Lungga and the Alligator Creek are prone to raid changes in discharge and become highly turbid.

With adequate rainfall and large infiltration area, considerable groundwater resources are available under the Guadalcanal coastal plain. Groundwater levels are between 1-2m of the surface and during the wet season, the majority of the plain suffers from poor drainage. With groundwater being so close to the surface, it is often used for drinking water either from wells or pumped from boreholes. The Solomon Island Water Authority (SIWA) maintains several pumping stations on the coastal plain for meeting Honiara's water demands.

4.1.4 Land Use Around HIR

The area surrounding HIR is mixed residential and urban with some small-scale agriculture and industry also in the vicinity. Immediately to the east and west of the airfield are two waterways surrounded by agricultural land. To the south of the airfield are scattered rural residence and agricultural land. The northern side of the airfield is a more developed industrial and urban area which spreads to meet with the Honiara City boundary. The Kakum Highway which joins HIR with Honaira is dense with informal community market stalls on either side of the road. The stalls operate on an ad hoc basis as and when the owner have fruits, vegetables or fish to sell.

Running along the eastern end of the runway is the northern coastline of Guadalcanal which open up onto the New Georgia Sound.

4.2 Biological Environment

4.2.1 Flora

The terrestrial ecosystems of Solomon Islands include tropical moist forests, montane forest and secondary vegetation, grassland and savanna, swamps, lowland rain forest, and cropland. Forest makes up 86% of the country's vegetation communities with low altitude forest accounting for the vast proportion of this, while cropland and bush account for 10% of the vegetation communities.

The Solomon Islands is characterized by a high level of biodiversity of plants including 3,210 species of vascular plants, although this is believed to be an under-estimation and a more correct estimate is in the order of 4,500 when unrecorded species are included. While diversity is high, endemism is low, with no endemic families and only three endemic genera. Endemism of species is not accurately known but is thought to range from 10% of fern species to 80% of pandan species. The islands with the highest rate of endemism are Santa Cruz (Temotu) and Guadalcanal.[3]

The project, being located on the coastal alluvial plain, traverses areas of what would have been lowland coastal forest. This area has now been extensively altered and all of the original forest has been removed and converted to coconut and cocoa plantations. The lowland hill areas where secondary forest occurs have been converted to subsistence gardens, otherwise, where grasslands have developed, these areas have lost fertility and remain as grassland areas which are frequently burnt and has deflected the natural succession.[4]

The vegetation of the subproject area largely consists of an invasive shrub Paper Mulberry (*Broucessonetia papyrifera*) which was introduced from the Fiji Islands as a source of paper making material. It has since become widespread particularly along roadsides. Paper Mulberry grows to about 3-4 m in height and reproduces vegetatively from shoots arising from its roots. It is difficult to control and after cutting back, it re-grows easily from the cut trunk while cutting stimulates it to send up further shoots from its root system. Also found in the vicinity are *Glyricidia sepium* which has been planted as a fence and shade tree in the cocoa plantations. Guinea Grass (*Sorghum haplense*) is the dominant grass, while creeping legumes include Pueraria phaseloides. Other species include Sensitive Mimosa (*Mimosa pudica*), Wild taro (*Alocasia macrorrhizos*) and the Kasume fern (*Diplazium proliferum*) which grows in wetter shady areas. Trees support a range of vines, ferns and some orchids.

4.2.2 Fauna

The terrestrial fauna of the Solomon Islands is extremely diverse and includes 223 species of birds (173 residential terrestrial species and 50 other species of shore/sea bird and migratory), 52 mammals (all of which belong to the bat and rat family), 61 species of reptiles (25 are endemic) and 17 species of frog.[5]

Solomon Islands has a high level of bird diversity and is recognised for the degree of speciation and population variation between islands. Birds are by far the most studied animal group in the Solomon Islands with Guadalcanal being home to 3 species which are endemic to that island.

[3] Solomon Island State of the Environment Report 2008, Ministry of Environment, Conservation and Meteorology

[4] Solomon Island Transport Sector Development Project Initial Environmental Examination, 2012.

[5] Solomon Island State of the Environment Report, 2008, Ministry of Environment, Conservation and Meteorology.

Field observations in the area of the Honiara airfield for the ADB Transport Sector Development Project did not show any significant wildlife species within the area. Bird species included the commonly occurring species; red and black parrots, the Guadalcanal pygmy parrot (*Microspitta finoschiii aolea*), swifts, mynahs, and the megapode bush fowl. There are no significant habitats remaining in the vicinity of the airfield which has mainly been converted into mono-crop plantations. No endemic or endangered species have been observed during these field investigations.

4.2.3 Rare or Endangered Species

The Solomon Islands is one of the most biologically diverse countries in the world, linked to this is a high number of critically endangered, endangered, vulnerable and endemic (to the country and provincial level) species. The State of the Environment Report details many of these species, however for the scope of these works this report only looks at species identified in the SOE report for Guadalcanal and only considered the immediate environment surrounding the project site.

For the Guadalcanal, the 2008 International Union for Conservation of Nature (IUCN) Redlist of endangered species lists 3 bird species as critically endangered, along with 6 threatened bird species and 3 endemic at the provincial level.

As the coastal plain of the HIR project site is heavily altered, there are not known to be any rare of endangered species in this habitat.

4.3 Socio-Economic Conditions

4.3.1 Population and Demographics

At the last census in 2009, the population of Honiara City was 64,609 living in a population density of 2,953 people per km2 living within the 22km2 borders of the city. The population of Honiara has continuously increased and now stands more than five times the size it was in 1970.

Honiara's population pyramid looks very different compared to all the other provinces by showing a very distinct expansion at age groups 15-30 years. It is evident that Honaira gained people of these age groups from the other provinces as they expect to find improved employment and education opportunities. Honiara has a relatively young age structure, with 32% of the population younger than 15 years of age; 65% are in the so called working age groups 15-59, and 3% are older than 60.

Average household sizes are higher in Honiara compared with other areas and the national average The Solomon Island Demographic and Health Survey (SIDHS), a recent representative household survey of health and demographics also found that there is a general trend of crowding and higher household sizes in urban areas. Other key findings relating to household structure from the SIDHS are that the majority of households (82%) are headed by males, while 18% are headed by females (18%), and that

17% of children aged less than 18 years do not usually live with a biological parent[6]. Childbearing for Solomon Islanders starts at a young age for many women with an average of two children by late 20s and more than four children by the time they are 50. Women who live in urban areas and those with more than a secondary level education tend to have their first child at a later age than other women.

The 2015 SIDHS also found that there is a slightly higher proportion of women (50.3%) than men (49.7%) in the population, and that there is not significant urban–rural variation though a slightly higher proportion of those living in urban areas are men (50.9%) compared with 49.1% women.[7]

4.3.2 Education and Health

Education is not compulsory in the Solomon Islands. In 2009, with respect to population in Honiara aged 6-15 years, 86% of males and females were enrolled in school. Enrolment rates in Honiara are lower than in most other provinces. Based on the 2009 census data on the highest level of education completed, 37% of males and 32% of females 12 years and older responded that they had attended secondary education (Form 3-7); 38% and 43% of males and females completed only primary level, and 3% of males and 8% females had no schooling completed. Fifteen percent of males and 10% of females had tertiary education.[8]

According to the SIDHS, the majority of Solomon Islanders may have attended school at some stage in their lives, but the overall education levels are low. Overall, the school national attendance ratio is assessed to be 66% for primary school children and 34% for secondary school children. Much of the population has not completed primary school (35% of women, 34% of men). This demonstrates that education levels are low with 66% never participating in secondary school education.

The Ministry of Health and Medical Services is the key health provider in the Solomon Islands. Health services are concentrated in urban centers with a hierarchy of facilities available ranging from nurse aide posts and rural clinics to the National Referral Hospital. Of the nine provinces in the Solomon Islands, eight have a public hospital. The SI have approximately 22 doctors per 100,000 of the population, but also has a strong base of nurse and midwives at 205 per 100,000. The SI do not have specific data on causes of death but has identified communicable diseases including malaria and tuberculosis as important issues. Increasing prevalence of obesity due to lifestyle, diabetes, hypertension and tobacco and alcohol use has increased the rate of non-communicable diseases which will soon overtake communicable disease as the leading burden of disease. [9]

[6] SINSO, SIMoHMS & SPC (2017). Solomon Islands Demographic and Health Survey (SIDHS) 2015.

[7] SINSO, SIMoHMS & SPC (2017). Solomon Islands Demographic and Health Survey (SIDHS) 2015.

[8] Report on 2009 Population and Housing Census for Honiara, Ministry of Finance and Treasury

[9] https://www.pacificmedicalsa.org/single-post/2017/01/23/Healthcare-Overview-Solomon-Islands

4.3.3 Livelihoods and Economic Activity

Solomon Islands' per-captia GDP of USD$600 ranks it as a lesser developed nation, and more than 75% of its labour force is engaged in subsistence and fishing. Most manufactured goods and petroleum products must be imported. Until 1998, when world prices for tropical timber fell steeply, timber was Solomon Islands' main export product and, in recent years, Solomon Islands forests were dangerously overexploited. Other important cash crops and exports include copra and palm oil.

In Honiara, the labour force includes all persons employed and unemployed and consists of 22,962 people (13,318 males and 9,644 females). The employment population ratio for males is 44.7% and for females is 27.5% and it was very low for the population 12-19 years. The EPR was the highest for people aged 30-54 and gradually decreases from then onwards. By occupation, the labour force is employed in government (33%) and private enterprises (67%).

4.3.4 Land Tenure and Rights

Most land (86%) in Solomon Islands is still held under customary tenure, where every member of landholding entity, such as tribal, clan or family is vested with the rights to use and access it. Non-owners usually have limited rights such as right of use, easement or right of way. There is no system which allows for customary land to be surveyed and registered, it is often very difficult for outsiders to identify land boundaries and to identify who 'owns' the customary land.

The Commissioner of Lands has the power to administer public lands and allocate interests to others. Once land is registered, the estate title owner has indefeasibility, except for overriding public interests or when the High Court issues an order to set aside the registration because of fraud or mistake. Under the Land and Titles Act 2014, the Commissioner of Lands discretionary power can only be exercised subject to directions of the Land Board.

4.3.5 Solid Waste Management

The Ranadi Landfill operated by Honiara City Council (HCC) Environmental Health Division is located 4km to the west of the HIR along the Kakum Highway. The active part of the dumpsite covers about 1.5 hectares and it is estimated that 20 to 30 tons of solid waste is disposed of daily at the site. Access to the site is restricted to Monday – Friday working hours and all wastes are accepted in designated managed pits. Scavenging at the dumpsite provides a source of income for several dozens of nearby residents.

The landfill has a drainage system along with settling and digestion ponds to capture leachate.

At least 3 private recycling companies operate in and around Honiara. They concentrate exclusively on metals.

4.4 Projected Climate Change and Impacts

This section is informed by the Pacific-Australia Climate Change Science and Adaptation Planning Program (PACCSAPP) country report for the Solomon Islands.

Annual and seasonal mean temperatures at Honiara have increased since 1962 at a rate of 0.14^{o}C per decade. There have also been increases in the number of warm nights and decreases in the number of cool nights. These temperature increases are consistent with the pattern of global warming. For all

carbon emission scenarios it is projected that temperature will increase in the future in the SI. By 2030 it is projected that the temperature will increase by 0.4°C to 1.0°C depending on the emission scenario.

There are no clear trends in rainfall over the Solomon Islands since the mid-1950s. Over this period there has been substantial variation in rainfall from year to year. Average annual and seasonal rainfall is projected to increase over the course of the 21st century. However, there is some uncertainty in the rainfall projections and not all models show consistent results. Wet and dry years will still occur in response to natural variability with drought frequency expected to decrease slightly by the end of the century. Projections show extreme rainfall days are likely to occur more often and be more intense.

In the Solomon Islands region projections tend to show a decrease in the frequency of tropical cyclones by the late 21st century but a likely increase in the intensity of those storms.

Satellite date indicates that the sea level has risen near the SI by about 8mm per year since 1993. This is larger than the global average of 2.8-3.6mm per year. Sea level is expected to continue to rise and by 2030 is project to rise between 8-18cm under all emission scenarios (Table 2). This sea level rise combined with natural year-to-year changes will increase the impact of storm surges and coastal flooding (Figure 4).

Table 2: Sea-level rise projections for the Solomon Islands. Values represent 90% of the range of the model results and are relative to the period 1986-2005

	2030 (cm)	2050 (cm)	2070 (cm)	2090 (cm)
Very low emissions scenario	8–18	14–31	19–45	24–60
Low emissions scenario	7–17	14–31	21–48	29–67
Medium emissions scenario	7–17	14–30	21–47	30–69
Very high emissions scenario	8–18	16–35	28–58	40–89

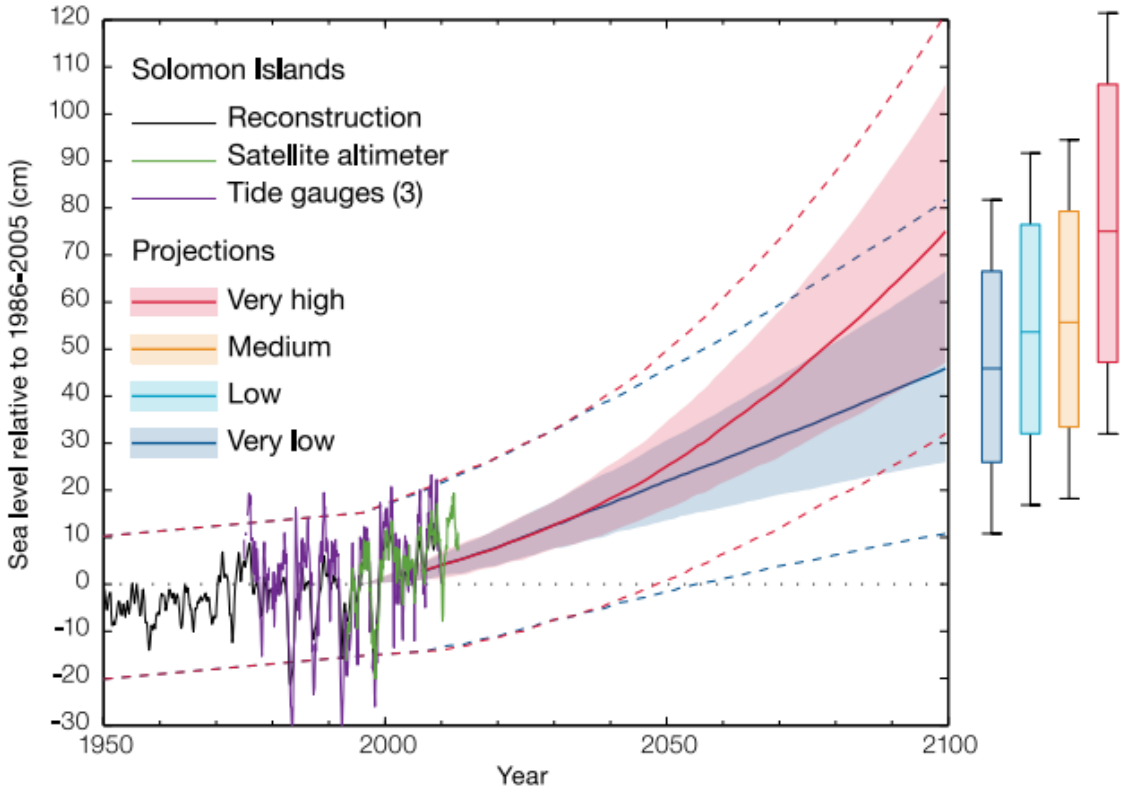


Figure 4: Observed and projected relative sea-level change near the Solomon Islands

The projected design life of the proposed works at Honiara are as yet unknown, however, it is most likely that the climate predictions for 2030 are applicable for SIRAP and should therefore be considered within the designs.

5 Consultation and Stakeholder Engagement

Stakeholder engagement will be required for the upgrading of Honiara International Airport.

Potential areas of investments include:

a) 5 cm overlay of existing runway (including drainage improvements);
b) installation of airfield ground lighting for runway (AGL);
c) construction and equipage of new air traffic control (ATC) tower;
d) construction of rescue fire service (RFS) vehicle station;
e) installation of Automatic Weather Observation System (AWOS);
f) installation of Very Small Aperture Terminal (VSAT) communications systems;
g) installation of Automatic Dependent Surveillance-Broadcast (ADS-B) ground stations and aircraft equipage; and,
h) provision of equipment for improved power supply.
i) Consulting services for design and supervision for runway works, AGL, ATC tower and the RFS station10.

During the detailed planning phase of the HIR works, stakeholder engagement critical to the review of detailed designs, the selection of mitigation options for identified social and environmental impacts and the prioritisation of investments for funding and implementation scheduling. It is important that the affected communities – including women and vulnerable groups – are given the opportunity through consultations to be made aware of the proposed activities, and to comment and contribute to the project design. MCA PST will be responsible for ensuring meaningful consultations be carried out for all components of SIRAP, through the life of the project.

5.1 Stakeholder Identification

A stakeholder is defined as a person or group who has an interest in a particular decision or activity relating to SIRAP, either as an individual or as a representative of a group. This includes people who can influence a decision, or can influence actions, as well as those affected by it.

For the SIRAP, stakeholder groups include HIR management, provincial government, and its surrounding communities and villages. Stakeholders for HIR have been and will continue to be identified on a continuing basis by:

- Identifying the various categories of parties who may be affected by or interested in the project; and
- Identifying specific individuals or organisations within each of these categories taking into account:

[10] There will be one consulting assignment so the same consultant will also supervise Munda, as well as design and supervise the road works.

- The expected area of influence of the project, that is the geographic area over which it may cause impacts (both positive and negative) over its lifetime, and therefore the localities within which people and businesses could be affected;
- The nature of the impacts that could arise and therefore the types of government bodies, NGOs, academic and research institutes and other bodies who may have an interest in these issues.

5.2 Stakeholder Groups

Stakeholder groups applicable to the HIR Upgrades under SIRAP are listed and described below.

5.2.1.1 National Government Authorities

National authorities are defined as those agencies of the SIG who have the power to regulate or influence the Project in terms of granting permits or other approvals for the Project, and monitoring and enforcing compliance with SIG law throughout the project implementation cycle. It is important to continue a productive dialogue with these national authorities throughout project implementation.

Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM)

The Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM) is responsible for sustainable environmental management, climate change adaptation and mitigation, disaster risk management and meteorological services for the Solomon Islands. The Ministry is organised into four technical divisions that look after each of the technical areas, namely environment and conservation, climate change, disaster management, meteorology.

Within the MECDM, sits the Environment and Conservation Division (ECD). The ECD currently administers three Acts of Parliament including Environment Act 1998, Wildlife Protection and Management Act 1998 and Protected Areas Act 2010, with their respective Regulations. The Division's key functions and areas of responsibility are stipulated in these three legislative frameworks.

Ministry of Lands, Housing and Survey

As part of the land due diligence for any future project under SIRAP, the Resettlement Policy Framework covers consultations with the Ministry. The Solomon Islands Government is supported by a Land Management System that Contributes to Social Stability, Economic Growth and Sustains the Environment. The key role of the Ministry is to:

- Effectively deliver land administration to the government and the people of Solomon Islands based on fair, transparent and timely processes;
- Registering Land Transactions;
- Ensuring that land Rents are based on fair and transparent principles and that rents are collected on a timely basis;
- Meeting the statutory requirements of surveying and valuations, and
- Keeping land records in a secured manner.

Ministry of Infrastructure Development

The Ministry of Infrastructure Development focuses on the development of important infrastructures to support development. The mission of the Ministry is to design safe standards for bridges, wharves, or houses as required in natural disasters prone regions, to ensure that shipping and all transport industries operate to safe and efficient standards that ensure passenger and cargo safety, and to ensure that national transportation is well planned, affordable and conducive to both economic growth and social well-being, and that government housings, materials, equipment, vehicle fleet, plant and machinery are professionally maintained.

Ministry of Communication and Aviation (MCA)

Ministry of Communication and Aviation (MCA) will be the lead Ministry overseeing the HIR upgrade project for the SIRAP. Airport operations and regulation of aviation safety and security are undertaken by the Ministry of Communication and Aviation and the Civil Aviation Authority of Solomon Islands. The Ministry supports the Minister of Communication and Aviation and undertakes the functional roles providing policy advice to the SIG as well as currently managing airport operations, facilities, equipment, maintenance and development.

The Civil Aviation Authority of Solomon Islands is established under the Civil Aviation Act 2008 and consists of the Attorney General or nominee, the Permanent Secretary for the Ministry or nominee, and a member who is a director general or chief executive officer or equivalent of a civil aviation authority of a member state of the International Civil Aviation Organisation. The Authority is headed by the Director of Civil Aviation which is a statutory position appointed by the Minister on the recommendation of the Authority.

5.2.1.2 Local Governance

Solomon Islands is a democratic country with the national parliament comprising 50 members, elected for a four year term under the “first past the post” voting system. Each major island group within Solomon Islands elects a provincial assembly for a four---year term. The Premier is the Chief Administrator of the provincial affairs who is elected from the leader of the majority party or coalition from members of the provincial assembly. The Deputy Premier is appointed by the speaker of the Assembly upon the advice of the Premier. Solomon Islands has nine provinces with each having their own Premiers. Provincial governments may enact ordinances that are only consistent to national legislations.

Honiara is the capital city of the Solomon Islands and is situated in its own province (Capital Province) on the Island of Guadalcanal, though its peri-urban areas stretch into the administrative boundaries of Guadalcanal Province. Honiara serves as the main administrative, educational, and economic center for the country and will be the local authority that will have input and recommendations on the HIR Airport upgrades.

5.2.1.3 Affected Communities and Individuals

This group will include all people who may be directly or indirectly affected by the SIRAP investments at HIR. It will include communities and villages located adjacent to the airport sites, hauling routes, and other relevant public sites.

5.2.1.4 Civil Societies and NGOs

This group includes smaller groups in society who may have an interest in the HIR upgrades and the SIRAP and its social and environmental aspects.

OXFAM Solomon Islands: OXFAM has branches on all major islands with the main office on Honiara. The key focus areas of OXFAM are:

- Gender justice: Oxfam works with a local NGO called the Family Support Centre (FSC) to address gender-based violence, sexual abuse and child abuse. FSC offer emergency accommodation, legal and counseling services, run educational programs, maintain a resource library and raise awareness of GBV and women and children's rights. They work closely with support agencies such as the police, as well as NGOs.
- Capacity building: Oxfam is strengthening FSC's long term sustainability and organizational development.
- Community engagement: We support community members as facilitators to run workshops that look at social inclusion, gender stereotypes, violence triggers and alternative actions.
- Advocacy: Oxfam is encouraging agencies including the government and the judiciary to work together to promote and ensure the safety of women.

Solomon Islands National Council of Women: The Council was founded to represent women in the Solomon Islands, with a vision of "Women as Equal Partners in the Development of Solomon Islands". It encourages the participation of women in decision-making on the Islands.

The objectives of the organisation are as follows:

- Promote and coordinate activities for women throughout Solomon Islands;
- Act as a representative body for women to the SIG and other entities;
- Advise the SIG on policies and issues of concern to women;
- Undertake awareness and advocacy on international relevant instruments;
- Provide a forum through which women can have a voice on issues affecting them;
- Encourage participation of women in decision making processes and bodies;
- Promote awareness at all levels women's concerns; and
- Promote formation of effective partnerships with other entities as appropriate.

Save the Children: Save the Children (STC) in the Solomon Islands focuses on empowering children and young people with the knowledge and tools they need to create better lives for themselves. Through child protection programs, STC aims to change communities' behaviour towards children and reduce physical, sexual and emotional abuse.

STCs youth engagement programs help young people to create sustainable livelihoods, participate in their communities and avoid dangerous behaviour such as drinking and taking drugs. STC also works to improve access to early childhood education and help communities to better prepare for disasters.

Disabled Persons Organsiations (DPOs): People with Disabilities Solomon Islands (PWDSI) is the only DPO located on the Solomon Islands. PWDSI is a central, registered, urban-based non-profit organisation with a constitution, an elected board, full-time, paid and voluntary staff and secure office facilities. It is

an organisation founded and managed by people with disabilities in Solomon Islands, to advocate for the rights of people with disabilities and to work together to improve their situation in Solomon Islands

Religious Organisations: Church activity and attendance is a core practice for locals and require close and ongoing communication and consultations with church leaders.

5.2.2 Land Administration & Management Group (LAOG) Division

The Land Administration, Management & Operations Group (LAOG) performs the core land administration function and processes within the Ministry of Lands, Housing and Survey. It performs the most vital role in supporting the Commissioner of Lands by virtue of the Lands and Title Act (Cap 133) who holds the interests in Land for and on behalf of the Government of SI, and who deals in land subject to the directions of the Land Board.

Two Divisional units and 1 supporting Unit directly support the work of the Commissioner of Lands under LAOG in the executing of its function under the Lands and Titles Act. They are the Rural lands Unit, Urban lands Unit, and Land records Management & data. These units carryout the land administration functions and land records & data Management responsibilities which include:

- Acquisition of Customary Land as provided for under the Lands & Titles Act (Cap 133) and the preparation of all completed CL Forms for land registration.
- Administering of land applications & allocation processes through the approved land Tendering system endorsed by the Commissioner of Lands and preparation of all required land transaction documents & instruments.
- Processing of any encumbrances of registered interest on land such as Charges, Discharges, easements, Right of Way, variations, renewals and extension of expired land parcels, Notices for forfeiture and re-entry, Subdivisions, Surrender of Estates, Variation, Offers for Land, Rental revisions, withdrawals, Consent, land transaction backlog, land correspondences, appointments and daily queries from the public.
- Lands records Management systems is Regularly updated, Safe, efficient, secure, professionally managed and able to support the operations of Land administration, research, legal documentation and land tendering system.

5.2.3 Public (Honiara Province)

The public surrounding the HIR area will be stakeholders in the development and implementation of the Works that will be conducted at HIR.

5.3 Stakeholder Engagement and Consultation Program (SECP)

The SECP needs to be updated and refined throughout the lifecycle of the Project. During this process the focus and scope of the SECP will change to reflect the varying stages of project implementation and to encompass any changes to project design. The implementation plan is included in Table 4.

5.3.1 Engagement Mediums

Table 3 below lists the recommended engagement mediums that are appropriate for SECP activities proposed as part of the implementation plan components in Section 5.3.3. Because of the myriad of activities and different stakeholders needs at different times, a wide range of communications methods and mediums are proposed.

Table 3: Recommended engagement mediums

Medium	Description
Stakeholder Meetings	
Structured Agenda	This agenda is developed based on project component under consultation and the stage of its implementation. Putting a focused agenda together will ensure that key strategic and risk items can be discussed with important decision-makers and influencers in an effort to mitigate risk proactively.
Community based consultations	These consultations are focused to identify and discuss stakeholder concerns or to provide feedback using detailed information. These consultations should, wherever feasible, be held within the community environment.
Written / visual communications	
ESMP Executive Summary	This needs to be a short and concise document providing jargon-free information describing the project actions, the potential social and environmental impacts, the need for the project and the contact details for the project team.
Notice boards	Notice boards (community, and work site entrances) are a good tool to use for communication of up-to-date project information such as timing and duration of works, upcoming consultations, project progress and other relevant project information.
Maps	Maps are effective when placing into context well known locations, linear and single site developments, change of fixed locations for developments, location options for developments and anticipated distances between developments or well-known locations.
Letters	Formal method of communication usually intended to convey very specific messages. Alternatively, it is used as a formal method for request of information.
Emails	Using emails for in-country stakeholders can pose a challenge because of limited internet access due to insufficient telecommunications and/or supporting IT infrastructure. NGOs and most of the Government Ministries do have access to email which can be utilised for communications, but arranging of formal community consultations is best arranged through other methods of communication.
Newspapers /adverts	Newspapers are usually best suited for formal announcements or to reach a wide spectrum of stakeholders quickly. It is however very important that the message content

	is carefully compiled since it is a one-way communication medium and can quickly cause misunderstanding or confusion if not clearly written.
Media	
Radio	Radio is a good medium to stimulate awareness and prepare stakeholders for larger events or refined communication to take place. This would be appropriate for Majuro but not for Ebeye (as there is no radio on island).
Other	
MCA	MCA will be the 'familiar faces' of the project and will, for many stakeholders at the community level, represent the most direct channel to the project.
Telephone	Use of the telephone / mobile phone is still regarded as the preferred method for communication because of accessibility and speed. Having a discussion over a phone in order to ensure mutual understanding between two parties is quicker and easier compared to sending an email, waiting for reply.

The mode of consultation will vary according to the subproject and the participants, but in all cases will promote participation by ensuring that the venue is accessible, the timing convenient and the manner of conduct of the consultation socially and culturally appropriate. Consultations will be announced to give sufficient notice for participants to prepare and provide input to project design.

5.3.2 Key Messages

Key messages will need to be developed as each component is prepared in more detail during implementation. For the physical investments planned for HIR, the key messages should be developed around the following and confirmed once the project details are confirmed:

Honiara International Airport Upgrade Key Messages:

- HIR airport has a large potential to contribute to tourism development on Guadalcanal Island
- increased passenger movements
- Improved safety and security
- Increased aviation freight and further government revenue
- Improved accessibility for persons with disabilities and the elderly

5.3.3 Implementation Plan

The Implementation Plan (Table 4) for the SIRAP lifecycle constitutes the following components:

Activity: the various operational consultation activities that will be undertaken as part of the SECP

Objective: the target that each activity needs to reach

Stakeholder: the various stakeholders to be targeted during implementation of the SECP activity; and

Medium: the method by which the engagement or consultation will be done

Some elements of the implementation plan have yet to be confirmed. As project details develop, this SECP and implementation plan shall be updated by the Safeguards Advisor to reflect the current project status and timeframes.

Table 4: Stakeholder Engagement and Consultation Implementation Plan

No	SIRAP Activity	Timetable	Objective	Stakeholders	Medium
A: Physical Investments (HIR Airport Upgrades)					
A1	Feasibility, decision on the sites / technologies and preliminary designs	From Project effectiveness through to tendering.	Bring stakeholders along with the decision making around the site and type of investments. Discuss potential impacts and mitigation measures. Key messages	All identified	Structured Agenda One-on-One Consultations Public meetings Emails and letters
A2	Disclosure of updates to the ESMP	Prior to tendering Prior to works starting	To disclose ESMP	All identified	Newspaper Website
			Advise stakeholders of preliminary designs and updated mitigation and management plan.	Communities Site occupants (State owned enterprises. Government agencies) Site users (if different from above)	One-on-one consultations Executive Summary
A3	Detailed design	Once Contractor is on board and prior to works starting	Keep stakeholders involved in any design updates. Public announcements	Government agencies, site occupants, site users	Emails, One-on-one consultations Newspaper and websites
A5	Commencement of Works	Week before commencement of	To advise all stakeholders of commencement	All identified stakeholders	Newspaper

No	SIRAP Activity	Timetable	Objective	Stakeholders	Medium
		works.	of civil works.	Site occupants (State owned enterprises. Government agencies)	Email
			To reconfirm ongoing consultation, feedback and GRM processes	Community Site occupants (State owned enterprises. Government agencies)	Community Notice Boards Building Notice Boards Website

5.3.4 Resources and Responsibilities

The implementation of the SECP will be the overall responsibility of the SIRAP PIU, with support from Safeguards Specialist as required. There are several facets to the works that are covered within this plan with MCA being the common denominator across the works as such, it is important that MCA are represented at each of the one-one-on consultations by a nominated staff member.

The PST will have a Safeguards Specialist who will take the lead role in the implementation of the SECP. The PST will be responsible for arranging and facilitating the meetings as it appropriate with their in-depth knowledge of the natural, social and traditional environments within the Solomon Islands. The PST will also be the focal point for all stakeholder queries and contacts in relation to the implementation of the SECP or the GRM.

It is also the responsibility of the PST to ensure that gender balance is achieved throughout the implementation of the SECP and the Safeguard Specialist will make culturally appropriate recommendations on strategies to achieve this such as separate meetings for males and females, or targeting female input through women's groups.

5.4 Public Consultations to Date

Public consultations for HIR Airport upgrades are ongoing. The consultations will plan to target four groups of stakeholders: (a) Village communities adjacent to HIR; (b) Government agencies, authorities and SOEs on Guadalcanal Island; (c) NGOs, non-governmental institutions and civil society groups; (d) donor agencies, especially those with experience and involvement in the SI Aviation sector.

Below is a summary of key findings from the initial consultation meeting with project stakeholders. The consultation program is ongoing throughout project preparation and implementation.

- Lack of early consultation in other MCA projects has resulted in these projects not working and the closure of many airstrips in the provinces.
- Gravel extraction sites used for HIR will need clear and early consultation with the correctly identified landowners. The combined volume of aggregates needs for the SIRAP and JICA works will need to be accounted for when selecting extraction sites.
- There are temporary squatters residences within the 50m boundary of MCA lands.
- Identification of land owners and land related issues outside the MCA boundary shouldn't be an issue for the SIRAP works as it is operating within the MCA boundaries.

- Participants are pleased that there are dediated safeguards roles within the SIRAP PMU.

6 Environmental and Social Impacts

6.1 Overview of Impacts

The following potential environmental and social impacts have been identified in relation to proposed activities at Honiara International Airport and as described in Section 2 of this PESMP.

Only risks with a likely moderate to significant impact are discussed in this section. All impacts, including minor ones, are covered in the mitigation planning sections.

As the proposed works are all within the existing airport boundary and will be improving on existing infrastructure it is unlikely to cause any major negative environmental or social impacts. While there will be some short term localised negative impacts to the surrounding communities during construction, overall the social outcomes of the SIRAP HIR works are expected to be positive by improving safety, accessibility and mobility of island communities. It is not anticipated that any land acquisition is required thus no physical or involuntary resettlement will be necessary.

6.2 Environmental Impacts

6.2.1 Solid Waste Generation

Replacement of pavement material, upgrades of drainage system and replacement of lighting and air navigation aids will lead to the generation of excess soil and demolition waste. Other types of solid waste such as general waste, non-recyclable inorganic waste, organic biodegradable waste and construction waste will be generated from other project activities. Impacts associated with solid waste can arise from on-site waste storage, transportation of waste and off-site disposal of waste.

On-site storage of waste materials prior to disposal has the potential to cause Foreign Object Debris (FOD) generation on the airfield if not correctly stored in an appropriate location. Impacts associated with the storage and disposal of organic biodegradable waste include leachate from decomposing materials contaminating the surrounding soils and aquifers.

Transportation of solid waste in trucks without the correct equipment such as coverings or functioning tail gates can lead to waste spills on the haulage route. Spilled waste is a safety hazard to vehicle and pedestrian traffic as well as an environmental pollutant.

To avoid any potential adverse impacts from the storage of waste or the introduction of waste into the environment, a Solid Waste Management Plan (SWMP) will be developed (see Section 7.10) by the Contractor and submitted for clearance along with the CESMP. The SWMP shall describe solid waste streams generated by the works and detail the approved disposal methods along with permissions. At all times, the Contractor is responsible for solid waste generated by the Works.

