

SECOND SOLOMON ISLANDS ROADS AND AVIATION PROJECT (SIRAP2) – ADDITIONAL FINANCING 2 (AF2)

Environmental and Social Management Plan: Fiu River Bridge Replacement, Revision 2.9 Final

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Quality Information

Document	Environmental and Social Management Plan (ESMP) for Fiu River Bridge Replacement and Approach Works
Date	8 July 2026
Prepared by	SIRAP2 PST

Revision History

Revision	Revision Date	Details	Submitted
			Name/Position
1.0	20 May 2020	Draft submitted for review	Kate Walker/International Safeguard Specialist
1.1	05 June 2020	Updated based on clients comments	Kate Walker/International Safeguard Specialist
2	17 July 2020	Updated for expanded scope to include Fiu Bridge	Kate Walker/International Safeguard Specialist
2.1	18 Sept 2020	Updated based on WB comments.	Kate Walker/International Safeguards Specialist
2.2	22 Oct 2020	Updated to incorporate detailed update from Design Engineer (Archana Singh/SMEC) Updated to incorporate RSS comments	Kate Walker/International Safeguards Specialist
2.3	07 Dec 2020	For disclosure	Kate Walker/International Safeguards Specialist
2.4	30 Apr 2026	Updated and to incorporate detailed design of Fiu River Bridge	SIRAP2 PST – E&S Team
2.5	29 May 2026	Updated to address WB's comment.	SIRAP2 PST – E&S Team
2.6	10 June 2026	Updated to address WB's comment.	SIRAP2 PST – E&S Team
2.7	16 June 2026	Updated to address WB's comment.	SIRAP2 PST – E&S Team
2.8	30 June 2026	Updated to address WB's comment.	SIRAP2 PST – E&S Team
2.9	8 July 2026	Updated to address WB's comment.	SIRAP2 PST – E&S Team

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GLOSSARY AND ABBREVIATIONS

ADB	Asian Development Bank
ADWG	Australian Drinking Water Guidelines
AF	Additional Financing of SIRAP2
AGO	Attorney General's Office
ANZECC	Australia and New Zealand Environment and Conservation Council
AP	Affected Person/People
ASP	Approved Service Providers
BMP	Building Materials Permit
CAC	Community Advisory Committee
CAE	Child Abuse and Exploitation
CESMP	Contractors Environmental and Social Management Plan
CLO	Community Liaison Officer
CoC	Codes of Conduct
COL	Commissioner of Lands
CPIU	Central Project Implementation Unit of MID
CSS	Country Safeguard Systems
ECD	Environmental and Conservation Department of MECDM
EIS	Environmental Impact Statement
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework- of World Bank
ESHS	Environmental, Social, Health and Safety
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standards
GBV	Gender Based Violence
GCT	GBV Complaint Team
GRM	Grievance Redress Mechanism
HCC	Honiara City Council
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome
IEC	Information, Education and communication
IFC	International Finance Corporation
IOL	Inventory of Losses
LAeq	Equivalent Continuous Level
LMP	Labour Management Procedure

LTA	Lands and Titles Act
MCA	Ministry of Communication and Aviation
MECDM	Ministry of Environment, Climate Change, Disaster Management and Meteorology
MFAT	Ministry of Foreign Affairs and Trade
MID	Ministry of Infrastructure Development
MLHS	Ministry of Lands, Housing and Survey
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPG	Malaita Provincial Government
MRIMP	Malaita Roads Improvement and Maintenance Program
NESO	National Environmental and Social Officer
NGO	Non-government organisations
NSSS	National Senior Safeguard Specialist
OHS	Occupational Health and Safety
PER	Public Environmental Report
PPE	Personal Protective Equipment
PSC	Project Steering Committee
PST	Project Support Team
QMP	Quarry Management Plan
RAP	Resettlement Action Plan
SEAH	Sexual Exploitation, Abuse and harassment
SEP	Stakeholder Engagement Plan
SESCP	Soil Erosion and Sediment Control Plan
SIRAP2	Second Solomon Islands Roads and Aviation Project
STI	Sexually transmitted Infection
SWMP	Solid Waste Management Plan
TMP	Traffic Management Plan
UXO	Unexploded Ordnance
WB	World Bank
WHO	World Health Organisation
WoMP	Workers Management Plan

Executive Summary

The Solomon Island Government (SIG) has been implementing the Second Solomon Islands Roads and Aviation Project (SIRAP2) since June 2022 to deliver aviation and road network improvements to support the development of climate resilient national transport infrastructure. In March 2025, Additional Financing (AF) for SIRAP2 became effective, and SIRAP2 AF2 followed in the fourth quarter of 2026. This ESMP has been updated and prepared for the Fiu River bridge Project and serves as a revision of the original ESMP that was developed in December 2020, capturing the planned activities under SIRAP2 as follows:

SIRAP2

- Honiara International Airport is located in Honiara, Guadalcanal.
- Munda International Airport is located in Munda, New Georgia Island.
- Existing road network in Noro Town on New Georgia Island.
- Santa Cruz Airport on Nendo Island, Temotu Province

SIRAP2 AF

- Suavanao Airport in Isabel Island, Isabel Province
- Upgrading of existing 2 x road networks on Malaita Island

SIRAP2 AF2

- Fiu Bridge replacement, Malaita Province
- Upgrading of existing 4.9km sealed road between Auki Gwaunaruu Airfield and Kiluuffi Hospital junction

SIRAP2 AF2 for social risk is Substantial, and environment risk is Substantial. Therefore, the overall rating is a 'Substantial' risk project under the World Bank (WB) Environmental and Social Framework (ESF) and requires the development of a site-specific Environmental and Social Management Plan (ESMP). Due to the nature of the project, it is expected that impacts will be site-specific; few, if any, are irreversible, and mitigation measures can be readily designed and implemented. The ESMP is required to identify and assess environmental and social issues associated with the proposed activities, and to develop mitigation and management measures that are consistent with WB requirements.

This ESMP is prepared for the Fiu River Bridge Replacement and approach works.

1 Introduction

1.1 Project Overview

The SIG, with World Bank financing, is implementing SIRAP2 to improve the climate resilience and safety of the Solomon Islands' Road and aviation sector. In 2024, SIG requested additional finance (AF) for SIRAP2, given the need to expand SIRAP2 further.

The SIRAP2 is a continuation of the Solomon Islands Roads and Aviation project (SIRAP) that closed in December 2024. On 3 March 2025, the first Additional Finance for SIRAP2 became effective and covers three subprojects: Suavanao Airport upgrade in Isabel province and the improvement of two road corridors in Malaita province. In February 2026, the SIG requested additional support to finance priority infrastructures in Malaita Province. Accordingly, the proposed second Additional Financing (AF2) is expected to become effective in the fourth quarter of 2026 and covers Fiu River bridge replacement and two (2) road corridors on Malaita.

The Fiu River bridge connect the wider population of North Malaita and the Eastern regions of Malaita to Auki town and to Honiara.

The table below outlines the location of the Bridge and roads improvement subprojects under the SIRAP2 AF2. The identified works will only be undertaken on the Right - of -Way that are confirmed as having been declared and gazetted as public roads under the Roads Act.

The following table outlines the various approaches that are generally proposed along the length of the identified network. The identified works will only be undertaken on roads that are confirmed as having been declared and gazetted as public roads under the Roads Act.

Table 1: Conformed approaches to Malaita Road network under AF2

Location	Investment	Description
Dala-Auki	Bridge replacement	This bridge had been identified for upgrading and lengthening: i. Fiu Bridge: lengthening and change alignment
Auki Gwaunaru'u Airfield to Kiluufi Hospital Junction	Upgrading the existing sealed roads	Upgrading the 4.9km road from Auki Gwaunaru'u Airfield and Kiluufi Hospital junction
All roads in scope	Road safety improvements	Signage, line marking, road footpath, bridge footpath (universal access inclusive of a 1,300 mm-wide footpath), speed humps, edge treatment, retaining wall repairs and guardrail.

This Environmental and Social Management Plan (ESMP) has been prepared to identify, assess, and manage the potential environmental and social risks and impacts associated with the Fiu River Bridge project in accordance with the requirements of the World Bank Environmental and Social Framework (ESF) and applicable national legislation.

The ESMP outlines mitigation and monitoring measures to avoid, minimise, or manage adverse impacts during project implementation, while promoting environmental protection, community health and safety, stakeholder engagement, and sustainable project outcomes.

The ESMP also defines the roles and responsibilities of the implementing agency, contractors, Supervision Engineer, and relevant stakeholders in ensuring compliance with the applicable Environmental and Social Standards (ESSs).

1.2 ESMP Scope and Development

Under the AF2, the Fiu River Bridge will be replaced as per the detailed design attached in Appendix K. This ESMP provides the environmental and social management measures that are to be implemented during the bridge replacement and approach works to the extent as is currently known in the design process.

Key activities include:

1. Site Preparation & Establishment

- Site clearance (limited vegetation removal)
- Establishment of workers' camp (if any)
- Establishment of laydown, stockpile, and batching areas
- Temporary access roads and site fencing
- Installation of fuel/hazardous materials storage, waste storage, sanitation facilities

2. Traffic & Access Management

- Temporary traffic diversions and control
- Pedestrian safety arrangements
- Temporary river or road crossings (if required)
- Transport of materials and equipment

3. Demolition / Removal of Existing Bridge (if it is to be demolished)

- Dismantling bridge deck and superstructure
- Removal of piers, piles, or abutments
- Handling and disposal of demolition waste
- Management of hazardous materials (e.g. asbestos, oils, lead paint)

4. In-River and Riverbank Works

- Excavation for foundations and abutments
- Cofferdams or flow diversion measures
- Piling and concreting works
- Riverbank protection and scour control
- Temporary restriction of river use by communities

5. Construction of New Bridge Structure

- Pile construction and substructure works

- Erection of girders/beams
- Deck construction and curing
- Installation of railings, barriers, pedestrian paths
- Bridge drainage installation

6. Road Approach and Ancillary Works

- Earthworks and embankment construction
- Road realignment and pavement works
- Drainage and culvert installation
- Road signage and safety features

7. Material Sourcing and Haulage (Throughout Construction)

- Quarry or borrow pit operations
- Aggregate extraction (river or land-based)
- Transport and stockpiling of materials
- Biosecurity controls for imported materials/equipment

8. Decommissioning and site rehabilitation

- Decommissioning of workers' camp, laydown area and quarry pits. The site for these facilities has yet to be determined for this Bridge project. During construction phase, activities will involve establishment of workers' camp, laydown area and quarry pit close to the vicinity of the project site. Location to be determined.

The SIRAP2 AF2 Environmental and Social Risk Screening (ESRS) has given an overall Environmental and Social Risk Classification (ESRC) of 'Substantial', with environmental risks classed as 'Substantial' and social risks as 'Substantial'. A site-specific ESMP is required for this proposed Fiu River Bridge subproject. 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, and is required.

The Environmental and Social Risk Screening (ESRS) completed by the WB team identifies the relevant Environmental and Social Standards (ESS) that apply to the SIRAP2 AF2 activities. These are:

- ESS 1: Assessment and Management of Environmental and Social Risks and Impacts
- ESS 2: Labour and Working Conditions

- ESS 3: Resource Efficiency and Pollution Prevention
- ESS 4: Community Health and Safety
- ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement
- ESS 6: Biodiversity Conservation and Sustainable Management of Natural Resources
- ESS 8: Cultural Heritage
- ESS 10: Stakeholder Engagement and Information Disclosure

1.3 Accompanying ESF Instrument

In conjunction with the ESF, the following listed instruments are also being produced for SIRAP2 AF2 sub-projects and to be implemented with this ESMP. These instruments will be reviewed, cleared by WB and disclosed on the SIRAP website. Updates will be made as required.

Labour Management Procedure (LMP), 2026¹: The LMP for SIRAP2-AF has been revised to cater for AF2. It outlines a structured approach for community outreach and two-way engagement with stakeholders in appropriate languages, as well as adopting measures to include vulnerable and disadvantaged groups (poor, disabled, elderly, isolated communities). It is based upon meaningful consultation and disclosure of appropriate information.

Resettlement Action Plan (RAP), 2026²: PST has revised the SIRAP2-AF RAP on behalf of the client to mitigate potential risks associated with any impact on land, which include land use, land access and the acquisition of land for SIRAP2 AF2 projects.

1.4 Integration of ESMP

It is the responsibility of the SIRAP2 PST to ensure that this ESMP is fully integrated into the project. The ESMP shall form part of any bid documentation of physical works for the bridge upgrade subproject, and it shall be the PST's responsibility to ensure that ALL procurement documents and contractual specifications is subject to review against this ESMP and the appropriate up to date version of the World Bank standard procurement documents to ensure that all relevant Environmental and Social (ES) risks management measures are captured at the bid stage and in all contracts.

It is further the responsibility of the PST to ensure that this ESMP is considered in review of any Terms of Reference (TOR) for Technical Assistance developed for the subproject. The ES for any design or supervision of the Subproject will be fully integrated into TOR to ensure that all safeguard responsibilities allocated within the ESMP are realized at the tender stage.

In this way, the ESMP will be fully integrated within the Subproject so that the required measures will be fully appreciated by all responsible parties and successful implementation will be achieved.

1.5 Disclosure

As part of the requirements of Solomon Islands law and World Bank policy, the ESMP is to be publicly disclosed by the World Bank and, the Ministry of Infrastructure Development (MID), as the agency responsible for project preparation and implementation, and on the SIRAP2 project website, www.sirap.sb.

Disclosure does not equate to the consultation (and vice versa), as disclosure is about transparency and accountability through the release of information about the project. The final Fiu Bridge ESMP will be made available in hard copy at the PST office at Kukum in Honiara. The disclosure of the ESMP will

¹ http://sirap.sb/images/Docs/6b_LMP_SIRAP2_AF_Final.pdf

² http://sirap.sb/images/Docs/6d_RAPT_SIRAP2_AF_Final.pdf

be in a PDF format less than 10Mb in size, so that it can be easily downloaded and emailed using Solomon Islands' standard internet connections.

Likewise, the PST will ensure that printed copies are readily available at the Malaita SIRAP office in Auki and easily accessible to affected groups and local Non-Governmental Organisations (NGOs).

The ESMP will be reviewed, updated, and approved as required. For each approved updated version of this ESMP, the PST will be responsible for disclosure through the above channels.

2 Subproject Description

2.1 Current Situation

Malaita has the highest population and largest road network outside of the main island of Guadalcanal, but the condition and standard of the road network on Malaita are of a lesser standard.

Under the SIRAP2 AF2, Fiu River Bridge replacement was considered high priority under the National Transport Plan (2017–2036) and the Medium-Term Transport Action Plan (2017–2021). This bridge are connecting over half the province’s wards and 70% of its population.

From the 2009 census report, the population of Malaita Province was 137,596 with 5,105 people living in the main town of Auki. The population density for Malaita Province was 33 per km² and has an annual growth rate of 1.2% but this increases to 11.6% in Auki. Fiu River bridge connected the northern and eastern regions of Malaita to Auki. Auki accommodates commercial houses, Non-Government Organisations (NGOs), State-Owned Enterprises (SOEs), and national government offices and essential services like health, market and education. Auki is also home to the main port on Malaita. Public Utility providers, including Solomon Power, Solomon Water, and Telekom, also operate in Auki.

The project, under the Additional Financing 2 (AF2) component takes onboard Fiu River Bridge replacement as a priority project under the Solomon Islands Government to mark the country's 50th anniversary on 7th July 2028. The Fiu bridge, plus the two road corridors in Malaita, are part of the ‘Special Anniversary Package’ to be completed before the 50th anniversary celebration.

2.2 Overview of Works

This subproject will cover the replacement and approach works for Fiu River bridge along the Auki - Dala Road corridor in Malaita. The existing bridge is located in central Malaita approximately 7km from Auki town. The bridge provides a critical link for the communities living to the northern and nasteren extents of Malaita, connecting them to Auki town and South Malaita. The existing bridge is in poor condition and requires urgent replacement. See the Figure below for the site location.

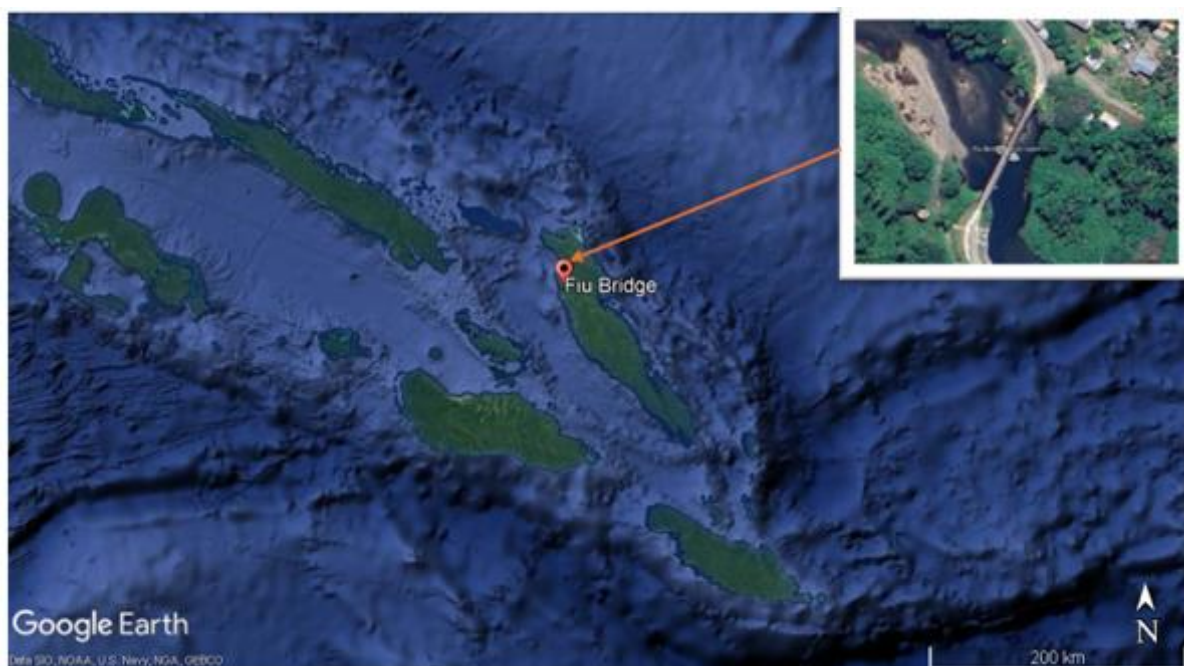


Figure 1: Location of the Fiu River bridge in Malaita

The existing Fiu bridge is a 2-span bailey bridge constructed more than 30 years ago. From the draft detailed design, the bridge will be 84m long, three span structures comprised of 2 x 25m side spans and a central span of 34m in length.

Appendix K contains the detailed drawings of Fiu River bridge.

It is proposed that the bridge will be constructed 7 meters downstream of the existing bridge, and temporary traffic diversion will be provided utilising the existing bridge. The scope of the works for the bridge will be provided in the detailed design phase.

- a) The Fiu River Bridge has been separately designed to the concept stage by the SIG (Appendix K). Under this concept design the following replacement and approach works are proposed:
 - a. Construction of a new 3 span steel bridge approximately 10m downstream from the existing bridge.
 - b. Realignment of both approaches to meet new bridge location.
 - c. Removal of old bridge including piles.
 - d. Widen bridge to two lane carriage way.
 - e. Expand and increase embankment protection.
 - f. Earthworks to support relocation and realignment.
 - g. Install pedestrian walkway on bridge.
 - h. Pavement construction.
 - i. Installation of guardrails, signage and other safety requirements.

The estimated quantities of aggregate for the bridge construction have not been calculated during the concept design phase, and while it is expected that these aggregates will be sourced locally from Malaita, the contractor will confirm that during the design phase and reflect it in the CESMP.

The new Fiu River bridge will be constructed before it is connected to the main road and no alternative crossing points will be required as the existing bridge will remain operational during construction.

2.3 Construction Methodology

2.3.1 Equipment

Specialised equipment such as concrete plant, cranes and construction materials required for the bridge construction will be provided by the contractor as part of its operational cost. Where necessary, the 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 under the Biosecurity Solomon Islands which require fumigation (proof of) of materials and equipment and declarations by personnel (specifically regarding communicable diseases). A biosecurity clearance certificate will be produced to substantiate the process.

2.3.2 Aggregate Supply

For this project, the site for river gravel is yet to be confirmed but it is anticipated that crushed aggregates will be sourced from the designated extraction site at downstream of Fiu River Bridge. In identifying a gravel extraction site, the contractor will work closely with the supervision consultant and conduct an environmental and social risk assessment to ensure, the quarry extraction is not undertaken in sensitive areas, including tabu sites, along river channel, along the coast, close to schools and communities. As part of this risk screening process, community consultations will also be conducted with the rightful owners and clarify the extraction process, possible stockpiling sites, volume to be extracted, depth and area of extraction, haulage route and mitigation measures to address dust, noise, sediment and water quality. Gravel extraction will be strictly on the alluvial deposits at the banks of the river, and not along the channel of the river. A Quarry Management Plan

will be compiled by the contractor and will provide the details of the extraction method, risk controls adopted and timeframe.

The contractor is responsible to test and to ensure the aggregates meets the required standard for the bridge construction work. Fiu River gravels were widely used for the Malaita roads upgrade and bridges construction works. Otherwise, the contractor will have an option of purchasing river gravel from licensed suppliers in Honiara, Guadalcanal and shipped over to the project site in Malaita province. Other projects under SIRAP and SIRAP2 adopted this practice of purchasing aggregates from Honiara based suppliers.

For the coronous materials, two (2) quarry sites were identified to be potential sources.

- Quarry 1- Areo quarry – A kilometre inland from the Gwaunaru'u Airport Junction
- Quarry 2- Ferafatoto quarry- Less than a kilometre inland of Auki township

Due diligence will be conducted by PST to reconfirm the arrangement with rightful landowners. However, the contractor has the option to buy crushed gravel from a licensed seller in Honiara and ship over to Malaita Province.

The contractor will be responsible for the quarrying crushing and transporting the aggregated from the quarry to site for the bridge works. These works will need a quarry permit, quarrying plan and CESMP to be developed by the Contractor. 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.

Accessible sources of suitable aggregate materials will be identified in the CESMP and approved by the Ministry of Mines, Energy and Rural Electrification (MMERE), MID and Environmental and Conservation Department (MECDM) and approved by the Supervision Engineer and extracted under valid Quarry Permit issued by the MMERE. The contractor will responsible to apply for a valid Building Materials Permit from MMERE.

Aggregates must be sourced from an area which is not impacted by the invasive Giant African Snails (GAS) and must not be transiting through other parts of the island unless through biosecurity controlled and approved stockpile site.

The Contractor will need to assess the existing bridge structure for use in transporting the works. The quality and quantity of the aggregates from the Fiu River site is yet to be determined to see if they are fit to use for bridge construction and pavement material. A request has been forwarded by MID to carry out the following tests:

- Atterberg Limits;
- Moisture Content;
- Compaction;
- Particle Size Distribution (PSD);
- Water Absorption; and
- Flakiness Test/Crush Face Test.

Potential river aggregates sites in Malaita are mostly under tribal or private land ownership, and contractor will have to consult with respective landowning groups. But according to a discussion with the Provincial Government on 20th of February 2020 revealed that Malaita Government owns a section of land at Gwaigeo area, about 2 kilometres by road downstream of Fiu Bridge which contain a sand bar that may be relevant for gravel extraction though relevant geotechnical tests have not yet been performed on the suitability for bridge works. MPG indicated in the meeting that SIRAP could utilise the site for its road and bridge works. This arrangement will be revisited with the MPG executive

to confirm the arrangement prior to execution of the contract. Alternatively, the contractor has the option of shipping aggregates from licenced suppliers who are based in Honiara.

The provincial secretary (PS) of MPG in a meeting with them in July 2020 mentioned that MPG has a current agreement with the landowners of Kwaimanafu Quarry site for use. This quarry was formally used by Kitano in previous road works. The PS said that SIRAP2 can access this quarry through formal agreements with MPG. MPG added that for any projects that operate in Malaita, it is their wish that they would be the one to liaise with and sign a long-term MOU with resource owners (including quarry owners) in Malaita. Projects shall extract aggregates from these quarries through an MOU with MPG. MPG shall manage the resource owners' expectation and requirements. The advantage of this approach is the fact that projects will only have to deal with MPG, a single entity rather than having to deal with separate landowners which can be complex at times. Therefore, the MOU for SIRAP2 works shall be signed between MID and MPG.

The contractor shall appropriate Management Plans are in place, including its quarry management Plan and Traffic Management Plan as part of the CESMP in accordance with the Environmental and Social Standards one(ESS1), ESS2, ESS3, ESS4, & ESS6 of ESF. The contractor shall ensure that it performs a screening on the site as well before agreeing to use any particular quarry site.

2.3.3 Cofferdam and flow regiment

The contractor will consider the river ecosystems in the design of coffer dams and river channel flow during in-stream works. The flow velocity is yet to be determined, and it is the responsibility of the contractor with the support of the supervision engineer to conduct all the essential water velocity, water depth and related testing prior to construction.

The design flood return period for the bridge and associated facilities is 1 in 100 years, with the peak flow during flooding event is calculated to be 1259m³/s and peak flood level of 8.99m. The dry season flow rate at the project site is to be determined by the contractor. However, assessment on limited available water data recorded within the catchment indicated a lower mean discharge of 2.8 m³/s. Given the catchment area of 62 km², this corresponds to an estimated discharge of 45 L/s/km², which is notably lower than the 120 L/s/km² estimated using the water balance method. It is highly recommended during the construction phase that a minimum residual river flow is to be maintained during in-stream works.

The coffer dam design will ensure it meets the design flood return period and the minimal flow requirements of the river. The contractor will also be required to provide a detailed in-stream works methodology, including dewatering procedures and sediment controls to the supervision engineer's approval prior to any work in the river channel. This should be detailed in the contractor's Safe Work Method Statement and the soil erosion and sediment control plan. The supervision consultant will work closely with the contractor and approval is required at every stage of the in-stream works, including the coffer dam construction.

In addition to the in-stream works, the contractor will compile and implement a Fish passage plan, to ensure the diadromous species are allowed to pass through during the construction phase. The contractor will consider appropriate methodology to enable fish migration during construction, including a fish ladder or detour channel to allow movements of fish species migrating upstream and downstream during the construction phase. Prior to any dewatering of the cofferdam zone, the contractor shall conduct a fish rescue operation under the supervision of an ecologist. All fish captured shall be identified, recorded, and released upstream or downstream of the works area.

2.3.4 Construction Camp and Laydown Areas

The laydown area generally will consist of the project offices, storage areas, stockpile sites, asphalt/concrete plant and associated facilities.

MID and the PST has not yet confirmed a suitable location at this stage. This area may be confirmed and captured at a later stage when the contractor is on board and will be included in the CESMP. The establishment of this area will need to be in accordance with the requirements of this ESMP.

Laydown area 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 area be located outside of the works security perimeter, the hiring of a local security firm to provide security for the area is recommended.

No company in the Malaita Island produces and sells ready-mix concrete, for the works the contractor will need to establish a concrete asphalt batching plant on site. Prior to the establishment of the concrete plant, consideration should be made on where the concrete plant is to be located as it can produce nuisances such as noise and bad odour. Depending on where the asphalt plant is to be located, there will be potential issues with noise and odour which can be managed through proper consultation with nearby communities and to ensure that work is done during times that are acceptable especially between 7:00 am and 6:00 pm. In terms of odour and dust issues, wind direction determines which communities are going to be impacted. Meaningful consultation will be conducted with the communities during finalisation of site and this ESMP will be updated with the outcomes of those sessions.

If located away from communities, social impacts should be minimal. The confirmed location of the laydown area will be noted in the CESMP and subject to WB clearance. Planning and management of the laydown will follow all requirements of the ESMP 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 anticipated that there will be a need for a workers camp for the bridge construction works. Prior to establishment of a workers' camp, appropriate land lease arrangements should be made and approved by the Supervision Engineer in conjunction with SIRAP2 PST. In general, the terms of the land lease agreement should outline following: parties to the agreement, voluntary agreement, description of land, purpose of land use, lease duration (i.e. project duration only), lease payment/compensation in which the Commissioner of Lands will approve. The lease agreement ideally will include the rate of the lease and access rights, site demarcation and boundaries, E&S compliance, liability & dispute resolution, community health and safety, protection of culture and natural resources, GRM, restoration and rehabilitation, monitoring & inspection, termination condition, documentation and record keeping, and signatures and witnessing.

The necessary steps required in the ESS2, SIRAP2-AF2 LMP, and International Finance Corporation (IFC)/WB Workers Accommodation: Process and Standards Codes of Practice should be followed, including number of workers per room, proper housekeeping, laundry facilities provided, separate toilets for men and women, ventilation systems, wastewater and drainage systems. Should a workers camp be required, then these guidelines must be adhered to, and updates made to the ESMP and CESMP as appropriate.

A Workers Camp Management Plan would be required from the Contractor following the guidelines provided in Appendix B. A Workers' Camp Management Plan addresses specific aspects of the establishment and operation of workers' camps.³

Particular attention should be paid to visitor management, Occupational Health and Safety, Community health and safety, labour influx, sanitary water systems, and waste management and measures to avoid instances of gender-based violence (GBV) and Sexual Exploitation, Abuse and harassment (SEAH) (see Section 8.2.3). A labour influx management Plan would also be required since

³ <http://pubdocs.worldbank.org/en/497851495202591233/Managing-Risk-of-Adverse-impact-from-project-labor.inbox.pdf>

there will be potentially an influx of skilled and unskilled workers who may originate from overseas and other parts of the Solomon's to work at the Bridge project. The focus of this plan is to ensure that nonlocal workers are inducted on the culture of Malaita and to manage an inappropriate contact between the non-locals and the residents close to the bridge construction site and haulage routes that may result in GBV, SEAH and other miss conduct.

2.3.6 Haulage Routes

Transport to and from the site and the construction camp, particularly of materials and equipment, must occur on the existing road network and measures undertaken to prevent accidents, dust, spillages, noise and vibration nuisance (e.g. wheel wash, covering of loads, servicing of vehicles) by applying and referring to ESS4. Deviations from the nominated access routes will not be tolerated.

If the transport of material or equipment is likely to impact on normal pedestrian and vehicle traffic or pose an increased safety hazard, consideration should be given to moving these items during off-peak times. Measures such as prohibiting the use of engine braking and the use of speed control in and close to settlements can be implemented to reduce noise, speed, and vibration near sensitive receptors (Section 5.4).

The haulage route is unknown at this stage, and the contractor will determine the haulage route and to be included in the CESMP in accordance with the ESS4. The CESMP should assess any requirements, and any necessary measures will be reflected in the Traffic Management Plan. Should off-peak transportation of materials be necessary, it is important to communicate this in a meaningful manner to the communities along the route, particularly those on any unsealed roads where additional traffic management may be necessary.

2.3.7 Hazardous Substances

Hardstand areas must be available for storage of hazardous substances and other equipment that poses a potential risk to the environment (e.g. leaking lubricant from machinery). Runoff from hardstand areas used to store machinery will need to be collected and treated (e.g. oil-water separator) to prevent contamination of soil or water bodies. Hazardous substances (e.g. fuel, lubricants, oil, paint) must be stored in a self-bunded tank or, with the Supervision Engineers' permission, within a bunded area. Solid waste and wastewater must be managed in such a way to prevent the spread of vector-borne diseases and contamination of soil and water bodies. The requirements to handle, store, dispose or respond to accidental spillage of hazardous substances must be reflected in the appropriate CESMPs including Hazardous Materials Management Plan, Spill Prevention and Emergency Response Plan within OHS Plan, pollution management plan and Waste Management Plan in accordance with the ESS3.

2.3.8 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. 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); and
- Hazardous waste (i.e. asbestos, waste oil, etc.).

The MPG office should be contacted by the Contractor to assess this possibility of using a licenced landfill for these wastes. Currently, there is no proper or licenced landfill in Auki or Malaita for that matter. The wastes and hazardous waste disposals will be detailed in the CESMP in lined with the ESS3 that will be produced by the contractor. In addition to this and with the approval of the Supervision Engineer:

- Organic biodegradable waste may be deposited in designated dumping areas in reasonable quantities; and
- Recyclable waste may be supplied to a local receiver licensed to process such waste. The Contractor needs to find out if there are local buyers of used aluminium cans in Malaita and Honiara.

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

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 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 (disposal slips). This would be costly, and the cost of this must be catered for in the construction and site rehabilitation budgets.

The export of any hazardous waste must be in compliance with ESS3, ESS1, ESS2, ESS4 & ESS6, the Basel and Waigani Conventions and any relevant laws enacted by the source and the recipient countries.

Disused material will be generated in the form of bridge demolition materials (steel, concrete, timber, etc.) and from the 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 base course material) for general use by MID and the community.

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 defect's liability period shall be removed from the site.

2.3.9 Occupational Health and Safety

All OHS requirements as per ESS2, WB EHS Guidelines and SIG law must be in place and workers trained in necessary procedures (e.g. spill response plan). The OHS Plan Guidelines in Appendix B have been designed to reinforce existing SIG health and safety law and must be applied to all aspects of the SIRAP2 project. The Contractor will ensure that OHS Plans are developed as part of its CESMP and presented as an addendum to the CESMP.

For the purposes of the Project, in addition to the national OHS standards, the Employer is adopting 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 is expected to show proven evidence of the application of such standards in its past projects.. 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 and PST approved the OHS Plan, and the full time Safety Officer is mobilised and on-site, and the staff has undergone appropriate 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 B and summarised in Section 8.2.2.

In light of the COVID-19 and related world pandemic, the project will ensure to protect its workers, and to comply with those regulations that of the national government requirements for COVID-19 protection measures. The Project should prioritize and look after the well-being of the workers and monitor and follow the local and national health authority guidance on Covid-19. All workers are required to undergo the COVID-19 testing, if a worker has been tested positive or in contact with a positive COVID-19 case, the worker will be required to undergo the 14 days quarantine.

2.3.10 Unexploded Ordnance (UXO)

For the Fiu River bridge, the UXO clearance had been undertaken by SolSearch Consultancy Services in 2023 for the Geotech survey work. However, a detailed UXO survey will be conducted as part of the CESMP preparation for the new bridge alignment, including the approaches, laydown area, workers camp and where necessary, quarry sites.

It is stated that unlike Honiara on Guadalcanal and Munda on New Georgia Island were the sites of several WW2 conflicts that resulted in numerous UXO's in the vicinity of SIRAP Munda and Honiara works sites, Malaita has an absence of WW2 conflict. From the UXO report, the UXO survey conducted for the Geotech work was cleared and confirmed no presence of UXOs. A detailed UXO survey will be conducted prior to the construction phase.

However, Contractor will need to review any previous works undertaken, previous UXO surveys and if required, undertake any further UXO surveys prior to commencement of works. In particular, the Contractor will seek UXO clearance before construction work mobilisation for any realignment, new quarry sites, borrow pits, laydown Area and workers camp that may not be covered in the previous UXO surveys. UXO Clearance will be the responsibility of the Contractor upon mobilisation, and the CESMP must include the Chance Find Procedure as outlined in Appendix G.

The contractor will need to review any previous works undertaken, previous UXO surveys and if required, undertake any further UXO survey prior to commencement of works on the bridge.

2.3.11 Duration and Timing of Construction Activities

The duration of the bridge constructions is expected to be 24 months. Once the contract is awarded to a contractor, a detailed working plan showing the staging of the works for each working shift is to be submitted to SIRAP2 PST prior to any commencement of works.

Daytime works are permitted Monday to Saturday 7:00 am to 6:00 pm subject to the facilitation of unobstructed vehicle movements.

Works outside these hours, including public holidays, will only be permitted subject to approval by the employer and PST, and is subjected to overtime rate to be paid to the workers.

Work on the site will not be permitted on Sunday. However, the Contractor may carry out work if it is unavoidable or necessary for the saving of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Engineer and CLO.

The following is a breakdown of anticipated construction staging for the works:

- a) Mobilisation – personnel, plant and materials;

- b) Detail Design Submission and Approvals;
- c) Sourcing aggregates;
- d) Temporary Traffic Diversions and Crossings;
- e) Bridge construction and approach works
- f) Road Signage and Line marking Works; and
- g) Demobilisation.

2.4 Consents and Permitting

Based on a review of the legislative requirements, a summary of national consents and permits that may be required is listed in Table 2 below.

Table 2: Required consents and permits for the bridge upgrade works

Consents Required	Agency Responsible for Applying	Ministry
Felling Licence	Contractor/Supervision engineer/PST/MID	Ministry of Forestry and Research (MoFR)
Development Consent	Contractor/Supervision engineer/PST/MID	MECDM
License to discharge waste, emit noise, odour or electromagnetic radiation	Contractor/Supervision engineer/PST/MID	MECDM
License to store fuel and oil	Contractor/Supervision engineer/PST/MID	MMERE
Permit to mine (quarry) building materials	Contractor/Supervision engineer/PST/MID	MMERE
Exemption for offshore insurance	Contractor/MID	MoFR
Work Permit for expatriate employees	Contractor/Supervision engineer/PST/MID	Ministry of Commerce, Industries, Labour and Immigration (MCILI)
Residency permits for expatriate employees	Contractor/Supervision engineer/PST/MID	MCILI
Biosecurity import clearance	Contractor/Supervision engineer/PST/MID	Ministry of Agriculture and Livestock (MAL)
Business License issued by the Malaita City Council (If required)	Contractor/Supervision engineer/PST/MID	Malaita Provincial Office
Permit to extract materials from the riverbed	Contractor/Supervision engineer/PST/MID	MMERE
Grant of any ancillary easement over registered land (If required)	Contractor/Supervision engineer/PST/MID	MMERE
Development Permit	Contractor/Supervision engineer/PST/MID	Malaita Provincial Office
UXO Clearance (for any alignments changes, borrow pits, quarry sites, lay down area, workers camp etc)	Contractor/Supervision engineer/PST/MID	Ministry of Police, National Security and Correctional Services (MPNSCS) (RSIPF EOD Unit)

2.5 Analysis of Alternatives

2.5.1 Fiu River Bridge

When selecting the location for the new Fiu Bridge alignment, an analysis of alternatives had previously been undertaken by the MID through a contracted hydrologist who determined the optimum location, and this location was then subject to public consultations by MID to seek

consensus. This activity will be tendered as a build only contract, as the designs, BOQs and specifications of the new bridge were completed in 2023.

The 'no action' alternative for the subproject would result in further degradation of the bridge and increase road hazard. The 'no action' alternative would likely cause negative impacts to the socio-economic environment of northern and eastern regions of Malaita and is not considered an appropriate option.

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. This framework comprises various acts and regulations that outline the responsibilities of different ministries based on their respective focuses. These include, but are not limited to:

3.1.1 The Environment Act and Regulation

The Environment Act 1998 (the Act)⁴ and the Environment Regulations 2008⁵ (the Regulations) establish provisions for the conservation and protection of the environment. The Act creates an integrated system for development control, environmental assessment, and pollution control. This includes the prevention, control, and monitoring of pollution, regulating the discharge of pollutants into air, water, or land, reducing risks to human health, and preventing environmental degradation. It also regulates the transport, collection, treatment, storage, and disposal of waste while promoting recycling, reuse, and recovery of materials in an economically viable manner. Additionally, the Act ensures compliance with regional and international conventions and obligations related to the environment.

The Second Schedule of the Act lists prescribed developments that require consent from the Environment and Conservation Division (ECD). This process must be accompanied by an environmental assessment, which can take the form of either a public environmental report (PER) or an environmental impact statement (EIS). All prescribed developments require an initial "screening" or "scoping" to determine the appropriate level of environmental assessment needed. Most prescribed developments will require a PER, while significant projects—such as logging, mining, or large-scale tourism and infrastructure developments—will necessitate a more detailed appraisal. This appraisal will include technical, economic, environmental, and social investigations, as well as consultations with stakeholders. The findings are then presented in an EIS.

The Regulations expand the requirements of the PER and EIS to encompass the following elements:

- i. assessing the social impact on surrounding communities.
- ii. ensuring public participation.
- iii. outlining employment opportunities for Solomon Islanders.
- iv. conducting a demographic impact assessment.
- v. performing a health impact assessment.
- vi. completing a gender impact assessment.
- vii. executing a noise impact assessment.
- viii. determining whether any of the above assessments may result in short- or long-term harmful effects on the environment.

Additionally, the Director may impose further requirements that must be met, such as notifying the applicant within 31 days of any additional obligations.

⁴ Solomon Islands. (1998). *Environment Act 1998 (No. 8 of 1998)*. Pacific Islands Legal Information Institute. https://www.pacii.org/sb/legis/num_act/ea1998159.pdf

⁵ Solomon Islands. (2008). *Environmental Regulations 2008*. Ministry of Environment, Climate Change, Disaster Management and Meteorology. Retrieved from <http://reddplussolomonislands.gov.sb/index.php/resources/related-legislation/social-and-environmental-impact-assessment.html>

3.1.1.1 Development Consent Application

To initiate the environmental assessment process, the developer must submit a written application to the Director of the ECD for the Development consent using Form 2, as outlined in Section 17 of the Environment Act. This application must include all required information and be accompanied by the standard fee, which under SIRAP and SIRAP2, a waiver for exemption was granted for the fees. The Director will then determine the appropriate type of environmental assessment—either a PER, an EIS, or a waiver of the requirement. A response outlining the assessment requirements will be provided within 30 days.

If an EIS or PER is deemed necessary, the director will convene a Public Meeting, allowing at least 30 days for stakeholders and affected parties to review the report, discuss findings, and raise any objections. In contrast, Director under circumstances can grant exemptions if the project impacts are considered minimal and public hearing is not required. If the EIS or PER is necessary, within 15 working days following the Public Meeting or the publication, the Director will issue a Development Consent—either with conditions or as a rejection—based on whether all requirements are satisfactorily met. This consent will be issued using Form 5 and may include additional implementation conditions.

The Development Consent will also require the developer to pay an environmental bond, the amount of which will be determined by the Director. The developer is responsible for covering all costs related to mitigating environmental impacts and may also be charged for monitoring activities. Any monitoring costs incurred by ECD—whether through internal inspectors or external parties—must be reimbursed by the applicant.

Given the scope and risk level of this project, a PER is expected to be compiled. This will be prepared in accordance with the ESMP, and the conditions outlined in the resulting Development Consent will be incorporated into the CESMP.

3.2 Other Acts

Relevant articles from other Acts governing these proposed works are listed below. The Contractor is responsible for ensuring that they are familiar with and compliant with these Acts.

Other Acts	Definitions
Mines and Minerals Act (1996) ⁶	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 are 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.

⁶ Solomon Islands. (1996). *Mines and Minerals Act 1996 (Cap. 42)*. Ministry of Mines, Energy and Rural Electrification. Retrieved from <https://mmere.gov.sb/index.php/alias-resources/legislation/8-mines-and-minerals-act/file.html>

	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 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; an (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 riverbed. (c) in any manner obstructs or interferes with a river or riverbed; (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 3.
Safety at Work Act (1996) ⁷	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 particular 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 (1996) ⁸	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;

⁷ Solomon Islands. (1996). *Safety at Work Act 1996 (Cap. 74)*. Ministry of Commerce, Industry, Labour and Immigration. Retrieved from https://www.labour.gov.sb/wp-content/uploads/dlm_uploads/2016/07/Safety-At-Work-Act.pdf

⁸ Solomon Islands. (1996). *Labour Act (Cap. 73)*. Ministry of Commerce, Industry, Labour and Immigration. Retrieved from https://labour.gov.sb/wp-content/uploads/dlm_uploads/2016/07/Labour-Act-Cap-73.pdf

	(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 relate 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.
Planning and Development Act	5 Planning and Development Boards (1) There shall be a Planning and Development Board in each Province and in Honiara. (2) Each Board shall in its respective Province or, as the case may be, in Honiara carry out the duties imposed and the functions conferred on it by this Act. (3) The Minister may from time to time give to a Board general or special directions about the exercise of any of its functions or the performance of any of its duties under this Act and the Board shall comply with such directions. (4) Each Board shall be constituted in accordance with and be subject to the Schedule to this Act. (5) A Board may appoint authorised officers to exercise powers or perform functions of the Board under the direction of the Board. (6) At any time during which a Board has not been appointed, the powers and functions of the Board may be exercised and performed by: (a) in the case of a Province, the Provincial Executive; or (b) in the case of Honiara, the Honiara City Council. 5A Provincial Plans (1) A Board for a province may approve a Provincial Plan for the development of land in the province. (2) The Provincial Plan must include the following matters: (a) the location and extent of registered land and customary land in the province; Reprint authorised by the Attorney General and published under the Legislation Act 2023 6 (b) an outline of the existing and proposed uses of land in the province, including the location of existing and proposed: (i) roads and other transport infrastructure; and (ii) settlements, schools and clinics; and (iii) industrial infrastructure; and (iv) areas for agriculture, forestry and mining activities; (c) the long-term strategy for development in the province; (d) in relation to a provincial plan for Guadalcanal Province, the relationships and links between existing and proposed land uses in the province and in Honiara; (e) any other matter relevant to the development of the province that the Board considers relevant or the Minister directs the Board to include in the Plan. 7 Areas for which Local Planning Scheme may be prepared.