6.2.2 Water Resources

Freshwater will be required for workers and some construction activities. As there is an abundance of ground water on the HIR coastal plain, it is not expected that the impact on the water supply would be significant. The source of water supply for the SIRAP HIR works has yet to be confirmed, however it is likely that the project will utilise the airports reticulated water supply from the provincial system and potentially the SWIA water supply system in the surrounding area.

6.2.3 Hazardous Substances and Materials

There are several project activities which could generate soil and/or water pollution from hazardous substances or materials.

Bitumen, fuel and lubricants will be needed during construction activities. If not properly stored or handled, this could result in run off into the local soil or apron drainage systems which feed directly into the rivers and coastal environment.

The SIRAP HIR works will include the demolition of old infrastructure that was built in the 1940s and later. During demolition of older infrastructure, there is the potential of asbestos-containing material being present.

Waste water and slurry from concrete production will have a high pH level making it alkaline and also contains chromium. Highly alkaline water can result in the death of marine organisms should it enter the marine environment. There are also impacts associated with concrete waste water leaching into the ground water and causing contamination.

Should an emergency event occur there is also potential for a discharge of hazardous substances to the environment or the use of fire retardants during firefighting.

6.2.4 Noise and Vibration

Noise and vibration disturbances are particularly likely during construction related to the transportation of construction materials from the quarries and operation of equipment (e.g. blasting and processing of aggregate in quarries, asphalt plant operation and milling of pavement surface). Additionally, movement of trucks will increase the traffic levels when offloading and delivering aggregate. These impacts will be short-term and affect different people at different times. Impacts include noise during runway paving and extension and possible effect of vibration caused by operation of heavy machinery, increased traffic in some sections of roads, etc. Noise and vibration is likely to be an ongoing issue throughout the construction stage and to a lesser degree the operational phase (e.g. aircraft landing and take-off). As the airport represents existing infrastructure any noise or vibration impacts are likely already being experienced by the local community. Effective communication of working hours will go towards alleviating any impacts during the construction phase.

For works outside normal hours, approval must be obtained from MCA and residents within 100 m of HIR must be notified 5 days before works take place. Careful consideration must be given to keeping nearby communities informed of any night works with regard to nature of noise and likely duration.

The WB/IFC EHS Guidelines[11] Section 1.7 – Noise Management shall be applied for the duration of construction works. Noise impacts should not exceed the levels at the closest residential or other sensitive social receptors for one hour LAeq of 55 dBA between the hours of 0700-2200 or 45 dBA outside of these hours for night works, or result in a maximum increase in background noise levels of 3dBA at the nearest receptor location off site. The nearest sensitive receptors are expected to change as the work moves along the pavements and will be determined the closest residences to the active works and to the construction camps and/or asphalt plan.

6.2.5 Erosion and Sediment Control

The majority of the airport site is either sealed by the pavement and buildings or grassed to ensure visual clearance and security. The grassed areas are regularly mown to meet necessary airport standards. Scrub vegetation does exist around some areas of the airport perimeter. The location of the HIR works will require removal of some small shrubs and vegetation to establish lay down areas. During resurfacing, and restoration of pavement areas and drainage, areas of bare soil may be exposed. For small areas of exposed soil, any soil that is suspended will either be captured by the swale drains around the pavements or will be captured by the vegetated habitat of the airfield. Due to the effective soil retention role played by grasses, it is anticipated that any eroded soil will be captured locally and will not cause any long term impacts on the surrounding environment and mitigation measures stipulated in Section 7.8 will strengthen this. Division bunds may be required for larger areas of exposed soil or for areas where the topography drains towards flood prone parts of the airfield. The impacts on vegetative cover will be short-term and reversible through natural regeneration.

Sediment has the potential to be generated during any vegetation clearance and excavations. As the airfield drainage feeds directly into the coastal environment there is the potential to increase the turbidity of the nearshore environment, however as this is already heavily impacted by sediments delivered from the highlands via the rivers, any additional impacts from the HIR works are expected to be minor in comparison.

6.2.6 Air Emissions and Odours

Air pollution can arise due to improper maintenance of equipment, dust generation and the bitumen smoke / fumes arising from application of the new pavement seal and maintenance work. Impacts are expected to be localised and short term with only minor negative impact on the ambient air quality in the vicinity of the construction areas. Consideration should be made as to where noisy and odorous equipment should be placed in relation to sensitive receptors, if located away from communities, the social impacts should be minimal.

No ongoing impact to air quality is expected as this is upgrade of existing infrastructure.

[11] International Finance Corporation, Environmental Health and Safety Guidelines, General Guidelines: Noise Management

6.2.7 Landside Traffic

Landside traffic impacts will occur in transporting equipment and materials from the quarries and port although it is not yet known to what extent this may be as the construction methodology for the works is unconfirmed. If imported aggregates are landed at any of the commercial wharf areas along the Kakum Highway to the west of HIR, the impacts on the already heavily congested and poorly maintained Kakum Highway will be significant in terms of dust generation, pedestrian and vehicle safety, road damage and loss of income for roadside stalls (as heavy traffic will make pulling over to buy items very dangerous.

Landing of aggregates at alternative offloading sites (such as the industrial compound) to the east of the Alligator Creek) could avoid the need to use the Kakum Highway and avoid the above impacts. Figure 5 illustrates the two main potential routes (on existing roads) to the project site for aggregate haulage at this early stage in project preparation.

Figure 5: Potential haulage routes from Honiara (red) or eastern (yellow) offloading points.

Any traffic impacts will mostly be short-term however, even with good mitigation and traffic management on any routes from Honiara, the impacts would still be significant. Upon completion of the construction phase of works, if the Kakum Highway has been used it, it is likely that additional damage caused to the road surface would lead to longer term significant impacts to pedestrian and vehicle safety.

The Contractor will be required to develop a detailed Traffic Management Plan for all landside traffic activities (Section 7.4) which will be included in the CESMP as an appendix and cleared by the Supervision Engineer.

6.2.8 Wastewater Discharges

Uncontrolled wastewater (e.g. sewage, grey water, wash water, water containing fire retardants used during emergency activities) discharges have the potential to contaminate soil, water and spread disease. Impacts may include sedimentation and an increase in nutrients impacting water quality and aquatic life in the adjacent lagoon and coral reef habitats, and contamination due to an accidental release of hazardous substances, refuse or other waste materials into the marine ecosystem. Wash water from equipment can be contaminated with hydrocarbons (e.g. oil and fuel) which have a detrimental effect on aquatic life, water quality and soil quality. There are also human health impacts regarding hydrocarbon exposure which vary in severity depending on type and length of exposure.

The significance of the impacts depends on the scale of the release, duration of earthworks, local worksite topography, soil type, rainfall levels, adequacy of sewage treatment facilities, and the sensitivity of the receiving water environment. The runway is located between 2 waterways which discharge into the nearby marine environment, therefore any release could be significant. It is vital to plan and carefully manage works adjacent to the marine environment. Furthermore, consideration should be given to works completed during the wet season. While the potential impacts of uncontrolled discharges of wastewater can adversely affect the receiving environment, they can be easily mitigated through planning and implementation of mitigation measures (as outlined in Section 7.8).

6.2.9 Local Aggregate Supply

For any locally sourced aggregates (from rivers or quarries), potential adverse impacts from uncontrolled quarrying or mining are high and include all of the above listed impacts, namely:

- Air emissions – machinery and dust.
- Noise and vibration – machinery and blasting (if used).
- Water – consumption, hydrology (changes to site drainage patterns and river water quality), wastewater, and contamination.
- Waste – overburden, by-products and contaminated waste material.
- Land conversion – loss of habitat, degradation of river banks and loss of agricultural land.
- Dust is a major issue at quarry sites and can travel some distance and affect a large number of people if not properly managed.

It is not yet known how much aggregates will be needed for the proposed works, however due to the nature of the works it is expected that a large volume of coronous and basalt aggregates will be needed. It is also not yet known whether the locally sourced aggregates will be quarried by the Contractor or purchased from a permitted contractor from SI.

Impacts of quarrying are not limited to the location of the quarry but can extend along the delivery route. Noise, dust, and traffic (vehicle and pedestrian) safety are primary concerns for the transport of materials from the quarry site for locally sourced aggregates and the offloading point for imported aggregates.

Additional risks with sourcing local aggregate from the Lungga River include the chance find of UXO in the river bed. Section 7.3.1 outlines the procedure to follow in this instance.

6.2.10 Biosecurity

It is probable that equipment and materials for the runway and other works will need to be imported to the SI. If imported consignments are not properly treated and/or washed before shipping, there is the risk of introducing non-native and potentially invasive plants, animals and disease. The introduction of harmful species to small island nations such as the SI, who have a high level of endemic species can be devastating to the local ecosystems, flora and fauna. It is also possible to import diseases such as foot and mouth disease which would have devastating impacts on local livestock.

Giant African Snails (GAS; Achtatina fulica) are causing significant damage to food crops on Honiara and have started to spread to some of the other islands. Sourcing local aggregates from quarry or extraction sites on Honiara which are already infested with this invasive species risks spreading the problem to other parts of Honiara as well as to the other SIRAP project sites. Local aggregates should be sourced from 'clean' sites on Honiara which have been approved by the ECD to minimize the risk of this spread.

6.2.11 Secondary and Cumulative Impacts

Secondary and cumulative impacts tend to be triggered by impacts to environmental resources that function as integral parts of a larger system over time and space, and can initially be 'invisible' to the normal present time impact assessment. Secondary impacts can include land use changes due to improved accessibility which in turn can impact habitats and pressure on existing resources and utilities (e.g. water supply). Secondary and cumulative impacts also often cannot be managed solely by the project executors. Town planning (e.g. restricting development and clearing of land) and conservation are two examples of external influences which can assist in reducing secondary and cumulative impacts.

The airport is existing infrastructure which has existing impacts. In most cases the SIRAP will not be able to remedy these impacts however the designs can lessen and in some cases mitigate some of the impacts.

6.3 Social Impacts

Social implications with the regard to safeguarding sensitive receptors such as airport satellite villages and communities on the haul routes will be addressed through the public consultation process throughout the life of the project. Section 5.3 details this ongoing process which will be driven by the the SIRAP National Safeguards Specialist.

6.3.1 Community Health and Safety

Project activities, equipment, and infrastructure can increase community exposure to risks and impacts. In addition to the impacts already identified throughout this section, the impacts of an imported work force must be considered.

While it is not anticipated that there will be a need for a workers camp to be established for the works, it is probable that there will be a need for additional workers to be bought to the project site for the

completion of works. It is possible that these workers are likely to be from both overseas and from other areas of the SI and the Contractor must therefore be aware of the potential impacts that this influx of outside labour can have on the local community, and manage these impacts and interactions appropriately which includes adherence to the GBV, CAE and HV codes of conduct outlined in annex E and to the requirement of the MoWP outined in 7.11.4.

In terms of the vulnerability of the airport satellite communities to external influences, in the context of HIR, these communities can be considered to be low-risk due to the limited scope of the works, the low number of overseas and regional personnel who are likely to be required, ongoing community consultation by the CLO and NSS and the easily controlled project site. Having said this, the HIR area and nearby village communities may still be vulnerable to increased social pressures from any uncontrolled influx of labour. Section 7.10.1 provides for mitigation measures against these potential impacts.

6.3.2 Human Trafficking

A US Department of State Report[12] released in April 2017 has concluded that within the SI, children and young girls are regularly subjected to sex trafficking and forced labour. The report said local children were forced to do labour or commercial marriages in exchange for money or goods, particularly near foreign logging camps, on foreign and local fishing vessels, and at hotels and entertainment establishments. In a survey conducted by the American Bar Association Rule of Law Initiative, 77% of survey respondents indicated that they knew personally of at least one case of trafficking (forced labour, forced marriage (for money), forced commercial sex or a child who has been paid for sex). Forced commercial marriage and forced commercial sex were the most common forms of trafficking identified.

In the context of the proposed HIR works, the risk arises due to the use of local hotels by the expatriate work force. It is anticipated that the risk posted during the construction phase of the works is low however, once the full scope of works is known and the likely level of overseas workers is established, this PESMP shall be updated and the risk of trafficking should be fully assessed.

6.3.3 Business Impacts

During the construction phase there is the potential for minor impacts on businesses in the airport vicinity. These impacts would be limited to noise, dust and traffic from construction activities and will be of limited duration. Standard good practice construction management will mitigate these potential impacts to an acceptable level. All potentially affected businesses will be included in the consultation process.

[12] US state dept report

7 Mitigation Measures

This section contains the detailed mitigation measures that are required for the various phase of the HIR works as they are currently known. Appendix B contains this mitigation information in a management plan table and covers all potential impacts that have been identified for the pre-construction, construction and operational phases. The Management Plan in Appendix B include summaries of the mitigation measures required, the responsible entity and the applicable project phase. It should be read in conjunction with this section.

7.1 Aggregates and Materials

Local aggregates: Local aggregates will either be sourced directly by the Contractor after receiving a Building Materials License or through existing licensed contractors in possession of a Building Materials License on Guadalcanal. If using local existing licensed contractors, the Contractor is responsible for reviewing site operations to ensure that the appropriate licenses are in place. The Contractor will also ensure that quarries are selected from areas of the island which are considered to be free from the invasive Giant African Snail. The Contractor will not open any brand new quarries or river extraction (both referred to here as quarries) sites for the HIR works. Within parameters of the above stipulations, the Contractor will have a choice as to which aggregate source to use.

The Contractor is also responsible for reviewing any conditions of operation which may have been imposed by the Building Materials License to ensure the operation is legal and that the contractor's work complies with any transport or purchase requirements.

In the case of the Contractor electing to re-open a former quarry site, a more detailed assessment of impacts will be completed by the Contractor in their CESMP along with mitigation measure suitable for the location and activities within the quarry. Consideration and planning will also be implemented on quarry rehabilitation following the completion of the works.

Should the Contractor seek to be granted their own Building Materials License to re-open former permitted quarries for the SIRAP project, the national obligations must be met and the measures stipulated in this PESMP must also be adhered to. ECD must be satisfied with the management of the quarry and the permitting process must be completed before any activities can take place on the site. The Contractor must detail this in their CESMP. In this situation, the Contractor would also be required to develop a Quarry Management Plan (QuMP) which follows the guidelines and practices detailed in Appendix E of this PESMP and which will be included in the CESMP for clearance by the Supervision Engineer.

For Contractor operated quarries, dust should be managed using the same measures as identified in Appendix B along with use of linear layout for materials handling to reduce the need for loading and unloading and vehicle movements around the site. The QuMP should include a provision for quarry dust and noise control; all equipment including crushers, aggregate processors, generators etc. should / if possible, be located in the quarry pit to minimize noise and dust emissions. When locating operations consideration should be given to prevailing wind conditions. Water is significant resource in quarry activities and where possible closed circuit systems should be implemented for treatment and re-use in site activities and processes (e.g. washing plants). The source for quarries would be declared and

approved by the Supervision Engineer. In order to minimise site waste, careful planning and understanding of product quality is required. Overburden by-product should be stockpiled for use in rehabilitation of the quarry site at a later date.

Other mitigation measures that have been identified for the project as a whole (refer to Appendix B) are also applicable to the quarry site if managed by the SIRAP pavement Contractor. For example, chance find of archaeological artefacts or loss of biodiversity, damage to assets and infrastructure, erosion and sediment control measures (e.g. clean water diversion), wastewater treatment, noise and vibration mitigation etc.

Imported Aggregates: For any internationally sourced aggregates, the Contractor is responsible for ensuring that the source quarry is operating under an existing permit and is operating in compliance with that permit under the source country's legislation. International quarries will first be approved by the Supervision Engineer. The contractor will be required to present specific management plans for the sea and land transportation of these materials from the origin to the project site, especially the landing facility. These plans will be approved by the Supervision Engineer

At the tender stage, the Contractor will be required to provide evidence that suitable source locations for aggregates has been identified and that communications have been established for the provision of large quantities of technically compliant aggregates within the timeframe and of the volume required by the Project. At the tender stage, the Contractor will be required to provide evidence that the source location of aggregates is able to fumigate the aggregates to the required standard (see Section 7.2)

The Contractor will be required to work with the SIG Biosecurity team to establish a secure perimeter around the identified stockpile sites prior to the arrival of imported aggregates. As with the Ministry of Infrastructure Developments stockpile site in Honiara, the perimeter of the identified stockpile site should be treated with agents designed to prevent Giant African Snail entering the area and infesting the imported aggregates. Any equipment bought into the stockpile site after decontamination will be thoroughly cleaned and made free from GAS prior to entry.

In all instances: The use closed/covered trucks for transportation of construction materials is a requirement.

Construction materials will be sourced commercially and use of wood from natural forests will not be permitted.

Chance find of archeological artifacts: It is possible that at any stage of quarrying or during the construction works new items of cultural importance or archaeological artifacts (WW2 artifacts, fossils, coins, articles of value or antiquity, and structures and other remains or fossil items of geological or archeological interest) can be revealed. In the event of the discovery of an item as defined above, the finding must be registered and the information shall be handed over to The Museum of Solomon Islands (under the Ministry of Culture and Tourism) who will advise on how they shall monitor the construction works.

7.2 Biosecurity

All imported vehicles, equipment, materials and machinery will be inspected by Biosecurity Solomon Islands on arrival. The imported items must be free of soil, any plant material and any other biosecurity risk. The Contractor is advised to arrange for their vehicles and machinery to be thoroughly cleaned of all contamination prior to shipping. Items shipped inside containers must also have the inside of the container thoroughly cleaned of all previous cargo residues, including dunnage. Government or accredited agent certificates of cleanliness can be submitted to Biosecurity Solomon Islands and may reduce the requirement for inspection on arrival.[13]

For imported aggregates and import permit will be required and the conditions of this permit may include the following fumigation requirements as a minimum:

> *Fumigation with methyl bromide at normal atmospheric pressure at a rate of 48g/m3 for 24 hours at 21˚C or above, within 21 days of shipment;*
>
> *OR*
>
> *Fumigation with sulphuryl fluoride (Vikane) at normal atmospheric pressure at a rate of 64 g/m3 for 16 hours at 21˚C or above, within 21 days of shipment.*

Prior to imported items being delivered to site the Supervision Engineer shall confirm that all necessary biosecurity documentation and clearances have been provided.

7.3 Hazardous Substance Use, Storage and Disposal

Hazardous liquids (e.g. fuel and lubricants) must be managed through the use of self-bunded drums and tanks, in accordance with the specification. If—with the permission of the Supervision Engineer—non-bunded vessels are used, the materials must be stored in designated areas within covered hardstand and bunded areas to prevent runoff to surrounding permeable ground. Bunded areas (secondary containment) must contain the larger of 110% of the largest tank or 25% of the combined volumes in areas with a total storage volume equal or greater than 1,000 L. Bunded areas are to be impervious (water tight), constructed from chemically resistant material, and be sheltered from the rain as rain water allowed to collect within the bund could be contaminated if there is any hazardous substance residue on storage containers or spilt product within the bund.

A spill response plan must be in place and all workers trained in correct implementation of the spill response plan. Spill kits should be available in close proximity to where hazardous substances are used and stored e.g. on the work truck or beside the fuel store. Workers should be trained in the use of spill kits.

The bitumen and asphalt plant (including dust scrubber) should be located at the construction lay down area or quarry to contain potential environmental impacts. The location of the construction lay down area should be such that residential settlements and sensitive receptors are not impacted by noise, dust or runoff. Where feasible, a minimum distance of 150m between the asphalt plant and the closest residential settlement or waterways are required.

[13] http://www.biosecurity.gov.sb/Importers#1048830-machinery-equipment--transpor

There is potential that hydrocarbon product or contamination may be encountered during construction work. Depending on the volume of material it may be appropriate to excavate the affected soils and prepare for transport to a facility licensed to accept hazardous waste. Material should be secured in airtight containers for transport (as per Waigani Convention requirements for the trans-boundary movement of hazardous waste material).

7.3.1 UXO

Honiara International Airfield may still contain unexploded ordinance (UXO). There will be an UXO survey and removal prior to the commencement or works, however, it is possible that during any excavation works for building foundations, that there might be a chance find of UXO items. Following the completion of the survey this PESMP for HIR will be updated and annexed once the findings are available to the SIRAP project. In the event of a discovery, the Contractor must immediately stop work and clear the work site of all personnel. The discovery must immediately be reported to the Supervision Engineer, MCA and the Royal Solomon Islands Police Force (RSIPF). It is the responsibility of the police force to report and coordinate the removal of the UXO. No works shall recommence on site until instruction has been received from the RSIPF and MCA.

Note: The SI UXO Procedure Policy (Annex G) will be considered in finalising the UXO removal procedures.

7.4 Landside Traffic Management

The airport is protected by a perimeter security fence. It is anticipated that all planned works, including the construction lay down area will occur within this fence. Security clearance will be required for all airside construction workers. Airside construction works will be managed through the MOWP and MCA will be responsible for ensuring the safe operation of the airport at all times. The MOWP will detail the specific safety and security requirements for the airport operations, including safe operating distances and responsibility of key project roles. If any off-site locations are approved for use then these management requirements, including a secure perimeter fence, shall be implemented for these locations.

The transport of aggregates and equipment to and from ports or quarries will need to be managed through a TMP which governs the landside traffic management and identifies the route, maximum load limits, required transport permits and required measures to reduce dust and spillages. The TMP will be submitted as an annex to the CESMP for approval. Mitigation measures provided in Appendix B include covering of loads, refused delivery of overloaded trucks, transport during off peak times and route identification which uses existing less trafficked roads. The Contractor should also include provision for noise and speed control in their TMP; this can include prohibiting the use of engine breaking for noise reduction, speed control measures in and near settlements with particular attention to any unsealed roads or roads in poor repair through villages (e.g. introduction of speed bumps) and regulating working hours for the haul trucks. For each haul route, the TMP will need to include measure to address:

- Layout plans;
- Vehicle traffic;

- Pedestrian traffic;
- Commercial marine traffic;
- Sensitive receptors (management near and consultation with) such as schools, residential dwellings, markets, churches, etc.);
- Management of increased heavy load traffic associated with transportation from the port.
- Repairs to road damage caused by project vehicles

The TMP should follow the guidelines set in the Safe Traffic Controls for Road Works Field Guide (w*ww.works.gov.pg/files/roads-bridges/IF003_PNGFieldGuide.pdf*) and adapted for the HIR works.

The TMP will also include any appropriate measures for minimizing numbers of shipments through consolidation of shipments and accurate calculations of aggregate needs.

7.5 Storm Water and Water Management

7.5.1 Stormwater Management

During construction clean water diversion bunds will be used to direct any runoff from undisturbed areas away from work areas, stockpiles and storage areas. The diversion bunds will direct this clean water to land for soakage. Runoff whether clean or treated should not be allowed to discharge directly to the coast as this can cause erosion. Soakage pits for stormwater will not be installed directly into a shallow aquifer and will be located under advisement from MCA and Supervision Engineer.

7.5.2 Water Management

Water required for construction activities such as dust suppression and concrete production will need to be managed carefully so as not to impact on the SIWA bores or the airport's needs for ARFF. Day to day activities can be sourced from the airport supply, but for any significant water needs such as dust suppressing or concrete production, water can be sourced directly from SIWA, or from the nearby designated rivers. Water extraction from designated rivers is regulated by the River Waters Act and extraction is subject to a Water Diverting Permit.

At the location of the laydown site and asphalt plant, ground and surface water quality monitoring is required. The Supervision Engineer is responsible for ground water monitoring before, mid and end of project. The Contractor is responsible for quarterly monitoring of surface water. The parameters that should be monitored include pH, electrical conductivity, total petroleum hydrocarbons (for potential petroleum contamination), and total nitrogen (for potential sewage contamination), or as agreed with ECD and the SIRAP NSS.

The Contractors are responsible for securing water access that is adequate and continuously supplied throughout the construction phase.

At all times water efficiency, conservation and reclamation practices will be adopted.

Work practices and mitigation measures for spills will be implemented, including a spill response plan and bunded areas for storage (for all project locations during construction and operation phase) and the specifications call for self bunded tanks to be used.

The contract shall have spill kits readily accessible, with staff trained in their use.

7.6 Concrete Production

It is possible that the project will require some small quantities of concrete. If concrete is to be produced in-situ, care needs to be taken with slurry and runoff from the concrete. Concrete production should only take place when there is no rain forecast. Concrete slurry is highly alkali and cannot be diluted. Sand bags or diversion drains must be used to divert runoff from concrete cutting or setting areas. As hardened concrete is inert, the best approach for disposing of concrete debris is to set any concrete waste and then dispose of as clean fill or crush for reuse. All equipment used in concrete production must be cleaned in designated wash down areas in the construction laydown area, away from surface water, in a bunded impermeable area and shall not be allowed to permeate to ground. Wastewater from concrete cutting, washing equipment or production must be collected and treated (settling and neutralisation through pH adjustment) before disposal (see Section 7.8 for disposal requirements).

7.7 Construction Lay Down Area

The lay down site(s) will be used to store equipment and materials for all components of the project and the production of asphalt and potentially concrete. As such there are a number of potential hazards associated with the equipment and materials. The site(s) for the laydown areas have not yet been identified.

All sites must be securely fenced to prevent unauthourised access. Additional fencing may be required around specific stores (e.g. hazardous substances) to prevent access by unauthourised personal.

The asphalt plant must avoid aircraft operations and the asphalt plant(a) must be at least 150m from the nearest waterways and 300m from the nearest residential settlements.

Areas within the compound must be clearly marked for solid waste collection, machinery maintenance, hazardous substance storage and toilet facilities for workers. Each of these areas must be constructed in such a way to prevent any potential adverse impacts on the surrounding environment; ideally it should be located away from nearby communities.

The 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 waste water from asphalt and concrete production and machinery maintenance. This includes the containment of the asphalt plant to prevent any hazardous substances entering the local environment from rainwater run off prior to its treatment.

The ground of the construction lay down area will likely be compacted by the end of its use and so restoration will require scarification of the soil, application of topsoil and re-vegetation.

The construction lay down area is not a residential camp. Foreign contract and project staff are expected to utilise existing local accommodation however it may be necessary to establish a residential workers camp. The IFC have minimum standards for workers accommodations which will be required for any SIRAP residential camps. These steps have been included within the codes of practice in Appendix G. Should a worker camp be required then these guidelines must be adhered to and updates made to the PESMP and CESMP as appropriate.

In addition to adhering the standards of accommodation, the Contractor will also be required to develop a Workers Management Plan (WoMP) which will be included in the CESMP as an appendix and cleared by the Supervision Engineer. The WoMP will include cultural protocols (including appropriate clothing and no work on a Sunday), management and restricting of visitors to the camp, visitor curfews, expected behaviours (noise, alcohol, within community areas), gift giving and receiving, disciplinary actions, etc.) The WoMP and the recruitment of overseas labour is discussed in more detail in Section 7.11 and Appendix E.

7.8 Waste Water Management

There are a number of activities during construction and operation phases of the project which will generate wastewater.

During construction wastewater will be generated by the sanitation facilities provided for workers at HIR, the contractor is responsible for the collection and treatment of the generated wastewater from their own sanitation facilities. There are a number of options regarding sewage treatment that the contractor can implement to mitigate the potential impacts on the land and or water (ocean or groundwater). These include installation of a septic tank (to be approved by MCA and ECD), using an existing waste removal contractor to remove the waste to Ranadi Landfill, use of composting systems or a mobile proprietary treatment system (to be imported for the project). The Contractor is responsible for ensuring the treatment and disposal of wastewater is in accordance with MCA and ECD and approved by Supervision Engineer.

Wastewater from wash down areas is to be collected either in a settlement pond or tank to allow sediment and particulate matter to drop out (or processed through a filtration system) before the water can be reused as wash water, dust suppression or in other processes. A separate wash down area is required for machinery or material with oil or fuel residue as this wash water is required to be treated through a mobile oil water separator. Wash water from concrete production, cutting, washing of equipment used and areas where concrete is produced must be collected and treated to lower the pH (closer to neutral) and to allow settlement of suspended solids. All wash down areas and wastewater treatment areas should be located within the construction lay down areas.

Treated wash water where possible should be reused for dust suppression or within other processes. Direct discharge to the marine or coastal environment or to the areas prone to flooding are strictly prohibited. Discharges of treated wash water are to occur to land only at least 200m from any bore used for potable water at a rate not exceeding 20mm/day or the infiltration rate of the ground (i.e. no ponding or runoff). Contractors must have sufficient measures to avoid direct discharges when working adjacent to the marine and coastal environment which may include bunding (e.g. sand bags), demarcation of exclusion zones, and limited use of large machinery.

Precautions should be in place to prevent wastewater and hazardous substances or materials entering the environment (e.g. fuel spillage, wastewater containing fire retardant during firefighting), however should an incident occur, the Contractor must have a spill response plan in place. 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). This spill response plan should be applicable to all SIRAP HIR project works areas (airport, quarries, and transport routes). A spill response plan should be in place for both the construction phase and operational phase.

7.9 Erosion and Sediment Control

The land within the vicinity of HIR is relatively flat, low lying with permeable soils. Clean water diversion bunds should be constructed around any excavation or cleared vegetation to prevent ingress of runoff from surrounding areas. Any ponding which may occur within an excavated area shall either be allowed to percolate into the subsoil or pumped out to a settling area or used for dust suppression at a later date. Excavations should be kept to a manageable size to reduce the time of exposure.

It is most likely that the largest stockpiles will be within the laydown areas for the aggregate. These stockpiles will need to be on hardstand or heavily compacted aggregates and runoff directed via drainage channels to permeable land. The drainage channels will be of sufficient depth and well maintained. The aggregate material will be inert larger size pieces. Stockpiles of any fine grain materials (e.g. sand and topsoil) must be covered to prevent dust and sediment laden runoff during rain events.

Discharges from any activity are prohibited from discharging directly to the marine and coastal environment or discharging directly into the flood prone areas of the airfield. Clean runoff should be diverted inland for percolation to underlying groundwater, and potentially contaminated runoff should be collected and treated. Treatment will be dependent on type of potential contamination (e.g. oil water separator for runoff contaminated with hydrocarbons, or settling pond or tank for sediment laden runoff).

These erosion and sediment control measures must also be applied to the quarry sites operated by the Contractor.

7.10 Solid Waste Management

The Honiara City Council (HCC) operates the Ranadi Landfill which is to be used during the day Monday to Friday. The following waste streams can be handled at the landfill:

General Waste: Plastic/Glass bottles and metal cans should be recycled if possible otherwise they are to be disposed of in the general waste area. Construction waste material and all other solid waste materials are to be disposed of in a general disposal cell area.

Organic (plant) waste: Plant waste, grass clippings, plants leaves can be disposed of at the landfill composing area.

Hazardous Material: Asbestos is to be wrapped properly in plastic and buried in the allocated area.

Septic waste: This is to be disposed of at the designated site within the landfill.

To avoid any potential adverse impacts from the storage of waste or the introduction of waste into the environment, a Solid Waste Management Plan (SWMP) will be developed (see Appendix E) by the Contractor and submitted for clearance annexed to the CESMP. The SWMP shall describe solid waste streams generated by the works and detail the approved disposal methods along with permissions. At all times, the Contractor is responsible for solid waste generated by the Works in accordance with the Environmental Health Act.

The SWMP should adhere to the SIG Environmental Health Act and follow the guidelines provided in Appendix E. As a minimum the SWMP will make provisions for the following:

- Describe the solid waste streams generated by the works along with estimated quantities.
- Develop a plan for safe storage and handling of waste stored on the project site as per the stipulations in this PESMP.
- Identify approved service providers for collection and disposal of waste and stipulate conditions of carriage.
- Detail the approved disposal methods along with appropriate permissions.
- Confirm with HCC the process and permissions for using Ranadi Landfill for handling general project waste and septic waste.
- Contractor shall contact HCC to determine whether any quantities of the projects hazardous waste materials generated by the project are suitable to be handled at the Ranadi Landfill and obtain any permissions necessary.
- Contractor shall seek permission from HCC to disposal of organic biodegradable waste in their designated managed area.
- Recyclable waste may be supplied to a local receiver licensed to process such waste.
- Contractor to identify shipping route and licensed disposal facilities for all exported waste.
- Contractor to identify any export permits or conditions for export of waste.
- Identify those persons responsible for implementing and monitoring the SWMP.

Any waste which cannot be safely and correctly disposed of in the SI is to be disposed of OFFSHORE in permitted or licensed facilities. It is the Contractor's responsibility to obtain all necessary permissions for transport and safe disposal of hazardous waste from the project site in a legally designated hazardous waste management site within the country or in another country, and to ensure compliance with all relevant laws. Evidence will need to be supplied to the Supervision Engineer of proper disposal of waste at the final location.

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.

Disused material may be generated in the form of concrete rubble and surplus materials from excavations. Most of the clean fill material can either be used to backfill areas where old equipment or infrastructure has been removed or as a resource for general use by MCA, MID and the community. Clean fill materials which are not able to be reused within the timeframe of the project implementation shall be transported to a location approved by the MCA to be stored for future use by the Ministry. This location shall also be subject to approval by the Supervision Engineer.

Unless otherwise instructed by the Supervision Engineer, other surplus materials not needed during the defects liability period shall be removed from the site and the country.

7.11 Social Impact Measures

7.11.1 Occupational Health and Safety

During construction and operation health and safety is to be managed through a Site Specific OHS Plan (to be developed by the contractors using the guidelines attached to this PESMP in Appendix E) and application of international environmental and health and safety (EHS) standards (WB/IFC EHS Guidelines). The Contractors health and safety documentation should incorporate all aspects of the project including the airport site, quarries and transport routes.

Civil works shall not commence until the Supervision Engineer has approved the OHS plan, the Safety Officer is mobilized and on site, and staff have undergone induction training.

The following are the contractual requirements for OHS as stipulated in the bidding documents:

Health and Safety: Funding for Occupational Health and Safety (OHS) training and activities is provided in the bill-of-quantity as a provisional sum. The Contractor's costs shall be financed from this on proof of record (e.g. time sheets, material invoices etc.) for the following:

- Recruitment of provider for delivery of HIV/AIDS education training.
- Recruitment of provider for delivery of gender based violence (GBV), human trafficking and child abuse and exploitation (CAE) training.
- Expenses related to HIV/AIDS, GBV, human trafficking and CAE training
- Provision of Safety Officer when acting in the role of Safety Officer
- Personal Protective Equipment (PPE) for all workers on the site, and visitors as appropriate
- Safety signage, safety literature, HIV/AIDS literature, condoms, voluntary counselling and testing, GBV literature, CAE, literature etc.
- Alcohol testing of staff to enforce a zero alcohol tolerance policy
- Labor costs for attending: (i) dedicated safety training such as working at heights, confined space training, first aid training etc.; (ii) HIV/AIDS education training; (iii) gender based violence (GBV) training; and, (iv) CAE training. The contractor shall make staff available for initial training of 1.5 days, and a total of at least 0.5 days per month for other such formal trainings.

For the purposes of the project, in addition to the national OHS standards the employer is adopting a guidelines for occupational health and safety based on good international industry practice. To be qualified for bidding contractors will be required to have in place an occupational health and safety management system which is compliant with, or equivalent to, OHSAS 18000 (http://certificationeurope.com/ohsas-18000-health-safety-managment-standards/) and is acceptable to the client. The contractor shall specify which occupational health and safety standards are to be applicable to the project, and provide evidence of application of such standards on a project of similar size and complexity during the past 5 years. The standards to be adopted may include those of Australia, Canada, New Zealand, the EU and the US, which are referred to in the World Bank Group EHS Guidelines.'