Road and Transport Act, 2016⁹ Honiara Local Planning Scheme, 2015¹⁰	A Local Planning Scheme may be prepared for any area of registered land. Part 1 Preliminary “road” means any public road within the meaning of the Roads Act or any Act replacing that Act and includes any other road or way, wharf or car park on which vehicles are capable of travelling and to which the public has access, and includes a bridge over which a road passes; Definition ‘Road’ means a public road as defined in the Roads Act (Cap. 129) and includes a public right of way created under section 185 of the Land and Titles Act (Cap. 133)¹¹. 6.8 Road Zone Roads are an important form of public space and must be preserved as road corridors. They include all the amenities within the road reserves, such as the footpaths, street light, landscaping and street trees. There should be no other permitted activities other than roads, service utilities and sign posts under the approval of the responsible authority. Future road reserves shall be determined at the time of subdivision for residential, commercial and industrial purposes. 8.5 Road Standards 1. Primary / Arterial Road – 30m Road Reserve - 4 lanes with drainage, service lines and footpaths Note: The Road Transport Act (Cap. 131) itself may not list specific zoning dimensions in its clauses, the 30m corridor is enforced through planning schemes (E.g. HLPS, 2015), MID policy, and infrastructure regulations. The Act supports zoning through its provisions for road safety, infrastructure management, and land use coordination.
Family Protection Act 2014	The Family Protection Act 2014 represents a significant legislative development in the Solomon Islands, designed to prevent and address domestic violence. The Act provides legal protection for individuals in domestic relationships through measures such as Police Safety Notices and Protection Orders, while explicitly criminalizing physical, sexual, psychological, and economic abuse. Its scope encompasses all forms of domestic violence, extending beyond intimate partner violence, and imposes responsibilities on police, health professionals, courts, and social services to support victims. Furthermore, the Act

⁹ [Road Transport Act \(Cap. 131\), in force as of 1 June 2016, is available via PacLII](#)

¹⁰ [Honiara Local Planning Scheme 2015 – Legal Notice No. 80](#)

¹¹ [Land and Titles Act \(Cap. 133\) – reprint in force at 5 Feb 2024](#)

	aligns with international human rights obligations, including CEDAW, reflecting a transition from regarding domestic violence as a private issue to recognizing it as a public concern necessitating state intervention. Nonetheless, implementation challenges remain, particularly regarding resource constraints and access to justice in remote regions.
Workmen's Compensation Act (Cap 78) - 1996	The purpose of the Solomon Islands Workmen's Compensation Act (Cap 78) - 1996 is to provide legal protection and financial compensation to workers who suffer injury, disease, or death arising out of and in the course of their employment. The Key objective and provision is: i. to ensure that employees injured at work or suffering from occupational diseases receive fair compensation without needing to prove employer negligence. ii. To establish employer liability for work-related injuries, disabilities, or fatalities. The Act also clearly stated the types of compensations to be paid to workers and is listed below: iii. Fatal Cases: Compensation to dependents of deceased workers. iv. Permanent Total Incapacity: Full compensation for workers unable to work again. v. Permanent Partial Incapacity: Proportional compensation based on the degree of disability. Temporary Incapacity: Compensation during the recovery period

3.3 Regional Governance

The Provincial Government Act established the division of the Solomon Islands (SI) into provinces. Each province has an elected Provincial Assembly that represents the different wards within the province. While the central government has delegated some responsibilities to the provincial government, the specific boundaries of authority can sometimes be ambiguous. Schedule 5 of the Provincial Government Act¹² outlines the legislative matters for the provinces in the table below:

Table 3: Schedule of the Provincial Government Act

Category	Definition
Trade and Industry	Local licensing of professions, trades, and businesses, as well as local marketing.
Cultural and Environmental	Local crafts. Historical remains. Protection of wild creatures.

via PaCLII

¹² Honiara Local Planning Scheme 2015 – Legal Notice No. 80

Retrieved from <https://www.mpgis.gov.sb/legislation/6-provincial-government-act-1997.html>

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 licenses issued by or on behalf of the Provincial Executive (other than services performed, or licenses 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 are available for agricultural production—protection, improvement, and maintenance of freshwater and reef fisheries.
Land and Land Use	Codification and amendment of existing customary law about land. Registration of customary rights with respect to land, including customary fishing rights. Physical planning is not allowed 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 at 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	Establish corporate or statutory bodies to provide provincial services, including those related to economic activity.

3.4 Consent and permitting

Based on a review of the legislative requirements, a summary of national consents and permits that may be required is listed in the table below.

Table 4: permitting requirements for the bridge replacement work

Consents Required	Agency Responsible for Applying	Ministry
Felling Licence (if required)	Contractor/MID	Ministry of Forestry and Research (MoFR)
Development Consent	PST/MID	MECDM

License to discharge waste, emit noise, odour or electromagnetic radiation	Contractor/PST//MID	MECDM
License to store fuel and oil	Contractor	MMERE
Permit to mine (quarry) building materials	Contractor/PST/MID	MMERE
Exemption for offshore insurance	Contractor/MID	MoFR
Work Permit for expatriate employees	Contractor/MID	Ministry of Commerce, Industries, Labour and Immigration (MCILI)
Residency permits for expatriate employees	Contractor/MID	MCILI
Biosecurity import clearance	Contractor/PST/MID	Ministry of Agriculture and Livestock (MAL)
Other Business License issued by the Malaita Province (If required)	Contractor/MID	MPG
Permit to extract materials from the riverbed	Contractor/PST/MID	MMERE
Grant of any ancillary easement over registered land (If required)	Contractor/MID	MMERE
Development Permit	Contractor/PST/MID	Malaita Provincial Office

3.5 World Bank Environmental and Social Framework

World Bank Environmental and Social Risk Specialist have screened the SIRAP2 project for risks and impacts using the Environmental and Social Standards (ESS) within the Environmental and Social Framework (ESF). The project has been deemed to have an environmental and social risk rating of 'Substantial' meaning that the project is large to medium scale and some risks have a medium probability of resulting in longer term impacts requiring significant time and investment to mitigate or remediate. The Environmental and Social Risk Screening (ESRS) completed by the WB team identifies the relevant ESS that apply to the SIRAP2 activities. These are:

Table 5: Applicable ESS to the bridge project

Standard	Relevance from ESRS
ESS1: Assessment and Management of Environmental and Social Risks and Impacts	The project will present a number of environmental and social risks and/or impacts. To manage those risks, the project will assess and manage the risks and impacts associated with the project in a manner that is proportionate to the significance of the potential risks and impacts. Site specific ESMPs will be prepared for the project site to cover all infrastructure investments (including ancillary infrastructure) Each ESMP will apply the national regulations, the WB ESF ESS and/or the WB Environmental, Health and Safety Guidelines (ESHG)

ESS2: Labour and Working Conditions	ESS 2 is considered relevant. Workers involved in the project will include direct and contracted workers. Direct workers will include employees and consultants of the Project Management Unit. Contracted workers will be engaged through key consulting firms or construction contractors. The preparation of LMP will be included in the Environmental and Social Commitment Plan (ESCP) and will be required to be prepared during implementation but prior to contract bid document release. The LMP will include appropriate terms and conditions of employment, non-discrimination and equal opportunity, workers organizations, restrictions on child and forced labour, and OHS in design, construction and operational phases.
ESS3: Resource Efficiency and Pollution Prevention	ESS 3 is considered relevant. The infrastructure may result in design, construction and operation impacts. Inadequate designs could result in the inefficient consumption of resources such as construction materials or energy, completion of activities such as aggregate extraction in significant risk areas, increased risk of hydrocarbon spills during construction and operations and poorly managed run-off, greywater and sewage. Risks will be considered in the preparation of the site specific ESMPs and TORs of infrastructure designs.
ESS4: Community Health and Safety	ESS4 is relevant. The potential E&S risks will need to be managed, both during the construction and operational phase. The Solomon Islands has a high background rate of GBV and SEAH. The increase in the labour influx for the project has been considered under SIRAP2, and the risks that come with it have been identified and described in the SIRAP2 ESMPs. Measures to help reduce or eliminate instances transmission of HIV/AIDS, SEAH induced by the project will be in place and the responsibility will fall on the contractors to ensure that these measures are implemented, for example all workers will be required to sign 'Codes of Conduct' describing their responsibilities. Infection Prevention and Control measures in the form of a training, awareness will be implemented to provide knowledge on transmission of disease but also measures to prevent COVID transmission in light of any possible pandemic.
ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	This standard is considered relevant as there will be land required for several project components. Though no land acquisition is expected, discussions between MID and the Ministry of Lands is progressing to consider 3 structures that were encroached in the right of way at the northern approach of Fiu bridge. For this matter, a resettlement action plan (RAP) was revised and updated for AF2 activities and to capture the affected assets.
ESS8:	The ESS8 on cultural heritage may be relevant depending on existing sensitive receptors along the ROW of the project site. There will be excavation work at the downstream side of the bridge to clear the site for the new bridge location. In a case where items of cultural significance are identified, a Chance Find

	Procedure will be implemented. In the event of the discovery of an item, 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. See Appendix G for the Chance Find Procedure template and UXO Response plan. Work to stop in specific location of unearthed artefacts or site. Fence the area to limit access and notify SIRAP2 PST and Supervision Engineer immediately for instruction to proceed.
ESS10: Stakeholder Engagement and Information Disclosure	The project recognizes the need for effective and inclusive engagement with all of the relevant stakeholders and the population at large. A Stakeholder Engagement Plan (SEP) was being revised and updated for engaging with stakeholders on the E&S risks of the project and will be disclosed on the MCA and SIRAP official website. The SEP will identify and analyze key stakeholders (i.e. affected parties, other interested parties and disadvantaged and vulnerable groups) and describe the process and modalities for sharing information on the project activities, incorporating stakeholder feedback into the Project and reporting and disclosure of project documents. The established grievance redress mechanism (GRM) will be maintained throughout the project cycle to receive, manage and resolve project-related grievances in a timely, transparent and effective manner.

4 Project Setting

The environmental and social impacts are assessed based on the reports compiled by Beca International consultant in 2023.

4.1 Description of Project Site

The existing Fiu River bridge is located along the North Road approximately 7km from Auki town and crosses the Fiu river. The bridge provides a critical link for the communities living to the Northern and Eastern extents of Malaita, connecting them to Auki town and South Malaita. The existing bridge is in poor condition and requires replacement. See the Figure 2 below for the site locality.

The natural habitat would have originally been lowland coastal forest, however the surrounding areas have been altered to accommodate for agriculture and much of the land from both bridge approaches have been converted to predominately coconut plantation and farming activities. There are no primary or pristine areas of native vegetation at the project site. Furthermore, there are no rare or endangered species in the project site. Section 4.3.1 cover an overview of the flora identified in the area.

Baseline water quality data for the Fiu River have been established (see Table 7) and ongoing monitoring will be done as part of the Contractor's environmental responsibilities. The contractor will set up monitoring stations at the upper and lower section of the river and conduct ongoing water quality monitoring and analyse at a minimum for pH, Temperature, turbidity, conductivity, Total dissolved solids (TDS), Dissolved oxygen plus other parameters seen necessary, such as depth and flow rate.

There are no known places of physical cultural significance at the bridge site.



Figure 2: Site locality of Fiu River Bridge

As part of the road upgrade activities on Malaita under SIRAP in 2019, traffic counts have been carried out at a selection of survey sites, most of which are on the sealed roads in the main town of Auki, but 2 of the sites are relevant to the bridge upgrade works. The counts were carried out in two 12-hour blocks. See Figure below.

Table 6: Traffic Survey data along North Road

Site	Traffic Survey Location	Traffic Direction	12 Hour Flow		Heavy Class Vehicle (%)
			Day 1	Day 2	
Bio	Bio-1 Bridge Site Traffic Count Survey	To Auki	100	102	54.69
		From Auki	110	128	
Kilu'uli	Junction for hospital at Kilu'uli, 2.5km south of Fiu Bridge	To Auki	493	632	Not identified in count data
		From Auki	634	550	

Figure 3: Traffic Survey data along North Road

4.1.1 Fiu River bridge

Fiu River Bridge **Error! Reference source not found.** is located in the Central Kwaraae region of Malaita. It is the largest bridge on the targeted sections of road and crosses the Fiu River just to the north of the Aimela village. It is a braided river system with aggregate islands and banks found mostly upstream from the Fiu Bridge, the bridge itself crosses the river at the last notable aggregate island before the river mouth. The river flows another 6km from the bridge before meeting the ocean. Normal community activities happen along the banks of the Fiu River at the bridge site, but the most significant of those is the extraction of gravel from the riverbank on the Auki side (southern approach) by the community. Vehicles access the bank via a track which comes off the main road and often drive into the water to extract stones and gravel. There are also two small settlements downstream of the bridge which use the river as a water source and for bathing and who may temporarily experience changes in turbidity during construction works.

The bridge had collapsed on 26th of May 2025 due to heavy machines using the bridge. As a result, the public transports have no option but to cross the river with their passengers and cargos. In response to the damaged bridge, MID engaged a contractor to repair the bridge on the morning of 28th May. The bridge reopened to the public the same evening, restoring access for road users. As seen from the site observation, the state of the bridge has been deteriorating over the years and has pose public safety for all who use the bridge on a daily basis.



Figure 4: Fiu River Bridge looking from the southern approach



Figure 5: Fiu Bridge maintenance and public transport crossing the river in 2025.

Source: MID

4.1.2 Benefit to communities

In Malaita Province, Fiu River Bridge is vital in connecting the rest of North and East Malaita to Auki and is one of the most economically significant bridges in the province. Replacing the existing 2-span structure measuring 76m in length with a new and improved structure will potentially benefit more than 50,000 people as it will help surrounding communities to access the major services in Auki. Communities have expressed concern over the condition of the existing bridge. They also discussed the importance of the bridge to the economic growth of the province and particularly to communities north of the bridge as it is used for transporting farmed products for sale, to access wharves and essential services in Auki. It also connects the communities south of the bridge to the only airport, Gwaunaruú airfield which located along the north road corridor.

Based on the 30 m gazetted road width under the Roads Act, the Fiu bridge is within the legal road corridor. Lands 15 m from the centreline on either side of the bridge and bridge approaches are owned either by tribal or private landowners. The areas surrounding the bridge comprise predominantly of modified vegetations and rural communities. See Figure 7 and 8.



Figure 6: Fiu bridge view from the Southern and northern approach



Figure 7: Structures identified at the vicinity of the project site



Figure 8: Sensitive receptors at Fiu Bridge



Figure 9: Nearest schools to project site

4.2 Physical Environment

4.2.1 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.

Malaita is about 160km long and 37km wide at its widest point. A tropical mountainous island, Malaita's river systems and tropical forests are largely unexploited. The main structural feature of the island is the central ridge which runs along the length of the island, with flanking ridges and a few outlying hills. There is a central hill country between Auki and the Kwai Harbour which separates the central ridge into northern and southern halves. The Fiu River bridge for replacement is located on the northern half of the island.

4.2.2 Climate

Malaita has a climate that is largely controlled by the seasonal movement of the equatorial trough. The temperature and humidity in the Solomon Islands are relatively high and uniform with the former ranging from 22°C to 31°C throughout the year. The most variable of the climatic 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 Auki is about 3200mm annually (compared to 1,858mm in Honiara) and even the driest months still experience a lot of rainfall.

There are two distinct seasons, a wet season from November to April and a dry season from May to October. From November to April, the equatorial trough is usually found close to, or south of the Solomon Islands, and this is a period of the 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, nevertheless, cause serious damage to infrastructure, crops and water supply.

4.2.3 Rainfall

It rains heavily in Auki from December through to April and relatively little from May to November. The figure below shows the average monthly rainfall based on observation records of Malaita over the past 10 years (2010 to 2019). There is on average 180mm of precipitation in June (the driest month), and in January and March, the precipitation reaches its peak, with an average of 420mm. The most considerable daily precipitation observed at Malaita in the past 10 years is 967.4mm which occurred during March 2013.

In comparison, Malaita's average annual rainfall for the past 10 years is 3376.53mm while Guadalcanal's average annual rainfall in the past 10 years is 2228mm. Thus, Malaita has more significant rainfall occurrence than Guadalcanal.

4.2.4 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 thin freshwater lens of the underground aquifer of the small low-lying atolls and islets.¹³

With adequate rainfall and large infiltration area, considerable freshwater resources are available on Malaita, however, access to plumbed running water varies across the island. Drinking and household use in both rural villages and urban centres account for the largest water withdrawal in the country. There is limited agricultural water demand because most crops are rained. The industrial sector withdraws water for fish processing cannery, palm oil factory, mining operations and some small manufacturing industries.

On the larger islands, surface water in the form of streams, springs, or rivers is the main source of drinking water, including rainwater harvesting using tanks. Some communities on the higher volcanic islands also use groundwater for domestic purposes. In areas where surface water supply is not available for farming, groundwater is used if available. Therefore, the surrounding communities of Fiu Bridge are using the surface water and rainwater for domestic use, due to the lack of water supply system in the suburban area in Malaita, with reticulated water services primarily available in urban centres such as Auki¹⁴.

In urban areas, piped water accounts for 75 percent of total water withdrawal, rainwater tanks account for 22 percent, borehole/spring/wells account for 1 percent, and other sources account for 2 percent.

4.2.5 Geology

The Solomon Islands is a double chain archipelago of islands formed by a fertile volcanic rock through tectonic activity also known as the Pacific Rim of Fire. The Solomon Islands (excluding the Santa Cruz group) are divided into three geological Provinces: Pacific Province, Central Province and Volcanic

¹³ Solomon Islands Roads and Aviation Project Environmental and Social Management Framework, Malaita Road Infrastructure Upgrades (February 2019)

¹⁴ [Geographical inequalities in drinking water in the Solomon Islands](#) (February 2020)

Province. Islands with a recent extinct volcano which included the northwestern tip of Guadalcanal, the Russell Islands, Shortlands and Savo are found in this province. The volcanic geological province is much younger and consists of Late Miocene to Holocene volcanic, which are five to six million years old.

The geology comprises a mono-lithological Cretaceous basalt basement sequence up to 3-4km thick, termed the Malaita Volcanic Group, (MVG), conformably overlain by a 1-2km thick Cretaceous-Pliocene pelagic sedimentary cover sequence. Cretaceous-Pliocene pelagic sedimentation was punctuated by alkaline basalt volcanism during the Eocene and ultramafic alnoite intrusive activity during the Oligocene. Basement and cover sequences were both deformed by an intense but short deformation event during the Mid-Pliocene.¹⁵

4.2.6 Fiu River Hydrology

The Fiu River originates at an elevation of approximately 600 m above sea level from a hill in the Kwairai area of central Kwara'ae, about 7 km west of Auki Town. The river catchment covers an area of approximately 62 km² at an elevation of 455 m above sea level, which has been identified as the proposed intake site for a hydropower project. The river then flows to the coast approximately 6 km north of Auki.

An assessment conducted in March 2014 classified the Fiu River as a perennial river due to its experiences flooding with increased water level and flow velocity, affecting road approaches and causing riverbank erosion. Visible signs of scouring were also observed, likely influenced by the river's meandering characteristics.

To assess river discharge, the aforementioned study applied the water balance method. Using this approach, the estimated average discharge from the catchment area was calculated at 7.5 cubic metres per second (m³/s), based on an assumed average annual rainfall of 5,000 mm across the catchment, equivalent to 120 L/s/km². However, assessment on limited available water data recorded within the catchment indicated a lower mean discharge of 2.8 m³/s. Given the catchment area of 62 km², this corresponds to an estimated discharge of 45 L/s/km², which is notably lower than the 120 L/s/km² estimated using the water balance method.

4.2.7 Water Quality

In situ water quality testing of the physical and chemical water quality particularly for pH, dissolved oxygen (DO), temperature, conductivity, pH, turbidity, and TDS for Fiu river was undertaken on the 21st May 2026. However, this testing did not include testing for microbial water quality (total coliform and E. coli). This will be undertaken before the construction commences. During the construction phase, monitoring will be conducted at a monthly basis or where required at a weekly or daily basis especially for turbidity and TDS monitoring. In the event that the water quality readings exceed the acceptable standards, the supervision engineer will issue a site instruction for the contractor to remediate the noncompliance before resume work. The contractor will compile a pollution management plan, soil erosion and sediment control plan among other subplans as annex to the CESMP that will provide site specific mitigation measures.

¹⁵ Petterson, M.G (2018), The Geology of North and Central Malaita Solomon Islands: The thickest and most accessible part of the world's largest (Ontong Java) ocean plateau.

Table 7: Water Quality baseline data

Upstream GPS Coordinate: -8.726072016262126 S, 160.7066558544133 E

Downstream GPS Coordinate: -8.724290845711458 S, 160.7046485401228 E

Sites	Parameters					
	Temperature (Degree Celsius)	pH (pH unit)	Electrical conductivity (μ S/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	TDS (mg/L)
Fiu bridge Upstream	27.97	7.0	250	48	18.89	163
Fiu Bridge downstream	28.59	7.10	252	34.9	13.10	163

The international standards for water quality monitoring is listed below.

Table 8: International Standards for Water Quality

Parameters	Trigger levels (acceptable values)	Reference Standard
pH	6.8- 8.5	ANZECC
Electrical Conductivity	<450 μ S/cm	ANZECC
Dissolved Oxygen	6 - 8mg/L	ANZECC
Turbidity	6 - 50 NTU	WHO/ANZECC
Total Dissolved Solids (TDS)	500mg/L	ANZECC/ADWG
Fecal contamination- <i>E.coli</i>	0 MPN/100mL	WHO
Fecal contamination- Total coliform	<10MPN/100mL	WHO

4.3 Biological Environment

The sections below describe the status of marine and the terrestrial environment with the presence of rare or endangered species.

4.3.1 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 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 pandanus species. The islands with the highest rate of endemism are Santa Cruz (Temotu) and Guadalcanal.¹⁶

There are several different vegetation zones, based on altitude. Along the coast is either a rocky or sandy beach, where pandanus, coconuts, and vines predominate, or a swamp, supporting mangrove and sago palms. *Terminalia* grows in some drier areas. The lower slopes, up to about 2,500 feet (760 m), have a hardwood forest of banyans, *Canarium*, Indo-Malayan hardwoods, and, at higher altitudes, bamboo. In forested groves, there is relatively little undergrowth. In this zone is also the most intense human cultivation, which, when abandoned, a dense secondary forest grows, which is nearly impassably thick with shrubs and softwoods. Above about 2,500 feet (760 m) is a cloud forest, with dense carpeting of mosses, lichens, and liverworts, with cycads as the dominant tall plant.

The Fiu River Bridge is located on a lowland coastal forest. This area has now been altered to accommodate for agriculture, and much of the land along the roads have been converted to predominantly coconut (copra), cocoa and pineapple plantations. The common plant species observed at site besides the cocoa and coconut trees are grasses including the common para grass (*Urochloa mutica*), *Mikania* vine (*Mikania micrantha* Kunth), and shrubs including Guest tree (*Khleihovia hospita* L) and *Leucaena* trees. These are endemic and none of these plants are endangered or threatened species.



¹⁶ Solomon Islands Roads and Aviation Project Environmental and Social Management Framework, Malaita Road Infrastructure Upgrades (February 2019)

Figure 10: Plant species observed at the project site

4.3.2 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.¹⁷

The proposed site for the project is a highly modified area, for terrestrial fauna there are wide range animals such as birds, reptiles (lizard and frogs) including aquatic fauna. Usually, birds are by far the most studied animal group in the Solomon Islands with Malaita being home to 3 species which are endemic to that island.

In terms of aquatic fauna, a fish and aquatic resource (FAR) survey of the Fiu River was conducted in 2013. The survey area was located upstream of the Fiu River Bridge and was described as comprising intact primary forest and secondary forest areas affected by milling activities and the collection of forest materials.

The survey findings indicated that the Fiu River supports a rich diversity of aquatic invertebrates, including several common insect species, with some species considered potentially unknown to science, including common insect species such as *Orthodera* sp (Mantodea: Mantidae), *Gryllacridid* sp (Orthoptera: Gryllacrididae), and *Katydid* (Tettigoniidae). A number of butterfly species were also observed such as the large *Ornithoptera victoriae victoriae*, *Graphium* sp.

Table 9: List of species sighted during the FAR survey

(Source: IEE Solomon Islands: Provincial Renewable Energy Project, March 2014)

List of Species sighted during the survey	
<i>Awaous spp</i>	<i>Butis amboinensis</i>
<i>Lentipes spp*</i>	<i>Ambassis miops</i>
<i>Stiphodon birdsong</i>	<i>Schismatogobius marmoratus</i>
<i>Stiphodon semoni</i>	<i>Glossogobius spp</i>
<i>Stiphodon atratus .</i>	<i>Sicyopus spp</i>
<i>Stiphodon rutilaureus**</i>	<i>Ophieleotris marmaritaccea</i>
<i>Sycoptus mystax</i>	<i>Eleotris fusca</i>
<i>Sicyopteru slagocephalus</i>	<i>Redigobius leptochilus</i>
<i>Khulia rupestris</i>	<i>Stenogobius hoesei</i>
<i>Liza vaigenisis (juvi)</i>	<i>Mesopristes cancellatus</i>
<i>Anguilla marmorata**</i>	<i>Hypostomus plecostomus**</i>
<i>Belobranchus belobranchus</i>	<i>Macrobrachium lar (juvi)</i>

Note:

*Endemic to Solomon Islands (Boseto D and Jenkins P, 2010)

**Rare species due to fisheries pressure from population (Information from local community)

All are "least concern" status or unlisted in the IUCN Red List.

All are confirmed edible

Of the species recorded during the survey, approximately 4% were identified as endemic species, while 16% were classified as rare species. More than half of the recorded species were categorized by

¹⁷ Solomon Islands Roads and Aviation Project Environmental and Social Management Framework, Malaita Road Infrastructure Upgrades (February 2019)

the International Union for Conservation of Nature as species of least concern, indicating that they are relatively common and currently not considered threatened or dependent on conservation efforts.

It is important to note that the survey was conducted more than 10 years ago. Since then, increasing population growth and associated anthropogenic activities may have contributed to changes in species abundance and habitat conditions within the area.

4.3.3 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 State of the Environment report for Guadalcanal and only considered the immediate environment surrounding the project site.

For the Malaita Province, the 2008 International Union for Conservation of Nature (IUCN) Redlist of endangered species listed 3 bird species as critically endangered, along with 6 threatened bird species and 3 endemics at the provincial level.¹⁸

4.4 Socio-Economic conditions

4.4.1 Land Tenure 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

4.4.2 Population and Demographics

The last census for the Solomon Islands was conducted in 2019, and the population of Malaita is 172,740 with 7,020¹⁹ people living in the main town of Auki. The population density for Malaita Province was 40.9 per km², with an annual growth rate of 0.9%, but this increases to 5.9% in Auki.

Malaita's population pyramid has a distinct feature which is narrow bars at roughly ages 20-30. It is evident that Malaita lost people of these age groups as they migrate to the capital Honiara or other urban centres in search of employment, education and/or for other reasons. Malaita has a relatively young age structure, with 31% of the population between the age of 15 to 34 years old, 28% between that age of 30-59, in all ; 59% are in the so-called working age groups 15-59, and 6% are older than 60.

¹⁸ Solomon Islands Roads and Aviation Project Environmental and Social Management Framework, Malaita Road Infrastructure Upgrades (February 2019)

¹⁹ Solomon Islands Population and Housing Census 2019

Buma and Aimela ward, where the project site will be located have a population of 8,122 and 8734²⁰ respectively. Most villages have a primary school and a health centre and scattered residences, and settlements are found along the length of the road, providing continual human activity between the main village centres. Children travel to primary school on foot walking along the width of the road as no footpaths exist for them to use. Transport between the larger village, high schools and too and from Auki is usually in the back of large open trucks.

Of the 32,332 households surveyed across the province, 16% of the households use spring wells and 14% use rainwater for drinking purposes. A meagre fraction of roughly 5% still uses the unprotected surface water sources, including rivers as source of drinking water.

4.4.3 Gender based violence, Human trafficking and Sexual Exploitation

GBV is defined as actions which result in “physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life.” In the Solomon Islands, GBV has been largely normalized: 73% of men and 73% of women believe violence against women is justifiable, especially for infidelity and “disobedience,” as when women do “not live up to the gender roles that society imposes.” Local NGOs continue to advocate and create awareness on GBV issues on Malaita and plan to work closely with the project to minimize GBV. The Project will conduct and prepare, through consultations, a service provider mapping to identify local NGOs, along with the Provincial Women’s Council and other organisations located in Malaita who continue to advocate and create awareness on GBV issues in Malaita.²¹

Human (including child) trafficking, sexual exploitation and abuse are challenges and issues faced throughout the Solomon Islands on job sites and work camps. Human trafficking deals with a complex range of issues involving young girls and women who are forced into servitude and sexual exploitation for economic return. Much of the trafficking in the Solomon Islands appears to occur in and around logging camps and fishing vessels. The fishing vessels may be domestic or part of a foreign fleet.

The Solomon Islands has diverse patterns of trafficking – internal and transnational; organized and small-scale; and through sex, marriage and labour. Examples include:

- Trafficking of girls and women internally in the Solomon Islands for sexual exploitation, forced marriage or to work as domestic servants (Haus gele) – including in logging camps and on fishing vessels.
- Trafficking of Asian females for sexual exploitation.
- Trafficking of men into the Solomon Islands from other countries such as Asian countries to work in logging camps or fishing ships.

²⁰ Malaita Road Infrastructure Updates Environmental and Social Management Framework, February 2019

²¹ Solomon Islands Roads and Aviation Project Environmental and Social Management Framework, Malaita Road Infrastructure Upgrades (February 2019)

5 Stakeholder Engagement & Consultations

5.1 Stakeholder Groups

The SIRAP2 Stakeholder Engagement Plan (SEP) details the identified stakeholder groups that are targeted under SIRAP. Follow up consultations were conducted by the Design Engineer in 2023. The stakeholders consulted specific to the Fiu River bridge upgrade works are listed below.

Table 10: Malaita bridge upgrade works stakeholder group

No.	Stakeholder Group	Fiu Bridge Stakeholders
1	Affected Community	Gwailiki and Kilusakwalo
2	Donor Agency/ Project Financier	World Bank
3	Donor Agency	Asian Development Bank (ADB)
4	National Government	Ministry of Infrastructure Development (MID)
5	National Government	Ministry of Commerce, Industries Labour and Immigration (MCIL)
6	National Government	Ministry of Agriculture and Livestock (MAL)
7	National Government	Ministry of Finance (MOF)
8	National Government	Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM)
9	National Government	Ministry of Lands, Housing and Survey (MLHS)
10	National Government	Ministry of Mines, Energy & Rural Electrification (MMERE)
11	National Government	Ministry of Forestry and Research (MoFR)
12	National Government	Ministry of Culture and Tourism Solomon Islands (MCTSI)
13	National Government	Ministry of Women, Youth, Children and Family Affairs (MWYCA)
14	National Government	Ministry of Education and Human Resource Development (MEHRD)
15	National Government	Ministry of Health and Medical Services (MHMS)
16	National Government	Ministry of Police, National Security and Correctional Services
17	Supervision consultant	Design and supervision consultant- Beca International
18	New Contractor	New Contractors
19	NGOs and Organisation	World Vision (WV)
20	NGOs and Organisation	Oxfam
21	NGOs and Organisation	Save The Children
22	NGOs and Organisation	Family Support Centre
23	NGOs and Organisation	Malaita Province Council of Women
24	NGO and Organisation	Malaita Christian Care Centre
25	Other WB funded Projects in Malaita	Community Access and Urban Services Enhancement (CAUSE) Project Solomon Islands Agriculture and Rural Transformation (SIART) Project Integrated Economic Development and Community Resilience (IEDCR) Project Community Governance and Grievance Management Project
26	SIRAP2 Consultant	Finnish Overseas Consultants (FinnOC) – SIRAP 2 GBV/SEAH consultant
27	Provincial Government	Malaita Province

28	Resource Owners	Land and Resource Owners
29	SIRAP 2	Second Solomon Islands Road and Aviation Project (SIRAP 2) Support Team

5.2 Stakeholder Engagement and Consultation Plan

The SIRAP2 AF2 Stakeholder Engagement Plan (SEP) will be implemented for the bridge replacement works. Stakeholder engagement will be ongoing for the duration of the project.

Throughout the implementation of these works, ongoing and meaningful stakeholder engagement will be 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. SIRAP2 PST will be responsible for ensuring meaningful consultations be carried out for all components of SIRAP2 AF2 through the life of the project.

Table 11: Stakeholder and community consultation plan

sets out the implementation plan for stakeholder engagements and community consultations for the bridge upgrade subproject. The implementation plan has been tailored to meet the specific needs of this ESMP.

The plan is for the lifecycle of the project and 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

Table 11: Stakeholder and community consultation plan

No	SIRAP2SIR Activity	Timetable	Objective	Stakeholders	Medium
A: Physical Investments (Malaita Road Upgrades)					
A1	Feasibility, decision on the sites / technologies, preliminary designs and identification of correct land / resource owners.	From subproject design 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 andCESMP preparation	Prior to tendering	To disclose ESMP	All identified	Newspaper Website

No	SIRAP2SIR Activity	Timetable	Objective	Stakeholders	Medium
		Prior to works starting	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	Pre-Construction	Once Contractor is on board and prior to works starting	Keep stakeholders involved in any design updates. Public announcements Secure access to resources (materials)	Government agencies, site occupants, site users Communities	Emails, One-on-one consultations Newspaper and websites Community Consultations
A5	Commencement of Works	Week before commencement of works and continuous.	To advise all institutional stakeholders of commencement of civil works. To reconfirm ongoing consultation, feedback and Grievance Redress Mechanism (GRM) processes	All identified stakeholders Site occupants (State owned enterprises. Government agencies) Community Site occupants (State owned enterprises. Government agencies)	Newspaper Email/Letter Community Notice Boards Building Notice Boards Website

5.2.1.1 Resources and Responsibilities

To facilitate meaningful community consultation and in compliance with the MID safeguards requirements, the PST Community Liaison Officer (CLO) assisted by MID Safeguards Unit will establish a Community Advisory Committee (CAC) comprised of tribal leaders, churches representatives, school principal, village chiefs, women's group to capture wider representative of the communities.. The CAC is a tool in ensuring proper resolution of grievance, and impartial hearing and transparent decisions. The CAC does not possess any legal mandate or authority to resolve land acquisition or resettlement issues, rather act as an advisory body or facilitate the resolution of issues.

Implementing the above plan will be the overall responsibility of the PST CLO in coordination with the E&S team, which comprised of 1 x National Senior Safeguards Specialist (NSSS) and 2 x National Environmental and social officers (NESO). There are several facets to the works that are covered within this plan with MID being the common denominator across the works as such, it is important that MID are represented at each of the one-on-one consultations by a nominated staff member.

The CLO and E&S team will be responsible for arranging and facilitating these meetings as it appropriate with their in-depth knowledge of the natural, social and traditional environments within the Solomon Islands. The CLO will lead the social component of these meetings while the NESO will take the lead on the environmental aspects. The CLO will also be the focal point for all stakeholder

queries and contacts in relation to the implementation of the SIRAP2-AF Stakeholder Engagement Plan (SEP), Resettlement Action Plan (RAP) and the GRM, including GBV and SEAH at project sites.

The SIRAP2-AF CLO and E&S team will work with the supervision consultant and contractor to ensure the relevant ESF instruments/plans listed under section 1.3 are implemented, including, Stakeholder Engagement Plan (SEP), Resettlement Action Plan (RAP) and Labour Management procedure (LMP).

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

During the construction phase, the Contractor will be required to convene public consultations and provided project updates, project grievances and community health and safety awareness. The contractor will engage an experienced local CLO who will be on site full time to facilitate the community consultations and awareness. The costs for participation are considered included in the bid and this requirement will be included in their contract.

5.3 Community Consultations

The SIG Design Engineer carried out Community and stakeholder consultation for the bridge upgrades project in December 2019. A follow up consultations was conducted in 2023, targeting communities that located close to the project site. The communities were informed about the proposed replacement for Fiu River Bridge. This was done through informing the community elders and issuing notices a week in advance before the actual consultations. Furthermore, a letter of invitation was delivered by the Solomon Islands Roads and Aviation Project (SIRAP) CLO at Auki to the respective communities' elders and landowning groups. This invitation also contained information about the meetings.

The latest consultation was conducted in February/March 2026 as part of the SIRAP2-AF activities and covers the communities at the vicinity of the Fiu bridge. During this consultation too, a Cut-off date was announced as 30 June 2026 to the affected parties at approaches of the bridge. See Appendix H and I.

During the 2023 consultations, the communities covered are listed in Table 12.

Table 12: Communities consulted for the Fiu bridge replacement

Villages	Dates
Gwailiki	11 th November 2023
Kilusakwalo	11 th November 2023
Gwaunaruú	12 th November 2023



Figure 11: Courtesy call to the Malaita premier and community consultations



Figure 12: Community consultations for the Fiu River bridge communities

The consultation team include:

- MID Representatives of Eastern Region Manager
- Design Engineer (Beca) National Social Safeguards Consultant.

The community consultation was undertaken in all the communities identified and a courtesy meeting was held with the respective provincial government representative to inform them about the proposed bridge development on 13th November 2023

Prior to this, a series of public consultations and stakeholder meetings were held during the months of March, August, and October 2018 with the aim of providing meaningful consultation with stakeholder groups and to provide an opportunity for all parties to provide input into the Malaita Roads Improvement and Maintenance Program. The meetings targeting four key groups of stakeholders: (i) provincial government agencies and development partners in Honiara and Malaita; (ii) NGOs and civil society groups; (iii) the Malaita village community members; (iv) and tribal chiefs/village leaders.

5.3.1 November 2023

Community Consultations were conducted for the nearby communities and the discussions have been documented. The nearest community to the bridge is Gwailiki Village and located on the northern approach of the bridge. Consultations was undertaken with the community members on the 11th of November 2023 at the Community Hall. During the consultation, a total of 22 people attended, 2 females and 20 males. The project information shared during the meeting covers:

- The current condition of the Fiu Bridge

- Government through MID see the need to replace the existing bridge
- The detailed design of the bridge was shown to the community representatives.
- What will the replacement involve
- What to expect – Detailed Design phase
- What to expect – Construction phase
- Project timeframe

MID Representative for Malaita accompanied the Design consultant and also provided support during the consultation to help address any concerns and issues raised relating to MID and also Fiu Bridge. Below is a summary of the feedback, concerns and issues that were raised during the consultations at Gwailiki village:

- People are well aware of the affected structures within the right of way that are impacted by the approaches of the bridge. Community Elders/Chiefs will communicate with the owners to remove it.
- The Community Elders also mentioned to those present that no one will claim for compensation for the removal of affected properties, as they know very well it is being constructed along the road corridor.
- Two landowning groups claimed ownership of land upstream and downstream of the bridge site. The elder asked, if possible, for MID to survey the lands to reconfirm the land boundaries. MID responded, it is the responsibility of the landowners to hire a surveyor to survey and reconfirm their land boundaries and not MID.
- An elder raised his concern whether the bridge is to be built on the downstream of the existing location, and whether the flow of river during the flood events will still affect two farms on the downstream land. On the downstream side where people usually wash their vehicles, it has a built up of gravels and that location is high. So during flooding, when water flows downstream, and it reaches that point, it pushes water to the opposite side and then the water flow will then be affecting the farms as they are situated on a flood prone areas. MID responded that the bridge will be built beside the existing bridge on the downstream side, and there will be no measures to manage or alter the course of the river.
- Community Elders present urged and encouraged the attendees of the consultation to accept the development as it will provide a great service for the People of Malaita, and not only those that live close by.
- During Construction, community members

5.3.2 July 2020

The key outcomes of the consultations with the North Road communities covering road corridors and bridges in July 2020 are as follows:

Malaita Provincial Government (MPG)– 13 July 2020:

- Fully supports SIRAP and the work it will do to upgrade the roads in Malaita.
- MPG will support SIRAP like any other projects in Malaita to make sure that the implementation of the project is timely and unhindered.
- MPG to work with Malaita resource owners to open up resources such as quarry areas for projects like SIRAP.
- MPG has a set of active CACs all around Malaita comprising of community leaders, Chiefs, Landowners, Church leaders, schoolteachers etc. and recommends that SIRAP utilise this CAC.
- MPG also stressed the importance to communicate facts to Malaita people to not unnecessarily raise expectations and create hostility toward the project.

Utilities (Solomon Power, Solomon Water and Telekom) – 13 July 2020:

- There are no Utility Service Infrastructure at or near Fote and Dala bridges.

MECDM-13 July 2020:

- The project is required to apply for development consent and discharge permit from MECDM.
- Advised that a Building Materials Permit from MMERE Mines Division can only be granted after SIRAP2 receives a development consent from MECDM.
- Suggested that for future projects, consultations with communities should be done after the final scope of work is approved to avoid having disappointing people if projects do not follow through as promised.

Save the Children -13 July 2020:

- Really happy that SIRAP takes into consideration road safety of children and for the case of the bridges a designated pedestrian walkway.

MMERE Water Resources Division -11 June 2020:

- River permits only applies to conservation and protected areas. The current River Act has limited coverage and only covers Guadalcanal Province and not the whole SI. Fote and Dala bridges are not within a conservation area, and no river permits are required for the bridge construction nor extraction of aggregates from rivers in Malaita.

MID Quality Assurance Division – 19 June 2020:

- MID laboratory only has equipment that can only do a range of the test. If the contractor has other test requirements, they need to arrange other avenues to perform the test as MID does not have the equipment to do so.
- If requiring general aggregate tests done for the different quarry sites in Malaita, need to inform MID and arrange for access into quarry sites.
- Some general tests have been done in the past for quarries in Malaita.

Ministry of Culture and Tourism - 13 July 2020:

- Fully supports the road project and bridge replacement plan as this would support the development of tourism in Malaita.

Ministry of Health and Medical Services – 13 July 2020:

- Emphasised that good roads are important for better access to health services.
- Do not leave roads to reach very bad condition before trying to fix them. This is not a good practice.
- Want contractors that are competent to construct roads and bridges under SIRAP. Prefer international contractors.

CAUSE -13 July 2020:

- We must appreciate and utilise well, such as road projects.
- SIRAP to consider also engaging people close to project area as casuals. This would create ownership for these infrastructures.

Tudili Community- 19 July 2020:

- Fully supports the proposed road upgrade work and bridge replacement in Malaita
- Appreciates the fact that SIRAP is concerned about road safety, especially that of our children thus the inclusion of a designated pedestrian walkway on the new bridge design.
- Concern about water quality issues downstream that would cause by vehicles using the temporary crossing during bridge construction.
-
- Excited about the proposed sealing of roads

- Want to see the picture of the bridge proposed in the design to better understand that they expect to see after the bridge has been completed.
- Community elders call on the community to support the project as it is an opportunity to benefit from.
- Want to know who the contractors would be.
- Want to know about employment opportunities from the project.

Buma Height – 19 July 2020:

- Happy to know the 7km of Northern Road (from Airport Junction to Kiluufi) will be resealed.
- People here are aware of the 30m gazetted road with as owned by the government and properties like trees that grow in it shall not be compensated if asked to be removed.
- Elders said that people from Buma Height should cooperate and support SIRAP.
- Want to know about the legal width of the road right of way so that resource owners are aware of it.
- Want to know if the road and bridge contractor shall be international or local as they want the bridge and roads to be built well to last longer.
- Wants to know if aggregates shall be brought in by contractor or if its part of the community's contribution.
- It was highlighted that the main issues with the roads are with poor drainage that causes flooding on to the road and deterioration.
- Community elders call on the community to provide support for the project as this would be an opportunity for a good road.

Maoba Community – 21 July 2020:

- So thankful that WB shall fix their roads and replace the old Bridges.
- Happy with the project and to be beneficiaries of it
- They asked for clarification from MID on the ownership of the gazetted road and compensation for properties along the side of the road like trees if get cut down by contractor for road widening.
- Want to know who is responsible for removing debris from road works.
- Also want to know if the road works will be done by machines or manpower.

5.3.3 Wider SIRAP 2018 Consultations

Key areas of discussion during the wider 2018 community consultations relevant to this subproject included:

- A key element for managing and mitigating land issues is a strong consultative process with tribal leaders and village communities, working within cultural norms and supporting ongoing informal relationships with the Project and Contractor and Village Communities.
- Building relationships with tribal leaders and communities on an informal and formal level is critical.
- Working within the cultural norms, cultural values, and familial roles of the Malaita tribes will be important during the implementation cycle of the project.
- Community Liaison Officers (CLOs) or Community Helpers will play a critical role in the successful project implementation in keeping an open link of communication, information, and dialogue with communities affected by our new infrastructure activities.
- The inclusion of gender, disability, etc will be utilized within our Safeguard instruments and will be considered in our design documents for all new infrastructure activities in Honiara, Malaita, and Munda.