Civil works shall not commence until the Supervision Engineer has approved the OHS plan, the Safety Officer is mobilized and on site, and staff have undergone induction training.

The Contractor shall at all times take all reasonable precautions to maintain the health and safety of the Contractor's Personnel. In collaboration with local health authorities, the Contractor shall ensure that first aid facilities and sick bays are available at all times at the Site, including having a site vehicle available at all times that can be used to transport Contractor's and Employer's Personnel to medical facilities. The Contractor shall ensure that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics.

The Contractor shall appoint a certified Safety Officer at the Site, with qualifications acceptable to the Supervision Engineer, responsible for maintaining safety and protection against accidents. This person shall have the authority to issue instructions and take protective measures to prevent accidents. Throughout the execution of the Works, the Contractor shall provide whatever is required by this person to exercise this responsibility and authority.

The Contractor shall post in clearly accessible places information on how to transport injured Contractor's and Employer's Personnel to medical facilities, including the precise location and contact details of such medical facilities, name and contract details of the site designated Safety Officer.

The Contractor shall ensure that all workers on the site have appropriate PPE of an appropriate standard including: (i) impact resistant safety eyewear; (ii) safety footware with steel toe, sole and heel; (iii) high visibility clothing; (iv) long sleeves and long pants suitable for operating environment; (v) safety helmet with provision of sun protection as necessary; (vi) gloves (carried and worn when manual handling); (vii) hearing protection when working in close proximity to noisy equipment and in all underground environments. For site visitors, the above equipment will be supplied as appropriate based on assessed risks and depending on number of visitors and where they will be on site. See http://tinyurl.com/nzta-ppe-requirements for additional information.

The Contractor shall send, to the Supervision Engineer, details of any accident as soon as practicable after its occurrence.

Within 5 working days of the end of the calendar month the Contractor will be required to report to the Supervision Engineer on their performance with the following OHS indicators:

- Number of fatal injuries (resulting is loss of life of someone associated with the project or the public)
- Number of notifiable injuries (an incident which requires notification of a statutory authority under health and safety legislation or the contractor's health and safety management system)
- Number of lost time injuries (an injury or illness certified by a medical practitioner that results in absence of work for at least one scheduled day or shift, following the day or shift when the accident occurred)
- Number of medical treatment injuries (the management and care of a patient to effect medical treatment or combat disease and disorder excluding: (i) visits solely for the purposes of observation or counseling; (ii) diagnostic procedures (e.g. x-rays, blood tests); or, (iii) first aid treatments as described below)

- Number of first aid injuries (minor treatments administered by a nurse or a trained first aid attendant)
- Number of recordable strikes of services (contact with an above ground or below ground service resulting in damage or potential damage to the service)
- Lost Time Injury Frequency Rate (the number of allowed lost time injury and illness claims per 100 full-time equivalent workers for the injury year specified)
- Total Recorded Frequency Rate (the number of recordable injuries [recordable/lost time/fatal] per 100 full-time equivalent workers for the injury year specified)

The monthly reports shall also include:

- Number of alcohol tests
- Proportion of positive alcohol tests
- Number of site health and safety audits conducted by contractor
- Number of safety briefings
- Number of near misses
- Number of traffic management inspections
- Number of sub-contractor reviews
- Number of stop work actions
- Number of positive reinforcements
- For each fatality, injury or near miss incident, the Contractor shall provide a corrective action report within the monthly report detailing steps taken to ensure risks of a repeat incident are minimized.

7.11.2 Code of Conduct

In accordance with the World Bank's Standard Procurement Documents (SPDs), Contractors shall submit a satisfactory code of conduct to address the responsibilities of the individual, the management and the company towards the ESHS requirements of the Project, the prevention of GBV and the adherence to OHS requirements of the Project. The Code of Conduct will contain obligations on all Contractor's Personnel (including sub-contractors and day workers) that contain acceptable measures to address the social impacts of the project. The Code of Conduct should be written in plain language and signed by each worker to indicate that they have:

- received a copy of the code;
- had the code explained to them;
- acknowledged that adherence to this Code of Conduct is a condition of employment; and
- understood that violations of the Code can result in serious consequences, up to and including dismissal, or referral to legal authorities.

A copy of the code 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.

The Code of Conduct shall be based on the PAIP Code of Conduct, which is included as Appendix F.

7.11.3 Labour Influx

In addition to the Codes of Conduct that the Contractor will prepare for GBV/Human Trafficking/SAE, the Contractor will also prepare a Code of Conduct to describe the expected behaviours of their project worker in relation to the local communities and their social sensitivities.

The Contractor is required to maximise the number of local workers from the nearby communites. Preference should be given to a local recruitment process, only relying on workers from other islands or from overseas for vacancies which cannot be filled locally. As part of the CESMP, the Contractor will be required to submit a list of roles along with required qualifications or experience and the planned recruitment strategy for that role (i.e. local or regional/overseas). The Contractor will be required to provide justification for any roles not filled locally.

For recruitment of SI nationals which cannot be fulfilled by the local community, it is preferred that it is undertaken through a formal recruitment process which ensures that only people who are already employed are travelling to the project site. Employment of casual labour through an ad hoc process at the project site may encourage potential workers from across SI to migrate to the project site for the possibility of work and this should be avoided. This opportunistic influx would have the potential to create a negative burden on the local communities in terms of their available resources and increases in anti-social or insensitive behaviours.

Any project staff who are recruited from overseas are subject to visa approval. As part of the visa application process, all workers are required to submit a medical report, an element of which is a HIV test. All oversea workers must complete this test and submit their medical report to the immigration department before appropriate visas can be issued. As part of the visa application process all overseas workers will also be required to provide a police background check from their home country. It is also contractual requirement for all overseas SIRAP project works to provide MCA PST with police background clearances prior to arrival in country, regardless of the visa application process

In addition to these requirements, the Contractor is to ensure that all overseas project staff undergo a cultural familiarisation session as part of their induction training. The purpose of this induction will be to introduce the project staff to the cultural sensitivities of the local communities and the expected behaviours of the staff in their interactions with these communities. The MCA PST shall provide to the Contractor the approved service providers which shall include recognized NGOs and others for conducting this training.

As per the SI Labour Act, article 46 states that no child under the age of twelve years shall be employed in any capacity whatsoever and article 47 states that a person under the age of fifteen shall not be employed or work in nay industrial undertaking, or in any branch thereof. As the Solomon Islands is a member of the International Labour Organisation which states that the minimum age for hazardous work is 18 and given that construction work with heavy machinery can be classed as hazardous work, the Contractor shall ensure that no children under the age of 18 are employed to work in a construction or physically demanding role.

7.11.4 HIV/AIDS, Gender Based Violence, Human Trafficking and Sexual Abuse Exploitation

All employees (including managers) will be required to attend training prior to commencing work to reinforce the understanding of HIV/AIDS, GBV, human trafficking and SAE. Subsequently, employees must attend a mandatory training course at least once a month for the duration of mobilization.

Managers will be required to attend an additional manager training prior to commencing work on site to ensure that they are familiar with their roles and responsibilities in ensuring the HIV/AIDS, GBV, human trafficking and SAE standards are met on the project. This training will provide managers with the necessary understanding and technical support needed to begin to develop a plan for addressing HIV/AIDS, GBV, human trafficking and SAE throughout the life time of the civil works, including monitoring and reporting.

7.11.4.1 HIV-AIDS Prevention.

While mobilized for work, the Contractor shall produce a conduct an HIV-AIDS Information, Education and Consultation Communication (IEC) campaign via an approved service provider approved by the Supervision Engineer, and shall undertake such other measures as are specified in this Contract to reduce the risk of the transfer of the HIV virus between and among the Contractor's Personnel and the local community, to promote early diagnosis and to assist affected individuals. The Contractor shall not discriminate against people found to have HIV-AIDS as part of the campaign.

The Supervision Engineer shall provide to the Contractor a list of approved service providers which shall include recognized NGOs and/or recognized local health departments. From the provided list, the Contractor shall enter into agreement with one service provider to undertake the HIV-AIDS IEC campaign. The cost of the campaign shall be funded by the Contractor from the provisional sum provided in the bill-of-quantity. The contractor shall make staff available for a total of at least 0.5 days per month for formal trainings including HIV/AIDS.

Prior to contractor mobilization, the approved service provider shall prepare an action plan for the IEC campaign based on the 'Road to Good Health Toolkit' (www.theroadtogoodhealth.org) which shall be submitted to the Supervision Engineer for approval.

The action plan will clearly indicate (i) the types and frequency of education activities to be done; (ii) the target groups (as a minimum to all the Contractor's employees, all Sub-Contractors and Consultants' employees, and all truck drivers and crew making deliveries to Site for construction activities as well as immediate local communities); (iii) whether condoms shall be provided; and (iv) whether STI and HIV/AIDS screening, diagnosis, counselling and referral to a dedicated national STI and HIV/AIDS program, (unless otherwise agreed) of all Site staff and labour shall be provided.

The IEC campaign shall adopt the 'Road to Good Health' Toolkit methodology (www.theroadtogoodhealth.org) and use readily available information for the Project. No specific new information shall be produced unless instructed by the Supervision Engineer.

The IEC campaign shall be conducted while the Contractor is mobilized in accordance with the approved approach. It shall be addressed to all target groups identified concerning the risks, dangers and impact, and appropriate avoidance behaviour with respect to, of Sexually Transmitted Diseases (STD)—or Sexually Transmitted Infections (STI) in general and HIV/AIDS in particular.

The Contractor shall include in the program to be submitted for the execution of the Works under Sub-Clause 8.3 the IEC campaign for Site staff and labor and their families in respect of Sexually Transmitted Infections (STI) and Sexually Transmitted Diseases (STD) including HIV/AIDS. The STI, STD and HIV/AIDS alleviation program shall indicate when, how and at what cost the Contractor plans to satisfy the requirements of this Sub-Clause and the related specification. For each component, the program shall detail the resources to be provided or utilized and any related sub-contracting proposed. The program shall also include provision of a detailed cost estimate with supporting documentation. Payment to the Contractor for preparation and implementation this program shall not exceed the Provisional Sum dedicated for this purpose.

7.11.4.2 Gender Based Violence, Human Trafficking, Sexual Abuse and Exploitation

Table 5 shows the activities that will be undertaken on the project to address GBV. This is based on the World Bank's August 2018 Draft 'Good Practice Note: Recommendations for Addressing Gender Based Violence in Investment Project Financing involving Major Civil Works'. These activities reflect the 'Low' risk rating for the project as described in the Project Appraisal Document.

As required in the bid documents, the Contractor will implement the SIRAP Codes of Conduct and Action Plan to Prevent Gender Based Violence, Human Trafficking, as Well as Sexual Abuse/Exploitation (Appendix F). The Codes of Conduct aim to prevent and/or mitigate the risks of GBV, Human Trafficking, and SAE within the context of SIRAP. These Codes of Conduct are to be adopted by the civil works contractors, as well as supervision consultants.

The Supervision Engineer shall provide to the Contractor a list of approved service providers which shall include recognized NGOs and others for conducting training on GBV. From the provided list, the Contractor shall enter into agreement with one service provider to undertake the GBV IEC campaign. The cost of the campaign shall be funded by the Contractor from the provisional sum provided in the bill-of-quantity. The contractor shall make staff available for a total of at least 0.5 days per month for formal trainings including GBV.

As part of the WoMP, the Contractor will be required to submit a list of roles along with required qualifications or experience and the planned recruitment strategy for that role (i.e. local or regional/overseas). The Contractor will be required to provide justification for any roles not filled locally. Work permits will only be granted for workers with skills unavailable in the SI. Should international workers be found to be performing jobs that can be done by locals (e.g. driving vehicles), the Supervision Engineer will notify the contractor and the SIG who will cancel the work permits. The contractor will be required to return them home within 48 h of notification by the Supervision Engineer.

Table 5: Actions to Address GBV Risks

When	Action to Address GBV Risks	Timing for Action	Who is Responsible for Action	Ongoing Risk Management
	Sensitize the IA as to the importance of addressing GBV on the project, and the mechanisms that will be implemented.	• Preparation. • Implementation.	• Task Team.	• Task team to monitor and provide additional guidance as necessary.

When	Action to Address GBV Risks	Timing for Action	Who is Responsible for Action	Ongoing Risk Management
Identification/Appraisal	The **project's social assessment** to include assessment of the underlying GBV risks and social situation, using the GBV risk assessment tool to provide guidance and keeping to safety and ethical considerations related to GBV data collection. No prevalence data or baseline data should be collected as part of risk assessments.	• Preparation. • Implementation (before civil works commence). • PCN and QER/Decision Review (GBV Risk Assessment Tool).	IA for social assessment and ESMP. Contractor for C-ESMP. • Task Team for GBV Risk Assessment Tool.	• Ongoing review during implementation support missions. • Update project ESMP and Contractor's ESMP (C-ESMP) if risk situation changes.
	Map out GBV prevention and response actors in project adjoining communities.[14] This should incorporate an assessment of the capabilities of the service providers to provide quality survivor centered services including GBV case management, acting as a victim advocate, providing referral services to link to other services not provided by the organization itself.	• Preparation • Implementation	• IA	• Update mapping as appropriate
	Have GBV risks adequately reflected in all **safeguards instruments** (i.e., Project ESMP, C-ESMP)—particularly as part of the assessment in the ESA. Include the GBV mapping in these instruments.	• Preparation • Implementation (before civil works commence).	• IA for social assessment and ESMP. • Contractor for C-ESMP.	• Ongoing review during implementation support missions. Update project ESMP and Contractor's ESMP (C-ESMP) if risk situation changes.
	Develop a **GBV Action plan** including the **Accountability and Response Framework** as part of the ESMP. The contractor/consultant's response to these requirements will be required to be reflected in their C-ESMP.	• Preparation • Implementation (before civil works commence)	• IA	• Ongoing review during implementation
	Review the **IA's capacity** to prevent and respond to GBV as part of **Safeguard Preparation**.	• Preparation. • Implementation.	• Task Team	• Ongoing review during implementation support missions. Update project ESMP if risk situation changes.

[14] A mapping exercise of GBV prevention and response actors should ideally be undertaken at a country level and shared with all project teams.

When	Action to Address GBV Risks	Timing for Action	Who is Responsible for Action	Ongoing Risk Management
	As part of the **project's stakeholder consultations, those affected by the project should be properly informed of GBV risks** and project activities to get their feedback on project design and safeguard issues. Consultations need to engage with a variety of stakeholders (political, cultural or religious leaders, health teams, local councils, social workers, women's organizations and groups working with children) and should occur at the start and continuously throughout the implementation of the project.	• Consultations need to be continuous throughout the project cycle, not just during preparation.	• IA.	• Monitoring of implementation of Stakeholder Engagement Plan. • Ongoing consultations, particularly when C-ESMP is updated.
	The **Stakeholder Engagement Plan** of the project, which will be implemented over the life of the project to keep the local communities and other stakeholders informed about the project's activities, to specifically address GBV related issues**.**	• Consultations need to be continuous throughout the project cycle, not just during preparation.	• IA.	• Monitoring of implementation of Stakeholder Engagement Plan. • Ongoing consultations, particularly when C-ESMP is updated.
	Make certain the availability of an **effective grievance redress mechanism (GRM)** with multiple channels to initiate a complaint. It should have specific procedures for GBV including confidential reporting with safe and ethical documenting of GBV cases. Parallel GRM outside of the project GRM may be warranted for substantial to high risk situations.	Prior to contractor mobilizing.	IA, but discussed and agreed upon with the Task Team.	Ongoing monitoring and reporting on GRM to verify it is working as intended.
	Projects which do not use loan/credit/grant proceeds to hire GBV service providers at the start of project implementation encourage Borrowers include an escalation clause in the Environmental & Social Commitment Plan (ESCP) should GBV risks become apparent over the course of the project implementation.	Preparation.	Task Team.	Task Team.
Procurement	Clearly define the GBV requirements and expectations in the **bid documents.**	Procurement.	IA.	Review by Task Team.
	Based on the project's needs, the Bank's Standard Procurement Documents (SPDs), and the IA's policies and goals, define the requirements to be included in the bidding documents for a **CoC which addresses GBV**.	Procurement.	IA.	Review by Task Team.

When	Action to Address GBV Risks	Timing for Action	Who is Responsible for Action	Ongoing Risk Management
	For **National Competitive Bidding (NCB) procurement,** consider integrating the ICB SPD requirements for addressing GBV risks.	Procurement.	IA.	IA with review by Task Team.
	The procurement documents should set out clearly how adequate GBV costs will be paid for in the contract. This could be, for example, by including: (i) line items in bill of quantities for clearly defined GBV activities (such as preparation of relevant plans) or (ii) specified provisional sums for activities that cannot be defined in advance (such as for implementation of relevant plan/s, engaging GBV service providers, if necessary)	Procurement.	IA.	Review by Task Team.
	Clearly explain and define the requirements of the bidders **CoC** to bidders before submission of the bids.	Procurement.	IA.	Review by Task Team.
	Evaluate the contractor's GBV response proposal in the C-ESMP and confirm prior to finalizing the contract the contractor's ability to meet the project's GBV requirements	Procurement.	IA.	Review by Task Team.
Implementation	**Review C-ESMP** to verify that appropriate mitigation actions are included.	• Implementation.	• IA.	• Review by IA. • Review by Task Team.
	Review that the GRM receives and processes complaints to ensure that the protocols are being followed in a timely manner, referring complaints to an established mechanism to review and address GBV complaints.	• Implementation.	• Task Team. • IA	• Ongoing reporting. • Monitoring of complaints and their resolution.

When	Action to Address GBV Risks	Timing for Action	Who is Responsible for Action	Ongoing Risk Management
	Codes of Conduct signed and understood • Ensure requirements in CoCs are clearly understood by those signing. • Have CoCs signed by all those with a physical presence at the project site. • Train project-related staff on the behavior obligations under the CoCs. • Disseminate CoCs (including visual illustrations) and discuss with employees and surrounding communities.	• Initiated prior to contractor mobilization and continued during implementation.	Contractor, Consultant, IA.	• Review of GBV risks during project supervision (e.g., Mid-term Review) to assess any changes in risk. • Supervision consultant reporting that CoCs are signed and that workers have been trained and understand their obligations.[15] • Monitoring of GRM for GBV complaints. • Discussion at public consultations.
	Have project workers and local community undergo **training** on SEA and SH.	• Implementation.	• IA, Contractors, Consultants	• Ongoing reporting.
	Undertake regular **M&E** of progress on GBV activities, including reassessment of risks as appropriate.	• Implementation.	• IA, Contractors, Consultants.	• Monitoring of GRM. • Ongoing reporting.
	Implement appropriate **project-level activities** to reduce GBV risks prior to civil works commencing such as: • **Have separate, safe and easily accessible facilities for women and men working on the site**. Locker rooms and/or latrines should be located in separate areas, well-lit and include the ability to be locked from the inside. • **Visibly display signs around the project site** (if applicable) that signal to workers and the community that the project site is an area where GBV is prohibited. • As appropriate, public spaces around the project grounds should be **well-lit.**	• Prior to works commencing.	Contractor/ Supervision Consultant • Task Team.	• Ongoing reporting. • Reviews during implementation support missions.

[15] Civil works supervision consultant's monthly reports should confirm all persons with physical presence at the project site have signed a CoC and been trained.

The WoMP will also provide detail of how the Contractor will provide for workers camp facilities, workers camp operations and the management of off duty workers. Guidelines for the WoMP are provided in Appendix E and the WoMP will be included in the CESMP as an annex.

7.11.5 General Social Mitigations

Any impacts or concerns from communities close to HIR, or haul routes will be addressed throughout the SIRAP life through the disclosure and public consultation process (refer Section 5). Where possible local labour and businesses will be used to provide services and building supplies for the SIRAP works. This includes supply of fuel and hire of machinery and hiring of local security contractors.

8 PESMP Implementation

The executing agency is the MOFT. MCA will serve as Implementing Agency (IA) for the aviation component; MID for the road component. Each will take taking responsibility for signing contracts, monitoring implementation progress, providing authorization for contract payments under their area. When a contract applies to both ministries, MCA will sign with the approval of MID. MCA will also be responsible for signing contracts for activities benefitting CAASI.

The SIRAP Management Unit Steering Committee, comprised of representatives of different central and line agency members,[16], should be formed to provide overall oversight of Project implementation and of the Project and PST, and to makes Project strategic decisions. It will be critical to have someone from Malaita involved. The SIRAP Steering Committee's key role will be to advise the SIG and respective Ministries on issues or concerns affecting project implementation and to propose remedial actions accordingly.

8.1 Roles and Responsibilities

The following are the roles and responsibilities:

- **MCA PST:** The MCA PST reports to the Permanent Secretary of MCA and is responsible for the day-to-day project implementation on behalf of the SIG. The PST will have their main office in MCA but for the roads component there will be a project office based on Malaita. The PST:
    - Acts on behalf of the client and works closely with MCA, MID and all contracted parties to ensure that SIRAP objectives are delivered in a compliant manner consistent with client and MCA and MID requirements.
    - Conducting quarterly safeguard audits with the Supervision Engineer's environmental specialist, the National Safeguards Specialist (PMU) and other staff
    - Responsible for working with MCA, MID and Supervision Engineer (and contractors where appropriate for CESMP) to implement consultation plans for the SIRAP upgrade works.
    - Monitors and manages of complaints/incidents logged via the GRM mechanism on the SIRAP website.
    - During the construction phase, PST receives reporting from the Supervision Engineer and shares these reports with the MCA, MID, ECD (to comply with permit monitoring requirements) and TFSU.
    - PST is responsible for managing recurring instances of non-compliance by the contractor as they are reported by the Supervision Engineer and all instances of non-compliance by the Supervision Engineer. PST will conduct their own quarterly on-site audit of construction works, to supervise CESMP and PESMP implementation.

[16] The PST Steering Committee is proposed to be comprised of the following Central Agency Members: (i) Secretary to the Prime Minister of the Office of the Prime Minister; (ii) Permanent Secretary (PS) Ministry of Finance and Treasury; (iii) PS Ministry of Infrastructure Development; (iv) PS Ministry of Civil Aviation; (v) PS Ministry of Development Planning and Aid Coordination; (vi) PS Ministry of Provincial Government and Institutional Strengthening; and, (vii) Director of CAASI.

- **TFSU:** The TFSU provides technical assistance with project implementation to MCA PST. TFSU receives the Supervision Engineers reporting via PST and receives the quarterly PESMP and CESMP audit report. TFSU safeguards specialist monitors these reports for consistency and compliance. TFSU provides these safeguard reports to WB for review. TFSU also receives all new and updated PESMP or CESMP for review. TFSU provides these reviewed instruments to WB for approval. TFSU safeguard specialist provides periodical in-country inspection of project site for PESMP compliance.
- **Supervision Engineer**: is responsible for the day to day oversight of the construction works for the project, including safeguard compliance. The Supervision Engineer is the only party who is contractually able to provide instruction to the Contractor. The Supervision Engineer will work closely with the Contractor on a daily basis to ensure that HIR works are implemented in a compliant manner consistent with the detailed designs provided and the PESMP. They are responsible for:
    - Daily monitoring the Contractors work for compliance with the CESMP and PESMP as per the measures detailed in Appendix B, C and D and providing safeguard monitoring results in their monthly reporting to PST. As part of their CESMP monitoring responsibilities, the Supervision Engineer will ensure that an experienced full time national safeguard specialist and a suitably qualified and experience international safeguard specialist is resourced to provide at least quarterly site inspections to HIR and available for support at other times to respond to incidents, non-compliances, review of CESMP, update of the PESMP and other tasks.
    - Managing the review process of CESMPs for approval. The Supervision Engineer must ensure that all current safeguard instruments have been reviewed internally as well as by PST, TFSU, WB and final approval from WB has been secured before disclosure.
    - Updating the PESMP as necessary to reflect changes in the designs.
    - Working with PST to provide meaningful input and direction into community consultations on the draft updated versions of the PESMP.
    - Managing instances of non compliance by the Contractor and reporting all instances to PST. They are also responsible for escalating recurring instances of non compliance by the Contractor to PST for action.
    - Managing and responding to all direct complaints/incidents received by their representatives as per the GRM process in Section 8.3 and reporting all instances to PST for inclusion into statistical database.

A template Terms of Reference for a Supervision Safeguard Specialist (SSS) is provided in Appendix K and should be used as a basis the procurement of the SSS within the Supervision Engineer bid documents.

- **Contractor:** It is the contractors responsibility to:
    - Resource their team with an experienced and qualified full-time national safeguard specialist and an experienced and qualified international safeguards key personnel who is resourced to make regular and ad hoc (as needed) site visits. Appendix K provide the minimum requirements for the international specialist who will form part of the Contractors key personnel in the bid document.
    - Allocate budget for implementing all requirements of the CESMP and employment of appropriate safeguard specialists.

- Prepare and have cleared by the Supervision Engineer the CESMP in accordance with this PESMP.
- Carry out the HIR upgrade works in accordance with the CESMP.
- Conduct daily and weekly safeguard inspections of the works to ensure compliance and reporting the results of these inspections to the Supervision Engineer.
- Proactively update the CESMP as construction methodology or other features change.
- Provide meaningful input and direction into community consultations on the draft CESMP.
- Advise the Supervision Engineer of any changes to works or methods that are outside the scope of the PESMP for updating.
- Post all notifications specified in this PESMP at the site entrance.
- Report all environmental and OHS incidents to the Supervision Engineer for any action.

- **HIR Airport Management:** As the site owner and airport operator, the HIR Airport Manager has a role in ensuring stipulated OHS measures are being implemented as they relate to airport operations, such as the location and timing of works, signing off on the MWOP etc. They also have a role in approving uses of areas of their site for particular uses as they may relate or impact on airport operations (e.g. laydown sites). They will be involved in consultations and any publication of information relating to the works. There will also be ongoing airport operational monitoring requirements during the operational phase.

The Figure 6 below shows the safeguard reporting responsibilities for HIR as described in this PESMP.

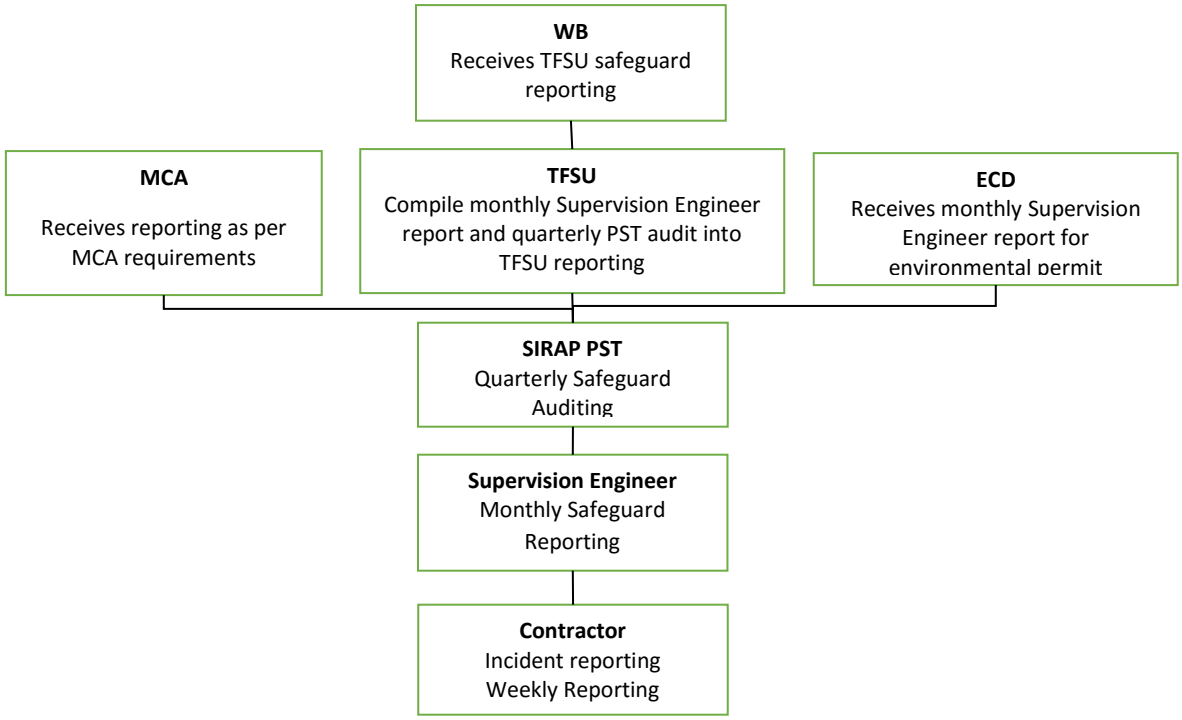


Figure 6: Safeguard Reporting Responsibilities for HIR

8.2 Institutional Capacity

8.2.1 Project Support Team

The SIG has delegated the delivery and management of SIRAP to the MCA PST which has been resourced with personnel specifically tasked to manage project implementation. As such, the PST carries much of the institutional capacity required by the SIG to implement the project and to monitor the works for compliance. The MCA PST will be resourced with an experienced National Safeguards Specialist (NSS) who will be responsible for monitoring for compliance with the PESMP, World Bank policies and Solomon Island legislation. A dedicated Community Liaison Officer (CLO) will be based on the island of Malaita to provide ongoing communication, problem resolution, and project coordination with village communities and tribal chiefs. For any additional support in areas of expertise that may be required by PST, the PAIP TFSU is tasked with either providing that support directly or assisting with any procurement of additional expertise or capacity that may be required.

8.2.2 Environment and Conversation Department

Review process: the ECD have the technical capacity within their department to review and assess PER submissions for DC, however they are under staffed and this can delay the review process for submissions. It is advised that prior to the submission of the SIRAP PERs, the SIRAP PST liaise with the ECD to arrange an external reviewer for the review process, funded by the proponent.

Monitoring: Consultations with the ECD have revealed that although the ECD has monitoring responsibilities for development consents they issue, they often lack the financial resources to monitor projects off Guadalcanal. The SIRAP National Safeguard Advisor should liaise with ECD to ensure that the monitoring requirement are integrated with the MCA monitoring to support compliance with the development consents.

Capacity Building: The ADB have undertaken an assessment of the ECD capacity and have developed a list of recommended capacity building needs. The SIRAP PST Safeguards Advisor in consultation with the TFSU Safeguards Specialists and the Director of ECD will identify any of the recommended capacity building actions that SIRAP can address throughout the implementation of the project.

8.2.3 Civil Works

Other parties to this PESMP who have implementation or monitoring responsibilities (Supervision Engineer, Contractor) are required to be resourced with suitably experienced and qualified safeguards specialists.

It is the responsibility of the Contractor and Supervision Engineer to ensure that they allocate budget lines to have the necessary tools and equipment for their areas of responsibilities within the mitigation and monitoring measures as stipulated in this PESMP and the Contract Documents.

A budget is being developed for the proposed training and capacity development activities relating to the prevention of HIV, GBV, Human Trafficking and CAE and will be included in updated versions of this PESMP prior to tender.

8.3 Grievance Redress Mechanism

During the course of these proposed works, it is possible that people may have concerns or grievances with the project's performance which may include any aspect of the implementation or an activity or a component of the project. Issues may occur during construction and again during operation. Any concerns will need to be addressed quickly and transparently, and without retribution to the affected person (AP) or group of people involved.

Complaints can be made through different channels, such as the traditional local practices (e.g. village chiefs), online, phone, in-person, the local GBV/Human Trafficking/CAE Service Provider, the manager(s), or the Police. Complaints should be able to be made in different ways such as online, via telephone or mail, or in person. Anonymity should be ensured if the complainant so desires it, especially about GBV/Human Trafficking/CAE.

This GRM has been developed to satisfy both SI legislative and WB GRM requirements as well as being developed in line with the Country Safeguard Systems. If there were a need to use the GRM then the following process is to be used.

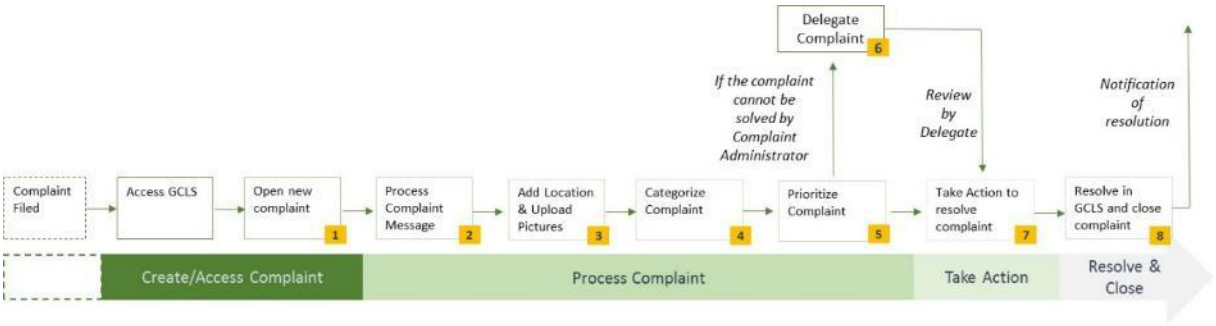
Complaints: Minor concerns or complaints that are given verbally to the Contractor or Supervision Engineer on site, the process would commence with an attempt to sort out the problem directly at the subproject level between the Contractor and the concerned individual or community.

Most complaints arise during construction are expected to be minor complaints concerning dust or noise that should be able to be resolved quite easily. All complaints arriving at the Contractors Site Office are to be forwarded to the Contractors community liaison personnel and entered into the complaints register that is maintained by the Contractor and kept at the site. Details recorded will be: date, name, contact address and reason for the complaint. A duplicate copy is given to the AP for their record at the time of registering the complaint. The register will show when the issue is to be dealt with and who has been directed to deal with the complaint, the date that the AP was informed of the decision and how the decision was conveyed to the AP. The register is then signed off the person who is responsible for the decision and dated.

Most complaints t If immediate resolution is achieved and the complainant is satisfied the matter will be recorded in the site diary and reported in the regular monthly report submitted and considered closed.

Grievances: If the issue cannot be resolved at the complaint level then it will be considered to be a grievance and will be addressed by being referred by the Contractor or Supervision Engineer toward the National Safeguards Advisor within the SIRAP PST. The NSA will log it into the 'Grievance and Complaints Logging System' (GCLS) database for tracking and reporting on resolution. In accordance with the World Bank's 'Citizen Engagement' commitments under IDA 17, key indicators from the GRM are published online at the SIRAP project website.

All complaints must be acknowledged within 24hrs. The following procedure is followed to address complaints:



If it is impossible to resolve the complaint, or the complainant is not satisfied with the resolution, the case may be first escalated to Permanent Secretary (PS) of MCA who will appoint a third party arbitrator to form part of a GRM committee. If the AP is dissatisfied with the recommendation of the GRM Committee and subsequent determination from the PS of the MCA, the AP may appeal to court. This will be at the Aps cost but if the court shows that the PS has been negligent in making their determination the AP will be able to seek costs.

GCT: The SIRAP Code of Conduct and Action Plan for the Prevention of GBV, Human Trafficking and CAE detail the specific GRM processes and responsibilities. The project shall establish a 'GBV Compliance Team' (GCT). The GCT will include, as appropriate to the project, at least four representatives as follows: the SIRAP PST National Safeguards Advisor, an appropriate Contractors representative, the supervision engineer and, a representative from the GBV/Human Trafficking/CAE service provider.

WB Level Resolution: In addition to the above project level GRM, communities and individuals who believe that they are adversely affected by a WB supported project may submit complaints to the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns.

Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the WB's attention, and WB Management has been given an opportunity to respond.

For information on how to submit complaints to the World Bank's corporate GRS, please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

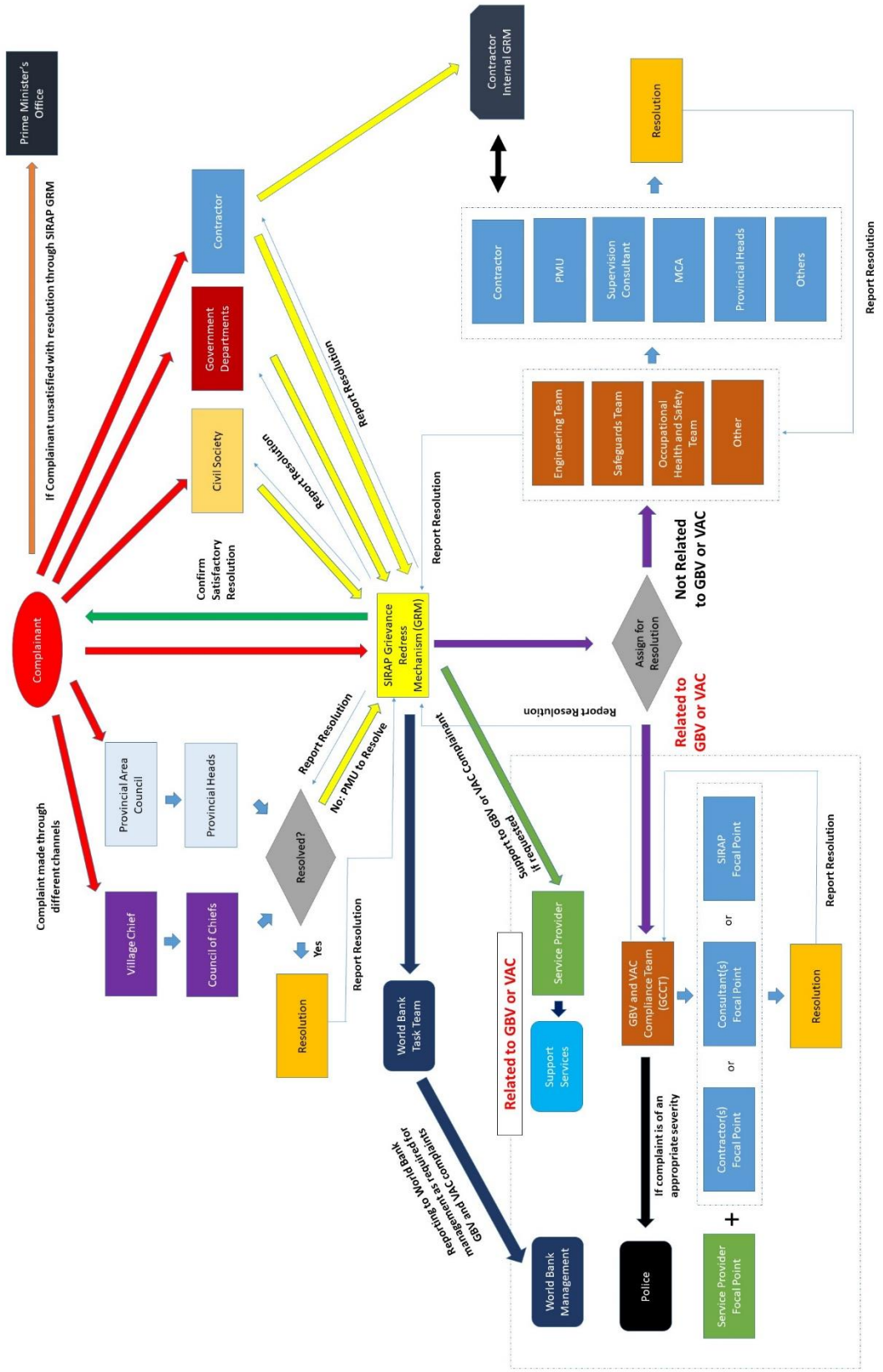


Figure 7: Flow chart for grievance management under SIRAP

9 Compliance and Monitoring Plan

9.1 Monitoring Plan

The PESMP identifies the environmental and social monitoring requirements to ensure that all the mitigation measures identified in this PESMP are implemented effectively. Environmental and social monitoring methodology (refer Appendix C) for this project includes:

- Audit of detailed designs.
- Audit and approval of site environmental planning documents.
- Consultations with communities and other stakeholders as required.
- Routine site inspection of construction works to confirm or otherwise the implementation and effectiveness of required environmental mitigation measures (refer to inspection checklist in Appendix D).

Non-compliance to environmental mitigation measures identified in the PESMP will be advised to the Contractor(s) in writing by the Supervision Engineer in the first instance. The non-compliance notification will identify the problem, including the actions the Contractor needs to take and a time frame for implementing the corrective action. Recurring instances of non-compliance will be referred to SIRAP PST for follow up action.

9.2 Monitoring Plan Reporting

Throughout the construction period, the Supervision Engineer will include results of their weekly PESMP monitoring, along with the details of any incidents report by the Contractor, in a monthly report for submission to the SIRAP PST who is responsible for submitting these monthly progress reports to the World Bank through the PAIP TFSU. The format of the monthly report shall be agreed with all agencies but is recommended to include the following aspects:

- Description and results of environmental monitoring activities undertaken during the month;
- Status of implementation of relevant environmental mitigation measures pertaining to the works;
- Key environmental problems encountered and actions taken to rectify problems;
- Summary of non-compliance notifications issued to the Contractor during the month, actions taken and non-compliances closed out;
- Summary of complaints received, actions taken and complaints closed out;
- Key environmental and social issues to be addressed in the coming month;
- Training records;
- Health and Safety Indicators;
- Summary of consultation / stakeholder engagement undertaken;
- Copies of environmental inspection reports;
- Summary of reported incidents, actions taken and recommendations for follow up; and

- Before project implementation photos, midway of project implementation photos, and completion photos of works

A day to day contract diary is to be maintained pertaining to administration of the contract, request forms and orders given to the Contractors, and any other information which may at a later date be of assistance in resolving queries which may arise concerning execution of works. This day to day contract diary is to include any environmental events that may arise in the course of the day, including incidents and response, complaints and inspections completed.

There are monitoring requirements associated with this PESMP that are applicable once SIRAP has concluded and normal airport operations have resumed. At this stage, there is no vehicle for continuing with safeguard monitoring during operations and it is recommended that this be incorporated into existing or new SIRAP processes. This PESMP should be updated to reflect the SIRAP environmental and social monitoring and reporting processes before the completion of the project.

SIRAP PST are responsible for quarterly progress reports to the WB. This quarterly progress report will include a section on safeguard compliance and issues. This section will cover (as a minimum):

- The overall compliance with implementation of the PESMP.
- Any environmental issues arising as a result of project works and how these issues will be remedied or mitigated;
- OHS performance;
- Community consultation updates;
- Public notification and communications;
- Schedule for completion of project works; and
- Summary of any complaints received, actions taken and complaints closed out.

10 Contingency Planning

The SIRAP Project Manager is the contact person for emergency situations that may arise during the implementation of the SIRAP and terminal upgrade projects. The SIRAP PM will be available 24 hours a day, seven days a week, and has delegated authority to stop or direct works. In the event of an environmental emergency, the procedures outlined below are recommended for SIRAP to consider for implementation.

As part of their CESMP, the Contractors are required to prepare a Contingency Plan encompassing cyclone and storm events. The purpose of the plan is to ensure all staff are fully aware of their responsibilities in respect to human safety and environmental risk reduction. Procedures should clearly delineate the roles and responsibilities of staff; define the functions to be performed by them, the process to be followed in the performance of these functions including tools and equipment to be kept in readiness, and an emergency medical plan. All of the Contractor's staff should undergo training/induction to the plan.

While it is preferable to undertake construction works outside of the wet season, it is probable that storm and heavy rain events will occur while works are underway.

The Contractors are responsible for monitoring weather forecasts, inspecting all erosion and sediment control measures and undertaking any remedial works required prior to the forecast rain or storm event.

In general the Contractors will:

- Inspect daily weather patterns to anticipate periods of risk and be prepared to undertake remedial works on erosion and sediment control measures to suit the climatic conditions.
- Monitor the effectiveness of such measures after storms and incorporate improvements where possible in accordance with best management practice.
- Ensure appropriate resources are available to deal with the installation of additional controls as and when needed.
- Inform Supervision Engineer if there are any concerns associated with the measures in place.

Appendix A: Safeguards Coordination and Alignment: JICA and WB

Under the JICA Environmental and Social Considerations (ESC) avoidance or minimisation of environmental and social impacts from development projects must be realised as part of the project itself, with its cost included in the development cost. This is the main objective of the ESC and they must be applied to JICA projects in accordance with the Guidelines for Environmental and Social Considerations (ESC Guidelines).

The JICA ESC operate under a set of standards and references[17] which are:

1) ESC in a JICA project must comply with the laws, standards, policies and plans of the host countries. If the standard set by the host country differs from the international standard, the project proponents are advised to adopt the standard that better serves the purpose of attaining a higher level of ESC
2) ESC in a JICA project must be in line with the World Bank's Safeguard Policies including Operational Policy on Environmental Assessment (OP4.01), Natural Habitats (OP4.04), Involuntary Resettlement (OP4.12), Indigenous Peoples (OP4.10) and other relevant policies.
3) International standards, treaties and declarations should also be applied as appropriate.

Given that the JICA ESC are stipulated to be in line with the World Bank Operating Policies, it has been assessed that there is NO GAP between the WB and JICA safeguard standards.

Below is a summary[18] developed by JICA of the main elements of their ESC, the table also gives the equivalent WB OP that the individual ESCs follow.

	JICA	World Bank
Category B Definition	The project may have adverse impacts on the environment or society, but these impacts are less significant than those of Category A projects. These impacts are site-specific; few, if any, of them are irreversible; in most cases, they can be mitigated more readily than Category A projects. Responsibilities of the project proponents include the planning and monitoring of necessary ESC activities. ESC procedures such as Initial Environmental examination and stakeholder participation may be required, depending on the scale and nature of the adverse impacts.	Compared with Category A projects, Category B projects potential impacts are less adverse and more limited, fewer, site-specific and likely to be reversible. Mitigation measures can be more easily designed and implemented.
ESC: Basic principles	1) Alternative or mitigation measures to avoid or minimise adverse impacts must be examined 2) Examinations include an analysis of	OP4.01 Environmental Assessment

[17] Japan International Cooperation Agency (JICA) Guidelines for Environmental and Social Considerations (Translation of Japanese Version), April 2010

[18] The Basics of Environmental and Social Considerations, Introduction to the JICA Guidelines for Environmental and Social Considerations, JICA 2012

	environmental and social costs and benefits in the quantitative terms and qualitative analysis 3) EIA reports must be produced for projects with large scale environmental impacts (Category A) 4) For projects with high potential for adverse impacts, a committee of experts may be formed.	
ESC: Impacts to be assessed	1) Items to be addressed in the project are selected through the scoping process and include: Physical: Air quality, water quality, waste, soil contamination, noise and vibration, subsidence, odour and sediment; Natural: Protected areas, ecosystem, fauna and flora including endangered species; Social: resettlement, living and livelihood, heritage, landscape, ethnic minorities, indigenous peoples, and occupations safety. 2) In addition to the direct and immediate impacts of the project, their derivative, secondary and cumulative impacts as well as the impacts of projects that are indivisible from the project are also to be examined and assessed to a reasonable extent.	OP4.01 Environmental Assessment OP4.11 Physical Cultural Resources
ESC: Compliance with laws, standards and plans	1) Projects must comply with the laws, ordinances and standards established by the governments. 2) Projects must, in principle, be undertaken outside of protected areas that are specifically designated by laws or ordinances for the conservation of nature or cultural heritage.	OP4.01 Environmental Assessment OP4.01 Natural Habitats
ESC: Social Acceptability	1) Projects must be adequately coordinated so that they are accepted in a manner that is socially appropriate to the country and locality. 2) Appropriate consideration must be given to vulnerable social groups, such as women and children, the elderly the poor, and ethnic minorities, all members of which are susceptible to environmental and social impacts and may have little access to decision making processes within society.	OP4.01 Environmental Assessment OP4.10 Indigenous Peoples
ESC: Ecosystems and Biota	1) Projects must not involve significant conversion or significant degradation of critical natural habitats and critical forests. 2) Illegal logging of forests must be avoided. Project proponents, etc, are encouraged to	OP4.04 Natural Habitats

	obtain certification systems as a way to ensure prevention of illegal logging.	
ESC: Involuntary Resettlement	1) Avoid and minimise the impacts of involuntary resettlement and loss of means of livelihood; 2) Prior compensation at full replacement cost. 3) To improve or at least restore the standard of living, income opportunities, and production levels to pre-project levels. 4) Grievance mechanism must be established. 5) For large involuntary a Resettlement Action Plan must be prepared and disclosed in host country before JICA environmental review. 6) RAP needs to include the elements stated in the World Bank's Safeguard Policy, OP4.12 Annex A	OP4.12 Involuntary Resettlement
ESC: Indigenous People	1) Avoid and minimise the impacts on Indigenous People. 2) Efforts must be made to obtain the consent of indigenous peoples in a process of free prior and informed consultations. 3) An Indigenous People Plan (IPP) must be prepared and disclosed in host country before JICA environmental review. 4) IPP needs to include the elements stated in the World Bank's Safeguard Policy OP4.10, Annex B.	OP4.10 Indigenous Peoples
ESC: Monitoring	1) Project proponents monitor whether any unforeseeable situations occur and whether the performance and effectiveness oof mitigation measures are consistent with the assessment's prediction. They then take appropriate measures based on the results of such monitoring. 2) Project proponents should make efforts to make the results of the monitoring process available to local project stakeholders.	OP4.01 Environmental Assessment
ESC: Disclosure	1) Project proponents disclose information about the environmental and social considerations of their projects. 2) JICA discloses important information about environmental and social considerations at the main stages of project implementation. 3) JICA discloses information on its website in Japanese, English and/or local languages and provides related reports for public reading at its library and at related overseas offices	OP4.01 Environmental Assessment
ESC: Consultation	1) Project proponent will consult with local stakeholders through means that include	OP4.01 Environmental Assessment

	broad public participation to a reasonable extent, in order to take into consideration the environmental and social factors in a way that is most suitable to local situations, and in order to reach an appropriate consensus. 2) In order to have meaningful meetings proponents will publicise in advance that they plan to consult with local stakeholders, with particular attention to directly affected people.	
Resettlement Action Plan	A Resettlement Action Plan (RAP) is a document in which the project proponents specify the procedures and actions to mitigate adverse effects, compensate losses, and provide development benefits to people affected by the involuntary resettlement caused by the project. RAP is mandatory for a project that causes large-scale involuntary resettlement. The objective of the RAP is to improve the living standards of the people affected, or at least restore them to the pre-project level. To this end, RAP should be developed together with the local stakeholders and address ESC requirements including prior compensation at full replacement cost, support for livelihood, and provision of expenses for relocation and re-establishment of communities. Also, it is desirable that the RAP covers issues listed in the World Bank's 'Operational Policy 4.12, Annex A'.	OP4.12 Involuntary Resettlement
Indigenous Peoples Plan	An Indigenous Peoples Plan (IPP) must be formulated for a project that requires considerations for indigenous peoples. When preparing IPP, indigenous peoples who are likely to be affected by the project must be sufficiently informed and consulted. The ESC Guidelines advises that elements listed in the World Bank's 'Operational Policy 4.10 Annex B' be included in IPP.	OP4.10 Indigenous People

Appendix B Mitigation Tables

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[19]	EXECUTING AGENCY	SUPERVISING AGENCY
DETAILED DESIGN/ PRE-CONSTRUCTION MOBILISATION STAGE					
Road traffic safety	The bid documents will require a Traffic Management Plan (TMP) to be developed by Contractor. For each haul route, the TMP will need to include measure to address: Layout plans; Vehicle traffic; Pedestrian traffic; Commercial marine traffic; Sensitive receptors (management near and consultation with) such as schools, residential dwellings, markets, churches, etc.); Management of increased heavy load traffic associated with transportation from the port. The TMP should follow the guidelines set in the Safe Traffic Controls for Road Works Field Guide (*www.works.gov.pg/files/roads-bridges/IF003_PNGFieldGuide.pdf*) and adapted for the HIR works. The TMP will be included as an annex to the CESMP.	From port to airport (delivery of equipment/ materials) To and from the construction lay down area	Minimal (requirement of bidding documents)	Contractor	SIRAP PST
Aviation traffic safety	Each investment within an operational airport is to have a Methods of Works Plan (MOWP) which is to be included in all bid and contract documents. The Contractors are to develop a Safety Management Plan as an addendum to the MOWP. The MOWP will include details of site works scheduling around known flight timetables and procedures for emergency response for all workers.	Operational airports	Minimal (requirement of bidding documents and standard construction practices)	Design Consultants (all contracts)	SIRAP PST
Soil erosion	Minimize erosion and design erosion protection measures according to international good practice standards, including incorporation of effective drainage systems (soakage pits) and consideration of surface flow paths. Wherever feasible, schedule excavation works for the dry season months (May to October) Develop Contingency Plan for works to allow for anticipated construction start date during the wet season. Contingency Plan must detail soil erosion prevention measures in event of storm or heavy rain event.	All locations	Minimal (part of standard design practices)	Design Consultants Contractor	SIRAP PST SIRAP PST
Dust / Odours / Air Pollution	Identify and locate waste disposal sites, stockpile sites and equipment (e.g. asphalt plant) at least 3000 m away from any residential settlements, to minimize impacts on nearby population. The CESMP should include a provision for quarry dust control; all equipment including crushers, aggregate processors, generators etc. should / if possible, be located in the quarry pit to minimize dust emissions.	All components	Minimal (part of standard design practices)	Contractor	Supervision Engineer / ECD

[19] Costs are estimates only and will be calculated during the detailed engineering design.

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[19]	EXECUTING AGENCY	SUPERVISING AGENCY
	Ensure all equipment is serviced and issued with warrant of fitness (as required). Any machinery deemed to be polluting the air must be replaced (or fixed) on instruction by the Supervision Engineer and/or the ECD.				
Water and soil pollution	Soakage pits should not be installed directly into a shallow aquifer. Oil water separators should be included to treat runoff from the apron and maintenance hangers. Minimise risk to groundwater and surrounding soil by developing a spill response plan and provide training to all contract workers on how to implement the spill response plan. Precautions should be in place to prevent wastewater and hazardous substances or materials entering the environment (e.g. fuel spillage, wastewater containing fire retardant during firefighting), The spill response plan should include factors associated with both the construction and operational phases and should be available at all SIRAP locations. Ensure bunded areas and hard stands are allocated at construction lay down area for the storage of fuel, lubricants and other potential substances required for the project. Water tight bunds to be able to contain 110% of volumes being stored or 25% if total volume greater than 1,000 L. Ensure wash down areas with respective collection and treatment systems are designated within the construction camp (e.g. settling pond or tank and concrete slurry treatment) prior to works commencing. Sanitation treatment system (e.g. removal of waste to landfill, compost or proprietary treatment system) is approved by the Supervision Engineer prior to implementation. Supervision Engineer to undertaken groundwater monitoring prior to any site establishment or construction activities at bores within 100 m of asphalt plant and laydown sites (to be coordinated with SIWA) to determine base line conditions. Measure depth to groundwater and analyse samples for concentrations of pH, electrical conductivity, total petroleum hydrocarbons (for potential petroleum contamination), and total nitrogen (for potential sewage contamination), or as agreed with SIWA. Asphalt plant will be located at least 150m from any body of water	All components	Minimal (part of standard design and construction practices)	Design Consultants Contractor Supervision Engineer	SIRAP PST Supervision Engineer SIRAP PST / SIWA

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[19]	EXECUTING AGENCY	SUPERVISING AGENCY
Water supply	The Contractors will need to ensure adequate supply of water for construction and personnel which does not adversely affect local community's water supply.	All components	Minimal (part of standard design practices)	Contractor	Supervision Engineer & SWA
Sourcing aggregate material	Ensure locally sourced aggregate is sourced under appropriate permit from approved quarry sources and are operating in accordance with SIG law. Quarries will be selected from areas of the island free of the GAS. Prior to any quarries being selected for the SIRAP project, public consultation will be completed with any affected parties relating to re-opened quarry sites. No brand new quarries will be established for the SIRAP HIR works. If the Contractor applies for their own Building Materials License to re-open former permitted quarries, they will be required to follow national consenting requirements and to produce a Quarry Management Plan as per the requirements of this PESMP and included as an annex in the CESMP for clearance. Imported aggregates will be from an existing permitted quarry in an approved country of origin. The source quarry must be operating in compliance with the conditions of their permit and good international standards. Supervision Engineer to approve source quarries prior to purchases agreements being signed. Stockpile sites for imported and local aggregates will be decontaminated and a biosecurity perimeter will be maintained in conjunction with the SIG Biosecurity department, following the system developed by MID for their road aggregate stockpile site.	All components	Minimal (part of standard design and construction practices)	Contractor	Supervision Engineer & ECD
Solid waste generation	Solid waste includes: • General waste (i.e. office type waste, household waste (from any workers camps), lightweight packaging materials). • Recyclable waste (i.e. certain plastics, metals, rubber etc. that can be recycled). • Organic biodegradable waste (i.e. waste that will decay / break down in a reasonable amount of time, such as green waste, food waste). • Inorganic non-recyclable waste (i.e. waste that cannot decompose / break down and which cannot be recycled).	All locations	Minimal (part of standard design and construction practices)	Contractor	Supervision Engineer

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[19]	EXECUTING AGENCY	SUPERVISING AGENCY
	• Hazardous waste (i.e. asbestos, waste oil etc.) The Contractor will develop a Solid Waste Management Plan (SWMP) following the guidelines provided in Appendix E of the CESMP. The SWMP is to be submitted as part of the CESMP for clearance by the WB. At all times, the Contractor is responsible for the safe and sound disposal of all solid waste generated by the Works. The SWMP should, as a minimum make provisions for the following: • Describe the solid waste streams generated by the works along with estimated quantities. • Develop a plan for safe storage and handling of waste stored on the project site as per the stipulations in this PESMP. • Identify approved service providers for collection and disposal of waste and stipulate conditions of carriage in Honiara. • Detail the approved disposal methods along with appropriate permissions. • Recyclable waste may be supplied to a local receiver licensed to process such waste. • Contractor to identify shipping route and licensed disposal facilities for all exported waste. • Contractor to identify any export permits or conditions for export of waste. • Identify those persons responsible for implementing and monitoring the SWMP. All other waste is to be disposed of OFFSHORE in permitted or licensed facilities. It is the Contractor's responsibility to obtain all necessary permissions for transport and safe disposal of hazardous waste from the project site in a legally designated hazardous waste management site within the country or in another country, and to ensure compliance with all relevant laws. Evidence will need to be supplied to the Supervision Engineer of proper disposal of waste at the final location. 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				

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[19]	EXECUTING AGENCY	SUPERVISING AGENCY
	recipient countries. For any clean fill material generated, it either be used to backfill areas where old equipment or infrastructure has been removed or as a resource (e.g. crushed asphalt and basecourse material) for general use by MCA, MID and the community. Clean fill materials which are not able to be reused within the timeframe of the project implementation shall be transported to a location approved by the Public Works Department to be stored for future use by the Ministry. This location shall also be subject to approval by the Supervision Engineer. These materials shall be removed from the site area and safely disposed of in compliance with any local requirements at the Employer's nominated disposal site(s) and/or disposed of at the Contractor's quarry site(s), before the start of the defects liability period. Unless otherwise instructed by the Supervision Engineer, other surplus materials not needed during the defects liability period shall be removed from the site and the country.				
Hazardous substances	Where possible fuel shall be obtained from local commercially available sources. Prior arrangement regarding quantity and type will need to be organised by the contractor. All fuel to be stored in self-bunded containers In all SIRAP project locations, fuel should only be stored in self bunded containers within designated areas that are designed to store and facilitate operations associated with it (e.g. re-fuelling). Spill Response Plan to be developed by Contractor. 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). This spill response plan should be applicable to all SIRAP project works areas (airport, quarries, and transport routes). A spill response plan should be in place for both the construction phase and operational phase. Identify suitable area for hardstand and bunded storage areas as per section 7.7. Any empty asphalt or bitumen drums will be removed offshore and either returned to supplier or disposed of in a legally approved facility outside Solomon Islands.	All locations	Minimal (part of mobilisation and construction planning)	Contractors	Supervision Engineer

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[19]	EXECUTING AGENCY	SUPERVISING AGENCY
Importation of equipment and materials	The Contractor is to arrange for their vehicles and machinery to be thoroughly cleaned of all contamination prior to shipping (e.g. soil, rocks, plant material, seeds, etc). Items shipped inside containers must also have the inside of the container thoroughly cleaned of all previous cargo residues, including dunnage. Obtain import permits and quarantine certification prior to export from country of origin. Certificate of fumigation and verification of source (as per national requirements in Section 7.2) to be submitted to Quarantine Inspectors and approved by the Supervision Engineer prior to delivery to site.	All components	Minimal (part of mobilisation and construction planning)	Contractor	Supervision Engineer
Community grievances	Ensure that public consultation and disclosure communication is completed at regular intervals to ensure that the public are fully aware of the SIRAP works. Consultation should include all aspects of the project including the airport site, quarries and transport routes. Consultation should include all aspects of the project including the airport site, quarries and transport routes. Consultation shall include raising awareness of the project GRM, how to complain and how complaints will be managed. Advertise, maintain and operate a grievance response mechanism, including publishing statistics on resolutions.	All components	Minimal (part of mobilisation and construction planning)	Supervision Engineer SIRAP PST	SIRAP PST & TFSU TFSU
Local business grievances	Ensure that local businesses/roadside vendors and are included in the public consultation and disclosure communication process. Regular communication should be made with affected parties to ensure that they are fully aware of the proposed program of works and how to complain and how complaints will be managed.	HIR locality	Minimal (part of mobilisation and construction planning)	Contractor	Supervision Engineer
CONSTRUCTION STAGE					
Traffic (vehicle and pedestrian) and construction safety	Implement the traffic management plan (TMP) to ensure smooth traffic flow and safety for workers, passing vehicles and pedestrian traffic. Where appropriate, employ flag operators on the road to prevent traffic accidents. The workers shall have relevant safety equipment and training. The TMP should prohibit the use of engine breaking close to and through communities and inhabited areas, it should also regulate the working hours for the haul trucks.	Route from quarries and port to airport	Safety equipment included in construction cost	Contractor	Supervision Engineer
Soil erosion	Minimise time and size of ground disturbing activities to workable size at	All locations	Minimal (part of	Contractor	Supervision

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[19]	EXECUTING AGENCY	SUPERVISING AGENCY
	any one time. Ensure sediment traps are in place prior to works commencing. Vegetation to be removed manually, strictly no use of herbicides/ pesticides. Division bunding or other similar methods to be used for large areas of vegetation clearance and around excavations. Keep construction vehicles on defined tracks. Re-vegetate disturbed areas that are not being paved as soon as practicable (loosen ground; apply topsoil; seed or plant as necessary). No land disturbance should occur within 100m of the estuarine environments located at each end of the HIR runway.		standard construction practice)		Engineer
Waste disposal	Implement approved SWMP. Ensure all construction waste material is re-used, recycled, returned to supplier, or packed up for transport to approved disposal site or out of country depending on accepted waste streams at each facility (see Section 7.9). Ensure areas for waste collection, recycling and off-site disposal are clearly marked/sign posted. Segregate waste to avoid cross contamination, such as with contaminated material (hazardous substance). Install waste collection facilities at construction lay down area to allow for collection and packing of waste. Strictly no dumping of rubbish. Include awareness training in general environmental training. If access to airport facilities is not available, workers must be provided with a sanitary system to prevent fouling of surrounding soils. Sanitary system must be of sufficient size for the number of workers and must take into account the disposal situation at the local landfill. All hazardous waste is to be disposed of offhsore in permitted or licensed facilities. It is the Contractor's responsibility to obtain all necessary permissions for transport and safe disposal of hazardous waste from the project site in a legally designated hazardous waste management site within the country or in another country, and to ensure compliance with all relevant laws. Evidence will need to be supplied to the Supervision Engineer	All locations	Minimal (part of standard construction practice)	Contractor	Supervision Engineer

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[19]	EXECUTING AGENCY	SUPERVISING AGENCY
	of proper disposal of waste at the final location. Organic biodegradable waste may be deposited in designated dumping areas in reasonable quantities at the Ranadi landfill. Disused Material (millings, excavation materials, concrete rubble) can either be used to backfill areas where old equipment or infrastructure has been removed or as a resource (e.g. crushed asphalt and basecourse material) for general use by MCA, MID or PWD and the community. Clean fill materials which are not able to be reused within the timeframe of the project implementation shall be transported to a location approved by the MID to be stored for future use by the Ministry. This location shall also be subject to approval by the Supervision Engineer. All surplus material from excavations shall be removed from the site area and safely disposed of in compliance with any local requirements at the Employer's nominated disposal site(s) and/or disposed of at the Contractor's quarry site(s), before the start of the defects liability period. Unless otherwise instructed by the Supervision Engineer, other surplus materials not needed during the defects liability period shall be removed from the site and the country The Contractor is responsible for the collection and treatment of the septic waste. Temporary toilets and disposal or treatment of wastewater will need to be in accordance with the ECD and MCA advice (for example construction and training in use of compositing toilet facilities).				
Water and soil pollution	Hydrocarbons (lubricants / fuel) shall be collected and recycled, or disposed of according to section 7.10 Spill response kits available at all locations where fuel is stored. Spill response plan training completed for all construction workers. Precautions should be in place to prevent wastewater and hazardous substances / materials entering the environment (e.g. fuel spillage, wastewater containing fire retardant during firefighting), however should an incident occur, the Contractor must have a spill response plan must be in place. 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). This spill response plan should be applicable to all SIRAP project works areas (airport, quarries, and transport	All locations	Minimal (part of standard construction practice)	Contractor	Supervision Engineer & ECD

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[19]	EXECUTING AGENCY	SUPERVISING AGENCY
	routes). A spill response plan should be in place for both the construction phase and operational phase. Zones for preliminary accumulation of 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). Excavations are bunded to prevent ingress of water runoff and clean water diversion (e.g. sand bags, clay bund, or shallow trenches) are used to direct overland flow away from active work and storage areas. Soakage pits should not be installed directly into a shallow aquifer. Regular cleaning of access points to prevent dirt build-up on roads. Control overland drainage to prevent channelling and sediment transport by diverting flows away from exposed areas. Sediment laden runoff from excavations or stockpiles must be directed to a settling area or collected for dust suppression provided the runoff is not contaminated with any chemicals (e.g. fuel). Discharges of treated wash water are to occur to land only, at least 500m from any bore used for potable water at a rate not exceeding 20mm/day or the infiltration rate of the ground (i.e. no ponding or runoff).				
Generation of dust	Use closed/covered trucks for transportation of construction materials. Any vehicle which is overloaded (exceed designed load limit) or is not covered properly shall be refused entry to the construction lay down area or material shall be refused delivery (if not to the construction lay down area). Cover or wet down stockpiles containing fine material (e.g. sand and topsoil) when not actively being used. Wetting of stockpiles is allowed but due to freshwater constraints should be kept to a minimum. All surfaces should be constructed to their final design solution as quickly as practicable. Keep work areas clean with regular sweeping. Only small areas should be cleared of vegetation at any one time and re-	All locations	Minimal (part of standard construction practice)	Contractor	Supervision Engineer

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[19]	EXECUTING AGENCY	SUPERVISING AGENCY
	vegetation should occur as soon as practicable. Dust masks and personnel protective equipment must be available for workers during dust generating activities (e.g. pavement milling). Manage speed of transportation trucks on unsealed roads, particularly when passing through settlements.				
Noise and vibration disturbances	Minimise nuisance from noise, especially closer to residential areas and sensitive receptors, through establishment and communication to affected parties of working hours, including night works and avoid increase of noise and number of work equipment at outside of advertised hours. Advertise working hours at the site entrance. If possible, use noise barriers / screens or mounds to shield sensitive receptors. It is likely that works at HIR will be undertaken at night, this will require approval by the SIRAP PST and early notice to affected peoples provided and then again at least one week prior to schedule works starting. Work on Sunday is restricted. The contractor is to determine what time Saturday night works are required to end and what time early hour Monday morning works can commence. Working during the day on Sunday is likely to only be approved in emergency situations. For works outside normal hours, approval must be obtained from MCA/ECD and residents within 100 m of HIR must be notified 5 days before works take place. Regularly check and maintain machinery, equipment and vehicle conditions to ensure appropriate use of mufflers, etc. Workers in the vicinity of sources of high noise shall wear necessary protection gear rated for the situation they are being used. Signage to outline complaints procedure (GRM) and contact details of recipient of complaints (e.g. phone number, physical address and email). The WB/IFC EHS Guidelines[20] Section 1.7 – Noise Management shall be applied. Noise impacts should not exceed the levels at the closest residential or other sensitive social receptors for one hour LAeq of 55 dBA	All locations	Minimal (part of standard construction practice)	Contractor	Supervision Engineer, SIRAP PST & ECD

[20] International Finance Corporation, Environmental Health and Safety Guidelines, General Guidelines: Noise Management

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[19]	EXECUTING AGENCY	SUPERVISING AGENCY
	between the hours of 0700-2200 or 45 dBA outside of these hours for night works, or result in a maximum increase in background noise levels of 3dB at the nearest receptor location off site. The nearest sensitive receptors are expected to change as the work moves along the pavements and will be determined the closest residences to the active works and to the construction camps and/or asphalt plant.				
Accident risks/Impacts on traffic safety	Arrange necessary measures for pedestrian and passer-by safety and all means of transportation safety (e.g. establish protection zones, by-pass these areas during transportation of materials, etc.) Relevant safety elements such as guardrails, road signs and delineators, pavement markings, barricades and beams, warning lights shall be installed. In some cases a flag operator or traffic control supervisor could be engaged around the specific work site.	All locations	Safety equipment included in construction cost Minimal (part of standard construction practice)	Contractor	Supervision Engineer
Chance find of objects and loss of archaeological artefacts or sites	Chance Find procedure to be followed as per Section 7.1. Work to stop in specific location of unearthed artefacts or site. Fence the area to limit access and notify SIRAP PST and Supervision Engineer immediately for instruction to proceed. Chance Find procedure for discovery of UXO to be followed as per Section 7.3.1. Contractor must immediately stop work and clear the work site of all personnel. The discovery must immediately be reported to the Supervision Engineer, MCA and the Royal Solomon Islands Police Force (RSIPF).	All locations	No marginal cost	Contractor	MCA/ Supervision Engineer
Landscape degradation	Contractor to include provision for construction lay down area rehabilitation following the completion of the construction phase. Restoration of quarries to be completed in accordance with quarry permit. Restoration of landscape after completion of rehabilitation works; restore the vegetation cover in accordance with the surrounding landscape and any required design (e.g. grass land or shrubs). Use plant species characteristic for the landscape in the course of restoration of the vegetation cover. Should the removal of mature trees be necessary for operational safety, determine whether OP4.12 would be triggered and ensure all appropriate	All locations	Minimal (part of standard construction practice)	Contractor	SIRAP PST/ Supervision Engineer / ECD