- The Malaita women's council, mandated by the Provincial Government, has expressed interest to participate in new project activities by conducting income generating activities and services such as canteen services where feasible and small scale road maintenance.
- The cultural practice of "Bride Price" and commodifying women as property has its linkages with GBV and compensation. It is critical to work closely with national women organisations, NGOs, CPIU, and others to conduct ongoing trainings on GBV, SAE, international and domestic trafficking.
- Consultations with the "House of Chiefs" will assist in project implementation and on Thursday, 23 August 2018 at 2pm, a consultation was conducted with the village of Gwaunoa which borders the unpaved road within the 7 km going towards Dala. Approximately 20 members of the village community was in attendance.
- Chief is sure that consultations with other villages and resource owners will help to mitigate land disputes and avoid project delays.
- Teacher and a female stated that the improved roads will assist women groups to bring their goods and crafts to the market in Auki.
- Social issues of GBV, SEAH, and HT should be managed in the home and villages, to create awareness of these problems, but do not see it affecting her village in a major way.
- Consultations should be done with all relevant villages near the roads and notifications posted to relevant villages prior to road works entering their area to mitigate against land disputes.
- Separate consultations should be done with resource owners (landowners, gravel/aggregate owners) to mitigate against land disputes.

5.3.4 Ad Hoc Consultations 2019-2020

Subsequent to the initial 2018 consultations and as recorded in the Design Philosophy Report, the SIRAP NSSS and CLO for Malaita together with Malaita based MID Works Officer in December 2019 carried out several community awareness programs to north road communities including those close to Fiu Bridge. The purpose of the consultation was to inform communities on the upcoming work that would be conducted by the Design Engineer, SIRAP PST, including survey, geotechnical investigations and road safety audits as part of data collection. The communities were also informed about the proposed plan to replace other bridges including Koa, Bio 1 and Bio 2 bridges. At that consultation, there were no concerns raised by the communities except to say that they are looking forward to the improved bridges.

The MPG on 7 November 2019 were also informed about the proposed replacement of the 3 bridges, including the Fiu River bridge and other SIRAP scope of work for Malaita Roads. They acknowledged their support for the project and the desire to be more involved for the following key reasons. Firstly, they want to ensure that such road infrastructure developments are not hindered by issues such as land disputes. Secondly, they want to make sure that roads are constructed to the standard that lasts longer and more resilient to the impacts of rain, floods and other natural hazards.

Malaita province has far more experience with roads and bridge projects (apart from Guadalcanal) than the other provinces in the Solomon Islands. They have also had their fair share of disappointments relating to road infrastructure development. Some issues arose from unresolved land disputes, and others from the choice of road contractors perceived by communities, to perform sub-standard road works which resulted in the roads returning to very poor condition immediately after the first episode of heavy rain. This sentiment was also shared by MPG in a meeting with them on 20 February 2020. There were also cases where road infrastructure projects never eventuated after the communities were informed about them, contributing to community disappointment and mistrust in Malaita.

5.4 Sensitive Receptors

The sensitive receptors identified For the Fiu River Bridge include,

Table 13: Sensitive receptors summary

Location	Name
Fiu River Bridge	
Northern approach to the bridge	3 x Structures and non-land assets
Southern approach to the bridge	1 x structure and other non-land assets. See Figure 7.
200m-300m southeast of the bridge (upstream)	Communal/public wash and car wash area.
20-100m west downstream of the bridge	Communal/public wash and car wash area. Car wash entry
700m north of the bridge	Gwailiki Community
700m South of the bridge	Kilusakwalo community
Fiu River	Fiu River is a sensitive receptor, given its proximity to coastal environment (2km) and communities (water users) downstream.

MID already started the consultations with the affected parties and public notice were posted for this purpose. See Appendix I. Specific consultations will be undertaken with these identified communities before and during construction activities to ensure that impacts are minimised, and community safety is ensured. This is particularly important for the transportation of materials and equipment. Mitigation measures may include construction works or transport during specific hours, which do not impact school hours or specific traffic (includes pedestrian) safety management like flag controls and route diversions

5.5 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 project preparation, design, 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), email, phone, in-person, through CAC members, the local Approved Service Provider (ASP), 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 on GBV and SEAH.

The Grievance Resolution timeline will depend entirely on the nature of the complaint received.

- Any grievance that is considered urgent will have to be responded to within 24 hours, this includes GBV and SEAH cases.
- The standard complaints from contracted workers and the public will be addressed between 2- 3 working days.
- For the complex matters, the issue will be resolved within 14 working days (2 weeks)

- Any grievance that cannot be addressed at project level, such as land dispute will be escalated to PST then to the responsible implementing Agency, either MID or MCA.

Regardless on the nature of the complaints, all cases must be acknowledged (to the affected party) within 24 hours by the contractor CLO.

This GRM has been developed to satisfy both SIG legislative and WB GRM requirements as well as being developed in line with the Country Safeguard Systems.

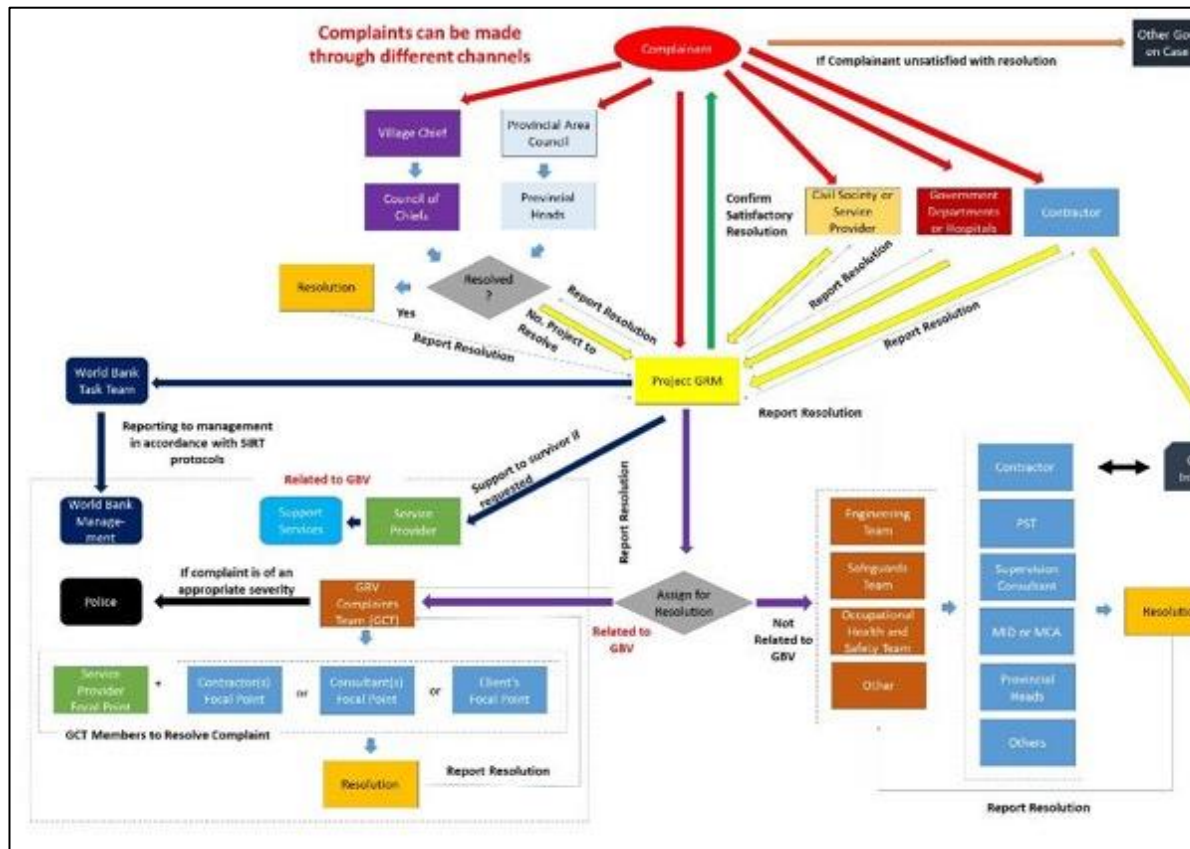


Figure 13: GRM Process

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 consultants on site, the process would commence with as much as practical to resolve the complaint at the contractor level between the Contractor and the concerned individual or community.

Most complaints arise during construction are expected to be minor complaints concerning traffic, 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 Contractor's Community Liaison Officer (CLO) 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, reason for the complaint and steps taken to resolve. 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.

For most complaints, if immediate resolution is achieved and the complainant is satisfied, the matter will be recorded in the site diary and reported in the monthly safeguards report submitted to PST.

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 Senior Safeguards Specialist within the PST. The NSSS will log it into the 'Grievance Register' 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.

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 MID or 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 MID and MCA, the AP may appeal to court or seek advice from the Office of the Ombudsman. 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.

GBV Complaint Team (GCT): The SIRAP Code of Conduct and Action Plan for the Prevention of GBV, Human Trafficking, and SEAH 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 SIRAP2 PST National Senior Safeguards Specialist, an appropriate contractors representative, the E&S from supervision consultant and, a representative from the SAFENET service provider at site.

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.

6 Sensitive Receptors

6.1 Sensitive Receptors Identified

Sensitive receptors for the Fiu bridge have been identified and summarised in Table 13. Environmental and social sensitive areas were identified during ESMP field investigations. The bridge works will take place in Buma ward and aggregates will likely be sourced from Aimela ward. Both wards are rural with scattered villages.

Table 13 summarises the key potential environmental and social impacts on those sensitive receptors in relation to the bridge replacement and approach road works, based on the subproject screening.

Table 14: Sensitive receptors along the North Road including Fiu Bridge

Sensitive Receptors	Location	Potential Impacts
Kilusakwalo Community	Fiu Bridge	- School is within 600m of Fiu River bridge. Other schools identified are greater than 600m from construction sites. - Traffic accidents involving school children coming to and from school. - Traffic accidents involving people going to and from sports events. - Noise and dust disturbance during school hours. - Disruption to children crossing bridge to access school. - Improved pedestrian safety of bridge on completion of works.
Fiu Bridge	Fiu Bridge	- Choke point for traffic during aggregate extraction and haulage. - Pedestrian safety risk from construction equipment and truck during crossing.
Gravel Extraction Site	River extraction sites	- Reduction in water quality of river from sedimentation. - Temporary reduction in available river gravels to other local projects. - Water pollution (oil/fuel spill) from working with extraction machinery in and around river. - Regular altering of habitat from active gravel extraction – not considered a natural habitat under ESS6 - Approximately 6km downstream to coast - no impacts on marine environment.
Community Speed Controls	Haulage Route	- Traffic accidents involving patients and visitors going to and from the health center. - Noise and dust impacts during construction works.
Riverine environment	Bridge site and gravel extraction sites	- Not considered a natural habitat under ESS6. - Water pollution from oil or fuel spill. - Alteration of water quality and course from dumped stones or aggregate. - Increased sedimentation from run off during construction works. - Potential for a temporary increase in suspended sediments in the river downstream of the construction site from necessary excavation and bridge footings work. - Temporary changes to river flow speed during replacement of Fiu River Bridge. - The use of the riverbed as a temporary crossing for vehicles will also contribute to the increased short term and localised suspended solids in the river.

Sensitive Receptors	Location	Potential Impacts
		▪ Erosion and Sediment Control Plan will be prepared by the Contractor for the proposed works.
Riverbanks	Bridge site	▪ Construction and replacement of bridge have the potential to damage the existing structure and profile of riverbanks from uncontrolled use and movement of heavy machinery. ▪ Construction of bridge footing will be done on dry sections of riverbanks. Construction site is small and timeframe of construction is only 24 months, meaning impacts will be minimal and temporary. ▪ Lack of access to riverbank for washing activities, local gravel extraction, etc during construction and potentially after riverbank and road realignment works are completed.
Roadside vegetation	Fiu Bridge	• Vegetations are mostly modified as the surrounding area of the bridge is mostly occupied by gardening activities and coconut plantations. • Only minor clearance of vegetation will be conducted at both approaches as the new bridge alignment will shift few meters downstream from the existing bridge ▪
Human uses of rivers	Fiu Bridge	▪ The settlement at the northern approach of Fiu Bridge who depend on the river section parallel to the north road may need to walk upstream from the construction site for their water needs. For settlements next to the bridge this may mean walking 500m if they do not have alternative sources. ▪ Alternative river crossings during construction will involve pedestrians walking across the riverbed which creates a hazard to all pedestrians, particularly children, the elderly and vulnerable groups, during times of heavy rain and/or flooding. Pupils of Kilusakwalo school south of the Fiu Bridge, and other schools along the road stretch who would attend school during the construction of the bridge as they will need to use the existing crossing every day. ▪ Communities who live on the Fiu River downstream from the bridge may be impacted by increased suspended sediments cause by the bridge replacement works in the water and riverbank or from the temporary river crossing through the water. ▪ While not expected settlements next to Fiu bridge may need to walk upstream to collect water should suspended sediment release become significant. ▪ The Fiu River is a popular local gravel extraction site (on the Auki side) and the road realignment works for the new bridge has the potential to permanently block access to that extraction site unless it is built into the detailed design.
Structures at Fiu Bridge	Fiu Bridge	▪ There are 3 structures at the northern approach of the bridge and will be directly impacted by these works. Also one structure at the southern approach and will be likely affected if the bridge is shifted downstream from its existing location. See Figure 7. ▪ Relocation of these structures prior to construction works or permanent setting back of market stall to allow for operational traffic management measures.

Sensitive Receptors	Location	Potential Impacts
Human Trafficking	Workers Accomodations	- In the context of the proposed Fiu bridge upgrade works, the risk arises due to the use of local hotels by the expatriate workforce. It is anticipated that the risk posed 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 ESMP shall be updated and the risk of trafficking should be fully assessed. - Additional risks for the Malaita project are that while there is not expected to be significant labour influx, there will be notable cash influx. As this will be injected into the current situation of supply of girls for trafficking and a functioning network of traffickers as well as minimal capacity to combat this, then the project would likely increase the risks of girls being trafficked.
Health Centres	Haulage routes and bridge sites	- Traffic accidents involving patients and visitors going to and from the health center. - Noise and dust impacts during construction works. - Interruptions to access to health centers while bridge works are ongoing.
Church	Haulage routes	- Traffic accidents involving pedetrians going to and from church. - Noise and dust disturbance during haulage.



Figure 14: Communities at the vicinity of the project site



Figure 15: Structures at the vicinity of the project site



Figure 16: Sensitive receptors at Fiu bridge

6.1.1 Specific Impacts: Fiu Bridge

There are three (3) structures identified at the northern edge of the bridge and one at the southern edge. The project will have to put in place due diligence to address the impacts. A Resettlement Action plan will be revised and updated to capture the impacts and appropriate measures to address the affected owners. A public notice was posted at the project site to inform the affected party and the public of the proposed project. See Appendix I.

SIRAP and MID had already conducted an initial consultation with the owners of the structure in November 2022, and they are aware of the proposed replacement of the Fiu River bridge. A follow up consultation was conducted in November 2023, purposely to get the views of the residents and how the project can be implemented without posing a big impact to the community and the environment. A recent consultation was conducted by MID and SIRAP2 PST from 27th February to 1st March 2026, covering the roads and bridge subprojects. See Appendix H for the consultation presentations. The contents of the consultations cover,

- Information on the current condition of the Fiu Bridge
- The Fiu River Bridge Replacement
- The detailed design of the bridge was shown to the community representatives.
- What will the replacement involve
- What to expect – Detailed Design phase
- What to expect – Construction phase
- Project timeframe
- Community involvement
- Environmental and Social risks
- Grievance Redress Mechanism
- Consultation schedule

Besides the impacts on the structures, other impacts that worth taking note of are listed below.

ACCESS FOR GRAVEL EXTRACTION – CONSTRUCTION PHASE: The gravel extraction site shown is frequently used site by communities, businesses and projects. Access is via a track leading off the sealed road on the Auki side of the bridge. During construction works, it is likely that access to the gravel beds will be limited for periods of times. Consultation with the local communities, businesses and MID office will be critical to raise awareness of the short-term disruptions and to identify any critical needs the community might have for Fiu river gravel during the construction of the new bridge.

ACCESS FOR GRAVEL EXTRACTION – LONG TERM: As shown in 8, the Fiu bridge and approach road will be realigned to the red dashed line (approximately). This realignment has the potential to cut off access to the track currently used by the community to access the grave beds on the seaward side of the current bridge. The concept design plan does not currently provide for reinstated access to the local extraction site. If this is not addressed at the design stage with an integrated off ramp to the access track, there is the risk of the project resulting in restricted access to that resource. The ESMP contains measures to address this.

NOISE AND DUST: On the northern approach of the Fiu bridge there is a small settlement of houses and at least one workshop observed. Noise and dust from the bridge works and from any gravel extraction at Fiu Bridge has the potential to cause a nuisance to the residents of those houses. These impacts will be short in duration and will cease once works are completed. The impacts can be readily managed through the measures stipulated in this ESMP.

TRAFFIC: As the Fiu Bridge will be built alongside the existing bridge, traffic flow across the river will be able to continue relatively unhindered, except for the usual traffic management measures that will be needed around the construction works. The Contractors Traffic Management Plan will reduce these impacts.

RIVERINE ENVIRONMENT: Installation of new bridge support in the Fiu River can be expected to alter the speed and flow of the river in that area. As the Fiu river is a braided river system, it is continually changing its flow paths and speeds around the gravel deposition beds as they change during rain and storm events, therefore the environment is already designed to adapt in this way. While in the short term there may be some flow pattern changes and reshaping of gravel banks, no long-term impacts are expected from the new infrastructure. Any short-term impacts would be reflective of the types of changes typical of a braided river system in response to heavy rain or storms.

7 Potential environmental and social impacts

Initial environmental and social screening by the World Bank Safeguards Specialists of the ESF ESS and site visits carried out by the SIRAP2 PST have informed the preliminary identification of impacts based on the extent of works described in Section 2. As more detailed design information becomes available, these impacts will be revisited and updated where necessary.

This section will look on the potential environmental and social impacts of activities under different phases of the project- covering planning and designing, construction and rehabilitation phase. The planning and design stage was completed in 2023. The next phase is the construction phase, and the potential impacts under construction phase are listed below.

7.1 Environmental Impacts

7.1.1 Physical Environment

7.1.1.1 *Dust and Air pollution*

Air pollution is likely to arise from improper maintenance of equipment, dust generation along the road, at the quarries and at the crushing plant. Impacts are expected to be experienced at the construction sites and could cause a significant nuisance and health hazard to nearby communities and the pedestrians.

It can be expected that once the bridge works are completed, traffic levels may increase and lead to an increase of dust generated at communities along unsealed maintained sections of road.

7.1.1.2 *Noise and vibration*

Emissions from bridge upgrade works would originate from noise caused by traffic and operation of machines, dust from traffic on dirt road landside and crushing of rocks.

No ongoing impact on air quality is expected as this is a rehabilitation of existing infrastructure.

These impacts will be short-term and affect different people at different times.

Noise and vibration are likely to be ongoing issues throughout the construction stage and to a lesser degree the operational phase. As the roads 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.

7.1.1.3 *Solid Waste Generation*

Bridge replacement works will lead to the generation of excess soil, metal scraps, wood offcuts and other wastes. 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.

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.

7.1.1.4 Water Resources

Freshwater will be required for workers and some construction activities. As there is an abundance of ground water and freshwater in Malaita, it is not expected that the impact on the water supply would be significant. The Contractors are responsible for securing water access that is adequate and continuously supplied throughout the construction phase for workers and some construction activities. Water efficiency, conservation and reclamation practices will be adopted by the Contractors and other site personnel.

7.1.1.5 Impact on water quality, hydrology, flow patterns, water level

The construction of the new bridge will have impacts on the water quality, hydrology, flow patterns and water level. Given the new bridge will be shifted 7 meters downstream from the existing site, the machines will move over the river channel which will optimally deteriorate the water quality, especially the turbid water and the sediment loads that will be produced during the construction phase. If not managed well, the increasing sediment loads in the river can lead to other environmental issues such as algal bloom, which leads to discoloration and reduced the river aesthetic features. Apart from water quality, the hydrology of the river will be affected as well, as contractor will likely to divert the river channel in some cases and can resulted in the change in flow patterns of the river. See Table 7 for the water quality data.

The river flow and water depth were not assessed during the scoping trip, but it is necessary for the contractor to measure the flow rate and water depth at different sections of the river, both upstream and downstream. This will guide the contractor in ensuring the river flow and depth is managed and not altered at a larger scale. As part of contractor ongoing monitoring and reporting, the data will be collected prior to the construction and during the construction phase.

7.1.1.6 Erosion and Sediment control

There is potential for works to create increased erosion and sedimentation of the river, and marine environments during the construction phase from any riverbank reinforcement works. Sediment has the potential to be generated during any vegetation clearance, excavations, stockpiles of aggregates and crushing of rocks at the laydown area and workers' camp.

During the period of construction of the bridge, there will be potentially an impact on the quality of the river temporarily due to a temporary increase in suspended sediments in the river downstream of the construction site. The issue with the suspended sediments will likely be more prevalent immediately downstream of the construction area but may gradually improve further downstream as the sediments settle onto the riverbed.

A Soil Erosion and Sediment Control Plan (SESCP) will be prepared for the proposed works, and this will be the Contractor's responsibility for the design, installation, and maintenance of Erosion and Sediment Control for the temporary works of the project. The primary purpose of installing sediment and erosion controls is to not cause environmental harm nor deposit prescribed water contaminants

in waterways. In addition, appropriate erosion control can have the benefit of decreasing soil degradation hence improving asset protection and decreasing maintenance costs during and post-construction.

An SESCP will be prepared for all areas prior to use or disturbance including auxiliary areas under the control of the contractor such as stockpile and storage areas, access and haulage tracks, temporary waterway crossing, borrow areas, compound areas and material processing areas. Clearing and grubbing (or the use of the area for stockpiles) for that section shall not start until the SESCP for that section is assessed as suitable by the Engineer.

7.1.1.7 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 waterways and coastal environments 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. 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 (October to March). 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 throughout Section 8).

7.1.1.8 Hazardous substances and materials

The use and storage of hazardous substances during construction can impact on physical soil and water resources if they accidentally spill or leak into the environment and if hazardous materials are not properly disposed of. There are several project activities which could generate soil and/or water pollution from hazardous substances or materials.

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.

Wastewater and slurry from concrete production (potentially for kerbs, signage footings, safety barriers, etc) 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 wastewater leaching into the ground water and causing contamination. Very limited amounts of concrete may be needed; therefore this impact is considered to be minor.

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.

7.1.1.9 *Local quarry and aggregate supply*

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

- Riverbank erosion from machinery access.
- Water quality – impacts of water turbidity from increased sedimentation and oil or fuel spill from machinery in the river;
- Air emissions – machinery and dust;
- Noise and vibration – machinery and blasting (if used);
- Water – consumption, hydrology (changes to site drainage patterns and groundwater), wastewater, and contamination;
- Waste – overburden, by-products and contaminated waste material;
- Land conversion – loss of habitat and agricultural land; and
- 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 or whether this aggregate will be sourced locally, nationally or internationally.

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 locally sourcing aggregate from Malaita are the identification of the correct landowner. Consultations with the local government offices on Malaita indicated that many land leases are now being registered and that more and more landowners are in possession of title deeds for the land issued by the courts. Additional consultations with the locally based contractors confirmed that providing a mutually beneficial exchange of services takes place between the permit holder and the landowner, sourcing of aggregates from quarries is frequently achieved for development aid funded road maintenance projects. There are multiple quarries along the Malaita roads, so it is preferable that a quarry source local to the active works site is used to ensure that the community experiencing the works is also benefitting by having their resources used and services exchanged.²²

Additional risks with sourcing local aggregate include the chance find of UXO in the riverbed. Appendix G outlines the procedure to follow in this instance.

UXO: UXO survey and clearance is required for the new bridge alignment, quarry sites, laydown area and workers camp site. In the event of a discovery, the Contractor must immediately stop work and clear the worksite of all personnel. The discovery must immediately be reported to the Supervision Engineer, MID and the Royal Solomon Islands Police Force (RSIPF). A UXO Response and Removal Plan is included in the Appendix G in this ESMP. No works shall recommence on-site until instruction has been received from the relevant authorities, including supervision engineer.

²² Solomon Islands Roads and Aviation Project Environmental and Social Management Framework, Malaita Road Infrastructure Upgrades (February 2019)

7.1.2 Biological Environment

7.1.2.1 Roadside Vegetation

As referred to in Table 14, upgrades to bridge will impact roadside vegetation.

FIU RIVER BRIDGE: For Fiu Bridge, proposed works include the removal trees and shrubs at the southern approach during the construction phase. Not much vegetation cover observed for the northern approach as locals use that area for roadside market and related activities. **Error! Reference source not found.** provide information with the trees for removal or protection for Fiu Bridge, and the concept design is included in Appendix K.

Table 15: Tree removal/protection for Fiu bridge

No.	Type of Tree	Species	Marked Tree: Removal/Protected	Height (m)	Distance from road edge facing north	Position from road edge
Fiu River Bridge						
1	Agricultural	Ornamental plants	Remove	3	<10m from the road edge	The left side of the Southern approach
2	Agricultural	Yellow bamboo (Phyllostachys aurea)	Protect	15	<10m from the road edge	The left side of the Southern approach
3	Agricultural	Banana plants	Remove	TBC	<10m from road edge	The left side of the Southern approach
4	Agricultural	Cocoa plants	Remove	TBC	<10m from road edge	The left side of the Southern approach
5	Agricultural	Coconut trees	Remove	TBC	<10m from road edge	The left side of the Southern approach



Yellow bamboo plant at southern approach



Plant and shrubs at the southern approach



Figure 17: Plants and shrubs to be removed at southern approach

Authorities, including the MAL and MoFR are responsible for setting values of the trees, should compensation be required. Fruit trees and sago palms come under MAL, and commercial trees come under MoFR. These authorities have offices and staff in Auki and can be consulted with prior to works.

It will be the Contractors responsibility through the supervision consultant to inform MAL and MoFR for any tree removal and tree protection plans and procedures.

During the consultation with communities close to the bridge's sites, at communities have been informed of the fact that certain trees and vegetations within the road corridors and bridges alignment that may require removal to allow for construction works in certain sections only. It was clearly explained to the communities by MID that they will be informed ahead by the contractor on the actual trees that may need to be removed to allow for bridge construction works to take place.

7.1.2.2 Biosecurity

It is possible that equipment and materials for the bridge construction and other works will need to be imported to the Solomon Islands or shipped in from other parts of the country. 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 Solomon Islands, which 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.

A good example is the Giant African Snails (GAS; *Achatina fulica*). This species is a biosecurity concern for the country and causing significant damage to food crops in Honiara and parts of Guadalcanal. This species has started to spread to some of the other islands. Sourcing local aggregates from quarry or extraction sites in Honiara which are already infested with this invasive species risks spreading the problem to the new sites on Malaita.

Besides the GAS, Asian Bee (*Apis Cerana*) have been reported to pose threat to bee hives in the country. This species is devastative to the local bee industry.

7.1.3 Cumulative impacts

Fiu River is one of the biggest river systems in Malaita. Due to its proximity to Auki town, the river is the main source of river gravel and aggregates for the locals, including the contractors working on the on other projects in Auki and elsewhere. From the site observations, the northern bank of the river is

steep, shifting the gravel and sand deposits to the southern bank of the river, and locals frequent that area for gravel and sand extraction.

A kilometre upstream from the bridge is another gravel extraction area. During the site visit in May 2026, machines were seen to be extracting river gravel along the riverbed for the Auki township road project. This is important to note as cumulative impacts to the planned Fiu Bridge project. The Fiu Bridge project will have to consider these cumulative impacts and put in place measures to control sediment loads and turbidity during construction phase. During the environmental and social scoping assessment, it was observed that machines were extracting aggregates upstream which causes the turbidity readings to be higher than normal. A follow up monitoring is required to ascertain the water quality data for baseline purpose and also ongoing monitoring is required. See Table 7 for the water quality baseline data.

Besides the contractors extracting river gravel, the locals from the nearby communities, including Auki township also frequent the river for washing, swimming and collecting stones and river gravel. The landowners of the area imposed an access fee of SBD\$20 for those who want to go to the river for swimming, washing and recreation purposes. The access fee is applicable for both the upstream and downstream areas of the bridge.

Important to not too, the current Fiu bridge will still be used for public access during construction phase of the new bridge, and increasing number of public transports crossing the bridge can emit noise and generate dust to the nearby communities and the project site itself. The contractor will as much as practical put in place mitigation measures to manage the noise and dust emissions at an acceptable level.

7.1.4 Climate & Disaster Risks

7.1.4.1 *Emergency preparedness and Response*

There is a risk from natural and man-made hazards during the works (e.g. floods, fire, leaks or spills due to failure to implement operating procedures that are designed to prevent their occurrence).

From the consultations with the locals, the river hardly overtops its banks to reach the communities, but it does at the other sections of the river upstream and downstream. During flooding events, the gardening areas usually inundated. Taking this into consideration, the Contractor is required to develop an emergency procedure and response plan to cover for possible flooding and extreme rainfall and will ensure measures for restoration and cleanup of the environment following any major incident will occur. The details will be provided in the contractor's emergency procedure and contingency plan.

7.2 Social Impacts

7.2.1 Land & Livelihood

7.2.1.1 *Land Use*

Land is an important factor and can be complex in the Solomon Islands and negative impacts may arise from the use of existing government land, the leasing of private lands or the use of quarries where land ownership may have disputes or legacy issues. SIRAP2- PST will liaise with MID ensuring the location on which the infrastructures will be built is gazetted. Land will be required during the construction phase. The use of the land will be temporary and for a short period of time. The MID executed the temporary land use through the use of the MOU with the rightful and true owners of the interested land. This will be facilitated by MID Safeguards Unit with the support from SIRAP2 PST.

Land will be required for construction camps, stockpile sites and potentially workers camps. It is not yet known where these sites will be and whether existing government land or private land will be used. MID already identified one location for the camp and laydown area.

- Auki site – the area was previously used by Kitano Construction group and is now vacant. This site is approximately 6km from the project site and it's a government land.

There will also be a need to source aggregates for the bridge constructions and the source or ownership status of those resources are not yet known. Contractor will engage a full time CLO, [preferably a local who is familiar with the area and will be instrumental in negotiating with the rightful landowning groups for aggregates extraction.

7.2.1.2 Business Impacts

During the construction phase there is a potential for minor impacts on businesses along the roads. At the northern approach of the bridge, the locals use the space to operate small vendor stalls. 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.

7.2.2 Labour and Working conditions

A Labour Management Procedure (LMP) has been prepared for SIRAP2-AF which identifies the risks to the workforce and includes terms and conditions of employment, nondiscrimination and equal opportunity (which includes a safe work environment free from violence and sexual harassment), workers' organizations, restrictions on child and forced labor, and OHS in design, construction, and operational phases.

7.2.2.1 Occupational Health and Safety

The primary hazards identified are:

- i) working in live traffic areas
- ii) construction works involving heavy machinery
- iii) working in extreme ambient temperatures.

During past consultations for SIRAP and SIRAP2 works on the island, the community raised concerns regarding the spread of sexually transmitted diseases (particularly HIV/AIDS) with incoming contractors and workers related to the project. A number of mitigation measures have been identified, including awareness training for foreign workers and employing local labourers.

7.2.3 Community Health and Safety

7.2.3.1 Road safety and traffic impacts

Construction works will result in higher traffic volume around sensitive social receptors and around the project site. It will also result in increased pressure on pedestrians along bridge where there is no walkway and where traffic and pedestrians may compete for space.

Waste spillage from project vehicles or construction works onto the roads will result in pollution and constitute obstructions to vehicular traffic. The transport of raw materials will introduce a number of heavy trucks on the access road and this could increase the risk of motor accidents and result in vehicular-pedestrian conflicts.

Physical works on the roads will cause disruption to the flow of traffic and create safety risks to pedestrians and vehicular traffic.

7.2.3.2 Hazardous substances and materials

There is a risk to the community from exposure to hazardous materials and substances associated with the construction activities including fuels, oils, lubricants, chemicals, and other potentially hazardous substances that maybe improperly stored, handled, transported or spilled at the project site.

Pollution prevention and management of these risks to communities will be managed under the requirements of the impacts identified above under 6.1.1 Resource Efficiency and Pollution Prevention and as stipulated in Section 7 of this ESMP.

7.2.3.3 Influx of workers

It is not yet known whether there will be a need for a workers' camp to be established for the works, however, it is probable that there will be a need for additional workers to be brought to the project site for the completion of works. It is possible that these workers are likely to be from both overseas, from other areas of the Solomon Islands, and even elsewhere in Malaita. The Contractor(s) must therefore be sensitive to the potential impacts that this influx of outside labor can have on the local community and manage these impacts and interactions appropriately. Communities understand the potential need for additional labor to ensure the quality of road works. This being said, it is the will and hope of Malaita communities that the contractor will first and foremost seek to employ local skilled and unskilled labor, prior to looking elsewhere outside of Malaita.

While the influx of this labour can have positive effects (e.g., increased opportunity for capacity building and economic development), more often than not, labour influx results in or contribute to adverse social impacts. If not planned for and effectively managed, labour influx can impact on the following social areas:

Risk of social conflict: Conflicts may arise between the local community and the construction workers, which may be related to religious, cultural or ethnic differences, or based on competition for resources. Tensions may also arise between different groups within the labour force, and pre-existing conflicts in the local community may be exacerbated.

Increased risk of illicit behaviours and crime: The influx of workers and service providers into communities may increase the rate of crimes and/or perception of insecurity by the local community. Such illicit behaviour or crime can include theft, physical assaults, substance abuse and locally brewed kwaso, prostitution and human trafficking. Local law enforcement may not be sufficiently equipped to deal with a temporary increase in the local population.

Impacts on community dynamics: Depending on the number of incoming workers and their engagement with the Malaita communities, the composition of the local communities, and with it, the community dynamics, may change significantly. Pre-existing social conflicts may intensify as a result of such changes.

Local inflation of prices: A significant increase in demand for goods and services due to labour influx may lead to local price hikes and/or crowding out of local residents.

Sexual Exploitation and Abuse: Construction workers are predominantly younger males. Those who are away from their home on construction jobs are typically separated from their families and act

outside of their normal social context. This can lead to inappropriate or illegal behaviour such as sexual harassment of women and girls, exploitative sexual relationships, and illicit sexual relations with minors from the local community. An influx of male labour may also lead to an increase in exploitative sexual relationships—particularly due to the often higher income levels of workers which enable them to purchase transactional sex, or makes them seen as good candidates for marriage.

Communicable Diseases: The influx of people may bring communicable diseases to the communities, including STIs such as HIV/AIDS, or the incoming workers may be exposed to diseases to which they have low resistance.

In terms of the vulnerability of the Malaita communities to external influences during the construction phase, these communities are considered medium to high risk due to the pre-existing culture on Malaita of the commodification of women and children and the low level of perceived vulnerability by this targeted group.

Limiting the number of external workers to the project site will help to reduce this risk, the contractor will compile a Labour Influx Management Plan and Appendix B provides guidelines for mitigation measures against these potential construction phase impacts.

7.2.4 Gender and Vulnerable Groups

7.2.4.1 GBV, HIV/AIDS and CAE

There are impacts associated with personnel recruited from outside the local community, such as increased instances of HIV/AIDS. Additionally, the Contractor accepts that gender-based violence might occur as an unintended consequence of economic development. As such, it is the Contractors responsibility for implementing actions to help reduce instances of HIV/AIDS, GBV and Child Abuse and Exploitation (CAE).

All employees (including managers) will be required to attend training prior to commencing work to reinforce the understanding of HIV/AIDS, GBV and CAE. 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 and CAE 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 and CAE throughout the lifetime of the civil works, including monitoring and reporting.

The Supervision Engineer shall provide to the Contractor a list of ASPs who are member of the SAFENET framework which shall include recognized NGOs and others for conducting training on GBV and SEAH. From the provided list, the Contractor shall enter into an agreement with one service provider to undertake the GBV Information, education and communication (IEC) campaign. The cost of the campaign shall be funded by the Contractor. The contractor shall make staff available for a total of at least 0.5 days per month for formal training, including GBV and SEAH.

8 Environmental and Social Management Plans

This section contains the detailed mitigation measures that are required for the various phases of the bridge upgrading and approach works as they described in the design philosophy.

Also included in Section 8.2 are expected processes for other safeguard management measures and referred to in the mitigation table in Section 8.1.

8.1 Mitigation Tables

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
DETAILED DESIGN/ PRE-CONSTRUCTION MOBILISATION STAGE					
Road traffic safety (including pedestrians)	The bid documents will require a Traffic Management Plan (TMP) to be developed by Contractor in compliance of ESS2 and ESS4. For each haul route, the TMP will need to include measure to address: Layout plans; Vehicle traffic; Pedestrian traffic (particularly on bridges that construction traffic will use); 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 Malaita works. The TMP will be included as an annex to the CESMP. This TMP shall provide estimates of traffic Frequency, during the project, and provide mitigation strategies for noise, dust. The TMP shall include the name, address, and telephone number of the person responsible for the safekeeping of the works, or any change thereto, shall also be notified. TMP shall include details of key map of routes, site entry and exit layout, use of signage and flag operators (including night-time safety), and personnel protective equipment to be worn by workers (e.g. high visibility vests). The TMP should consider that the transport of material or equipment may likely impact normal pedestrian and vehicle traffic or pose an increased safety hazard, consideration should be given to moving these items during off-peak times. The TMP will also detail specific safety and traffic management measures required around sensitive receptors. These measures should be developed in consultation with individual landowners, affected parties and property owners (e.g. community leaders, school principals, hospital management, and church leaders) as required.	All haulage routes and along project affected roads and bridge	Minimal (requirement of bidding documents)	Contractor	Supervision Engineer

²³ Costs are estimates only and will be calculated during the detailed engineering design.

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		Mitigation measures may include restricted construction times (e.g. time of day and or scheduling for school holidays) outside schools, communities or the hospital, reduced speeds and use of cones or barriers to guide traffic and pedestrians through the worksite. Subproject design will include solutions for pedestrian safety/management on bailey bridges. Solutions to include methods of separating pedestrians and traffic on current narrow spans. Solutions may include provision of separate walkways fixed to existing structures. TMP will include a safe alternative river crossing for pedestrians during construction work and will pay particular attention to safe crossing of pedestrians during times of rain and/or flooding for children, the elderly and vulnerable groups. Description of route alternatives will be presented in CESMP.				
Health and Safety		The bid documents will require the Contractor to have in place and comply with an occupational health and safety management system and the WB ESS2 and ESS4. The Occupational Health and Safety (OHS) Standards to be adopted to include those of Australia, Canada, New Zealand, the European Union, and the United States of America, which are referred to in the World Bank Group EHS Guidelines. The Contractor shall ensure that all staff, personnel, subcontractors and suppliers are inducted, trained and in compliance with OHS at all times. The Contractor shall be responsible for implementing all training, systems, procedures and monitoring of OHS management and compliance. The Contractor shall: • Prepare OHS plan as part of CESMP; • Conduct Induction training for Contractor personnel; • Sign Code of Conduct for Contractor workers, Managers and other personnel; and • Implement relevant pre-construction measures prescribed in the OHS Plan. The Contractor shall incorporate all OHS within the Site Safety Management Plan and shall provide a report to the Engineer monthly outlining compliance, achievements and training including the number of lost time incidents; the	Malaita	Minimal (requirement of bidding documents and standard construction practices)	Contractor	Supervision Engineer

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
	number of near-miss reports; first aid training; completed HIV/AIDS and GBV training; and OHS training courses completed by staff. The utility clearance will be undertaken by the Contractor, Solomon Power and Telekom prior to work commencing and a representative from Solomon Power will be on site during works.				
Approvals	Prepare and submit the Development Consent Application (Form2) with relevant supporting documentation (PER, EIA, ESMP, Consultation Report); Prepare and submit Application for material sources (including quarry, gravel pits, sand sources etc.) – Quarry Development and Operations, Gravel Extraction, Earthworks; Prepare and submit Contractor ESMP.	Malaita	Included in Contract costs	Design Engineer	SIRAP2 PST
Loss of Access to Assets and Land	For an areas of road reserve which may be temporarily needed during the construction phase of the project and which are subject to encroachment from the surrounding communities, under ESS5 consultations will be undertaken with the asset owner(s) to facilitate any temporary relocation of the asset (e.g. market stall) for the duration of those works. Section 7.2.1 and associated Appendix E and F outline the process for this. Rights to extract aggregates from quarries will be established following negotiations with the resource owner and permit conditions as required in section 7.2.1.	Malaita	Part of project and contract costs	Contractor and PST CLO	PST NSSS and WB specialist
Gender Based Violence (GBV) and Violence Against Children (VAC)	Establish a GBV and VAC Compliance Team. Refer to Appendix C for guidance. Prepare GBV and VAC Plans and seek Bank approval prior to project mobilization. Refer to Appendix C; Sign Codes of Conduct (if instructed) for Contractor, Managers and other personnel. Refer to Appendix C for draft Codes of Conduct; and Respond to GBV/SEAH and VAC events as a matter of priority.	Malaita	Minimal (requirement of bidding documents and standard construction practices)	Design Engineer	SIRA2P PST
Child labour/Forced Labour prevention	Establish strict measure in ensuring no Child labour or Forced labour exist in the work force. Onboarding process put in place for all workers, including locals and international workers to provide birth certificates and police	Malaita	Minimal (requirement of bidding documents and standard	Contractor	Supervision Engineer

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
	clearance prior to signing of contract. The code of conduct is compulsory for all workers to sign and to be checked by the supervision consultant.		construction practices)		
Consultations	SIRAP2 compiled a Stakeholder Engagement plan for all the projects under additional Financing in compliance to ESS10 of the WB ESF. Contractor to adopt this plan as a guide to stakeholder consultations as required over the course of the Project. Key stakeholders' engagement should be undertaken in accordance with WB requirements. Implement required pre-construction consultations in accordance with the approved CESMP Consultation and Stakeholder Engagement Plan.	Malaita	Minimal (requirement of bidding documents and standard construction practices)	Design Engineer	SIRAP2 PST
Laydown and Stockpile Sites	Short term rental of land for lay down or stockpile sites will follow the process in 4.4.1. The laydown and stockpile site must be located at least 300m from nearest residences or and 150 from waterways. This is to comply with the ESS1 and ESS3. All sites must be securely fenced to prevent unauthorised access. Additional fencing may be required around specific stores (e.g. hazardous substances) to prevent access by unauthorised personnel. Secure, well-constructed areas within the compound must be clearly marked for solid waste collection, machinery maintenance, hazardous substance storage and toilet facilities for workers. 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 wastewater from asphalt and concrete production and machinery maintenance. 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.	Malaita	Part of contract costs	Contractor	Supervision Engineer

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
Influx of Labour / Worker Management	The Contractor is required to provide its own camp facilities to accommodate the personnel and in accordance with WB's Managing the Risks of Adverse Impacts on Communities as per the ESS2 and ESS4 in addressing Temporary Project Induced Labour Influx. The Contractor shall prepare a Workers' Camp Management Plan (WCMS) which prescribes minimum environmental requirements in order to ensure that the operational of workers' camp will not cause any harmful effect to the environment and community. Contractor will be required to produce a Workers Management Plan (WoMP) and Labor Influx Management Plan (LIMP) for the Malaita bridge works to describe recruitment strategy, worker accommodations, accommodation facilities and management of off duty workers. Worker Management Plan will follow requirements of this ESMP, the plan guidelines in Appendix B and the IFC Workers Accommodation Standards and Guidelines. Workers Management Plan will be required as part of the bid submission and will be further developed and included as an annex in the CESMP for clearance by the Supervision Engineer. The WoMP will include cultural protocols (including appropriate clothing and no work on a Sunday (or Saturday for SDA) for Church members), management and restricting of visitors to the camp, visitor curfews, expected behaviours (noise, alcohol, within community areas), gift giving and receiving, disciplinary actions, etc.) SIRAP2 has a Code of Conduct and Action Plan for the Prevention of GBV, HT and SEAH (Appendix C). All Project workers will be required to undertake GBV and SEAH prevention training under this action plan and sign the associated Code of Conduct prior to commencement of works. The PST will provide the Contractor with details of ASPs who are able to undertake this training. 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. All workers are required to undertake training on the prevention of HIV/AIDS in addition to the GBV related training. The PST will provide the Contractor	Malaita	Part of standard contract costs	Contractor	Supervision Engineer/SIRAP2 PST

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		with details of ASPs who are able to undertake this training. The cost of the campaign shall be funded by the Contractor from the provisional sum provided in the bill-of-quantity. The Contractor is required to maximise the number of local workers from the project sites in Malaita. The Malaita Provincial Government will seek ways to provide list of local workers and skills for the contractor, prior to mobilizing. 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. In the WoMP, the Contractor will be required to submit a list of roles along with required qualifications and 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. The contractor will try to maintain a 70/30 ratio unless otherwise specified. In which 70% of total workforce are local and the remaining 30% are international workers. This workers ratio had already been implemented under the SIRAP2 component and its works well. This was in line with the 1 September 2025 Memo between SIG and WB, as a means of supporting local labour and skills development through WB supported projects. 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 and operating machines such as excavator and dump trucks), the Supervision Engineer will notify the contractor and the SIG through the SIRAP2- PST who will cancel the work permits. The contractor will be required to return them home within 48 hours of notification by the Supervision Engineer. For recruitment local recruitments 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. It is strongly advised that ad hoc employment of casual labour is not permitted for any project under SIRAP2 Any project staff who are recruited from overseas are subject to visa approval and ensure the role to be engaged in cannot be filled by local workers. As part of the visa application process, all workers are required to submit a medical				