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[19]	EXECUTING AGENCY	SUPERVISING AGENCY
	measures and permissions are in place before removal of trees.				
Hazardous substances and safety and pollution	Store and handle hazardous substances self-bunded tanks or drums. With the Supervision Engineer's permission may alternatively be store in bunded, hard stand or designated areas only. Bunded areas to drain to an oil water separator which will need to be constructed or a mobile proprietary unit imported specifically for use on the SIRAP. Bunds to contain 110% of total volume required to be stored or 25% of total volume if total volume is over 1,000 L. Provide hazard specific personnel protective equipment to workers directly involved in handling hazardous substances (e.g. chemical or heat resistant clothing, gloves). Complete list, including safety data sheets (SDS) for each hazardous substances stored or used shall be accessible at all times. Signage to be posted in storage areas identifying all chemicals present. Precautions should be in place to prevent wastewater and hazardous substances / materials entering the environment (e.g. fuel spillage, wastewater containing fire retardant during firefighting), however should an incident occur, the Contractors spill response plan must be in place. 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). This spill response plan should be applicable to all SIRAP project works areas (airport, quarries, and transport routes). A spill response plan should be in place for both the construction phase and operational phase. Spill kits and training of use to be provided to all workers during toolbox meetings. Spill kits to contain PPE for the spill clean-up (e.g. appropriate gloves [nitrile] and overalls), material to contain the spill and absorbent pads, and a heavy duty rubbish bag to collect absorbent pads or material. Waste oil to be collected and removed abroad to an approved facility (for disposal or cleaning) at completion of works.	All locations	Safety equipment included in construction cost Minimal (part of standard construction practice)	Contractor	Supervision Engineer
Loss of biodiversity	If during course of construction work, particularly vegetation clearance and excavations any bird, reptile or mammal species is identified as being potentially impacted (e.g. nesting bird in area of proposed vegetation clearance) work is to stop in the specific location of the find and the ECD and SIRAP PST be notified immediately for instruction to proceed.	All locations	No marginal cost	Contractors	Supervision Engineer / SIRAP PST / ECD
Health and safety	Fully implement OHS requirements in PESMP Guidelines (Annex E).	All locations	Included as	Contractor	Supervision

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[19]	EXECUTING AGENCY	SUPERVISING AGENCY
	Have safety officer with suitable qualifications available at all times during construction. Ensure all workers have undergone suitable induction training on OHS with regular training over course of project. Prepare site specific safety plans specifying responsibilities and authorities. Health and safety documentation to include all areas of the project (e.g. airport, quarries and transport routes). Ensure all occupational health and safety requirements are in place on construction sites and in work camps. Construction lay down area to be fenced to prevent access by unauthorised personnel. First aid training to be provided as required to site workers with basic first aid services to be provided by Contractor e.g. stretcher, vehicle transport to hospital. Provide education on basic hygiene practices to minimize spread of diseases. Increase workers' HIV/AIDS and sexually transmitted disease (STD) awareness, including information on methods of transmission and protection measures. Prohibit usage of drugs and alcohol on construction sites and undertake regular alcohol testing. Install lights and cautionary signs in hazardous areas. Enhance safety and inspection procedures. Ensure use of PPE and consider providing for on-site storage of workers allocated PPE.		provisional sum in the bill of quantity		Engineer / SIRAP PST
Damage to assets and infrastructure	Maintain high standard of site supervision and vehicle and plant operation to reduce risks of damage to water, power and telecommunication lines. Prepare procedures for rapid notification to the responsible authority (MCA and service providers).	All locations	Dependent on asset/ infrastructure and level of damage	Contractors	Supervision Engineer / SIRAP PST

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS[19]	EXECUTING AGENCY	SUPERVISING AGENCY
	As a result of SIRAP construction activities any damage to assets or infrastructure (including public roads) must be reported to the MCA and MID and rectified at the expense of the Contractors. Provide assistance with reinstatement, in the event of any disruption.				
Community grievances	Maintain a grievance response mechanism at the SIRAP project website. Ensure that public consultation and disclosure communication is completed at regular intervals to ensure that the public are fully aware of the SIRAP project program of activities and the GRM process. Consultation should include all aspects of the project including the airport site, quarries and transport routes. (see section 7.3). Signage should be used in public areas around the SIRAP project sites advising the complaints procedure and contact details of key project individuals responsible for responding to issues raised.	All components	Minimal (part of standard construction practice)	SIRAP PST Supervision Engineer Contractor	SIRAP PST Supervision Engineer
Airport concessionaires / local business grievances	Ensure that local businesses are included in the public consultation and disclosure communication process throughout the construction phase. Regular communication should be made with affected parties to ensure that they are fully aware of the proposed program of works and the GRM. Signage should be used in public areas around the vicinity of HIR advising the complaints procedure and contact details of key project individuals responsible for responding to issues raised.	Airport	Minimal (part of standard construction practice)	Supervision Engineer Contractor	SIRAP PST Supervision Engineer
OPERATION STAGE					
Airport waste management	Development of MCA Waste Management Plan recommended to allow for recycling or re-using of as much waste as possible. ECD should be consulted for approval to receive material that cannot be recycled, reused or returned to the supplier.	All airport compounds	No marginal cost (standard operating procedure)	MCA	ECD
Water and soil pollution	Inspection of sites to ensure waste collection in defined area; spill response plan in place and workers trained at all SIRAP locations. Complete spill kits available where hazardous substances sorted and handled. Inspection drains on site to ensure no blockages present or maintenance required.	All airport compounds	No marginal cost (standard operating procedure)	HIR ground staff	HIR management

Appendix C Monitoring Plan

PARAMETER TO MONITOR	LOCATION	MONITORING	FREQUENCY	MONITORING RESPONSIBILITY
DETAILED DESIGN/ PRE-CONSTRUCTION PHASE				
Traffic safety	CESMP documents	Ensure TMP established for project.	Prior to commencing civil works	Supervision Engineer
Development Consents	CESMP Document	Development Consent and consent conditions are included in the CESMP	Prior to approval of CESMP	Supervision Engineer
CESMP approved	CESMP Documents	Ensure Contractor has produced a CESMP to the appropriate standard and this has been reviewed and cleared by WB and SIRAP PMU	Prior to commencing civil works	Supervision Engineer
Aviation safety	Design documents	MOWP complete with details of flight schedules and emergency procedures.	Prior to commencing civil works	Supervision Engineer with inputs from MCA
OHS Plan	Design documents	Ensure safety plan established for project	Prior to commencing civil works	Supervision Engineer
Soil erosion	CESMP documents	Ensure Contingency Plan is completed and approved. Storm event management and soil erosion prevention measures to be included.	Prior to sign off of final designs	Design Consultant
Water supply	CESMP documents	Suggested water source and supply network to be included in designs	Prior to commencing civil works	Supervision Engineer
Ground water quality	Laydown sites	Ground water quality monitoring for project baseline. The parameters include pH, electrical conductivity, total petroleum hydrocarbons (for potential petroleum contamination), and total nitrogen (for potential sewage contamination), or as agreed with ECD and the SIRAP NSS	Prior to establishment of laydown site and asphalt plan	Supervision Engineer
Storm water management	CESMP documents	Proposed storm water management / drainage design (e.g. use of oil-water separator) to consider impacts on hydrology, receiving environments and also contamination risk	Prior to commencing civil works	Supervision Engineer
Quarry operations	Quarry	Upon confirmation of which quarries are to supply aggregate verify quarry operations to ensure any required permits or approvals are in place. Ensure TMP is included in procurement documentation for transport of materials from the quarries to the airport.	Prior to commencing civil works	Supervision Engineer

PARAMETER TO MONITOR	LOCATION	MONITORING	FREQUENCY	MONITORING RESPONSIBILITY
Importation of equipment and materials	Importation permits	Approval to import material and equipment is given prior to material and equipment leaving country of origin. Ensure bio-secure stockpile site it established with SIG Biosecurity Department	Contractor to organize prior to export from country of origin.	Supervision Engineer
CONSTRUCTION PHASE				
Agreement for waste disposal	Contractor's records	Permits and/or agreements with local waste disposal providers and licensed recycling operators. Inspection of disposal sites.	Documentation viewed prior to construction works starting Weekly as applicable to schedule of works.	Supervision Engineer
Soil erosion	Areas of exposed soil and earth moving	Inspections at sites to ensure silt fences, diversion drains etc. are constructed as needed. Inspection to ensure replanting and restoration work completed.	Weekly inspection as applicable to schedule of works and after site restoration.	Supervision Engineer
Waste disposal	At construction and quarry sites	Inspection to ensure waste is not accumulating and evidence waste has been stockpiled for removal to licensed landfill, removal from Solomon Islands if required, recycling or returning to supplier. Inspections to ensure waste streams are sorted for re-use, recycling or waste to landfill.	Weekly inspection as applicable to schedule of works and on receipt of any complaints.	Supervision Engineer
Water and soil pollution	At construction sites	Ensure all storage tanks are self bunded. Inspection of sites to ensure waste collection in defined area; spill response plan in place and workers trained at all SIRAP HIR locations. Complete spill kits available where hazardous substances sorted and handled. Any encounters with potentially or confirmed contaminated soil are reported to MCA and ECD. Inspect soakage pits siting directly above any underlying aquifer (if present).	Weekly inspection as applicable to schedule of works and on receipt of any complaints	Supervision Engineer

PARAMETER TO MONITOR	LOCATION	MONITORING	FREQUENCY	MONITORING RESPONSIBILITY
		Ground water monitoring as per parameters in PESMP. The parameters include pH, electrical conductivity, total petroleum hydrocarbons (for potential petroleum contamination), and total nitrogen (for potential sewage contamination), or as agreed with ECD and the SIRAP NSS.	Once midway through implementation and once prior to demobilisation	Supervision Engineer
Dust	At construction sites, quarries and adjacent sensitive receptors	Site inspections. Regular visual inspections to ensure stockpiles are covered when not in use and trucks transporting material are covered and not overloaded.	Weekly inspection as applicable to schedule of works and on receipt of any complaints.	Supervision Engineer
Noise	At work sites	Site inspections to ensure workers wearing appropriate PPE when required. Measurement of noise level (one hour LAeg) at closest social receptors (residences) to active work sites, construction camps and lay down areas not to exceed 45dB between 2200-0700 or 3dBA above background. Public signage detailing complaints procedure and contact people/person on display. Noisy machinery is replaced or fixed as soon as problem arises or on instruction by Supervision Engineer.	Weekly inspection as applicable to schedule of works and on receipt of any complaints.	Supervision Engineer
Air pollution	At work sites	Site inspections to ensure equipment and machinery operating without excessive emissions. If an issue is reported the contractor is responsible for replacing or fixing the equipment to the satisfaction of Supervision Engineer. Bitumen and asphalt processes plants to be located away from closest communities	Weekly inspection as applicable to schedule of works and on receipt of any complaints.	Supervision Engineer
Storage of fuel, oil, etc.	At work sites and construction camp. Contractors training log.	Regular site inspections to ensure material is stored within bunded area and spill response training for workers completed. Visual inspection of spill kit for completeness and accessibility. Checking that staff are trained on use of spill kits.	Weekly as applicable to schedule of works and on receipt of any complaints.	Supervision Engineer

PARAMETER TO MONITOR	LOCATION	MONITORING	FREQUENCY	MONITORING RESPONSIBILITY
Vehicle and pedestrian safety	At and near work sites	Regular inspections to check that TMP is implemented correctly (e.g. flags and diversions in place) and workers wearing appropriate PPE.	Weekly inspection as applicable to schedule of works and on receipt of any complaints.	Supervision Engineer
Construction workers and staff safety (personal protective equipment)	At work sites	Inspections to ensure workers have access to and are wearing (when required) appropriate personnel protective equipment (e.g. for handling hazardous materials). Guidelines in PESMP implemented.	Weekly inspection as applicable to schedule of works and on receipt of any complaints.	Supervision Engineer
Community / airport concessionaires / local business safety	At work sites	Inspections to ensure signs and fences restricting access are in place and pedestrian diversion routes clearly marked (whether for access to a building or home or particular route).	Weekly inspection as applicable to schedule of works and on receipt of any complaints.	Supervision Engineer
Community grievances	At all locations	Monitor the GRM database for the number and type of grievances and the average number of days to resolve a grievance.	Weekly	MCA PST
Airport concessionaires / local business grievances	At and near HIR work sites	Monitor the GRM database for the number and type of grievances and the average number of days to resolve a grievance.	Weekly	At and near HIR work sites
Materials supply	Quarry and work sites	Evidence that trucks are not overloaded and loads are covered e.g. complaints register, evidence of debris on the road.	Weekly visual inspection as applicable to schedule of works and on receipt of any complaints.	Supervision Engineer
OPERATION (Recommended for Consideration by MCA)				
Drainage system operational	Runway	Inspection and clean out of open channel drainage.	Soakage pit – after storm events to clear blockages and annually to remove sediment. After grass mowing.	MCA
Waste disposal	Airport sites	Inspection to ensure waste is not accumulating and evidence waste has been stockpiled for removal to licensed landfill, removal from SI as hazardous, recycling or returning to supplier. Inspections to ensure waste streams are sorted	Weekly inspection as applicable to schedule of works and on receipt of any complaints.	MCA

PARAMETER TO MONITOR	LOCATION	MONITORING	FREQUENCY	MONITORING RESPONSIBILITY
		for re-use, recycling or waste to landfill.		
Water and soil pollution	Airport sites	Inspection of sites to ensure waste collection in defined area; spill response plan in place and workers trained at all HIR locations. Complete spill kits available where hazardous substances sorted and handled. Inspection drains on site to ensure no blockages present or maintenance required.	Weekly inspection as applicable to schedule of works and on receipt of any complaints	MCA

Appendix D CESMP Monitoring Checklist

Honiara Airport Weekly CESMP INSPECTION

PROJECT:	Solomon Island Road and Aviation Project	**IMPLEMENTING AGENCY:**	MCA
DATE:		**CONTRACTOR:**	
PREPARED BY:		**SUPERVISION CONSULTANT**	
DISTRIBUTION LIST:			

Inspection Participants: (insert names and positions)

CESMP Items (edit as necessary based on approved CESMP)	**Applicable**		**Compliance**			**Issues**	**Status (R)/(O)**	**Action Required/Taken**	**Target/ Actual Date**
	Yes	**No**							
1. Mitigation & Management Measures: Construction Phase									
Soil Erosion: - Silt fences and diversion drains in place - Replanting and restoration work completed									

CESMP Items (edit as necessary based on approved CESMP)	Applicable		Compliance	Issues	Status (R)/(O)	Action Required/Taken	Target/ Actual Date
	Yes	No					
Water Accumulation and Disposal Agreements: - Good housekeeping around the work sites - Waste collected in defined area on impermeable ground or containers - Separation of waste into (i) Recyclable waste (i.e. certain plastics, metals, rubber etc. that can be recycled); (ii) Organic biodegradable waste (i.e. waste that will decay / break down in a reasonable amount of time, such as green waste, food waste; (iii) Inorganic non-recyclable waste (i.e. waste that cannot decompose / break down and which cannot be recycled) and, (iv) Hazardous waste (i.e. asbestos, waste oil etc.) - Hazardous waste stored in safe and appropriate manner. - Waste management plan in place and operating for proper disposal							
Soil and Water Pollution: - Appropriate spill response plan/kit in place for waste area - No visible spills on soil or uncovered ground - Drainage and soakage systems clear and fit for purpose - Surface water monitoring on a quarterly basis							

CESMP Items (edit as necessary based on approved CESMP)	Applicable		Compliance	Issues	Status (R)/(O)	Action Required/Taken	Target/ Actual Date
	Yes	No					
Dust and Materials Transport: - Stockpiles covered or kept wet when not in use - Visual inspection of ambient dust conditions on site and at nearby sensitive locations - Truck transports are covered - No evidence of aggregate spills on haulage route							
Noise: - Workers wearing ear protection as required - Noise level maximum of 45dB between 2200-0700 - No complaints received relating to noise							
Air Pollution: - Equipment operating without excessive emissions - Bitumen and asphalt plant emissions move away from nearby communities							
Fuel and Oil Storage: - Substances stored in self-bunded vessels or within bund on impermeable surface - Spill kit complete and accessible - Spill training completed - No evidence of spills on the ground							
TMP Implementation: - Traffic Management Plan (TMP) under effective implementation							

CESMP Items (edit as necessary based on approved CESMP)	Applicable		Compliance	Issues	Status (R)/(O)	Action Required/Taken	Target/ Actual Date
	Yes	No					
Community and Local Business Consultation: - Public signage of complaints procedure - Signs and fences restrict or direct pedestrians and public where appropriate.							
Materials Supply: - Quarry establishment and operations in fully compliance with PESMP - All quarries licensed to supply materials - All imported materials with appropriate biosecurity clearances							
Laydown Area: - Laydown areas established on pre-approved sites - Laydown areas dust levels managed efficiently - Traffic management plan correctly implemented at laydown site - Water run off management systems operating correctly - Dust management effectively implemented							

CESMP Items (edit as necessary based on approved CESMP)	Applicable		Compliance	Issues	Status (R)/(O)	Action Required/Taken	Target/ Actual Date
	Yes	No					
Workers Camp (if applicable): - Camp established in accordance with Code of Practice in PESMP Annex E. - Septic system cleaned and fully operational. - Waste stored in an appropriate location in a clean and tidy manner, segregated by waste type. - Workers living and recreational areas clean and properly equipped. - OHS, HIV/AIDS, GBV, Human Trafficking, CAE and other information available							
Monitoring - Weekly safeguards compliance report completed							

Compliant, Minor Non-Compliance, Significant Non-Compliance Status: (R) Resolved Issues, (O) Ongoing Issues

Notes:

Required Actions:

Environmental Specialist: **Signed:** **Date:**

Photos (attach as appropriate)

Appendix E Codes of Practice and Guidelines

- Solid Waste Management Plan
- OHS Management Plan
-
- Workers Camp Management Plan
- Quarry Management Plan

Solid Waste Management Plan Guidelines

The key objectives of this solid waste management plan (SWMP) guidelines is to assist the Contractor to develop a SWMP that:

1. Maximise the amount of material which is sent for reuse, recycling or reprocessing
2. Minimise the amount of material sent to the landfill
3. Satisfies the national waste management legislations
4. Statisfies the EHS requirements of the World Bank

When developing, and implementing a SWMP the following key elements should be considered:

1. Waste streams: identify which waste streams are likely to be generated and estimate the approximate amounts of materials

Undertake inventory of materials that can be reused, recycled or recovered from the construction site:

- Specific types of materials: a full list of options is provided in the assessment table below
- Amount of material expected
- Possible contamination by hazardous materials like asbestos or lead: these materials will limit reuse/recycling options and require special disposal.

Waste and/or Recyclable Materials		Destination		
		Reuse and recycling		Disposal
Possible Materials Generated	Estimated Volume (m3) or Area (m2) or weight (t)	On-site (How will materials be reused and/or recycled on site)	Off-site (Specify the proposed destination and/or recycling facility)	Specify the disposal site and permit if required.
Timber (specify type)				
Wood waste (e.g. MDF, plywood)				
Cardboard				
Ferrous materials (e.g. iron, steel)				
Nonferrous materials (e.g. copper wiring)				
Concrete				
Roofing tiles				
Ceramic tiles				
Gravel				
Gypsum board (e.g. drywall)				
Plaster				
Plumbing fixtures and fittings				

Carpet and underlay				
Stone				
Asphalt				
Glass				
Sand/fill				
Topsoil				
Green waste				
Asbestos				
Fluorescent light bulbs				
Hazardous materials (e.g. oils, paints, solvents)				
Plastics				
PVC				
Co-mingled recyclables (e.g. paper, cans, glass and plastic bottles, carboard, etc)				
General waste (e.g. food waste, contaminated food packaging, non-recyclable plastics)				
Mixed waste				

2. Services: identify an appropriately equipped waste management contractor who will provide compliant services for disposal of the waste streams generated.

3. On-site: understand how the waste management system (sorting and storage) will work on-site, including bin placement and access.

Determine storage requirements (separate bins or co-mingled), things to consider include:

- Ease of use: ensure that containers are easily accessible by workers and that storage areas are clearly sign posted
- Safety: ensure that the containers and storage can be managed safely, including limiting public access to the site and protecting against FOD
- Hazardous waste materials storage
- Aesthetics: ensure that the site appears orderly and will not raise concern from local residents or businesses – for example screening for dust and litter containment and daily collection of windblown material
- Establish a collection/delivery plan in collaboration with waste contractors for waste and recyclable materials generated on-site.

4. Clearly assign and communicate responsibilities: ensure those involved in the project are aware of their responsibilities in relation to the construction waste management plan.

5. Training: be clear about how the various elements of the WMP will be implemented.

6. Monitor: to ensure the plan is being implemented, monitor on-site as per the PESMP monitoring plan.

OHS MANAGEMENT PLAN GUIDELINES

1. Objective

The objective of this S guideline is to provide guidance on the:

- key principles involved in ensuring the health and safety of workers is protected;
- preparation of Health and Safety Sub-plans and associated Job Safety Analyses (JSA); and
- implementation of Health and Safety Sub-plans during project implementation.

The key reference document for this Guideline is the World Bank Group's *Environmental, Health, and Safety (EHS) Guidelines* (April 2007) together with the relevant Industry Sector EHS Guidelines available at www.ifc.org/ehsguidelines.

2. Principles

Employers must take all reasonable practicable steps to protect the health and safety of workers and provide and maintain a safe and healthy working environment. The following key principles are relevant to maintaining worker health and safety:

2.1 Identification and assessment of hazards

Each employer must establish and maintain effective methods for:

- Systematically identifying existing and potential hazards to employees;
- Systematically identifying, at the earliest practicable time, new hazards to employees;
- Regularly assessing the extent to which a hazard poses a risk to employees.

2.2 Management of identified hazards

Each employer must apply prevention and control measures to control hazards which are identified and assessed as posing a threat to the safety, health or welfare of employees, and where practicable, the hazard shall he eliminated. The following preventive and protective measures must be implemented order of priority:

- Eliminating the hazard by removing the activity from the work process;
- Controlling the hazard at its source through engineering controls;
- Minimizing the hazard through design of safe work systems;
- Providing appropriate personal protective equipment (PPE).

The application of prevention and control measures to occupational hazards should be based on comprehensive job safety analyses (JSA). The results of these analyses should be prioritized as part of an action plan based on the likelihood and severity of the consequence of exposure to the identified hazards.

2.3 Training and supervision

Each employer must take all reasonable practicable steps to provide to employees (in appropriate languages) the necessary information, instruction, training and supervision to protect each employee's

health and to manage emergencies that might reasonably be expected to arise in the course of work. Training and supervision extends to the correct use of PPE and providing employees with appropriate incentives to use PPE.

2.4 General duty of employees

Each employee shall:

- take all reasonable care to protect their own and fellow workers health and safety at the workplace and, as appropriate, other persons in the vicinity of the workplace;
- use PPE and other safety equipment supplied as required; and
- not use PPE or other safety equipment for any purpose not directly related to the work for which it is provided.

2.5 Protective clothing and equipment

Each employer shall:

- provide, maintain and make accessible to employees the PPE necessary to avoid injury and damage to their health;
- take all reasonably practicable steps to ensure that employees use that PPE in the circumstances for which it is provided; and
- make provision at the workplace for PPE to be cleaned and securely stored without risk of damage when not required.

The application of prevention and control measures to occupational hazards should be based on comprehensive job safety analyses (JSA). The results of these analyses should be prioritized as part of an action plan based on the likelihood and severity of the consequence of exposure to the identified hazards.

3. Design

Effective management of health and safety issues requires the inclusion of health and safety considerations during design processes in an organized, hierarchical manner that includes the following steps:

- identifying project health and safety hazards and associated risks as early as possible in the project cycle including the incorporation of health and safety considerations into the worksite selection process and construction methodologies;
- involving health and safety professionals who have the experience, competence, and training necessary to assess and manage health and safety risks;
- understanding the likelihood and magnitude of health and safety risks, based on:
    - the nature of the project activities, such as whether the project will involve hazardous materials or processes;
    - The potential consequences to workers if hazards are not adequately managed;
- designing and implementing risk management strategies with the objective of reducing the risk to human health;

- prioritising strategies that eliminate the cause of the hazard at its source by selecting less hazardous materials or processes that avoid the need for health and safety controls;
- when impact avoidance is not feasible, incorporating engineering and management controls to reduce or minimize the possibility and magnitude of undesired consequences;
- preparing workers and nearby communities to respond to accidents, including providing technical resources to effectively and safely control such events;
- Improving health and safety performance through a combination of ongoing monitoring of facility performance and effective accountability.

3.1 Job Safety Analysis

Job safety analysis (JSA) is a process involving the identification of potential health and safety hazards from a particular work activity and designing risk control measures to eliminate the hazards or reduce the risk to an acceptable level. JSAs must be undertaken for discrete project activities such that the risks can be readily identified and appropriate risk management measures designed.

This Guideline includes a template for a JSA that must be completed and included as an attachment to the Health and Safety Sub-plan.

4. Implementation

4.1 Documentation

A Health and Safety Plan must be prepared and approved prior to any works commencing on site. The H&S Plan must demonstrate the Contractor's understanding of how to manage safety and a commitment to providing a workplace that enables all work activities to be carried out safely. The H&S Plan must detail reasonably practicable measures to eliminate or minimise risks to the health, safety and welfare of workers, contractors, visitors, and anyone else who may be affected by the operations. The H&S Plan must be prepared in accordance with the World Bank's EH&S Guidelines and the relevant country health and safety legislation.

4.2 Training and Awareness

Provisions should be made to provide health and safety orientation training to all new employees to ensure they are apprised of the basic site rules of work at / on the site and of personal protection and preventing injury to fellow employees. Training should consist of basic hazard awareness, site-specific hazards, safe work practices, and emergency procedures for fire, evacuation, and natural disaster, as appropriate.

Visitors to worksites must be provided with a site induction prior to entering and must be escorted at all times while on site. This induction must include details of site hazards, provision of necessary PPE and emergency procedures. Visitors are not permitted to access to areas where hazardous conditions or substances may be present, unless appropriately inducted.

4.3 Personal Protective Equipment (PPE)

Personal Protective Equipment (PPE) provides additional protection to workers exposed to workplace hazards in conjunction with other facility controls and safety systems.

PPE is considered to be a last resort that is above and beyond the other facility controls and provides the worker with an extra level of personal protection. The table below presents general examples of occupational hazards and types of PPE available for different purposes. Recommended measures for use of PPE in the workplace include:·

- active use of PPE if alternative technologies, work plans or procedures cannot eliminate, or sufficiently reduce, a hazard or exposure;
- identification and provision of appropriate PPE that offers adequate protection to the worker, co-workers, and occasional visitors, without incurring unnecessary inconvenience to the individual;
- proper maintenance of PPE, including cleaning when dirty and replacement when damaged or worn out. Proper use of PPE should be part of the recurrent training programs for Employees
- selection of PPE should be based on the hazard and risk ranking described earlier in this section, and selected according to criteria on performance and testing established

Objective	**Workplace Hazards**	**Suggested PPE**
Eye and face protection	Flying particles, molten metal, liquid chemicals, gases or vapors, light radiation.	Safety Glasses with side-shields, protective shades, etc.
Head protection	Falling objects, inadequate height clearance, and overhead power cords.	Plastic Helmets with top and side impact protection.
Hearing protection	Noise, ultra-sound.	Hearing protectors (ear plugs or ear muffs).
Foot protection	Falling or rolling objects, pointed objects. Corrosive or hot liquids.	Safety shoes and boots for protection against moving & falling objects, liquids and chemicals.
Hand protection	Hazardous materials, cuts or lacerations, vibrations, extreme temperatures.	Gloves made of rubber or synthetic materials (Neoprene), leather, steel, insulating materials, etc.
Respiratory protection	Dust, fogs, fumes, mists, gases, smokes, vapors.	Facemasks with appropriate filters for dust removal and air purification (chemicals, mists, vapors and gases). Single or multi-gas personal monitors, if available.
	Oxygen deficiency	Portable or supplied air (fixed lines). On-site rescue equipment.
Body/leg protection	Extreme temperatures, hazardous materials, biological agents, cutting and laceration.	Insulating clothing, body suits aprons etc. of appropriate materials.

5. Monitoring

Occupational health and safety monitoring programs should verify the effectiveness of prevention and control strategies. The selected indicators should be representative of the most significant occupational,

health, and safety hazards, and the implementation of prevention and control strategies. The occupational health and safety monitoring program should include:

- **Safety inspection, testing and calibration**: This should include regular inspection and testing of all safety features and hazard control measures focusing on engineering and personal protective features, work procedures, places of work, installations, equipment, and tools used. The inspection should verify that issued PPE continues to provide adequate protection and is being worn as required.
- **Surveillance of the working environment**: Employers should document compliance using an appropriate combination of portable and stationary sampling and monitoring instruments. Monitoring and analyses should be conducted according to internationally recognized methods and standards.
- **Surveillance of workers health**: When extraordinary protective measures are required (for example, against hazardous compounds), workers should be provided appropriate and relevant health surveillance prior to first exposure, and at regular intervals thereafter.
- **Training**: Training activities for employees and visitors should be adequately monitored and documented (curriculum, duration, and participants). Emergency exercises, including fire drills, should be documented adequately.
- **Accidents and Diseases monitoring**. The employer should establish procedures and systems for reporting and recording:
    - Occupational accidents and diseases
    - Dangerous occurrences and incidents

These systems should enable workers to report immediately to their immediate supervisor any situation they believe presents a serious danger to life or health.

All reported occupational accidents, occupational diseases, dangerous occurrences, and incidents together with near misses should be investigated with the assistance of a person knowledgeable and competent in occupational safety. The investigation should:

- Establish what happened
- Determine the cause of what happened
- Identify measures necessary to prevent a recurrence

Job Safety Analysis (JSA)

Add Organisation Name:

Ref: Version:

Business details			
Business name:			
ABN:		Contact person:	
Address:		Contact position:	
Contact phone number		Contact email address:	
Job Safety Analysis details			
Work activity:		Location:	
Who are involved in the activity:		This job analysis has been authorised by: Name: ..... Position: ..... Signature: ..... Date:	
Plant and equipment used:			
Maintenance checks required:			
Tools used:			
Materials used:			
Personal protective equipment:			
Certificates, permits and/approvals required			
Relevant legislation, codes, standard MSDSs etc applicable to this activity			

Risk assessment

**Use the risk rating table to assess the level of risk for each job step.

		Likelihood				
		1	**2**	**3**	**4**	**5**
Consequence		**Rare** The event may occur in exceptional circumstances	**Unlikely** The event could occur sometimes	**Moderate** The event should occur sometimes	**Likely** The event will probably occur in most circumstances	**Almost Certain** The event is expected to occur in most circumstances
1	**Insignificant** No injuries or health issues	**LOW**	**LOW**	**LOW**	**LOW**	**MODERATE**
2	**Minor** First aid treatment	**LOW**	**LOW**	**MODERATE**	**MODERATE**	**HIGH**
3	**Moderate** Medical treatment, potential LTI	**LOW**	**MODERATE**	**HIGH**	**HIGH**	**CRITICAL**
4	**Major** Permanent disability or disease	**LOW**	**MODERATE**	**HIGH**	**CRITICAL**	**CATASTROPHIC**
5	**Extreme** Death	**MODERATE**	**HIGH**	**CRITICAL**	**CATASTROPHIC**	**CATASTROPHIC**

Risk rating:

Low risk: Acceptable risk and no further action required as long as risk has been minimised as possible. Risk needs to be reviewed periodically.

Moderate risk: Tolerable with further action required to minimise risk. Risk needs to be reviewed periodically.

High risk: Tolerable with further action required to minimise risk. Risk needs to be reviewed continuously.

Critical risk: Unacceptable risk and further action required immediately to minimise risk.

Catastrophic: Unacceptable risk and urgent action required to minimise risk.

Risk controls

The hierarchy of control can be used as an effective tool to deal with health and safety issues at work. Use the type of control suggested as measures to deal with the hazard. Aim to use control measures from as high on the hierarchy of control list as possible. If that is not possible the next option down the list or a combination of the measures should be implemented. The least effective control measure is the use of personal protective equipment (PPE) and it should be used as a last resort or a support to other control measures. Information and training should be integrated with all levels of control to explain how controls work.

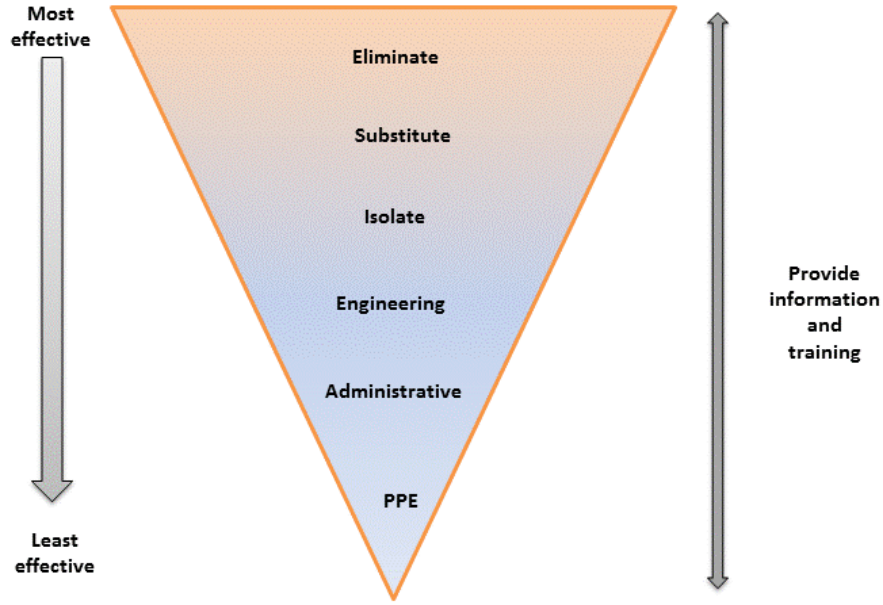
1. **Eliminate** – if it is possible, the hazard should be removed completely. For example, get rid of dangerous machines.

2. **Substitute** – replace something that produces the hazard with something that does not produce a hazard. For example, replacing solvent based paint with water based paint. Risk assessment on the substitution must be conducted to ensure that it will not pose another hazard.

3. **Engineering control** – isolate a person from the hazard by creating physical barrier or making changes to process, equipment or plant to reduce the hazard. For example, install ventilation systems.

4. **Administrative control** – change the way a person works by establishing policies and procedures to minimise the risks. For example, job scheduling to limit exposure and posting hazard signs.