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		report, an element of which is a HIV test. All overseas 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 SIRAP2 project workers to provide SIRAP2 PST with police background clearances prior to arrival in country, regardless of the visa application process. Where necessary, all workers are required to undergo the COVID-19 screening before the recruitment process. If a worker has been tested positive or has been in contact with a positive COVID-19 case, the worker will be required to undergo the 14 day quarantine isolation period. In addition to the Codes of Conduct for GBV/Human Trafficking/SEAH, the Contractor will also prepare a Codes of Conduct to describe the expected behaviours of their project worker in relation to the local communities and their social sensitivities. Mandatory for all workers (locals and internationals) to sign their codes of conduct as part of the onboarding process. The supervision engineer E&S team will provide the list of workers and their status of signing the CoC.				
Riverbank Works and riverine ecosystem		Set conservative working areas along the rivers and ensure that the areas are clearly marked at all times. It is important to protect the riverine ecosystem and the surrounding areas in compliance with the ESS6. Riverbank reinforcement works should be designed to take into account future predicted rainfall patterns. Fiu Bridge road realignment must maintain access for local community vehicles to riverbank on Auki side for gravel extraction. Contractor to include replanting of native species along riverbank on completion of work as part of the CESMP. Minimize amount of vegetation clearance required for the works.	All bridges	Minimal (part of standard design practice)	Design Engineer Contractor	SIRAP2 PST Supervision Engineer

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
Soil erosion		All erosion and sediment controls will be the Contractors responsibility to maintain an effective working order, including reconfiguring drainage lines as required during the construction process to ensure dirty water is directed into sediment ponds and sumps at all times. Reuse of the water collected in sediment ponds or sumps for dust suppression and roadworks is preferred over release into the environment. Where water is being stored for dust suppression, the required design capacity of the basins shall be available. Sediment ponds and other sediment control facilities shall be operated and maintained in a manner that minimises the risk of environmental harm. The design capacity of the upper settling volume shall be made available within 120 hours of the most recent rainfall event which causes runoff. The sediment storage zone shall be maintained at all times with the accumulated sediment removed in a manner that does not allow the sediment to be conveyed into a watercourse or offsite. Where coagulants or flocculants are used to treat stormwater, they must not cause harm to the receiving waters or environment. Before the natural surface is disturbed on a section of the works, the Contractor shall submit a Soil Erosion and Sediment Control Plan (SESCP). Excavations should be kept to a manageable size to reduce the time of exposure. Any stockpiles will need to be on an impermeable geotextile or hardstand and runoff directed to permeable land and not directly into the waterways. 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 at this location are prohibited from discharging directly to the marine and coastal environment. 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 the type of potential contamination (e.g. oil water separator for runoff contaminated with hydrocarbons or settling pond or tank for sediment laden runoff). The works shall: • Minimize erosion and design erosion protection measures according to international good practise standards, including the incorporation of	All locations	Minimal (part of standard design practices)	Design Consultants Contractor	SIRAP2 PST SIRAP2 PST

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		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 a Contingency Plan for works to allow for anticipated construction start date during the wet season. • Contingency Plan must detail soil erosion prevention measures in the event of a storm or heavy rain event.				
Water quality and river flow		Baseline data for water quality and flow rate will be register prior to actual construction work. Measures will be in place to ensure the river continues to flow and allow the river ecosystem to intact as per the ESS6. At a minimum, water quality parameters to be tested include chemical and physical parameters, covering pH, temperature, conductivity, dissolved oxygen, turbidity, TDS and ORP. During mobilisation, the contractor will also conducted microbiological test to cover total coliforms and e.coli. Monitoring sites were established at site for the upstream and downstream monitoring and to account for cumulative impacts. The water depth will assess and readings at certain locations will be documented by the contractor as baseline information.				
Dust / Air Pollution		Identify and locate waste storage sites, stockpile sites and equipment (e.g. crushing plant) at least 300 m away from any residential settlements and 150m from water bodies, streams or rivers, to minimize impacts on the environment and nearby population. This is for the safety of the public and nearby communities as specified in the ESS4. Minimise dust from open area sources, including stockpiles, by using control measures such as using enclosure of covers and increasing moisture content. 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 or fenced off with dust control materials to minimize dust emissions. 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/PST.	All components	Minimal (part of standard design practices)	Contractor	Supervision Engineer

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
	During transportation, the trucks need to have covers to minimise dust and dust suppression techniques will be implemented which as applying water to minimise dust from vehicle movements.				
Water and soil pollution	Soakage pits should not be installed directly into a shallow aquifer. Minimise risk to rivers, 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. Contractor to undertake ground water monitoring prior to any site establishment or construction laydown areas to determine baseline conditions. Measure depth to groundwater and analyse samples for concentrations of pH, electrical conductivity, Dissolved Oxygen, TDS, Turbidity, and as agreed with SIRAP2 PST. Contractor with the support of the supervision engineer to undertake river water quality monitoring prior to commencement of works at Fiu bridge to establish the baseline of community drinking/washing/bathing sites. Contractor will pay particular attention to sensitive receptor sites within 100m of project sites and as identified in this ESMP. No stockpiles within 100m of any surface water bodies. 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. Watertight bunds to be able to contain 110% of volumes being stored or 25% if total volume greater than 1,000 L. Concrete production should only take place when there is no rain forecast. Sandbags or diversion drains must be used to divert runoff from concrete cutting or setting areas. Concrete production is to be equipped with settlement tanks/ponds for treatment of slurry and process water. Treatment shall include settling of suspended solids and decreasing the pH of the water.	All components	Minimal (part of standard design and construction practices)	Contractor	SIRAP2 PST & Supervision Engineer

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		Waste concrete should be allowed to harden before reuse as clean fill. All equipment used in concrete production must be cleaned in designated wash down areas in the construction laydown area, away from surface 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). 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. Contractor to be responsible for ensuring Relevant Water permits (River Waters Act) are in place, including river diversions. No runoff from laydown sites, workers camp and construction works or other project activities will enter any waterway. Where suspended sediment levels result in community members having to walk further to collect water for cooking, the Contractor will facilitate water collection either by providing transportation to a better stretch of water or by collecting water on the communities behalf and trucking it to a collection point convenient for the communities. The cost of this exercise will be covered by the contractor under its operational cost or community goodwill support cost.				
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. The Contractor will need to provide access to clean potable water to communities who are impacted by increased river turbidity in their usual water supply sites. The Contractor will need to ensure an adequate supply of water for construction and personnel, which does not adversely affect local community supply.	All components	Minimal (part of standard design practices)	Contractor	Supervision Engineer

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
Sourcing aggregate material and borrow pits		Ensure locally sourced aggregate is sourced under appropriate permit from approved quarry sources and are operating in accordance with SIG law. Prior to any quarries being selected for the this project, public consultation will be conducted with the rightful owners and an MOU will be signed to guide the extraction agreement. Consultations will also be completed with the correct rightful landowners to secure access to site and resource extraction. Consultations and negotiations will be done under the direction of the PST CLO and the supervision consultant Under circumstances, the contractor will ue quarry sites/borrow pits, it is a requirement for the Contractor to apply for a Building Materials License, they will be required to follow national consenting requirements and to produce a Quarry Management Plan as per the requirements of ESMP and in line with ESS3 and included as an annex in the CESMP for clearance. The following conditions apply to site selection for new river extraction sites: i. All sites will be subject to approval and permitting under both the Mines and Minerals Act (Building Materials Permit) and the Environment Act (Development Consent); ii. Limits to volume of material extracted from any one source will be set in light of the ability of the source to regenerate and likely environmental impact as a result of the extraction. As with any extraction, there are limits after which localized or more extensive environmental impacts may occur. This might be due to facilitation of erosion or sedimentation which could alter the immediate environment or impact directly upon flora and fauna; iii. Access to gravel extraction sites will be negotiated with land owners and users, in the event that an access is purpose built, should the owner not want to keep the access, the contractor will be responsible for reinstating the land to its pre-project condition; iv. Any rivers or streams identified as being a natural habitat²⁴ under ESS6 Natural Habitats or forming part of a protected area (including the buffer zone of a protected area), a proposed protected area, or having	All components	Minimal (part of standard design and construction practices)	Contractor	Supervision Engineer, SIRAP2 CLO, SIRAP National Senior Safeguards Specialist & ECD

²⁴ Natural habitats are land and water areas where (i) the ecosystems' bio-logical communities are formed largely by native plant and animal species, and (ii) human activity has not essentially modified the area's primary ecological functions.

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		conservation value, being habitat for rare or endangered aquatic species or birds, comprising part of the intertidal zone, comprising swamp or wetland, or including mangroves, will not be permitted to be used as sources of gravel; v. Any rivers or streams that are used as a fresh water source for villages should not be used as a materials source as gravel extraction will cause increased sedimentation and turbidity. In cases where such rivers or streams must be used, alternative water sources, such as drilled or dug wells, upstream of extraction sites and works, must be provided for the villages; vi. Use of approved machinery for gravel extraction from rivers such as excavator or backhoe. Dredging or similar operations for the winning of construction material will not be permitted; vii. A number of sites for extraction are preferred over a large volume being taken from one location; viii. In respect of maximum volumes to be removed from any one source, any river gravel removal for the subproject will be managed in accordance with the aggregate extraction guidelines and conditions of approval for the extraction plan; ix. Gravel or material should not be extracted from river bends, and if required, river training be undertaken; x. Any extraction sites and borrow areas close to roads will be located at least 15 m outside the right-of-way of roads, extraction from the sides of roads in a way that could undermine the roads will not be permitted; xi. Any extraction sites within rivers will have a 200m buffer zone between the site and the coastline. xii. Site and pit restoration will follow the completion of works in full compliance with all applicable standards and specifications; xiii. Any topsoil excavated from the top of sites and borrow pit areas will be saved and reused in re-vegetating the sites and pits to the satisfaction of the National Safeguard Specialist; xiv. Additional extraction sites and/or borrow pits will not be opened without the restoration of those areas no longer in use; and xv. The excavation and restoration of sites and borrow areas, as well as their immediate surroundings, will be undertaken in an environmentally sound manner to the satisfaction of the National Safeguard				

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		Specialist. Sign-off to this effect by PST will be required before final acceptance and payment under the terms of the contract. For quarries on Malaita, the Contractor will recruit a CLO experienced in infrastructure projects and they will be responsible for engaging with the SIRAP2 Community Liaison Officer to develop relationships with quarry owners and their communities. During this process, the Contractor CLO and the PST CLO will identify the required traditional exchange of services which would enable the project to extract aggregate. This traditional exchange of services will be acceptable within the context of the WB Safeguards Policies and may be in addition to the usual fee paid for the aggregates. Prior to any commitment being given to the communities, the agreement will be approved by the Supervision who will take advice from the SIRAP National Safeguard Specialist and SIRAP Project Manager. For rivers on Malaita, the extraction limit will be set based on ability of the resource to regenerate and the potential environmental impacts. Contractor is required adhere to these limits and change the quarry source as the project work site move. This will also ensure that the communities nearest to the work are given the opportunity to benefit from this economic activity. This will also provide more community support to the project rather than sourcing aggregates from a remote location compared to the work site. 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 own national permit and good international standards. Supervision Engineer to approve source quarries prior to purchases agreements being signed. To prevent inter-island spread of GAS, stockpile sites for imported and local aggregates which are transhipped through Honiara will be decontaminated and a biosecurity perimeter will be maintained at the Honiara stockpile site in conjunction with the Biosecurity Solomon Islands department, following the system developed by MID for their road aggregate stockpile site. 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				

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		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. The contractor will liaise with Biosecurity Solomon Islands to thoroughly check and cleared the materials/equipment with the issuance of biosecurity certificate before shipment. Additionally, 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.				
Solid waste generation		Solid Waste Management Plan to be completed following requirements of ESMP. SWMP will be included as an appendix to 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. 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). • Hazardous waste (i.e. asbestos, waste oil etc.) All solid waste will be disposed at an approved site on Malaita. The contractor will have to liaise with the Malaita provincial Government and MID on this arrangement. If need be, the Honiara City Council in Honiara (Guadalcanal Island) should be consulted on their willingness and ability to receive any waste from Malaita.	All locations	Minimal (part of standard design and construction practices)	Contractor	Supervision Engineer

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		The Ranadi Landfill operated by Honiara City Council (HCC) Environmental Health Division. The landfill has a drainage system along with settling and digestion ponds to capture leachate. • General waste (including only small quantities of lightweight packaging waste) can be disposed of at Honiara, subject to HCC approval. In addition to this and with the approval of the Supervision Engineer: • Organic biodegradable waste may be deposited in designated dumping areas in reasonable quantities. • Recyclable waste may be supplied to a local receiver licensed to process such waste. 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 B. 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 register firms for collection and disposal of waste and stipulate conditions of carriage. • Detail the approved disposal methods along with appropriate permissions. • Liaise with Malaita provincial Government and MID on the approved waste disposal area • 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.				

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		- Contractor shall seek permission from the Malaita provincial Government 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 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 materials may be generated in the form of surplus aggregates or 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 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 MID 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.				
Hazardous substances		Contractor will compile a Hazardous Material Management plan as an annex to the CESMP. Where possible fuel shall be obtained from local commercially	All locations	Minimal (part of mobilisation and	Contractors	SIRAP2 PST

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		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 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). 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. Spill Response Plan to be developed by Contractor and workers are trained in implementing the plan. 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 SIRAP2 project works areas. 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. These areas will be at least 100m inland from the coast.		construction planning)		
Importation of equipment and materials		All imported vehicles, equipment, materials and machinery will be inspected by Biosecurity Solomon Islands on arrival and a clearance certificate to be provided. 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	All components	Minimal (part of mobilisation and construction planning)	Contractor	Supervision Engineer

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		national requirements) to be submitted to Quarantine Inspectors and approved by the Supervision Engineer prior to delivery to site. For imported aggregates and import permit will be required and the conditions of this permit may include the following fumigation requirements as a minimum: <i>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;</i> <i>OR</i> <i>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.</i> Prior to imported items being delivered to site the Supervision Engineer shall confirm that all necessary biosecurity documentation and clearances have been undertaken. 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				
Community grievances		Ensure that public consultation and disclosure communication is completed at regular intervals with full involvement of SIRAP2 CLO to ensure that the public are fully aware of the SIRAP2 and SIRAP2-Additional Financing works. Consultation should include all aspects of the project including the road works site, quarries and transport routes. Consultation shall include raising awareness of the project GRM, lodgement channels and resolution process. In all instances, consultation will be designed to ensure free, prior and informed consent of the affected communities with the aim to maintain the broad community support for the project which has been demonstrated to date.	All components	Minimal (part of mobilisation and construction planning)	Supervision Engineer	SIRAP2 PST CLO & NSSS
					SIRAP2 PST	SIRAP2 NSSS

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		Advertise, maintain and operate a grievance response mechanism, including publishing statistics on resolutions. SIRAP2 PST CLO and MID/CPIU Safeguards Unit to setup Community Advisory Committee for the works in compliance with MID CAC Guidelines.				
Local business grievances		Ensure that local businesses/roadsides 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 lodgement channels and resolution process.	Malaita 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/Wardens on the road to prevent traffic accidents. The workers shall have relevant safety equipment and training. Add on to the traffic wardens, traffic signages/safety signages will be put in appropriate locations. 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. Contractor to report on adherence to speed limits and use of haulage routes in monthly reports. Special care must be taken when construction works reach any community or school nearby. Coordination with school representatives must occur for safe passage of students and parents through a construction area. May include restricted work hours, reduced speed and detours. At all times ensure safety of pedestrians using alternative river crossing during construction particularly children, the elderly and vulnerable groups during times of heavy rain and/or flooding.	Route from quarries and ports to laydown sites	Safety equipment included in construction cost	Construction Contractors	Supervision Engineer

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
Site Safety		Restrict access to the construction zone through warning signs, Traffic controls, temporary gates, fencing or other construction zone demarcation at all entry points, including Contractor Laydown site. Demarcate all excavations of 2.0m depth or greater and side slopes in excess of 2:1 (horizontal to vertical) through construction fence, rope or other means that clearly defines the hazard. Maintain and demarcate a 5.0m setback from the top of the bank using safety signs, construction flags, or other visual warning to prevent machinery, vehicles and people from accidentally falling into the river channel. Ensure use of PPE and consider providing for on-site storage of workers allocated PPE.	All components	Included as the provisional sum in the BoQ	Contractor	Supervision Engineer
Soil erosion		All erosion and sediment controls will be Contractors responsibility to maintain an effective working order, including reconfiguring drainage lines as required during the construction process to ensure dirty water is directed into sediment controls at all times. Reuse of the water collected in sediment ponds or basins for dust suppression and roadworks is preferred over release into the environment. Where water is being stored for dust suppression, the required design capacity of the basins shall be available. Sediment basins, settling ponds and other sediment controls shall be operated and maintained in a manner that minimises the risk of environmental harm. The design capacity of the upper settling volume shall be made available within 120 hours of the most recent rainfall event which causes runoff. The sediment storage zone shall be maintained at all times with the accumulated sediment removed in a manner that does not allow the sediment to be conveyed into a watercourse or offsite. Where coagulants or flocculants are used to treat stormwater, they must not cause harm to the receiving waters or environment. Before the natural surface is disturbed on a section of the works, the Contractor shall submit a Soil Erosion and Sediment Control Plan (SESCP). Excavations should be kept to a manageable size to reduce the time of exposure. Any stockpiles will need to be on an impermeable geotextile or hardstand and runoff directed to permeable land. Stockpiles of any fine grain	Project site	Minimal (part of standard construction practice)	Construction Contractors	Supervision Engineer

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		materials (e.g. sand and topsoil) must be covered to prevent dust and sediment laden runoff during rain events. Discharges from any activity at any location are prohibited from discharging directly to the marine and coastal environment. 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 the type of potential contamination (e.g. oil water separator for runoff contaminated with hydrocarbons or settling pond or tank for sediment laden runoff). River water quality monitoring pH, Total Dissolved Solids (TDS), turbidity, Dissolved oxygen and Electrical Conductivity will be undertaken upstream and downstream of the construction site and will be the Contractors responsibility. The Supervision Engineer ensures that the Contractor monitors river quality monitoring is conducted at a quarterly basis .. The Contractor shall maintain all soil erosion and sediment controls in effective working order using the SESP including: • Minimise time and size of ground disturbing activities to workable size at 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). • All earthworks must be undertaken with the intent to reduce/prevent soil erosion of any exposed surface and be constructed according to a phasing plan which requires re-vegetation before moving on to the next stage. • Minimize the number of stockpiles area, and a number of time stockpiles are exposed, place all minimum 30m from areas prone to flooding, and construct a swale (minimum 450 x 450 mm) between stockpiles and adjacent properties to retain sediment in the construction zone. • Slopes greater than 2:1 (stockpiles, excavation pits, temporary cut/fill, and final landscape form) must be fitted with appropriate erosion control measures as soon as possible.				

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		- All earthworks to be undertaken during the dry season or when the weather conditions are favourable. - Install silt traps in all temporary and permanent drains where work is occurring in or within 30m of such drain. - All run-off from the project shall be collected and diverted to facilities for removal of sediments, i.e. sumps and ponds. - Runoff from project area shall not be discharged into an adjacent water body, including the sea without effective means to prevent sedimentation.				
Water quality/river flow and cumulative impacts		Contractor will ensure the quality, and the flow of the river is not altered to a degree that it stops the flow. Measures will be in place to ensure the river continues to flow. It is the responsibility of the contractor to conduct routine water quality tests for both the chemical and physical parameters, including pH, temperature, conductivity, dissolved oxygen, turbidity, TDS and ORP and ensure its within the acceptable range of compliance. Where seen necessary, the contractor will also conducted microbiological test to cover total coliforms and e.coli. The water depth will also be monitored at certain locations and data will be compiled and reported at a monthly basis. Other contractors and private companies also extract river aggregates from the Fiu river. This exacerbates the water quality, especially for the turbidity and increased sediment loads. Contractor to established monitoring sites for both upstream and downstream sites of the project site for monitoring purpose and to adjust for cumulative impacts.				
Natural Cyclones, Landslips	Disasters, Earthquakes,	If a cyclone strikes, within 24 hours, construction must cease, any loose boulders, construction materials secured or removed from the river channel, all stockpiles of loose aggregate or soil, and any potential contaminant must be covered and or removed, and any temporary fencing or safety equipment likely to be in the flooding zone of the river must be removed. Compact and protect all stockpiles and excavation pits throughout the construction period. Stabilize any steep slope (greater than 2:1 horizontal to vertical) with erosion control measures.	Fiu Bridge	Minimal (part of standard construction practice)	Construction Contractors	Supervision Engineer

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
Vegetation Clearance	The Contractor will limit any areas to be cleared to the minimum workable area. Any significant vegetation (crop trees, important shade trees, boundary marker species, etc) will be identified prior to any clearance and appropriate compensation to rightful owners or avoidance measures will be secured (consultations facilitated by the National Senior Safeguards Specialists and CLO) prior to establishment of laydown and storage sites. 100m buffer zone established around water courses and coastline. Construction site to be properly marked out with barricade tapes and the contractor's machinery operators to understand boundaries. Cleared vegetative material to be disposed of by communities for fuel firewood. All topsoil (minimum 15cm depth) must be stripped and stockpiled and re-applied to revegetated areas. Final grading must re-construct the original landscape shape and grade at edges of the construction zone. Trees and vegetation stockpiled for decomposition must be placed in appropriate locations that will not disrupt drainage patterns of the surrounding landscape, and or removed and disposed of at an approved site. Where logs and firewood are desired by villagers, contractors must remove branches and assist villages in transporting logs to appropriate locations away from active construction site.	Laydown and storage sites	Minimal (part of standard construction practice)	Contractor	Supervision Engineer and NSSS
Waste disposal	Solid waste will be disposed at an approved disposal area as approved by the Malaita Provincial Government and MID. The Ranadi Landfill in Honiara on Guadalcanal is operated by Honiara City Council (HCC) Environmental Health Division. The landfill has a drainage system along with settling and digestion ponds to capture leachate. The Contractor shall prepare and implement approved Solid Waste Management Plan. General waste (including only small quantities of lightweight packaging waste) can be disposed of at Honiara, subject to HCC	All locations (laydown site, stockpile site, work location and workers facilities)	Minimal (part of standard construction practice)	Contractors	Supervision Engineer

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		approval. In addition to this and with the approval of the Supervision Engineer: • Organic biodegradable waste may be deposited in designated dumping areas in reasonable quantities. • Recyclable waste may be supplied to a local receiver licensed to process such waste. 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. Disposal of solid wastes into drainage ditches, waterways and public areas shall be prohibited. Burning of construction and domestic waste shall be prohibited. 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. If necessary, hazardous 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 project site, 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.				