5. Use **personal protective equipment** (PPE) – protect a person from the hazard by wearing PPE. For example, wearing gloves, safety glasses, hard hats and high-visibility clothing. PPE must be correctly fitted, used and maintained to provide protection.



Hierarchy of control

JSA – Action steps

Step No	Job step details	Potential hazards	Risk rating**	How to control risks***	Name of persons responsible for work

Review number: Version:
Review number: Version:

This job safety analysis has been developed through consultation with our employees and has been read, understood and signed by all employees undertaking the works:		
Print Names:	**Signatures:**	**Dates:**

Review No	01	02	03	04	05	06	07	08
Initial:								
Date:								

Worker Planning and Management Guidelines

GENERAL

The Workers Camp Management Plan will be compliant with the specific prescriptions of the ESMP.

OBJECTIVES

To provide guidelines on the recruitment of workers and the selection, development, management, maintenance and restoration of workers accommodation camp sites in order to avoid or mitigate against significant adverse environmental and social effects, both transient and permanent.

WORKER RECRUITMENT

The Contractor is required to minimise the number of skilled workers that are recruited from overseas. No unskilled labour will be sourced from overseas. The Contractor will maximise the number of skilled and unskilled workers that are recruited from the Nanumaga community from the labour force inventory that is being undertaken by the Kaupule.

The Contractor will be required to provide justification for any skilled workers that the wish to recruit from overseas and explain why this position cannot be filled locally on Nanumaga or Funafuti.

WORKERS CAMP FACILITIES

All facilities in the Workers Camp must be complaint with the stipulations of the ESMP and the IFC Workers Accommodations and Standards. The camp shall be provided with the following minimum facilities:

- Canteen, dining hall and dormitories as required shall be constructed of suitable materials to provide a safe healthy environment for the workforce and which facilitate regular cleaning and the provision of ventilation and illumination.
- Ablution block with a minimum of one water closet toilet, one urinal and one shower per 10 personnel engaged either permanently or temporarily on the project. Separate toilet and wash facilities shall be provided for male and female employees.
- A sick bay and first aid station.
- Sewage collection facilities to allow for the treatment of black and grey wastewater discharge from toilets, wash rooms, showers, kitchens, laundry and the like. The management of all camp wastewater water shall be as prescribed in the PESMP.
- All camp facilities shall be maintained in a safe clean and or appropriate condition throughout the construction period.
- The contractor shall provide, equip, and maintain adequate first aid stations and erect conspicuous notice boards directing where these are situated and provide all required transport. The contractor shall comply with the government medical or labour requirements at all times and provide, equip and maintain dressing stations where directed and at all times have experienced first aid personnel available throughout the works for attending injuries.
- Throughout the period of the contract the employer, the engineer, or their representatives shall have uninterrupted access to and from the camp for the purpose of carrying out routine inspections of all buildings, facilities or installations of whatever nature to ensure compliance with this specification.

WORKERS CAMP OPERATIONS

- The Contractor will be required to provide calculations of the amount of freshwater needed for the number of workers accommodated at the camp and is to demonstrate how they will provide this water. No currently existing freshwater resources on Nanumaga island will be used for the workers or for worker camp operations.

- The Contractor will be required to provide adequate provisions for the workers for the duration of the project so as not to deplete the available food sources of the community.

- All wastewater, solid waste, fresh water usage, noise levels, handling and storage of hazardous materials shall be as prescribed in the PESMP.

MANAGEMENT OF OFF DUTY WORKERS

- The Contractor will prepare a specific Code of Conduct to describe the expected behaviours of their project worker in relation to the local communities and their social sensitivities.

- The Contractor is to ensure that all overseas project staff undergo a cultural familiarisation session as part of their induction training. The purpose of this induction will be to introduce the project staff to the cultural sensitivities of the local communities and the expected behaviours of the staff in their interactions with these communities. The MICRO PMU shall provide to the Contractor a list of approved service providers which shall include recognized NGOs and others for conducting this training.

- The Contractor is to stipulate the conditions under which visitors may attend the workers camp. Strict visiting hours should be enforced and all visitors will be required to sign in and out of the workers camp.

- The Contractor shall ensure that basic social/collective rest spaces are provided equipped with seating within the Workers Camp to help minimise the impact that the workers would have on the leisure and recreational facilities of the nearby communities. Provisions should also be made to provide the workers with an active recreation space within the camp.

WORKERS CAMP MANAGEMENT PLAN

A Workers Camp Management Plan shall be submitted as an annex to the CEMSP. The Workers Camp Management Plan shall describe how this document, the ESMP and the IFC Guidelines shall be implemented in the following:

- Recruitment strategy
- Accommodation
- Canteen and dining areas
- Ablutions
- Water supply
- Wastewater management system
- Proposed power supply
- Full Code of Conduct for Workers
- Recreational/leisure facilities for workers
- Visitors to the Workers Camp
- Interactions with the local communities

QUARRY MANAGEMENT SUB-PLAN GUIDELINE

1. Objective

The objective of this Sub-plan is to prescribe the safety requirements for the development and operation of quarries as well as to define procedures and works that shall be used to mitigate against adverse environmental effects.

2. Planning and Design

2.1 Quarry Sites

During the planning of a development project which will involve earthworks, potential quarry sites shall be identified. The potential sites shall be discussed during public consultations in regard to the project.

2.2 Land and Non-Land Acquisition

The Contractor will make lease arrangements with the titled land owner prior to any quarrying. The lease arrangement will follow the procedures (Construction Materia) in Appendix L and will also include the agreed fee for the aggregates as well as the cost of any lost crops. The lease agreement must be approved by the Supervision Engineer and included in the CESMP. The government issued land lease rates shall be applied and all lease agreements will be entered into knowingly and voluntarily.

The consultant shall define potential quarry sites that may be used for the construction of the project. Such potential sites shall be identified on plans drawn to an appropriate scale and the plans shall be displayed and discussed during public consultations.

2.3 Site Plans

Site plans for quarry development shall be included in drawings issued for tender and the specification shall define the requirements of the contract in relation to quarry development and operation. The following design directives shall apply:

It is desirable that no quarry boundary is located within 500 metres of a public area or town or village nor within 300 metres of any isolated dwelling. The designer shall provide site plans of potential quarry sites in the tender documents. Such plans shall show existing level contours, access road, natural watercourses and other relevant topographical features.

The area defined for quarry operation shall be based on the volume of aggregate to be quarried and hence the extent of quarry operation. It shall also provide the area necessary for stockpiling stripped overburden, the establishment of a crusher and screening plant, the stockpiling of crushed aggregate and the installation of stormwater cut off drains, silt retention ponds and staff amenities.

3. Construction

3.1 Quarry Management Plan

Prior to commencing any physical works on site, a quarry development plan shall be prepared and approved by the Engineer and ECD. The quarry management plan shall have due regard for the following:

- All operations shall comply with the laws of the Solomon Islands.
- Show the extent of overburden stripping and the stockpiling of same for later site restoration.
- Show the details and location of surface water drainage from the quarry site and the silt retention pond that will be constructed to settle silt and soil contaminated water prior to its discharge to a natural water course.

- Show details of catch drains installed to intercept overland flow of surface water to prevent its discharge into the quarry area.
- State safety precautions to be implemented.
- Show facilities such as guardhouse, amenities block and other facilities to be constructed.
- Show location of aggregate stockpiles.
- List plant and equipment to be used in the development and operation of the quarry.
- Show the site of the proposed magazine for the storage of explosives.

On no account shall physical works be commenced for development of the quarry until an agreed Quarry Management Plan has been submitted to the Engineer. Thereafter all quarry operation shall be the entire responsibility of the contractor and shall be carried out in terms of the agreed management plan.

3.2 Safety Provisions

The following provisions shall be made in the operation of any quarry for the safety of all employees or persons on site:

- A daily register is to be maintained identifying all personnel who are engaged in or about the quarry.
- All persons engaged in the operation of the quarry shall be trained and have sufficient knowledge of and experience in the type of operation in which they are engaged.
- All persons engaged in the operation of the quarry shall be adequately supervised.
- Approved lighting shall be provided in inside working places where natural lighting is inadequate to provide safe working conditions.
- All personnel engaged in quarry operations shall wear a protective helmet of approved type at all times when on the quarry site.
- All personnel shall wear protective footwear while engaged in quarry operations.
- All employees engaged in operations on a quarry face at a height greater than 1.5 metres above the level of the quarry floor or bench floor shall be attached at all times to a properly secured safety rope by means of a safety belt.
- All persons whose duty it is to attend to moving machinery in or about any quarry shall wear close fitting and close fastened garments. Their hair shall be cut short or securely fixed and confined close to their head.
- All boilers, compressors, engines, gears, crushing and screening equipment and all moving parts of machinery shall be kept in a safe condition. Every flywheel and exposed moving parts of machinery shall be fitted with safety screens or safety fenced as appropriate.
- All elevated platforms, walkways and ladders shall be provided with adequate hand or safety rails or cages.
- Machinery shall not be cleaned manually while it is in motion nor oiled or greased while in motion.

Should any of the above safety measures be ignored or inoperative at any time then the engineer shall direct that quarry operations cease until all safety measures are provided and are in operating order.

3.3 Provision of First Aid

At every quarry there shall be provided the following first aid equipment:

- A suitably constructed stretcher with a warm, dry blanket.
- A first-aid box equipped to a standard acceptable to the Ministry of Health.

The quarry manager shall at least once every working week personally inspect the first-aid equipment to ensure that it complies with the requirements of this specification. Any supplies used from the first-aid box shall be replaced forthwith.

A person trained in first aid to the injured shall be available at the quarry during all operational periods of whatever nature.

3.4 Health Provisions

At every quarry a sufficient number of toilets and urinals shall be provided for the use of employees and shall be properly maintained and kept in a clean condition.

At every quarry a supply of potable water, sufficient for the needs of the persons employed, shall be provided. If persons are employed in places remote from the source of water supply, suitable clean containers of potable water shall be provided for their use.

Suitable facilities for washing shall be provided and maintained in a clean and tidy condition to the satisfaction of the employer, and those facilities shall be conveniently accessible for the use of persons employed in or about the quarry.

3.5 Quarry Manager

A manager who is experienced in all aspects of quarry operation and in particular safety procedures shall control every quarry. The manager shall be personally responsible for ensuring that all safety facilities are available and that safety procedures are followed.

The contractor shall nominate an experienced quarry manager in the submission of the tender for the works. The quarry manager shall have a recognised current “A” grade quarry manager’s surface certificate and a recognised current quarry shot firer’s certificate.

In the submission of the quarry manager’s credentials with the tender documents, the contractor shall ensure that the credentials include certified true copies of the following documents:

- Grade quarry manager’s surface certificate
- Quarry shot firer’s certificate
- References from previous clients or employers demonstrating experience in:
    - The design and layout of quarries including the layout of benches, faces, access roads, drainage and crushing plant.
    - The methods of working quarry faces with particular reference to face stability and the safety of persons employed in or about the quarry
    - The safety of the public at large
    - The provision for and application of first aid.

The quarry manager’s duties shall include:

- daily, within two hours immediately before the commencement of the first working shift of the day in any part of the quarry, inspect every working place and travelling road, and all adjacent places from which danger might arise, and shall forthwith make a true report of the inspection in a record book kept for the purpose at the quarry. The record book shall be accessible to the engineer and the persons employed in or about the quarry.
- at least once in every 24 hours examine the state of the safety appliances or gear connected with quarrying operations in the quarry, and shall record the examination in the record book.
- once in each week carefully examine the buildings, machinery, faces, benches, and all working places used in the quarrying operations, and shall forthwith after every such examination record in writing in the record book his opinion as to their condition and safety and as to any alterations

or repairs required to ensure greater safety of the persons employed in the working of the quarry. The manager shall then ensure that any such alterations or repairs are carried out.

3.6 Vegetation

Vegetation shall be stripped from the proposed quarry development area. Before stripping any vegetation a survey shall be undertaken to determine the presence of any rare plant species. All necessary steps shall be taken to save plants classified as important. Care shall be taken to avoid damage to any vegetation outside the defined quarry area. On no account shall burning of vegetation be permitted.

3.7 Overburden Stripping

Overburden stripped from any proposed quarry area shall be stockpiled clear of the quarry operation to be used for site restoration at the completion of operations. Stockpiles shall be shaped and smoothed to minimise ingress of rainwater.

Surface water run off from stockpiles shall be intercepted by perimeter drains which shall be discharged to silt retention ponds.

Batters in overburden excavation shall be sloped to ensure they are safe and stable against failure.

The maximum height of any batter in overburden shall be 3 metres. Any higher batter in overburden shall have an intermediate bench at least 3.5 metres in width. Such benches shall be shaped and drained.

3.8 Blasting Operations

Blasting operations shall be conducted in a manner that will not cause danger to life or property.

All explosives shall be stored in purpose built locked magazines on a site within the quarry boundary but remote from blasting operations. Detonators shall be stored in a separate locked magazine but similarly sited.

A blasting operations manual shall be prepared for any quarry and such manual, which shall be maintained by the quarry manager, shall stipulate procedures for at least the following:

- Operation of magazines for the storage of explosives and for the storage of detonators.
- The quantity of explosive that may be removed from a magazine at any one time.
- The procedure for quarry explosive cases.
- Persons allowed to fire shots.
- Explosives to be carried in securely covered containers.
- Tamping of explosives.
- Diameter of drill holes.
- Time when charges are to be fired.
- Detonation delay.
- Firing warnings.
- Blasting shelters.
- Treatment of misfired charges
- Inspection of work site after each detonation by the quarry manager or an approved person appointed in writing by the quarry manager.

A person specially appointed in writing by the quarry manager for the purpose shall be in charge of every magazine, and shall have keys to one of the locks. That person shall be responsible for the safe storage of explosives contained therein, for the distribution of explosives therefrom, and for the keeping of accurate records of stocks and issues in a book provided for the purpose. A second person, appointed by the

employer shall have keys to the second lock. Both persons shall be present to unlock the magazine, and note the removal of stock and ensure both locks are subsequently secured.

- Explosives shall be used in the same order as that in which they were received into the magazine.
- Naked lights shall not be introduced into a magazine or into any working place in a quarry where explosives are temporarily stored.
- Explosives shall not be taken from a magazine in quantities exceeding that required for use during one shift, and any surplus explosives shall be returned to the magazine at the end of that shift.
- No case or carton containing explosives shall be opened in the storage area of any magazine.
- Instruments made solely of wood, brass, or copper shall be used in opening cases or cartons of explosives, and the contractor shall provide and keep suitable instruments for that purpose.
- The preparation of charges and the charging, tamping, and firing of all explosive charges in or about a quarry shall be carried out under the personal supervision of the quarry manager.

3.9 Dust Suppression

Operation of any quarry shall incorporate dust suppression measures. Dust generation during blasting operations shall be minimised. All haul roads shall be regularly dampened by spray bars fitted to water tankers or similar systems in order to minimise dust generation by traffic movements. Crushers, screens and stockpiles shall be dampened by appropriate water sprays to minimise dust generation.

4. Rehabilitation

A realistic Rehabilitation Plan will be developed and rehabilitation planning shall begin as early as possible in the quarry life cycle in order to be fully effective. Once objectives are set, rehabilitation activities should be defined and performed in order to achieve these goals.

The objectives of a rehabilitation plan should be based upon the specific characteristics of the extraction site and should reflect:

- Legislative requirements
- Health and safety considerations
- Environmental and social characteristics of the quarry and surrounding area
- Biodiversity of area
- Ecosystem services provided within the sites ecological boundaries
- Operating plan for the quarry – technical feasibility of the rehabilitation objectives will be affected by the manner in which the quarry operates
- Status of the quarrying area of existing operating site
- Characteristics of the deposit (geology and hydrology)
- Impacts arising from operation of the site
- Post closure land use plan

Rehabilitation plans should adopt the following structure:

a. Context
b. Objectives
c. Action plans
d. Prioritised actions and schedule
e. Monitoring and evaluation
f. Rehabilitation and post-closure costs

g. Roles and responsibilities
h. Compatibility with biodiversity

5. Consent

5.1 Consent Required

In accordance with the Mines and Minerals Act 1996) and any other relevant legislation, any person who engages in quarry development or operations shall first obtain Building Materials Permit for the proposed activity.

5.2 Application for Consent

Permit applications shall be on an approved form and shall be submitted by to the Commissioner. Applications shall be accompanied by such other documents as ECD may require. The Commissioner must not issue or renew any permit unless a copy of the application has been exhibited for a period of not less than 30 days at the headquarters of the area council of the local government council responsible for the land which is the subject of the application.

5.3 Special Conditions

The Commissioner may, by notice served on the applicant, require further information in respect of the application as the Commissioner considers relevant or necessary. The applicant must comply with the notice.

Appendix F PAIP Code of Conduct

CODES OF CONDUCT AND ACTION PLAN FOR IMPLEMENTING ESHS AND OHS STANDARDS, AND PREVENTING GENDER BASED VIOLENCE ON PACIFIC ISLAND COUNTRY TRANSPORT PROJECTS

Background

The purpose of these *Codes of Conduct and Action Plan for Implementing ESHS and OHS Standards, and Preventing Gender Based Violence* is to introduce a set of key definitions, core Codes of Conduct, and guidelines for application on World Bank financed transport projects in Pacific Island Countries (PICs) that:

i. clearly define obligations on all project staff (including sub-contractors and day workers) with regard to implementing the project's environmental, social, health and safety (ESHS) and occupational health and safety (OHS) requirements, and;
ii. help prevent, report and address Gender Based Violence (GBV) within the work site and in its immediate surrounding communities.

The application of these Codes of Conduct will help ensure the project meets its ESHS and OHS objectives, as well as preventing and/or mitigating the risks of GBV on the project and in the local communities.

These Codes of Conduct are to be adopted by all those working on the project—including subcontractors—and are meant to:

i. create awareness of the ESHS and OHS expectations on the project;
ii. create common awareness about GBV and:
    (a) ensure a shared understanding that GBV has no place on the project; and,
    (b) create a clear system for identifying, responding to, and sanctioning GBV incidents.

Ensuring that all project staff understand the values of the project, understanding expectations for all employees, and acknowledging the consequences for violations of these values, will help to create smoother, more respectful and productive project implementation thereby helping ensure that the project's development objectives will be achieved.

Definitions

The following definitions apply:

ESHS and General Project

- **Environmental, Social, Health and Safety (ESHS):** an umbrella term covering issues related to the impact of the project on the environment, communities and workers.
- **Occupational Health and Safety (OHS):** Occupational health and safety is concerned with protecting the safety, health and welfare of people engaged in work or employment, and the surrounding communities. The enjoyment of these standards at the highest levels is a basic human right that should be accessible by each worker.
- **Key Documents:**
    - **Project Environmental and Social Management Plan (ESMP):** The safeguards document prepared prior to project approval by the World Bank identifying the activities to be undertaken, key risks (based on ESIA if available), and their mitigation measures.
    - **Contractors Environmental and Social Management Plan (C-ESMP):** the plan prepared by the contractor outlining how they will implement the works activities in accordance with the project's environmental and social management plan (ESMP). As shown in Figure 2, the C-ESMP also contains a number of management plans, in particular, the OHS Management Plan.
    - **Codes of Conduct:** the Codes of Conduct adopted for the project (or individual companies) covering the commitment of the company, and the responsibilities of managers and individuals with regards to ESHS, OHS and GBV.
- **Key Project Actors:**
    - **Consultant:** is as any firm, company, organization or other institution that has been awarded a contract to provide consulting services to the project, and has hired managers and/or employees to conduct this work.
    - **Contractor:** is any firm, company, organization or other institution that has been awarded a contract to conduct infrastructure development works for the project and has hired managers and/or employees to conduct this work. This also includes sub-contractors hired to undertake activities on behalf of the contractor.
    - **Manager:** is any individual offering labor to the contractor or consultant, on or off the work site, under a formal or informal employment contract and in exchange for a salary, with responsibility to control or direct the activities of a contractor's or consultant's team, unit, division or similar, and to supervise and manage a pre-defined number of employees.
    - **Employee:** is any individual offering labor to the contractor or consultant within country on or off the work site, under a formal or informal employment contract or arrangement, typically, but not necessarily (e.g. including unpaid interns and volunteers), in exchange for a salary, with no responsibility to manage or supervise other employees.
- **Grievance Redress Mechanism (GRM):** is the process established by a project to receive and address complaints related to the project—not just GBV but related to any aspect of the project. The GRM needs to: (i) allow for multiple channels to receive complaints; (ii) be readily accessible, allowing complaints to be made in different ways; and, (iii) have appropriate protocols to handle GBV complaints including empathetic listening and assurance of confidentiality.
- **Work Site:** is the area in which infrastructure development works are being conducted, as part of the project. Consulting assignments are considered to have the areas in which they are active as their work sites.

- **Work Site Surroundings:** is the 'Project Area of Influence' which are any area, urban or rural, directly affected by the project, including all human settlements found in it.

GBV

Key definitions: With reference to the focus areas for in Figure 1, there are a number of key definitions for understanding GBV:

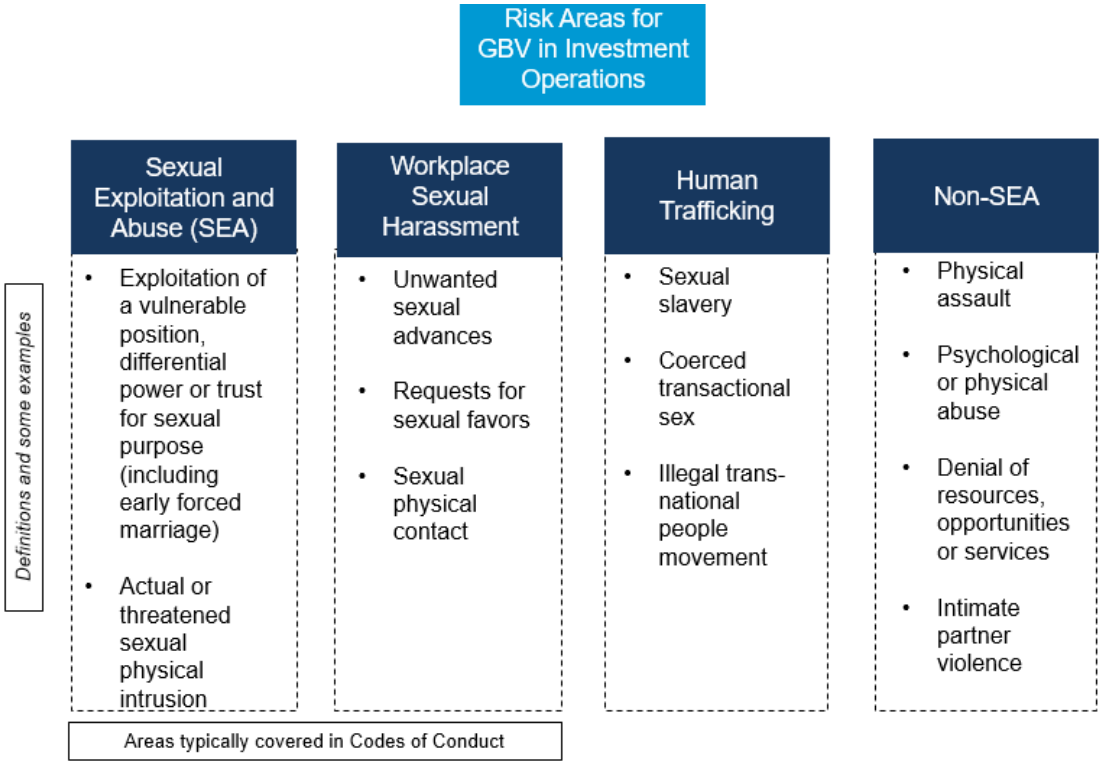


Figure 1: Types of GBV that may be Exacerbated by Investment Operations

Codes of Conduct Focus
These Codes of Conduct specifically focus on the following forms of GBV - Sexual Exploitation and Abuse (SEA) and Sexual Harassment as they represent high risk areas in the context of investment operations.

- **Gender Based Violence (GBV):** is an umbrella term for any harmful act that is perpetrated against a person's will and that is based on socially ascribed (that is, gender) differences between male and female individuals. GBV includes acts that inflict physical, mental, or sexual harm or suffering; threats of such acts; and coercion and other deprivations of liberty, whether occurring in public or in private life.

- **Sexual Exploitation and Abuse (SEA):** Sexual exploitation is a facet of GBV that is defined as any actual or attempted abuse of a 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 the context of World Bank supported projects, SEA occurs against a beneficiary or member of the community.

    - **Sexual abuse** is further defined as the actual or threatened physical intrusion of a sexual nature whether by force or under unequal or coercive conditions.

    - **Child sexual abuse:** is defined by the age of the survivor. It includes different forms of sexual violence, involves either explicit force or coercion or cases in which the survivor cannot consent because of his or her age. Sexual activity with anyone below the age of 18, except in cases of pre-existing marriage, constitutes child sexual abuse. Mistaken belief regarding the age of the child and/or receipt of consent from the child is not a defense.

- **Sexual harassment:** occurs between personnel and staff on the project, and involves any unwelcome sexual advance or unwanted verbal or physical conduct of a sexual nature. (e.g. looking somebody up and down; kissing; whistling and catcalls; in some instances, giving personal gifts). The distinction between the SEA and sexual harassment is important so that agency policies and staff trainings can include specific instruction on the procedures to report each.

    - **Sexual favors:** is a form of sexual harassment and includes making promises of favorable treatment (e.g. promotion) or threats of unfavorable treatment (e.g. loss of job) dependent on sexual acts—or other forms of humiliating, degrading or exploitative behavior.

- **Child protection (CP):** Is an activity or initiative designed to protect children from any form of harm, particularly arising from child abuse and exploitation.

    - **Child:** is used interchangeably with the term ‘minor’ and refers to a person under the age of 18. This is in accordance with Article 1 of the United Nations Convention on the Rights of the Child.

    - **Child Abuse and Exploitation (CAE):** the physical, sexual or psychological harm of children including using for profit, labor, sexual gratification, or some other personal or financial advantage. This also includes other activities such as using computers, mobile phones, or video and digital cameras appropriately, and never to exploit or harass children or to access child pornography through any mediums

    - **Grooming:** are behaviors that make it easier for a perpetrator to procure a child for sexual activity. For example, an offender might build a relationship of trust with the child, and then seek to sexualize that relationship (for example by encouraging romantic feelings or exposing the child to sexual concepts through pornography).

    - **Online Grooming:** is the act of sending an electronic message to a recipient who the sender believes to be a minor, with the intention of developing a relationship of trust that can be abused by procuring the recipient to engage in or submit to sexual activity with another person, including but not necessarily limited to the sender. This includes engaging in online sexual activities, such as messages, videos and photos with sexual content either sent to or procured from a child.

Other definitions: In addressing the issues raised above related to GBV there are a number of considerations which need to be clearly defined:

- **Rape:** non-consensual penetration (however slight) of the vagina, anus or mouth with a penis, other body part, or an object.

- **Consent:** refers to when an adult makes an informed choice to agree freely and voluntarily to do something. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even if

national legislation of the country into which the CoC is introduced has a lower age. Mistaken belief regarding the age of the child and consent from the child is not a defense. There is **no** consent when agreement is obtained through:

  - The use of threats, force or other forms of coercion, abduction, fraud, manipulation, deception, or misrepresentation,
  - The use of a threat to withhold a benefit to which the person is already entitled, or,
  - A promise made to the person to provide a benefit.

- **Perpetrator:** the person(s) who commit(s) or threaten(s) to commit an act or acts of GBV.
- **Survivor/Survivors:** the person(s) adversely affected by GBV. Women, men and children can be survivors of GBV.
- **GBV Service Provider:** is an independent organization trusted by the local communities with the skills and resources to provide support to survivors of GBV, as well as training to reduce the risks of GBV.
- **Third-Party Monitor (TPM) or Independent Verification Agent (IVA):** an organization commissioned to independently monitor and report on the effectiveness of the implementation of the GBV activities on the project. TPMs are financed independent of the project; IVAs are financed by the project.
- **Investigation and resolution of GBV allegations:**
  - **GBV Allegation Procedure:** is the prescribed procedure to be followed when reporting incidents of GBV.
  - **Accountability Measures:** are the measures put in place to ensure the confidentiality of survivors and to hold contractors, consultants and the client responsible for instituting a fair system of addressing cases of GBV.
  - **Response Protocol:** are the mechanisms set in place to respond to cases of GBV.
  - **GBV Complaints Team (GCT):** a team established by the project to address GBV issues.

Codes of Conduct

This chapter presents three Codes of Conduct for use:

i. **Company Code of Conduct:** Commits the company to addressing EHSH, OHS and GBV issues;
ii. **Manager's Code of Conduct:** Commits managers to implementing the Company Code of Conduct, as well as those signed by individuals; and,
iii. **Individual Code of Conduct:** Code of Conduct for everyone working on the project, including managers.

Company Code of Conduct

Implementing ESHS and OHS Standards

Preventing Gender Based Violence

The company is committed to ensuring that the project is implemented in such a way which minimizes any negative impacts on the local environment, communities, and its workers. This will be done by respecting the environmental, social, health and safety (ESHS) standards, and ensuring appropriate occupational health and safety (OHS) standards are met. The company is also committed to creating and maintaining an environment where children under the age of 18 will be protected, and where Sexual Exploitation and Abuse (SEA) and sexual harassment have no place. Improper actions towards children, SEA and sexual harassment are acts of Gender Based Violence (GBV) and as such will not be tolerated by any employee, sub-contractors, supplier, associate, or representative of the company.

Therefore, to ensure that all those engaged in the project are aware of this commitment, the company commits to the following core principles and minimum standards of behavior that will apply to all company employees, associates, and representatives, including sub-contractors and suppliers, without exception:

General

1. The company—and therefore all employees, associates, representatives, sub-contractors and suppliers—commits to complying with all relevant national laws, rules and regulations.
2. The company commits to full implementing its 'Contractors Environmental and Social Management Plan' (C-ESMP) as approved by the client.
3. The company commits to treating women, children (persons under the age of 18), and men with respect regardless of race, color, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status. Acts of GBV are in violation of this commitment.
4. The company shall ensure that interactions with local community members are done with respect and non-discrimination.
5. Demeaning, threatening, harassing, abusive, culturally inappropriate, or sexually provocative language and behavior are prohibited among all company employees, associates, and its representatives, including sub-contractors and suppliers.
6. The company will follow all reasonable work instructions (including regarding environmental and social norms).
7. The company will protect and ensure proper use of property (for example, to prohibit theft, carelessness or waste).

Health and Safety

8. The company will ensure that the project's OHS Management Plan is effectively implemented by company's staff, as well as sub-contractors and suppliers.
9. The company will ensure that all persons on-site wear prescribed and appropriate personal protective equipment, preventing avoidable accidents, and reporting conditions or practices that pose a safety hazard or threaten the environment.
10. The company will:
    i. prohibit the use of alcohol during work activities.
    ii. prohibit the use of narcotics or other substances which can impair faculties at all times.

11. The company will ensure that adequate sanitation facilities are available on site and at any worker accommodations provided to those working on the project.

12. The company will not hire children under the age of 18 for construction work, or allow them on the work site, due to the hazardous nature of construction sites.

Gender Based Violence

13. Acts of GBV constitute gross misconduct and are therefore grounds for sanctions, which may include penalties and/or termination of employment and, if appropriate, referral to the Police for further action.
14. All forms of GBV, are unacceptable, regardless of whether they take place on the work site, the work site surroundings, at worker's camps or within the local community.
15. Sexual harassment of work personnel and staff (e.g. making unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature) are acts of GBV and are prohibited.
16. Sexual favors (e.g. making promises of favorable treatment such as promotions, threats of unfavorable treatment such as losing a job, payments in kind or in cash dependent on sexual acts) and any form of humiliating, degrading or exploitative behavior are prohibited.
17. The use of prostitution in any form at any time is strictly prohibited.
18. Sexual contact or activity with children under 18—including through digital media—is prohibited. Mistaken belief regarding the age of a child is not a defense. Consent from the child is also not a defense or excuse.
19. Unless there is full consent[21] by all parties involved in the sexual act, sexual interactions between the company's employees (at any level) and members of the communities surrounding the work place are prohibited. This includes relationships involving the withholding/promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex (including prostitution). Such sexual activity is considered "non-consensual" within the scope of this Code.
20. In addition to company sanctions, legal prosecution of those who commit acts of GBV will be pursued if appropriate.
21. All employees, including volunteers and sub-contractors are highly encouraged to report suspected or actual acts of GBV by a fellow worker, whether in the same company or not. Reports must be made in accordance with project's GBV Allegation Procedures.
22. Managers are required to report and act to address suspected or actual acts of GBV as they have a responsibility to uphold company commitments and hold their direct reports responsible.

Implementation

To ensure that the above principles are implemented effectively the company commits to:

23. Ensuring that all managers sign the project's 'Manager's Code of Conduct' detailing their responsibilities for implementing the company's commitments and enforcing the responsibilities in the 'Individual Code of Conduct'.
24. Ensuring that all employees sign the project's 'Individual Code of Conduct' confirming their agreement to comply with ESHS and OHS standards, and not to engage in activities resulting in GBV, child endangerment or abuse, or sexual harassment.

[21] **Consent:** refers to when an adult makes an informed choice to agree freely and voluntarily to do something. There is **no** consent when agreement is obtained through the use of threats, force or other forms of coercion, abduction, fraud, manipulation, deception, or misrepresentation; the use of a threat to withhold a benefit to which the person is already entitled, or; a promise made to the person to provide a benefit. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even if national legislation of the country into which the Code of Conduct is introduced has a lower age. Mistaken belief regarding the age of the child and consent from the child is not a defense.

25. Displaying the Company and Individual Codes of Conduct prominently and in clear view at workers' camps, offices, and in in public areas of the work space. Examples of areas include waiting, rest and lobby areas of sites, canteen areas and health clinics.
26. Ensuring that posted and distributed copies of the Company and Individual Codes of Conduct are translated into the appropriate language of use in the work site areas as well as for any international staff in their native language.
27. Ensuring that an appropriate person is nominated as the company's 'Focal Point' for addressing GBV issues, including representing the company on the GBV Complaints Team (GCT) which is comprised of representatives from the client, contractor(s), the supervision consultant, and local GBV Service Provider.
28. Ensuring that an effective GBV Action Plan is developed in consultation with the GCT which includes as a minimum:
    i. **GBV Allegation Procedure** to report GBV issues through the project Grievance Redress Mechanism (Section 4.3 Action Plan);
    ii. **Accountability Measures** to protect confidentiality of all involved (Section 4.4 Action Plan); and,
    iii. **Response Protocol** applicable to GBV survivors and perpetrators (Section 4.7 Action Plan).
29. Ensuring that the company effectively implements the agreed final GBV Action Plan, providing feedback to the GCT for improvements and updates as appropriate.
30. Ensuring that all employees attend an induction training course prior to commencing work on site to ensure they are familiar with the company's commitments to ESHS and OHS standards, and the project's GBV Codes of Conduct.
31. Ensuring that all employees attend a mandatory training course once a month for the duration of the contract starting from the first induction training prior to commencement of work to reinforce the understanding of the project's ESHS and OHS standards and the GBV Code of Conduct.

I do hereby acknowledge that I have read the foregoing Company Code of Conduct, and on behalf of the company agree to comply with the standards contained therein. I understand my role and responsibilities to support the project's OHS and ESHS standards, and to prevent and respond to GBV. I understand that any action inconsistent with this Company Code of Conduct or failure to act mandated by this Company Code of Conduct may result in disciplinary action.

Company name: _____

Signature: _____

Printed Name: _____

Title: _____

Date: _____

Manager's Code of Conduct

Implementing ESHS and OHS Standards

Preventing Gender Based Violence

The company is committed to ensuring that the project is implemented in such a way which minimizes any negative impacts on the local environment, communities, and its workers. This will be done by respecting the environmental, social, health and safety (ESHS) standards, and ensuring appropriate occupational health and safety (OHS) standards are met. The company is also committed to creating and maintaining an environment where children under the age of 18 will be protected, and where Sexual Exploitation and Abuse (SEA) and sexual harassment have no place. Improper actions towards children, SEA and sexual harassment are acts of Gender Based Violence (GBV) and as such will not be tolerated by any employee, sub-contractors, supplier, associate, or representative of the company.

Managers at all levels have a responsibility to uphold the company's commitment. Managers need to support and promote the implementation of the Company Code of Conduct. To that end, managers must adhere to this Manager's Code of Conduct and also to sign the Individual Code of Conduct. This commits them to supporting the implementation of the Contractor's Environmental and Social Management Plan (C-ESMP), the OHS Management Plan, and developing systems that facilitate the implementation of the GBV Action Plan.

Managers need to maintain a safe workplace, as well as a GBV-free environment at the workplace and in the local community. Their responsibilities to achieve this include but are not limited to:

Implementation

1. To ensure maximum effectiveness of the Company and Individual Codes of Conduct:
    i. Prominently displaying the Company and Individual Codes of Conduct in clear view at workers' camps, offices, and in public areas of the work space. Examples of areas include waiting, rest and lobby areas of sites, canteen areas and health clinics.
    ii. Ensuring all posted and distributed copies of the Company and Individual Codes of Conduct are translated into the appropriate language of use in the work site areas as well as for any international staff in their native language.
2. Verbally and in writing explain the Company and Individual Codes of Conduct to all staff.
3. Ensure that:
    i. All direct reports sign the 'Individual Code of Conduct', including acknowledgment that they have read and agree with the Code of Conduct.
    ii. Staff lists and signed copies of the Individual Code of Conduct are provided to the OHS Manager, the GBV Complaints Team (GCT), and the client.
    iii. Participate in training and ensure that staff also participate as outlined below.
    iv. Put in place a mechanism for staff to:
        (a) report concerns on ESHS or OHS compliance; and,
        (b) confidentially report GBV incidents through the Grievance Redress Mechanism (GRM)
    v. Staff are encouraged to report suspected or actual ESHS, OHS, GBV issues, emphasizing the staff's responsibility to the Company and the country hosting their employment, and emphasizing the respect for confidentiality.

4. In compliance with applicable laws and to the best of your abilities, prevent perpetrators of sexual exploitation and abuse from being hired, re-hired or deployed. Use background and criminal reference checks for all employees nor ordinarily resident in the country where the works are taking place.
5. Ensure that when engaging in partnership, sub-contractor, supplier or similar agreements, these agreements:
    i. Incorporate the ESHS, OHS, GBV Codes of Conduct as an attachment.
    ii. Include the appropriate language requiring such contracting entities and individuals, and their employees and volunteers, to comply with the Individual Codes of Conduct.
    iii. Expressly state that the failure of those entities or individuals, as appropriate, to ensure compliance with the ESHS and OHS standards, take preventive measures against GBV, to investigate allegations thereof, or to take corrective actions when GBV has occurred, shall not only constitute grounds for sanctions and penalties in accordance with the Individual Codes of Conduct but also termination of agreements to work on or supply the project.
6. Provide support and resources to the GCT to create and disseminate internal sensitization initiatives through the awareness-raising strategy under the GBV Action Plan.
7. Ensure that any GBV complaint warranting Police action is reported to the Police, the client and the World Bank immediately.
8. Report and act in accordance with the agreed response protocol any suspected or actual acts of GBV.
9. Ensure that any major ESHS or OHS incidents are reported to the client and the supervision engineer immediately, non-major issues in accordance with the agreed reporting protocol.
10. Ensure that children under the age of 18 are not present at the construction site, or engaged in any hazardous activities.

Training

11. The managers are responsible to:
    i. Ensure that the OHS Management Plan is implemented, with suitable training required for all staff, including sub-contractors and suppliers; and,
    ii. Ensure that staff have a suitable understanding of the C-ESMP and are trained as appropriate to implement the C-ESMP requirements.
12. All managers are required to attend an induction manager training course prior to commencing work on site to ensure that they are familiar with their roles and responsibilities in upholding the GBV elements of these Codes of Conduct. This training will be separate from the induction training course required of all employees and will provide managers with the necessary understanding and technical support needed to begin to develop the GBV Action Plan for addressing GBV issues.
13. Managers are required to attend and assist with the project facilitated monthly training courses for all employees. Managers will be required to introduce the trainings and announce the self-evaluations, including collecting satisfaction surveys to evaluate training experiences and provide advice on improving the effectiveness of training.
14. Ensure that time is provided during work hours and that staff prior to commencing work on site attend the mandatory project facilitated induction training on:
    i. OHS and ESHS; and,
    ii. GBV required of all employees.
15. During civil works, ensure that staff attend ongoing OHS and ESHS training, as well as the monthly mandatory refresher training course required of all employees to on GBV.

Response

16. Managers will be required to take appropriate actions to address any ESHS or OHS incidents.
17. Regarding GBV:
    i. Provide input to the GBV Allegation Procedures and Response Protocol developed by the GCT as part of the final cleared GBV Action Plan.

ii. Once adopted by the Company, managers will uphold the Accountability Measures set forth in the GBV Action Plan to maintain the confidentiality of all employees who report or (allegedly) perpetrate incidences of GBV (unless a breach of confidentiality is required to protect persons or property from serious harm or where required by law).
iii. If a manager develops concerns or suspicions regarding any form of GBV by one of his/her direct reports, or by an employee working for another contractor on the same work site, s/he is required to report the case using the GRM.
iv. Once a sanction has been determined, the relevant manager(s) is/are expected to be personally responsible for ensuring that the measure is effectively enforced, within a maximum timeframe of 14 days from the date on which the decision to sanction was made by the GCT.
v. If a Manager has a conflict of interest due to personal or familial relationships with the survivor and/or perpetrator, he/she must notify the Company and the GCT. The Company will be required to appoint another manager without a conflict of interest to respond to complaints.
vi. Ensure that any GBV issue warranting Police action is reported to the Police, the client and the World Bank immediately

18. Managers failing address ESHS or OHS incidents, or failing to report or comply with the GBV provisions may be subject to disciplinary measures, to be determined and enacted by the cCmpany's CEO, Managing Director or equivalent highest-ranking manager. Those measures may include:
    i. Informal warning.
    ii. Formal warning.
    iii. Additional Training.
    iv. Loss of up to one week's salary.
    v. Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months.
    vi. Termination of employment.
19. Ultimately, failure to effectively respond to ESHS, OHS, and GBV cases on the work site by the company's managers or CEO may provide grounds for legal actions by authorities.

I do hereby acknowledge that I have read the foregoing Manager's Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to ESHS, OHS, and GBV requirements. I understand that any action inconsistent with this Manager's Code of Conduct or failure to act mandated by this Manager's Code of Conduct may result in disciplinary action.

Signature: _____

Printed Name: _____

Title: _____

Date: _____

Individual Code of Conduct

Implementing ESHS and OHS Standards

Preventing Gender Based Violence

I, _____, acknowledge that adhering to environmental, social, health and safety (ESHS) standards, following the project's occupational health and safety (OHS) requirements, and preventing Gender Based Violence (GBV) is important.

The Company considers that failure to follow ESHS and OHS standards, or to partake in activities constituting GBV—be it on the work site, the work site surroundings, at workers' camps, or the surrounding communities—constitute acts of gross misconduct and are therefore grounds for sanctions, penalties or potential termination of employment. Prosecution by the Police of those who commit GBV may be pursued if appropriate.

I agree that while working on the project I will:

- Consent to Police background check.
- Attend and actively partake in training courses related to ESHS, OHS, and GBV as requested by my employer.
- Will wear my personal protective equipment (PPE) at all times when at the work site or engaged in project related activities.
- Take all practical steps to implement the contractor's environmental and social management plan (C-ESMP).
- Implement the OHS Management Plan.
- Adhere to a zero-alcohol policy during work activities, and refrain from the use of narcotics or other substances which can impair faculties at all times.
- Treat women, children (persons under the age of 18), and men with respect regardless of race, color, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
- Not use language or behavior towards women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
- Not sexually exploit or abuse project beneficiaries and members of the surrounding communities.
- Not engage in sexual harassment of work personnel and staff —for instance, making unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature is prohibited. E.g. looking somebody up and down; kissing, howling or smacking sounds; hanging around somebody; whistling and catcalls; in some instances, giving personal gifts.
- Not engage in sexual favors —for instance, making promises of favorable treatment (e.g. promotion), threats of unfavorable treatment (e.g. loss of job) or payments in kind or in cash, dependent on sexual acts—or other forms of humiliating, degrading or exploitative behavior.
- Not use prostitution in any form at any time.
- Not participate in sexual contact or activity with children under the age of 18—including grooming, or contact through digital media. Mistaken belief regarding the age of a child is not a defense. Consent from the child is also not a defense or excuse.

- Unless there is the full consent[22] by all parties involved, I will not have sexual interactions with members of the surrounding communities. This includes relationships involving the withholding or promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex (including prostitution). Such sexual activity is considered "non-consensual" within the scope of this Code.
- Consider reporting through the GRM or to my manager any suspected or actual GBV by a fellow worker, whether employed by my company or not, or any breaches of this Code of Conduct.

With regard to children under the age of 18:

- Bring to the attention of my manager the presence of any children on the construction site or engaged in hazardous activities.
- Wherever possible, ensure that another adult is present when working in the proximity of children.
- Not invite unaccompanied children unrelated to my family into my home, unless they are at immediate risk of injury or in physical danger.
- Not use any computers, mobile phones, video and digital cameras or any other medium to exploit or harass children or to access child pornography (see also "Use of children's images for work related purposes" below).
- Refrain from physical punishment or discipline of children.
- Refrain from hiring children for domestic or other labor below the minimum age of 14 unless national law specifies a higher age, or which places them at significant risk of injury.
- Comply with all relevant local legislation, including labor laws in relation to child labor and World Bank's safeguard policies on child labor and minimum age.
- Take appropriate caution when photographing or filming children (See Annex 2 for details).

Use of children's images for work related purposes

When photographing or filming a child for work related purposes, I must:

- Before photographing or filming a child, assess and endeavor to comply with local traditions or restrictions for reproducing personal images.
- Before photographing or filming a child, obtain informed consent from the child and a parent or guardian of the child. As part of this I must explain how the photograph or film will be used.
- Ensure photographs, films, videos and DVDs present children in a dignified and respectful manner and not in a vulnerable or submissive manner. Children should be adequately clothed and not in poses that could be seen as sexually suggestive.
- Ensure images are honest representations of the context and the facts.
- Ensure file labels do not reveal identifying information about a child when sending images electronically.

Sanctions

[22] **Consent** is defined as the informed choice underlying an individual's free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained using threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even if national legislation of the country into which the Code of Conduct is introduced has a lower age. Mistaken belief regarding the age of the child and consent from the child is not a defense.

I understand that if I breach this Individual 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.

I understand that it is my responsibility to ensure that the environmental, social, health and safety standards are met. That I will adhere to the occupational health and safety management plan. That I will avoid actions or behaviors that could be construed as GBV. Any such actions will be a breach this Individual Code of Conduct. I do hereby acknowledge that I have read the foregoing Individual Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to ESHS, OHS, GBV issues. I understand that any action inconsistent with this Individual Code of Conduct or failure to act mandated by this Individual Code of Conduct may result in disciplinary action and may affect my ongoing employment.

Signature: _____

Printed Name: _____

Title: _____

Date: _____

GBV Action Plan

This GBV Action Plan outlines how the project will put in place the necessary protocols and mechanisms to minimize or eliminate GBV on the project, as well as to address any GBV issues that may arise. The following framework needs to be adapted to reflect the specific situation and implementation arrangements for each project.

The GBV Complaints Team

The project shall establish a 'GBV Complaints Team' (GCT). The GCT will include, as appropriate to the project, at least four representatives ('Focal Points') as follows:

a. A safeguards specialist from the client;
b. The occupational health and safety manager from the contractor[23], or someone else tasked with the responsibility for addressing GBV with the time and seniority to devote to the position;
c. The supervision consultant;
d. A representative from a client approved service provider with experience in GBV—the 'GBV Service Provider' (GSP); and optionally,
e. Members representing the local community, government, etc.

It will be the duty of the GCT with support from the management of the contractor(s) and consultant(s) to inform workers about the activities and responsibilities of the GCT. To effectively serve on the GCT, members must undergo training by the GBV Service Provider prior to the commencement of their assignment to ensure that they are sensitized on GBV.

The GCT will be required to:

a. Approve any changes to the **GBV** elements of the **Codes of Conduct** contained in this document, with clearances from the client and the World Bank for any such changes.
b. Prepare the **GBV Action Plan** reflecting the Codes of Conduct which includes:
    i. **GBV Allegation Procedures** (See 4.2)
    ii. **Addressing GBV Complaints** (See 4.3)
    iii. **Accountability Measures** (See 4.4)
    iv. An **Awareness raising Strategy** (See 4.6)
    v. A **Response Protocol** (See 4.7)
c. Obtain approval of the GBV Action Plan by the Contractor's management;
d. Obtain client and World Bank clearances for the GBV Action Plan prior to full mobilization;
e. Receive and monitor resolutions and sanctions regarding complaints received related to GBV associated with the project; and,
f. Ensure that GBV statistics in the GRM are up to date and included in the regular project reports.

The GCT shall hold quarterly update meetings to discuss ways to strengthen resources and GBV support for employees and community members.

Making Complaints: GBV Allegation Procedures

[23] Where there are multiple contractors working on the project, each shall nominate a representative as appropriate.

All staff, volunteers, consultants and sub-contractors are encouraged to report suspected or actual GBV cases. Managers are required to report suspected or actual GBV cases as they have responsibilities to uphold company commitments and they hold their direct reports accountable for complying with the Individual Code of Conduct.

The project will provide information to employees and the community on how to report cases of GBV Code of Conduct breaches through the Grievance Redress Mechanism (GRM). The GCT will follow up on cases of GBV and Code of Conduct breaches reported through the GRM.

Addressing Complaints about GBV

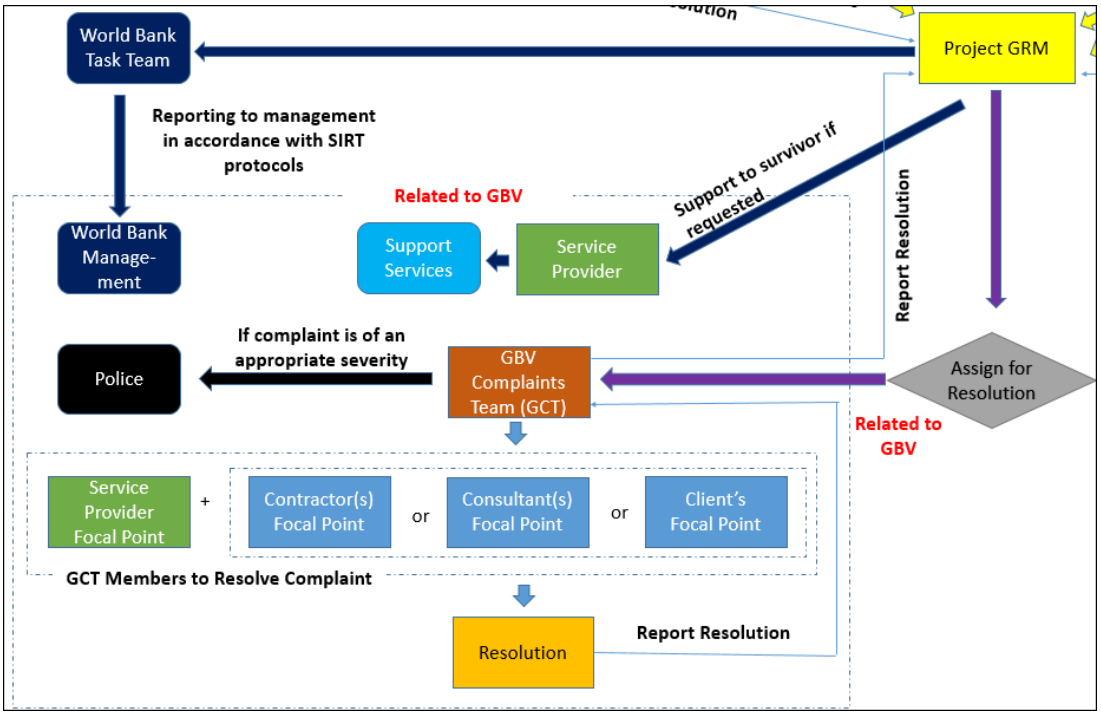
Each project needs to put in place appropriate protocols for addressing GBV complaints. The protocols will vary between projects based on local circumstances, but there are key principles which are required in all projects.

GRM

The project operates a GRM which is managed by a designated GRM operator with the project management unit or, ideally, an entity independent of the project implementation. The GRM must be designed to ensure that:

i. Complaints can be made through different channels, such as the traditional local practices (e.g. village chiefs), online, phone, in-person, the local GBV Service Provider, the manager(s), or the Police.
ii. Complaints should be able to be made in different ways such as online, via telephone or mail, or in person;
iii. Anonymity should be ensured if the complainant so desires it, especially about GBV;

There needs to be a specific workflow for handling GBV complaints. The figure below illustrates the work flow adopted in 2017 for the Vanuatu Aviation Investment Project (VAIP).



If the complaint to the GRM is made by an GBV survivor, or on behalf of a survivor, the complainant will be directly referred to the GBV Service Provider to receive support services (if so desired) while the GCT investigates the complaint in parallel.

The World Bank requires that all complaints regarding GBV must immediately be reported to the World Bank task team by the GRM operator. These complaints may be referred to the World Bank management in accordance with the World Bank's reporting protocols.

The GRM shall only collect two items of data related to GBV—to be inferred from discussions with the complainant:

i. The nature of the GBV; and,
ii. To the best of the knowledge was the perpetrator associated with the project.

Additional information shall be gathered by the GBV Service Provider using their existing survivor support protocols. This information shall be confidential and not part of the GRM process.

The GRM operator will refer complaints related to GBV to the GCT to resolve them. In accordance with the GBV Action Plan, the GCT through the GBV Service Provider and Focal Point(s) will investigate the complaint and ultimately provide the GRM operator with a resolution to the complaint, or the Police if appropriate. The victim's confidentiality should also be kept in mind when reporting any incidences to the Police.

The GRM operator will, upon resolution, advise the complainant of the outcome, unless it was made anonymously.

GBV Service Provider

The GBV Service Provider is a local organization which has the trust of the local community, experience and ability to support survivors of GBV. They will be identified by the client during project preparation, if necessary with the support of the World Bank.

The client, the contractor(s) and consultant(s) must establish a working relationship with the GBV Service Provider, so that GBV cases can safely be referred to them. The GBV Service Provider will also provide support and guidance to the GBV Focal Points as necessary. The GBV Service Provider will have a representative on the GCT and be involved in resolving complaints related to GBV.

The contract for the GBV Service Provider shall include provision for financing costs around providing the necessary support to survivors.

GBV Complaints Team

The GCT is responsible for ensuring that GBV complaints are properly investigated and that appropriate sanctions are applied for any cases where sanctions are considered to be justified. The GCT is comprised of: (i) the GBV Service Provider; and, (ii) 'Focal Points' from the contractor(s), consultant(s) and client; and optionally, (iii) members of the local community, government, etc.

All the Focal Points on the GCT must be trained and empowered to resolve GBV issues. It is essential that all staff of the GRM and GCT understand the guiding principles and ethical requirement of dealing with survivors of GBV. All reports should be kept confidential and referred immediately to the GBV Service Provider represented on the GCT[24].

The GCT shall confirm that all complaints related to GBV have been: (i) referred to the client and the World Bank by the GRM operator; and, (ii) are referred to Police (or other authorities) for investigation if of appropriate severity. In GBV cases warranting Police action; and, (iii) management for further action.

The GCT shall consider all GBV complaints and agree on a plan for resolution. The appropriate Focal Point will be tasked with implementing the plan (i.e. issues with contractor's staff will be for the contractor to resolve; consultant's staff the consultant; and client's staff the client). The Focal Point will advise the GCT on resolution, including referral to the Police if necessary. They will be assisted by the GBV Service Provider as appropriate.

Accountability Measures

All reports of GBV shall be handled in a confidential manner to protect the rights of all involved. The client, contractor and consultant must maintain the confidentiality of employees who notify any acts or threats of violence, and of any employees accused of engaging in any acts or threats of violence (unless a breach of confidentiality is required to protect persons or property from serious harm or where required by law). The contractor and consultant must prohibit discrimination or adverse action against an employee because of survivor's disclosure, experience or perceived experience of GBV (see Annex 1 for examples of actions to maintain accountability).

To ensure that survivors feel confident to disclose their experience of GBV, they can report cases of GBV through multiple channels such as: (i) online, (ii) phone, (iii) in-person, (iv) the local GBV Service Provider, (v) the manager(s), (vi) village councils; or, (vii) the Police. To ensure confidentiality, only the GBV Service Provider will be privy to information regarding the survivor. The GCT will be the primary point of contact for information and follow up regarding the perpetrator.

Monitoring and Evaluation

The GRM is to notify the client and the World Bank immediately of any complaints related to GBV.

The GCT must monitor the follow up of cases that have been reported and maintain all reported cases in a confidential and secure location. Monitoring must collect the number of cases that have been reported and the share of them that are being managed by Police, NGOs etc.

These statistics shall be reported to the GRM and the Supervision Engineer for inclusion in their reporting.

Awareness-raising Strategy

It is important to create an Awareness-raising Strategy with activities aimed to sensitize employees on GBV on the work site and its related risks, provisions of the GBV Codes of Conduct, and GBV Allegation Procedures, Accountability Measures and Response Protocol. The strategy will be accompanied by a timeline, indicating the various sensitization activities through which the strategy will be implemented and

[24] Survivors of GBV may need access to Police, justice, health, psychosocial, safe shelter and livelihood services to begin on a path of healing from their experience of violence.

the related (expected) delivery dates. Awareness-raising activities should be linked with trainings provided by the GBV Service Provider.

Response Protocol

The GCT will be responsible for developing a written response[25] protocol to meet the project requirements, in accordance to national laws and protocols. The response protocol must include:

i. Mechanisms to notify and respond to perpetrators in the workplace;
ii. The GRM process to ensure competent and confidential response to disclosures of GBV, and;
iii. A referral pathway to refer survivors to appropriate services (See 4.8 Survivor Support Measures below).

The contractor(s), consultant(s) and client shall encourage notification through the GRM channels from employees and community members about perpetrators in the workplace through awareness raising activities. An employee who discloses a case of sexual harassment in the workplace shall be referred to the GRM for reporting to seek services.

Through the GCT, the companies and client shall oversee the investigation of these grievances, ensuring procedural fairness for the accused, and within the local laws. If an employee has breached the Code of Conduct, the employer will take appropriate action which could include:

i. Undertake disciplinary action up in accordance with sanctions in the GBV Codes of Conduct (see Section 4.9);
ii. Report the perpetrator to the Police as per local legal paradigms; and/or
iii. If feasible, provide or facilitate counselling for the perpetrator.

Survivor Support Measures

It is essential to appropriately respond to the survivor's complaint by respecting the survivor's choices to minimize the potential for re-traumatization and further violence against the survivor.

Any survivor will receive care regardless of whether the perpetrator is associated with the project will receive support/ The support will be provided by the GBV Service Provider—including medical and psychosocial support, emergency accommodation, transport fees necessary to receive services, security including Police protection and livelihood support—by facilitating contact and coordination with these services. See Annex 1 for examples of the types of support which could be considered under the project.

The contract with the GBV Service Provider shall explicitly detail the services to be provided, and how the associated costs shall be financed by the project.

If the survivor is an employee of the contractor(s), consultant(s) or client, to ensure the safety of the survivor, and the workplace in general, the client, contractor or consultant, in consultation with the survivor, will assess the risk of ongoing abuse to the survivor and in the workplace. Reasonable adjustments will be made to the survivor's work schedule and work environment as deemed necessary (see Annex 1 for examples of safety measures). The employer will provide adequate leave to survivors seeking services after experiencing violence (see Annex 1 for details).

[25] Develop appropriate protocol for written recording of GBV issues raised in case the notes are subpoenaed. Develop processes for record keeping including activities undertaken by the GCT.

Sanctions

In accordance with the Code of Conduct, any employee confirmed as a GBV perpetrator shall be considered for disciplinary measures in line with sanctions and practices as agreed in the Individual Code of Conduct. Potential Sanctions to employees who are perpetrators of GBV include:

i. Informal warning
ii. Formal warning
iii. Additional Training
iv. Loss of up to one week's salary.
v. Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months.
vi. Termination of employment.
vii. Referral to the Police or other authorities as warranted.

It is important to note that, for each case, disciplinary sanctions are intended to be part of a process that is entirely internal to the employer, is placed under the full control and responsibility of its managers, and is conducted in accordance with the applicable national labor legislation.

Such process is expected to be fully independent from any official investigation that competent authorities (e.g. Police) may decide to conduct in relationship to the same case, and in accordance with the applicable national law. Similarly, internal disciplinary measures that the employer's managers may decide to enact are meant to be separate from any charges or sanctions that the official investigation may result into (e.g. monetary fines, detention etc.).

Annex 1 - Potential Procedures for Addressing GBV

Accountability Measures to maintain confidentiality can be achieved through the following actions:

1. Inform all employees that confidentiality of GBV survivors' personal information is of utmost importance.
2. Provide the GCT with training on empathetic and non-judgmental listening.
3. Take disciplinary action, including and up to dismissal, against those who breach survivor's confidentiality (this is unless a breach of confidentiality is necessary to protect the survivor or another person from serious harm, or where required by law).

GBV Allegation Procedures should specify:

1. Who survivors can seek information and assistance from.
2. The process for community members and employees to lodge a complaint through the GRM should there be alleged GBV.
3. The mechanism for how community members and employees can escalate a request for support or notification of violence if the process for reporting is ineffective due to unavailability or non-responsiveness, or if the employee's concern in not resolved.

Financial and Other Supports to survivors can include:

1. No/low interest loans.
2. Salary advances.
3. Direct payment of medical costs.
4. Coverage of legal costs specifically related to the incident
5. Coverage of all medical costs related specifically to the incident.
6. Upfront payments for medical costs to later be recouped from the employee's health insurance.
7. Providing or facilitating access to childcare.
8. Providing security upgrades to the employee's home.
9. Providing safe transportation to access support services or to and from accommodation.

Based on the rights, needs and wishes of the survivor, survivor support measures to ensure the safety of the survivor who is an employee can include[26]:

1. Changing the perpetrator or survivor's span of hours or pattern of hours and/or shift patterns.
2. Redesigning or changing the perpetrator or survivor's duties.
3. Changing the survivor's telephone number or email address to avoid harassing contact.
4. Relocating the survivor or perpetrator to another work site/ alternative premises.
5. Providing safe transportation to and from work for a specified period.
6. Supporting the survivor to apply for an Interim Protection Order or referring them to appropriate support.
7. Taking any other appropriate measures including those available under existing provisions for family friendly and flexible work arrangements.

Leave options for survivors that are employees can include:

1. An employee experiencing sexual harassment should be able to request paid special leave to attend medical or psychosocial appointments, legal proceedings, and relocation to safe accommodation among other services that may be needed.
2. An employee who supports a person experiencing sexual harassment may take care givers leave,

[26] It is critical that a survivor centered approach be adopted. The survivor should be fully involved in the decision making. Except for exceptional circumstances the perpetrator should be required to take appropriate actions to accommodate the survivor (e.g. move, change hours, etc.), rather than the survivor changing.

including but not limited to accompanying them to court or hospital, or to take care of children.

3. Employees who are employed in a casual capacity may request unpaid special leave or unpaid care givers leave to undertake the activities described above.
4. The amount of leave provided will be determine by the individual's situation through consultations with the employee, the management and the GCT where appropriate.

Potential Sanctions to employees who are perpetrators of GBV 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.

Referral to the Police or other authorities as warranted.

Appendix G UXO Procedure Policy and Response Plan

SOLOMON ISLANDS

NATIONAL TRANSPORT FUND BOARD

AGENDA ITEM

Purpose:

The purpose of this agenda item is to update The Board on TSDP's progress in developing a simple high-level policy in relation to unexploded ordinance (UXO) - for inclusion in the MID Specification for Road and Bridge Works master document.

This item has been written For Information Only.

Background:

TSDP staff have recently been undertaking a review the various practices, procedures and specifications that are prescribed within the MID Specification for Road and Bridge Works master document.

When staff were canvassed as to whether any other processes or procedures might be worthwhile, one staff member suggested that it might be beneficial to develop a policy that provides MID recommendations as to procedures in relation to unexploded ordinance {UXO).

Current Situation:

While responsibility for UXO typically resides with The Royal Solomon Islands Police Force Explosives Ordinance Disposal Unit {RSIPF- EDD Unit), MID has proposed that contractors and landowners do have so some responsibilities in relation to ordinance when doing work commissioned by MID.

This policy does not seek to assume any responsibilities currently shouldered by RSIPF- EDD Unit but it seeks to reduce the risk to anyone involved on MID Projects by requiring in some cases that study is undertaken to assess likelihood of UXO and that practices to reduce the adverse effects of UXO are adopted.

The RSIPF- EOD Unit has been consulted in the drafting of this policy. While they are receptive to the idea of such a policy and understand the benefits of offering such high-level guidance to contractors, they as yet have not offered any formal written response to the detail of this first draft policy.

EOD Unit has indicated that a reply will be forthcoming however, and that TSDP staff can expect their reply shortly.

Recommendation:

It is recommended that the Board receive the report attached For Information Only.

9.0 UNEXPLODED ORDINANCE PROCEDURES

9.1 Use of this policyguidance

This policy is intended to propose initial minimum sensible generic procedures to help reduce the risks posed by unexploded ordinance (UXO).

Note that this policy has not been written by personnel with any technical expertise within the UXO subject area. These interim guidelines have been written to ensure that this risk area does receive a robust design and construction response to help minimise any risks posed by UXO in a common-sense manner.

As such this policy procedure document does not provide a comprehensive technical guideline that can be relied upon to assure the safety of personnel in relation to UXO.

Note that all designers, consultants and contractors all bear a collective responsibility for minimising the potential harm of these potentially very dangerous hazards.

It is envisaged that this interim policy guidance document will be replaced by a policy that has been written by personnel with technical expertise within the UXO subject area in due course.

9.2 Ownership

UXO remains relatively benign if left undisturbed. However, once any intrusive investigations, excavations or earthworks are conducted in an affected area, the risk of contact with any remaining UXO is increased and while explosions are rare the consequences can be disastrous so this threat must be taken very seriously by all involved.

The responsibility to assess and mitigate or eliminate any UXO related hazard generally resides with the landowner or developer.

In the case of crown land and any development on it, the Solomon Islands Government (SIG} is effectively the land's custodian, and as such is responsible for UXO related hazards, especially when proposing infrastructure or materials acquisition from such areas.

Given the history and scale of military conflict in the Solomon Islands, some assessment of the likelihood of UXO in any proposed works area should be made as part of the design/study phase of any larger scale

project.

In any case where SIG staff are involved in the design and/or construction management of infrastructure, the project design manager shall be primarily responsible for requiring and acquiring an assessment of UXO.

9.3 General Methodology for UXO

UXO assessments should deliver to the design team a robust investigation of the likelihood of UXO in all

The UXO investigation performed should initially be informed by local historical knowledge of either **a)** previous ordinance in the area or **b)** knowledge of past military actions in the area. In the event that either of these are thought to suggest a significant risk of any UXO then a second, physical assessment of the presence of UXO shall be required.

In the event that historical knowledge does not suggest that UXO is likely, then design and or construction may proceed in the absence of a physical (e.g. metal detector) survey, but construction activities should always keep this possibility in mind and any metallic noises treated {e.g. against digger buckets) should always be treated with this risk in mind.

In the event that historical knowledge suggests that UXO is likely, the project design manager must require that all (likely) affected site areas are surveyed by suitable experts who can do so competently and safely. This is practice will typically require that the area proposed for civil works Is surveyed and cleared of any UXO's etc with a Certificate Of Clearance from the Explosive Disposal Unit (EDU), Royal Solomon Islands Police Force (RSIPF) before any physical works Contractor takes possession of the site.

The survey of subject site area(s) will include an initial desktop historical review, a risk assessment and strategy for mitigation, which will be based upon all available reference material for the proposed location. This will then determine what, if any, additional survey works are advisable to verify the level of threat and hence what further works may be necessary to mitigate the risks. lt is indeed likely that for many areas of the country, the risk will be identified to be so low that no further action will be necessary other than general awareness, however, this should never be assumed.

larger scale projects may be beyond the resources of the RSIPF Explosives Disposal Unit however, and in such cases the project design manager will likely need to put the clearance task out via private contract to provide the requisite expert UXO identification and removal assistance, prior to works.

A contractor (to this offer) is required to complete a survey of ''The Area", including carrying out a magnetic anomaly survey, clearly identifying suspected ordinance locations, arranging for removal of any such ordinance, providing a complete clearance of all ordnances on site and all documentation necessary for certification of the clearance.

9.4 Typical Contractor Specialist Assistance

A contractor will typically be required to:

- Complete the UXO survey of The Area - within the geographical envelope specified in the site

plan for "The Area". The survey shall include but not be limited to magnetic anomaly survey. This will include all sink holes, areas of subsidence, and bunkers etc. Note that this shall also include all project affected areas outside of the primary site, such as materials acquisition sites, e.g. quarries, river beds etc

- Cordon all areas where a "positive" ordinance detection is indicated. This should be done in such a manner as to prevent safety risks arising from unauthorised tampering. This may include temporary secure storage to support this objective as long as the transit and containment of said UXO can be done in a safemanner.

- Arrange for the prompt removal of all UXO and other metallic debris. Note that the removal of UXO may be effected in either of two ways. The removal of UXO shall EITHER be expedited by the contractor {to this offer) issuing advice and a specific Instruction to Civil Contractor requiring that they undertake safe disposal OR by the contractor carrying out safe excavation, removal and disposal of the items utilising in-house expertise - Noting that the disposal mechanism adopted must correspond with the UXO disposal mechanism cited in the contractor's proposal document.

- Identify, Isolate, remove, destroy and responsibly dump all UXO (etc).
- Manage any unintended explosive events by having the staff available for triage, medical care and event management and by having clear plans in place ready for any such unintended event.
- Clear all UXO from the entire site area - as depicted within the geographical envelope specified in the site plan.
- Provide a letter that confirms that complete surveys of all UXO (etc) have been completed and all UXO (etc) have been detected, isolated, removed and destroyed.
- Complete all necessary work and documentation in order to receive certification of clearance from the relevant governmental quality assurance agent, i.e. EDU - RSJPF.
- Promptly report to RSIPF and the Site Engineer on any potential residual risks identified by the contractor, as they arise. Reporting should be followed up with documentation to record this advice.
- Neutralise and/or isolate any such potential residual risks so that no adverse safety effects can arise.
- Monitor site and any hazards arising during construction phase.

9.4.1 Typical UXO Consultant Contractor Minimum Competencies Required

- Expertise in the identification, isolation, removal, destruction and responsible dumping of UXO (etc) are frequently a mandatory pre-requisite to being awarded such contracts.
- Site safety experience within high risk environments.
- Strong management culture- able to strictly manage the movements and behaviour of all staff
- -Again this is required due to the inherent dangers of this environment.
- Appropriate management of environmental impacts.
- An interest in WWII military relics- all of which should be photographed in situ & transferred to

SIG.

- Expertise in triage and medical treatment in emergencies and adverse event management.

The contractor will conform and certify in accordance with CIRIA C681: Unexploded Ordnance (UXO). Or the contractor may propose an alternative internationally accepted standard.

Note: The means of UXO disposal may remain optional, but any contractor's offer made must dearly identify which UXO disposal mechanism is being proposed in conjunction with the offer. Safely disposing of toxic and explosive ordinance in an environmentally responsible manner is a significant liability, so the contract should be written such that a failure to specify which UXO disposal mechanism is being proposed in conjunction with the offer will result in the offer being declared invalid.

The consultant should submit a brief proposal that:

- reflects a good understanding of all the project requirements
- proposes a sensible methodology and offers an attractive approach to MID
- proposes the engagement of suitably experienced staff -and provides a contractual commitment that all staff cited will be used on project
- provides a brief draft timeline (in excel only) with meeting dates and other milestones that conform with the delivery dates prescribed in this document {see below)
- explains the consultants successful track record with projects of a similar type and scale
- dearly identifies the fee required for the services offered within the proposal

The contractor should confirm the tasks, relevant delivery dates and meeting dates with MID Staff upon MID's confirmation of the commission at the Project Inception Meeting.

9.4.2 Typical UXO Output Required:

Larger projects and especially those in identified high risk/ high UXO density areas will usually require that a contractor consultant is engaged for the UXO clearance task.

Beyond the primary physical clearance and disposal task, the project design manager shall also require several documents to be produced by the contractor consultant, as follows:

1. A brief summary report outlining the whole process from the initial SIG brief through to the final RSIPF EDU clearance certificate - and including any remaining responsibilities post report, e.g. site monitoring
2. A letter that confirms that complete surveys of all UXO (etc) have been completed and all UXO (etc) have been detected, isolated, removed and destroyed.

3. The appropriate Certificate of Clearance from the relevant governmental quality assurance agent, i.e. EDU- RSIPF.
4. Copies of all documented reports submitted to RSIPF and the Engineer on any potential residual risks identified by the contractor, as they arose.
5. A plan for managing risks during construction.

These documents should be provided as both "soft copy'' - MS Office software based electronic files (e.g. Word Documents), and as "hard copy''- i.e. paper sheets mounted in a suitable filing folder

In the event that the project is of a smaller scale and the project design manager feels that it is inappropriate to engage a UXO Specialist contractor, then arrangements should be made with EDU • RSlPF, to conduct the survey. They {EDU) will provide a Clearance Certificate for "The area" upon completion of survey for the initial stage of risk assessment.

9.5 General Site Procedures to minimise risk of harm from UXO

Jf a site proposed for civil works is not seen as posing any risk related to UXO etc. or in cases where a Clearance Certificate had been issued, the contractor is still required to do the following if anything suspicious is encountered or dug up:

1. Immediately cease work and withdraw all staff to a sensible safe distance from the site.
2. Site staff to immediately report the risk of possible UXO having been encountered to the Site Engineer. Reporting should be followed up with documentation to record this advice.
3. Site engineer to urgently contact EDU-RSIPF and request immediate attendance for confirmation/removal and site certification. Reporting should be followed up with documentation to record this advice.
4. Once inspected by EDU-RSIPF and declared safe to do so, cordon all areas where a "positive" ordinance detection is indicated or being dug up and not actually removed or dealt with to prevent accidents arising from communication problems. This should ideally also be done in such a manner as to prevent safety risks arising from unauthorised tampering if feasible/safe to do so as well, but this entire process must be undertaken by UXO Specialists only. Ideally EDU-RSIPF will inspect/declare/remove the item concerned upon arrival.

Unexploded Ordnance clearance

Description

This work shall consist of the detection and disposal of unexploded ordnance (UXO) that exist within the confines of the site and the certification that the entire site is free from contamination and is safe for all construction operations. The work shall include the following activities:

(i) Detailed Contamination Survey
(ii) Detection and Disposal of UXO

The Contractor shall carry out all necessary UXO detection and disposal and shall carry out such checks as shall be necessary to enable him to take full responsibility for safety from the risk of UXO over the whole area of the Site and for all construction operations.

General Requirements

Standards

The Sub-Clauses of this plan relating to the detection and disposal of UXO are derived from standard peace time range area clearance procedures typically in use by NATO military forces with modifications drawn from experience in the Indochina region. The procedures and methodology recommended by the United States Army Corps of Engineers for remediation of formerly used military sites were also taken into account and the resultant procedures closely follow best international practice for commercial activity in this field.

Limits of Work

Searching to remove UXO is required to provide a safe working environment for road construction. Clearance is required along the route alignment that is to be cleared of UXO to an overall width of 5m outside the limit of physical works on each side of the project roads and/or water main, the depth of any construction work is anticipated to be a maximum of 2m. This comprises a civil works area where the road/watermain will be constructed, plus a safe working zone added to the outer peripheries of the civil works area to provide reasonable safe turning and working room for plant and construction vehicles.

The complete width as defined in these specifications including any existing trafficked road formation, with the exception of intact pavement sections, is to be searched by metal detector using UXO area clearance techniques.

The complete width of 10m outside the limits of physical works on each side of the project roads, including any existing trafficked road formation together with all paved sections, is to be swept by magnetometer.

Additional searching for UXO may be required outside of the right-of-way to allow access to resource areas, camp sites, construction lay downs, bridge abutments and approaches, etc.

The limits of clearance required along the route will be determined from the results of the detailed contamination survey carried out in accordance with the provisions of sub-section 1.2.2 of this plan and as approved by the Engineer.

Areas of Non-Original Soil

Areas of non-original soil may exist containing UXO of indeterminate size at indeterminate depth. The maximum cut depth will be limited by the capability of the search equipment in geologically reactive soil. Where earthworks are to occur below 30 cm in such areas, (detection performance depth for BLU 26/36 or equivalent) then complete UXO removal can only be achieved by successive search then-cut techniques. During initial searches the Contractor will be required to record and report on such areas to ensure that the required search-then-cut process is applied later in conjunction with construction.

Clearance Performance Requirements

Searches are to comprise a 100% area sweep by metal detector to remove shallow items, followed by a magnetometer search. Magnetometer searching is to be conducted at no greater than 1 metre lane separation.

Searches are to achieve the removal of all UXO within the specified size/depth capacity of the search equipment. All areas completed are to be certified free of UXO to within these limitations.

Contractor's Nominated Ordnance Expert

The Contractor shall nominate and provide an Ordnance Expert, who shall have appropriate internationally recognised qualifications or appropriate verifiable experience in its own or other countries, acceptable to the Engineer. It will be the sole responsibility of the Contractor's Ordnance Expert to declare each area of the site safe for construction operations and no construction activities shall be carried out in any area until this has been done. The Ordnance Expert will advise separately on works required ‘within' and ‘outside' the areas with UXO.

Staffing

Personnel involved in UXO clearance must satisfy the following criteria:

(i) staff supervising UXO searching must have qualifications and experience commensurate with the United Nations Standards; and
(ii) staff supervising magnetometer survey or conducting Quality Control must have received formal recognised training on and have field experience in magnetometer use; and
(iii) staff must have received a formal course providing them as a minimum, with instruction on UXO recognition, metal detector use, UXO excavation and first aid.

UXO Disposal

The Contractor will be responsible for the safe disposal of all UXO recovered. Where collateral property damage is likely to occur as a result of disposal activity, the Contractor will be required to first advise the Engineer before proceeding.

Explosives

The Contractor will be responsible for the supply, storage and security of all explosives required for UXO disposal and their use will conform to the requirements of internationally recognised Specifications.

Compensation

In the course of clearance operations it may be necessary to damage crops, remove fences etc. The Contractor will be required to notify the Engineer in writing with a copy to the Employer prior to taking any action that may cause damage resulting in demands for compensation being presented.

Medical and Emergency Evacuation

The Contractor is required to provide the facilities and arrangements as defined in sub-clause 3.1 b) of these Specifications.

Government Registration and Liaison

The Contractor will be required to demonstrate that it possesses formal registration by the relevant regulatory authorities in the country prior to commencing any site works.

In addition the Contractor will be required to secure the necessary approvals and clearances from the appropriate Government Department enabling it to carry out UXO works in the country.

The Contractor shall maintain close liaison at all times with the appropriate authorities in the country, particularly those engaged in the ordnance clearance operations, and shall cooperate with them, particularly in the disposal of unexploded ordnance.

Equipment Requirements

UXO Detection

The Contractor is required to nominate the search instruments to be used for the UXO clearance task. Search instruments must be capable of operating in the conditions prevalent in the country.

The proposed metal detectors must be capable of confidently detecting the following when operating under the expected conditions:

(i) projectiles 20 mm HE or items of equivalent detectability to a depth of 25 cm; and
(ii) BLU 26/36 or items of equivalent detectability to a depth of 30 cm.

The proposed magnetometers must be capable of confidently detecting 81mm HE Mortar Bombs or items of equivalent detectability, to a depth of 1.25 metres in low magnetic noise conditions and to 0.75 metres in areas of high magnetic background noise.

The Contractor is required to provide evidence constituting an independent and objective verification of proposed instrument capability. Instrument capability will be tested and approved by the Engineer prior to its use on site. Further performance audits will be conducted during contract execution.

Provision of Equipment to the Engineer

The provision of equipment, manpower and assistance to the Engineer for Audit checking of the Contractor's work, prior to endorsement of any certificate shall be the responsibility of the Contractor, and the quantities of equipment, manpower and assistance shall be such as to be compatible with planned rates of construction progress.

Operation Requirements

Method Statement and Programme

Within 28 days from the issue of the Notice to Proceed the Contractor shall submit to the Engineer a detailed method statement for the de-mining and UXO clearance works. The method statement incorporating a detailed, resourced programme to ensure that all areas within the project site are safe, to internationally accepted standards, for construction operations shall include:

(i) intended procedures for the clearance;
(ii) work plans showing estimated time schedules;
(iii) clearance team structure;
(iv) type of equipment proposed;
(v) quality control programme.

The Programme shall be revised and submitted to the Engineer at monthly intervals throughout the contract period and shall be adhered to whenever possible.

Detailed Contamination Survey

Prior to any mine and UXO clearance operations being conducted the Contractor will be required to carry out a detailed contamination survey of the Site to determine the extent of the mine and UXO clearance operations required. Survey and delineation of UXO contaminated zones will be carried out in accordance with the provisions of this plan and shall consist of 100% metal detector searches on 2 metre wide cross sections over the full width as defined in the Special Provisions at 100 metre intervals along the centreline of the alignment. Magnetometer searches are not required.

Positioning

To enable accurate positioning and recording of search areas within the defined limits, the Contractor will be required to geodetically survey and mark the new road centre line. The outer boundary limits of clearance work, measured from the surveyed centre line, may then be located and marked.

The limits of the construction support areas requiring clearance will be defined by the Contractor. The boundaries of all areas cleared of UXO must be recorded and marked by semi-permanent means to facilitate subsequent identification during construction.

Contractor's Quality Control and Certification

The Contractor is required to include in its Method Statement as required under sub-clause 3.1 d) of these Specifications a formal Quality Control Programme. Quality Control surveys constituting a minimum 10% of the searched area are required.

The control areas are to be searched initially by metal detector followed by a magnetometer search.

Control areas and results are to be recorded and reported by formal log. Log sheets are to be personally signed off by the Contractor's Ordnance Expert and are to be available for examination by the Engineer.

At least seven days before the Contractor intends to enter any area of the site to commence construction works, the Ordnance Expert shall submit, to the Engineer, his certificate declaring the area concerned to be safe for all intended construction operations. The certificate shall clearly define the

area concerned and shall be supported by the log sheets that will give details of the types of survey carried out and the classes and methods of disposal of the various UXO encountered.

Audit of Cleared Areas

The Engineer may perform a formal 10% check of UXO cleared areas. These percentages may be increased at his discretion.

If UXO are located during these checks, then a re-search at the Contractor's cost will be required. Finds triggering re-searching are either:

(i) one BLU 26/36 or metallic item of equivalent detectability per 10% of grid will require re-searching for UXO in that grid; or
(ii) three 20mm rounds or metallic items of equivalent detectability per 10% of grid will require a re-search of that grid.

When satisfied, the Engineer shall endorse the Contractor's Ordnance Expert's certificate. The Contractor shall not enter the area of the site concerned until such endorsement has been obtained. Such endorsement shall not relieve the Contractor of any of his responsibilities under the Contract.

Before providing such endorsement, the Engineer shall be entitled to consult the nationally recognised authority for UXO clearance in respect of the thoroughness of the ordnance search, and shall be entitled to withhold endorsement if so advised.

Measurement and Payment

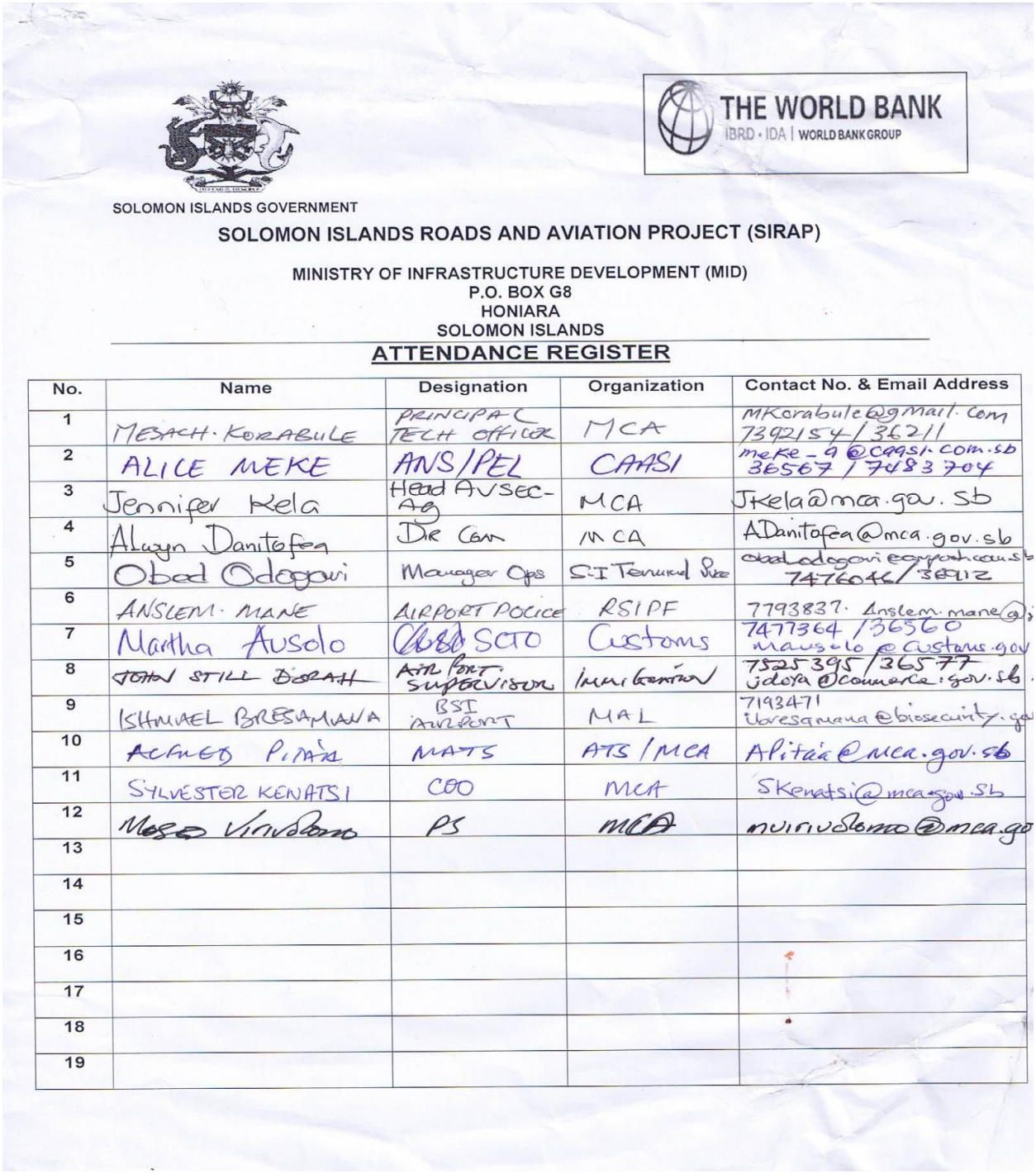
Detailed Contamination Survey for minefields shall be measured by square metre of area surveyed and recorded in accordance with these Specifications.

Detailed Contamination Survey for UXO shall be measured by kilometre of alignment surveyed and recorded in accordance with these Specifications.

Mine Detection shall be measured by square metre of site approved for clearance as determined by the results of the Detailed Contamination Survey and certified and endorsed as cleared in accordance with these Specifications.

UXO Detection shall be measured by Hectare of site approved for clearance as determined by the results of the Detailed Contamination `.

Appendix H Consultation Participant List



SOLOMON ISLANDS GOVERNMENT

THE WORLD BANK
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SOLOMON ISLANDS ROADS AND AVIATION PROJECT (SIRAP)

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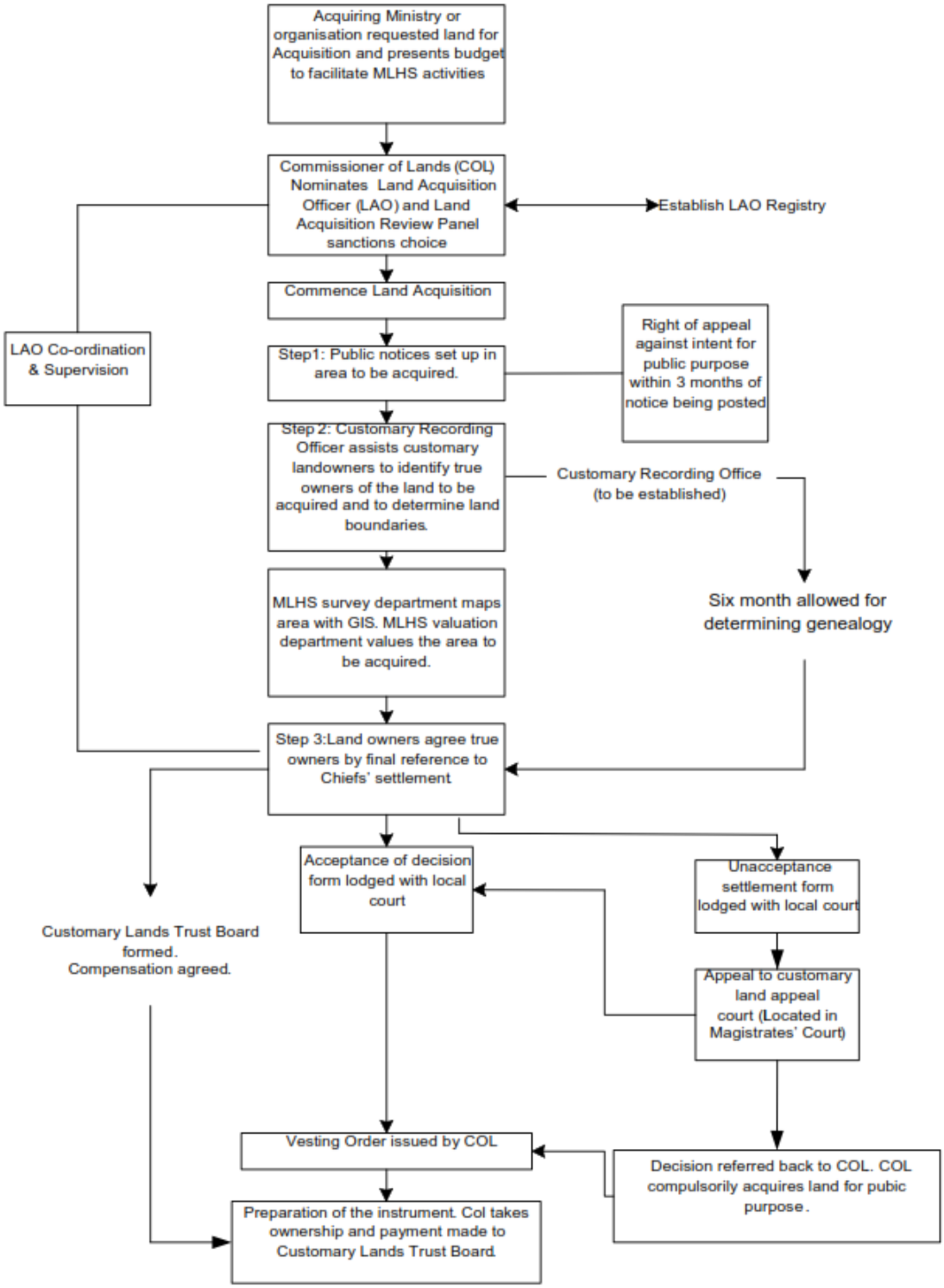
Appendix I Outline of Land Resettlement and Acquisition Framework

A. Executive Summary
B. Project Description
C. Scope of Land Acquisition and Resettlement
D. Socio-economic Information and Profile
E. Information Disclosure, Consultation, and Participation
F. Grievance Redress Mechanisms
G. Legal Framework
H. Entitlements, Assistance and Benefits
I. Relocation of Housing and Settlements
J. Income Restoration and Rehabilitation
K. Resettlement Budget and Financing Plan
L. Institutional Arrangements
M. Implementation Schedule
N. Monitoring and Reporting

Appendix J MID Proposed Modified Land Acquisition Process



Appendix K: Safeguard supervision for the SIRAP Honiara International Airport upgrade works

1. Contractor International Safeguard Specialist

The Contractors International Safeguard Specialist (Key Personnel) should:

- Have 10 years total similar work experience which will include experience in environmental management on civil construction projects and in assessing environmental and social impacts associated with infrastructure projects.
- Hold tertiary qualifications in a field relevant to environmental management and/or engineering.
- Be resourced to provide in country support at key project milestones and regular intervals in between.
- Be resourced to provide weekly inputs to safeguard oversight from home office base.

2. Supervision Consultant

General

In order to prevent harm and nuisances on local communities, and to minimize the impacts on the environment during the construction and operation of the SIRAP Project at Honiara International Airport (HIR), the following plan has been prepared which should be adhered to by all Contractors and his employees:

- The Environmental and Social Management Plan (ESMP) for HIR including site specific measures in Appendix B;
- The mitigation measures included in tender and contract documents;
- The specifications, procedures, and best practices included in the ESMP. These specifications complement any technical specifications included in the work quantities and the requirements of any SIG regulations and standards.

Objective of the Assignment

The Consultant is to provide professional technical services ("the Services") to help ensure effective implementation of the Environmental and Social Management Plan (ESMP) during the SIRAP works.

In order to achieve the goal of minimizing the negative environmental and social impacts of the project, the ESMP will be integrated in the design documents for SIRAP HIR, and in the technical specifications and contract documents. It will need to be closely followed and implemented by the contractors. The implementation of the ESMP will therefore involve four parties:

- The ***National Safeguards Specialist (NSS)*** is the person responsible for overall coordination of ESMP implementation. This person will be appointed directly by PMU.
- The ***Contractor's Safeguard Specialist (CSS)*** responsible for implementing the ESMP and other construction related environmental and safety issues.
- The ***Construction Supervision Engineers (CSE)*** who are responsible for supervising and monitoring all construction activities and for ensuring that contractors comply with the

requirements of the contracts and the EMP. The CSE will include a ***Supervision Safeguard Specialist (SSS)*;** and,

- A Client's International Safeguard Specialist, who provide support to the NSS for oversight of ESMP implementation throughout the works.

This Terms of Reference is for the **Supervision Safeguard Specialist (SSS)** to be part of the Construction Supervision Engineers (CSE).

Scope of Services:

The general services to be provided by the SSS are to inspect, monitor and audit the construction activities[27] to ensure that mitigation measures adopted in the ESMP are properly implemented, and that the negative environmental and social impacts of the project are minimized.

The Contractor has the responsibility for ensuring compliance with the project ESMP and contract conditions while undertaking the works. This is overseen by the SSS. The SSS is therefore to be an independent monitor to ensure compliance with the ESMP and to ensure adequate performance of the Contractors on environmental issues.

The SSS will inspect, monitor and carry out environmental review of all road and bridge contracts packages and lots. The SSS shall have extensive knowledge and experience in environmental supervision, monitoring and auditing to provide independent, objective and professional advice to the client on the environmental performance of the project. The SSS team leader shall be familiar with the project works through review of the relevant reports, including the EMP and any development consents as well as project technical specifications and contract documents.

As part of the CSE, the SSS is expected to perform the following duties:

Phase I: Preparation

The objective of Phase I is to lay the groundwork for the successful execution of the project. In this phase, the SSS shall: (i) review the ESMP, project designs and technical specifications and confirm that there have been no major omissions of mitigation measures; (ii) prepare a supervision work plan for ESMP monitoring including identification of key project milestones which will require intensive monitoring and in-country presence of SSS; and, (iv) develop and execute a training program for all involved in construction activities.

[27] The term 'construction activities' in this TOR pertains to all aspects related to the SIRAP HIR during the construction phase including, but not limited to, all construction sites, permanent and temporary camps, off-site activities (disposal sites, borrow pits), all associated facilities (crushing plants, asphalt plants, maintenance yards), access roads, traffic and disturbances (dust, noise) in local roads, and areas of impact away from the project site. The ESMP of the project contain a full description of these activities.

The main tasks in this phase are:

Review of Project Documents: The SSS shall review the ESMP, project designs and technical specifications and confirm in writing that there have been no major omissions of mitigation measures. If any issues are identified, the SSS shall propose to the NSS updates to the ESMP and the design and technical specifications to address these issues. Once approved by NSS, the SSS shall update the ESMP.

Environmental Supervision Checklist: The SSS shall establish a comprehensive checklist which will be used during the construction of the project to monitor the contractor's performance. This shall cover major aspects of the project, required mitigation/control measures and their implementation schedule.

Log-Book*:* The SSS shall keep a log-book of each and every circumstance or change of circumstances which may affect the environmental impact assessment and non-compliance with the recommendations made by the SSS to remediate the non-compliance. The log-book shall be kept readily available for inspection by all persons assisting in the supervision of the implementation of the recommendations of the ESMP and Contract. The NSS shall verify the log-book as part of his environmental audit.

Environmental Training: The SSS shall design and execute a comprehensive training program for all actors: Supervision Engineers, , NSS, Contractor's CSSs (and workers as part of the trainings given to the CSS), on the environmental requirements of the project, and how they will be supervised, monitored and audited, giving particular attention to:

- **ESMP:** The requirements of the ESMP, the agreed environmental monitoring checklist, the environmental monitoring form, how non-compliance with the ESMP will be handled, and all other key issues shall be covered. Particular attention will be paid to the specific provisions in each contract's technical specifications indicating how the ESMP is to be complied with;
- **Health and Safety:** The health and safety requirements of the project shall be clearly identified and communicated with the Contractors and NSS (included in environmental specifications for contractors).

At the conclusion of the training Contractors will also sign a statement acknowledging their awareness of the environmental regulations, the ESMP, the compliance framework, and health and safety obligations. The CSS shall sign a similar statement confirming their understanding of the supervision responsibilities. This shall be provided to PMU and the World Bank

Phase II: Supervision of Construction Activities

On behalf of the NSS and the Chief Supervision Engineer, the SSS will:

- Review, and inspect in an independent, objective and professional manner in all aspects of the implementation of the ESMP;
- Carry out random monitoring checks, and review on records prepared by the Contractor's CSS;
- Conduct regular site inspections;

- Review the status of implementation of environmental protection measures against the ESMP and contract documents;
- Review the effectiveness of environmental mitigation measures and project environmental performance;
- As needed, review the environmental acceptability of the construction methodology (both temporary and permanent works), relevant design plans and submissions. Where necessary, the SSS shall seek and recommend the least environmental impact alternative in consultation with the designer, the Contractor(s), and PMU;
- Verify the investigation results of any non-compliance of the environmental quality performance and the effectiveness of corrective measures; and
- Provide regular feedback audit results to NSS and CSS according to the procedures of non-compliance in the ESMP;
- Provide training programs at minimum six monthly intervals and every time there are new workers or new Contractors coming into the site, including CSS and PMU staff, to appraise them of issues identified and how to improve environmental compliance;
- Instruct the Contractor(s) to take remedial actions within a specified timeframe, and carry out additional monitoring, if required, according to the contractual requirements and procedures in the event of non-compliances or complaints;
- Instruct the Contractor(s) to take actions to reduce impacts and follow the required ESMP procedures in case of non-compliance / discrepancies identified;
- Instruct the Contractor(s) to stop activities which generate adverse impacts, and/or when the Contractor(s) fails to implement the EMP requirements / remedial actions instructed by the SES or the EMC.

Review of Site CESMP: To ensure consistency across the project, the SSS shall provide the final review and recommend clearance (following approval from World Bank) of the CESMP including all sub plans. Where these plans are found not to comply with the ESMP the SSS shall work with the CSS and Contractor to establish a suitable solution.

Site Inspections: The SSS shall closely audit the construction activities through regular site inspections accomplished through daily site visits, walks and visual inspections to identify areas of potential environmental problems and concerns. As noted in footnote 1 of this TOR, the area of inspection should cover both the construction areas and the environment outside the site area that could be affected, directly or indirectly, by the contractor's activities.

Inspections should be done independently from the Contractor's staff. It is expected that the SSS shall have their own hand held and portable monitoring equipment such as cameras, transport and other resources. Where definitive monitoring is necessary to resolve contentious issues or to impose penalties, the SSS may contract third parties to carry out specific monitoring at the locations under review.

Where there is infringement of technical specifications, or condition of contracts, or non compliance with the ESMP, the SSS shall be immediately inform Contractor's Chief Engineer, Supervision Chief Engineer and NSS. The SSS shall also report all infringements to the PMU as part of the monthly reporting.

Regular joint environmental site inspections (e.g. weekly) should be organized by the SSS and CSS, with participation from the Contractor's Environmental Officer (DEO). These should be used as an opportunity for the SSS to further train the CSS and Contractor's staff.

SSS field engineer's log-book shall be kept readily available for inspection by all persons assisting in project management, including the Independent Monitoring consultant

The SSS shall also regularly review the records of the contractors to ensure that they are up to date, factual and meet the EMP reporting requirements (*e.g.* environmental complaint monitoring records).

Complaints: Complaints will be received by the Contractor's Site Office from local residents with regard to environmental infractions such as noise, dust, traffic safety, etc. The Contractor's Chief Engineer or his deputy, and the DEO shall be responsible for processing, addressing or reaching solutions for complaints brought to them. The SSS shall be provided with a copy of these complaints and shall confirm that they are properly addressed by the Contractors in the same manner as incidents identified during site inspections. The SSS shall ensure that these complaints are logged into the SIRAP GRM

Unforeseen Impacts: In the event that an incident arises which was not foreseen in the ESMP, the SSS shall work closely with the CSS, the Contractors, and the NSS to confirm satisfactory resolution to the incident. The SSS shall then update the ESMP and the implementation guidelines, training the Contractors' staff accordingly.

Monthly Payments: The SSS shall confirm the monthly payments for environmentally related activities as recommended by the SSS to the client.

Site Restoration and Landscaping: The SSS shall closely monitor all activities with regard to site restoration and landscaping in areas such as borrow pits, quarries, camps, crushing plants, etc. to ensure that the activities are done to an appropriate and acceptable standard. The SSS will agree with the Contractor on a Site Decommissioning and Restoration plan to be implemented before the completion of the construction of the access road and bridges.

Project Initiation and Staffing: It is anticipated that the CSS and the SSS, will be mobilized one month before the start of the construction activities. The one month start up time will be utilized by the SSS to review and familiarize itself with the project, the project design, the technical specifications, contract documents, the ESMP and other project relevant documents and reports. Following the review, the SSS will prepare a brief report on the potential issues and challenges arising from the implementation of the ESMP and the condition of contracts and make recommendations to the PMU about how best to improve the implementation of the ESMP.

The SSS is expected to be mobilized at the beginning of the contract, to prepare the necessary guidelines, documentation, training, *etc*.

Reporting: As a minimum the SSS shall prepare the following written reports:

- Weekly report of non-compliance issues
- Summary monthly report covering key issues and findings from reviewing and supervision activities

- Consolidated summary report from contractor's monthly report
- The SSS shall also collect and report on data as requested by the PMU.

At the end of the project the SSS shall prepare a final report summarizing the key findings from their work, the number of infringements, resolutions, *etc*. as well as advice and guidance for how such assignments should be conducted in the future.

During the course of the project the SSS shall provide briefings as requested by the PMU, environmental agencies, the World Bank and MCA on the project progress, incidents, and other issues associated with environmental management and supervision. As a minimum these are expected to be at six-monthly intervals.

Appendix L: Native Land Leasing Process

Laydown sites and stockpile sites: for these activities, there is no land acquisition; the project requires only temporary access into lands. This land is used to park equipment and to position construction materials such as gravel. The procedure for these lands is as follows:

1. The National Safeguard Specialist (NSS) identifies the landowners, the boundaries of their properties, and non-land assets which can be affected by the project. The NSS produces a scoping report which lists the owners, marks out the boundaries of the land in a sketch map and lists down non-land assets which may be removed during civil works.
2. The communities are consulted (by the NSS) to seek agreement on the scoping report and to verify that correct landowners and boundaries have been identified.
3. MCA PMU and customary landowners sign a MCA approved Memorandum of Understanding (MOU) for voluntary land access with no cash compensation. This is usually done before mobilization of the Contractor.

Construction Material: for this activity, there is no land acquisition; the project requires only temporary access into lands. The procedure for these lands is as follows:

1. The NSS identifies the landowners, the boundaries of their properties, and non-land assets which can be affected by the project. The NSS produces a scoping report which lists the owners, marks out the boundaries of the land in a sketch map and lists down non-land assets which may be removed during civil works.
2. The communities are consulted (by the NSS) to seek agreement on the scoping report and to verify that correct landowners and boundaries have been identified.
3. Contractor (with support from NSS) enters negotiations with the landowners for access to materials.
4. Contractor and customary landowners sign a MCA approved Memorandum of Understanding (MOU).