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		With the approval of the Supervision Engineer, organic biodegradable waste may be deposited in designated dumping areas in reasonable quantities, other suitable facilities which do not allow for leachate to reach soils or groundwater. Disused material may be generated in the form of surplus aggregates or 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 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 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 PST/ECD and MID advice (for example construction and training in use of composting toilet facilities).				
Water and soil pollution		Treatment and disposal of all Contractor generated sanitation wastewater is in accordance with PST/ ECD and approved by Supervision Engineer. Contractor will compile a pollution management plan as an annex to its CESMP to detail the methods to be used in managing water and soil pollution. Hydrocarbons (lubricants/fuel) shall be collected and recycled or disposed of according to SIG regulations (incinerated or removed from country). All areas intended for the storage of hazardous materials will be quarantined and provided with adequate facilities to combat emergency situations.	Project site	Minimal (part of standard construction practice)	Contractors	Supervision Engineer & PST

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		Spill response kits available at all locations where fuel is stored. Spill response plan training and mock drill exercise completed for all construction workers, including supervisors. Ensure availability of spill clean-up materials (e.g. absorbent pads, etc.) specially designed for petroleum products and other hazardous substances where such materials are being stored. Spillage, if any, will be immediately cleared with utmost caution to leave no traces. 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 and SIRAP2 project works areas (quarries, and transport 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). Machinery refuelling to be undertaken at least 20m from any watercourse. Heavy machinery shall not be used during a period of heavy rain or when the ground is waterlogged. Excavations are banded 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. Discharge of oil contaminated water shall be prohibited. A separate washdown area is required for machinery or material with oil or fuel residue and treated through an oil water separator.				

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		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). 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). 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. 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). A separate washdown area is required for machinery or material with oil or fuel residue and treated through an oil water separator. Concrete production should only take place when there is no rain forecast. Sandbags or diversion drains must be used to divert runoff from concrete cutting or setting areas. 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 where required).				
Ground water and surface water		Aquifers discovered during excavation must be suitably protected from contamination using erosion control and stormwater management techniques in the National Building Code. Depth of soil over bedrock must be adequate to eliminate negative impacts on groundwater for road, bridge and slope stabilization construction.	Fiu Bridge	Minimal (part of standard construction practice)	Construction Contractors	Supervision Engineer

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		Minimise risk to groundwater and surrounding soil by developing a Spill Prevention and Control 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 Prevention and Control Plan should include factors associated with both the construction and operational phases and should be available at all SIRAP locations. Mitigation measures will be implemented to divert stormwater from the construction site away.				
Generation of dust		Ensure to use closed/covered trucks for transportation of construction materials, including aggregates. 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 machinery and equipment shall be well maintained and in good working order. A machine/equipment maintenance checklist to be available at site. 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-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.	All locations (particular focus on identified sensitive social receptors – schools, churches, health centres, market stalls)	Minimal (part of standard construction practice)	Construction Contractors	Supervision Engineer

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		All construction areas and access roads will be sprinkled with water, on a regular basis, particularly during dry, windy conditions. Sources of water will be detailed in the CESMP. Ensure watering of access road adjacent to residential areas during dry periods. Water soil stockpiles or otherwise cover them to limit the spread of air-borne dust particles. Minimize heavy machinery usage and idling. Ensure vehicles and machinery are fitted with appropriate emission control equipment to avoid air pollution and release of toxic substances.				
Noise and disturbances	vibration	Crushing plant to be located away from residences and communities. The crushing plant will be located so that it is screened by natural vegetation and/or landforms to act as a noise barrier. Minimise nuisance from noise, especially closer to residential areas and sensitive receptors, through establishment and communication to affected parties of working hours 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 from aggregate processing. No works to be undertaken at night or on a Sunday for Sunday keepers. 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. Consultation with Communities should be undertaken to inform them of any change in works and process for loading complaints. Signage to outline complaints procedure (GRM) and contact details of recipient of complaints (e.g. phone number, physical address and email).	All locations (particularly close to identified sensitive receptors)	Minimal (part of standard construction practice)	Construction Contractors	Supervision Engineer, SIRAP2 PST & MID

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		The WB/IFC EHS Guidelines²⁵ Section 1.7 – Noise Management at the aggregate processing plant 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 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. Project activities must be conducted during normal workings and working days. If activities must be conducted in the evening and/or weekend, the local Community Council of Chiefs must be given at least one week notice of start and completion times. Maintain as much tree cover as possible between the construction zone and residential buildings. Operators of noisy equipment or other workers in the vicinity of excessively noisy equipment to be provided with ear protection equipment. Any construction equipment deemed too noisy by MID shall be replaced. Noise barriers will be installed as per the Contractors Noise Management Plan.				
Accident risks/Impacts on traffic safety		In compliance with national regulations, the Contractor will implement the Traffic Management Plan and ensure that the construction site is properly secured, and construction related traffic regulated. This includes but is not limited to: • Signposting, warning signs, barriers and traffic diversions: the site will be clearly visible, and the public warned of all potential hazards. • Traffic management system and staff training, especially for site access and near-site heavy traffic. Provision of safe passages and crossings for pedestrians where construction traffic interferes. • Communication to the public through a public consultation and notice boards regarding the scope and schedule of construction as well as certain construction activities causing disruptions and access restrictions.	Project site	Safety equipment included in construction cost Minimal (part of standard construction practice)	Construction Contractors	Supervision Engineer

²⁵ International Finance Corporation, Environmental Health and Safety Guidelines, General Guidelines: Noise Management

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		- Avoid closure of the crossing, particularly at high use times. Provide an alternative crossing through the use of temporary structures. - 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 worksite. - Contractor to report on adherence to speed limits and use of haulage routes in monthly reports. - Ensuring safe and continuous access to office facilities, shops and residences during renovation activities, if the buildings stay open for the public. - Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during peak hours (e.g. school pick up/drop off times, etc.). - Conduct road safety audit prior to completion of construction to ensure road safety designs properly implemented.				
Chance find of objects and loss of archaeological artefacts or sites		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. Work to stop in specific location of unearthed artefacts or site. Barricade the area to limit access and notify SIRAP2 PST and Supervision Engineer immediately for instruction to proceed. Chance Find Procedure for discovery of UXO to be followed as per ESMP Appendix G. Contractor must immediately stop work and clear the work site of all personnel. The discovery must immediately be reported to the Supervision Engineer, MID and the Royal Solomon Islands Police Force (RSIPF) Explosive Ordnance Disposal (EOD) team. Refer to Appendix G for contact details.	Project site	No marginal cost	Contractors	MID/ Supervision Engineer
UXO discovery		The contractor will conduct UXO survey and clearance prior to any activity. This includes the new bridge alignment, workers' camp and laydown site, quarry, or borrow pit. It's a requirement to have a UXO survey and clearance	Project site	No Marginal Cost	Contractor	PST/Supervision Engineer/RSIPF (EOD)

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		certificate from registered UXO firm before excavation and construction work starts. If the contractor discovers UXO, they are expected to follow the ESMP procedure in Appendix G of this document and in line with the ESS4. Part of the UXO Response Plan is to implement the “STOP WORK” procedure when suspected UXO is discovered. The area needs to be barricaded and clearly marked. Workers, Community members/public are prohibited from tampering with the suspected UXO. The Royal Solomon Islands Police Force (RSIPF) Explosive Ordnance Disposal (EOD) is to provide clearance before works begin/resume. The contacts for the EOD team is listed in the UXO Response plan- Appendix G.				
Landscape degradation		The contractor is required to submit a Site Decommissioning and Restoration Plan in the CESMP. The plan will describe 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 sites must be restored to at least the same condition and standard that existed prior to commencement of works. The plan will be approved by the Supervision Engineer. Restoration of quarry sites to be completed in accordance with ESMP and approved Quarry Management Plan in consultation with the landowning groups. Construction materials will be sourced commercially and use of wood from natural forests will not be permitted. • 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 management plan and the building materials 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.	Project site	Minimal (part of standard construction practice)	Contractors	SIRAP2 PST/ Supervision Engineer / ECD

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		- Should the removal of mature trees be necessary for operational safety, determine whether ESS5 would be triggered and ensure all appropriate measures and permissions are in place before removal of trees. - Contractor to take photographs of any laydown and stockpiling sites prior to establishment and provided to Supervision Engineer. Photos will be used as a guide during restoration and post-restoration photographs are required to be submitted to the Supervision Engineer. - Land disturbed during construction must be revegetated and graded/constructed as quickly as possible to prevent soil erosion. - Any final steep slopes should be finished using bioengineering techniques. - Drainage patterns before construction must be restored – if modified, there must be no increase or decrease in drainage patterns that could negatively impact adjacent forested / farmed areas. - For rare plants, contact responsible Ministry to determine the course of action which may include – documentation and mapping of range, harvesting seed, transplanting to a plant nursery.				
Hazardous substances and safety and pollution		Hazardous substances and materials may be specified and used in construction. It is the Contractor's responsibility to ensure that these are stored in accordance with the ESMP and applicable rules and regulations and that all persons who may come in contact with such hazardous substances and materials are adequately protected from unnecessary exposure. 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 this project. 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 materials safety data sheets (MSDS) for each hazardous substances stored or used shall be accessible at all times. Signage to be posted in storage areas identifying all chemicals present. Safety signages for the fuel storage area.	All locations (particularly near the identified environmental receptors: rivers)	Safety equipment included in construction cost Minimal (part of standard construction practice)	Contractors	Supervision Engineer

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		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. 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. Minimize fuels and chemicals stored on-site and Contractor to have a spill management plan that ensures the protection of groundwater and the river channel. Sites where pollutants or hazardous materials are stored or used must be confined to a designated area or protected according to the National Building Code of Solomon Islands. Adopt effective stormwater management techniques to ensure there is no possibility of groundwater or river channel contamination.				
Loss of Biodiversity and riverine ecosystem		If during the course of construction work, particularly vegetation clearance will be conducted along the riverbank and at the new bridge location. The riverine vegetations will be cleared which can also affect the bird, reptile or mammal species is identified at site. Impact also potential for the nesting bird in area of proposed vegetation clearance site. For large trees in the vicinity of the activity, mark and cordon off with a fence large tress and protect the root system and avoid any damage to the trees.	Project site	No marginal cost	Contractor	Supervision Engineer/SIRAP2 PST/ECD

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
		Riverine environment and any open water drain discharging to the river will be protected, from construction site run-off, with appropriate erosion and sediment control feature to include by not limited to bunds, silt fences etc. There will be no unlicensed borrow pits, quarries or waste dumps in adjacent areas. Ensure the full payment of compensation for lost crops and assets to rightful owners.				
Occupational Health and safety, and Community Health and Safety		Fully implement OHS requirements in Section 8.2.2 and approved Contractor OHS Plan following the guidelines in Appendix B. Have safety officer with suitable qualifications available at all times during construction. Ensure JHA is implemented, identify risks, list the safety measures to take, and actions to eliminate the hazards. PPE is the least effective measure in the hierarchy of controls. Ensure all workers have undergone suitable induction training on OHS with regular training over the duration of the project. This include reporting of near misses and incidents at workplace, Not reporting or late in reporting incident is a noncompliance. Prepare site specific safety plans specifying responsibilities and authorities. Health and safety documentation to include all areas of the project (e.g. quarries and transport routes). Ensure all occupational health and safety requirements are in place on construction sites and in work camps. Construction laydown 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 and reporting. First aid kits to be located in communal areas or marked areas in the unlikely event of an incident occurring.	Project site	Included as provisional sum in the bill of quantity	Contractor	Supervision Engineer / SIRAP2 PST

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
	Provide education on basic hygiene practices to minimize spread of diseases. Increase workers' HIV/AIDS and STI 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. Strongly advise on the use of appropriate PPEs and consider providing for on-site storage of workers allocated PPEs. If required, all workers are required to undergo the COVID-19 screening before the recruitment process. If a worker has been tested positive or have been in contact with a positive COVID-19 case, the worker will be required to undergo the 14 day quarantine isolation period.				
Construction Camp/Laydown Area	Throughout the construction and operation of workers camp, the Contractor will be fully responsible for carrying out the job in an environmentally and socially appropriate manner. Furthermore, the Contractor shall comply with the requirements outlined in ESMP. The Construction Camp (Contractor Laydown Areas): • Must be constructed on a solid surface and located to not cause disturbance to adjacent land and landowners. • Must not be located with floodplains, coastal hazard, and landslip prone areas, and shall have a minimal adverse environmental effect. • Must have the minimum requirements regarding facilities and maintenance.	Construction Camp/Site Offices	Minimal (part of standard construction practices)	Contractor	Supervision Engineer

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
Damage to utilities and infrastructure	Maintain high standard of site supervision and vehicle and plant operation to reduce risks of damage to public utilities if any, including water, power and telecommunication lines. Prepare procedures for rapid notification to the responsible authority (MID and service providers). As a result of SIRAP2 construction activities any damage to assets or infrastructure (including public roads) must be reported to the MID and rectified at the expense of the Contractor. Contractor CLO will liaise with MID and service providers for any damage to community assets or public utilities Provide assistance with reinstatement, in the event of any disruption. Accidental damage to community assets including crop trees or agricultural will be compensated (facilitated by CLO) by the Contractor under the Ministry of Lands, Housing and survey (MLHS) valuation guidelines.	All locations (particularly identified sensitive receptors for road side tree plantations, coconut and cocoa plantations and encroachment areas)	Dependent on asset/ infrastructure and level of damage	Contractors	Supervision Engineer /MID/ SIRAP2 PST
Community engagement and grievances	Implement the stakeholder engagement plan for the SIRAP2 AF2. In all instances, consultations will be designed to ensure free, prior and informed consent of the affected communities with the aim to maintain the broad community support for the project which has been demonstrated to date. Maintain a grievance response mechanism at the SIRAP project website.	All components	Minimal (part of standard construction practice)	SIRAP National Senior Safeguards Specialist	SIRAP2 PST
	Contractor to budget for and convene monthly meetings of the CAC (formed by the PST CLO) in compliance with MID CAC guidelines and in consultation with the PST CLO Ensure that public consultation and disclosure communication is completed at regular intervals to ensure that the public are fully aware of the SIRAP2 AF2 project program of activities and the GRM process. Consultation should include all aspects of the project including the road works, quarries, laydown area/camp and transport routes. Contractor will recruit a CLO from Malaita to assist in developing relationships with quarry owners.			Contractor	Supervision Engineer & SIRAP2 National Senior Safeguards Specialists

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
	Ideally, the t community liaison officer will be from the nearby communities to assist in developing relationships with communities. SIRAP2-PST CLO will be the Contractors key facilitator for all consultations. Signage should be used in public areas around the SIRAP2 project sites advising the complaints procedure and contact details of key project individuals responsible for responding to issues raised.				
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. Signages should be used in public areas around the vicinity of works advising the complaints procedure and contact details of key project individuals responsible for responding to issues raised.	Project site	Minimal (part of standard construction practice)	Supervision Engineer Contractor	SIRAP2 PST Supervision Engineer

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
OPERATION STAGE					
Road Safety	Ongoing program by MID to raise awareness of road and pedestrian safety through encouraging safe driving and safe use of roads and bridges by pedestrians	Malaita	Additional to project costs	Malaita Provincial Government	MID Malaita Office
Riverine ecosystem and banks protection	Rehabilitation will include revegetation of the excavated areas. Ensure the riverine ecosystem is restored and banks protections are intact.	Fiu River Bridge	No marginal cost (part of standard operating procedure)	MID Malaita Office	MID / Malaita Provincial Government
Maintenance of drainage and soakage systems	Ensure drains are cleared of sediment and detritus build up on a regular basis and after significant rain events	Drainage along approach works section	No marginal cost (part of standard operating procedure)	MID Malaita Office	MID / Malaita Provincial Government
Traffic/Circulation	Directional signage to the communities nearby must be installed around the construction works. Speed limit signs must be installed.	Fiu River Bridge	No marginal cost (standard operating procedure)	MID Malaita Office	MID

POTENTIAL IMPACT	NEGATIVE	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
Site Safety and security controls		Ensure highway markings, lanes, pedestrian-only, and any other pavement markings are visible. Ensure pedestrian separation from vehicles is clearly indicated along the road. Ensure pedestrian areas are accessible (use ramps instead of curbs along pedestrian walkways). Any portion of the road intended for pedestrian use must consist of a non-slip surface. Appropriate lighting/reflectors for user safety and security must be provided. Provision of security measures to restrict access to a non-public or dangerous area. Security personnel to be appropriately screened, trained and sign the Code of conducts as part of the onboarding process. Security personnel will be inducted on incident reporting, use of force principles, community interaction, and Grievance redress mechanism.	Fiu River Bridge	No marginal cost (standard operating procedure)	MID Malaita Office	MID
Natural Cyclones Landslip	Disasters Earthquake	Ensure traffic signs are securely installed to resist strong wind speeds. Incorporate design measures (e.g. erosion control techniques, protection of bridge abutments from debris), to prepare for, and deal with consequences of flash flooding, for all construction in the floodplain. Inspect steep slopes (horizontal to vertical) or greater to ensure erosion control techniques set out in the National Building Code are performing as expected.	Fiu River Bridge	No marginal cost (standard operating procedure)	MID Malaita Office	MID

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
Soil Erosion	Inspect steep slopes (horizontal to vertical) or greater to ensure erosion control techniques set out in the National Building Code are performing as expected.	Fiu River Bridge	No marginal cost (standard operating procedure)	MID Malaita Office	MID
Soil Contamination	Drainage works must not allow runoff from the road (that may be carrying pollutants) to enter any water bodies or aquifers. Runoff from the road (that may be carrying pollutants) must be directed to appropriate discharge areas and not to the river bed or aquifers.	Fiu River Bridge	No marginal cost (standard operating procedure)	MID Malaita Office	MID
River Channel and river flow regime	Ensure any diversions or gravel pits in the river channel is rehabilitated to ensure the river continues flow and allow the river ecosystems to thrive. This is stipulated under ESS6. The river sediments were observed on the southern bank more than the northern bank. The river flow is also towards the northern bank where scouring is observed. The river flow pattern must be maintained as part of the river channel characteristic. Runoff from the bridge (that may be carrying pollutants) must be directed to appropriate discharge areas and not to the river bed or aquifers. Runoff from tableland must only be permitted to drain to the river bed if there is no possibility of it carrying pollutants.	Fiu River Bridge	No marginal cost (standard operating procedure)	MID Malaita Office	MID
Stormwater Management, Sediment Mitigation	Ensure no ponding or flooding of stormwater occurs along with the bridge extension through proper grading, ditches, culverts, catchment areas. Ensure grading at edges of construction zone does not result in a significant change in drainage patterns for adjacent lands.	Fiu River Bridge	No marginal cost (standard operating procedure)	MID Malaita Office	MID
Groundwater	Drainage works must not allow runoff from the bridge(that may be carrying pollutants) to enter the rivers/aquifers present within the vicinity of the works.	Fiu River Bridge	No marginal cost (standard operating procedure)	MID Malaita Office	MID

POTENTIAL NEGATIVE IMPACT	ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES	IMPLEMENTING LOCATION	ESTIMATED MITIGATION COSTS ²³	EXECUTING AGENCY	SUPERVISING AGENCY
Waste (solid)	Warning signs advertising fines for littering and dumping placed in appropriate locations. Removal of trash and litter from the bridge	Fiu River Bridge	No marginal cost (standard operating procedure)	MID Malaita Office	MID
Landscape Restoration	Vegetation must be removed/trimmed if it becomes hazardous to site lines.	Fiu River Bridge	No marginal cost (standard operating procedure)	Contractor	Supervision Engineer
Construction Camp/Contractor Laydown Areas	Construction camps must be removed when construction is complete, and the land restored to its pre-construction condition.	Construction Camp/Contractor Laydown Areas/office site locations	No marginal cost (standard operating procedure)	Contractor	Supervision Engineer

8.2 Supplementary Management Processes

8.2.1 Contractor access

Under the MID CPIU Safeguards Procedures Manual for National Transport Plan (NTP)²⁶ projects in the Solomon Islands, approved procedures for land access, easement and acquisition have already been established following consultation with stakeholders and communities. While these procedures are directly applicable to the SIRAP Malaita road works, for any permanent land acquisition the WB ESS5 would also apply. This process viewed through the ESS5 lens should be implemented for the Project as they are already approved by and familiar to the communities:

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 NESO and Community Liaison Officer (CLO) identifies the landowners, the boundaries of their properties, and non-land assets which can be affected by the project. The NESO and CLO produce 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 CLO) to seek agreement on the scoping report and to verify that correct landowners and boundaries have been identified.
3. MID/CPIU and customary landowners sign a MID 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 NESO and CLO identifies the landowners, the boundaries of their properties, and non-land assets which can be affected by the project. The NESO and CLO produce 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 CLO) to seek agreement on the scoping report and to verify that correct landowners and boundaries have been identified.
3. Contractor (with support from CLO) enters negotiations with the landowners for access to materials.
4. Contractor and customary landowners sign a MID approved Memorandum of Understanding (MOU).

Land Acquisition: Project activities may require permanent land access and in these cases a Resettlement Action Plan is required. For land acquisition, the following procedures apply:

1. The PST NSSS/NESO and CLO undertake scoping to gather information on the land subject to acquisition: its physical attributes (boundary areas and use), the fixed assets on it, its ownership, and any issues or disputes which may make land acquisition difficult. The information gathered is the same as for the laydown sites, however they also identify potential risks which can make land acquisition difficult.
2. The Project safeguards team discloses the project information during a community consultation/meeting.
3. The Project safeguards team commences the establishment of a CAC with a broad selection of community representatives.

²⁶ Ministry of Infrastructure Development Safeguards Procedures Manual

4. The PST NSSS/NESO and CLO produce a scoping report which identifies impacts and the needed studies and instruments to address these impacts. The outputs of the scoping exercise are a scoping report and the outline for the preparation of a LARP.
5. An assessment of the Lands Acquisition Resettlement (LAR) impacts is undertaken in line with ESS5 and seeks to identify the positive and negative social impacts of the project, including resettlement. The results of the LAR impact assessment are incorporated into the LARP. Besides impact identification and analysis, the assessment of LAR impacts elaborates on measures to: (i) enhance positive impacts such as measures to promote equitable access to project by different affected people; and (ii) mitigate negative impacts. An assessment of LAR impacts consists of the following:
 - a. Demographic and socio-economic study of affected persons
 - b. Ethnic and inter-generational relations (where applicable)
 - c. Poverty and vulnerability analysis of APs
 - d. LAR and other social impacts
 - e. Gender analysis of Aps
 - f. Accessibility analysis (where applicable)
 - g. Institutional analysis of organisations which are involved in implementing mitigation and enhancement measures on LAR.

LAR planning identifies measures to avoid, minimize, offset or compensate the negative impacts of LAR and to improve, or at least restore, standard of living and livelihood of affected persons to pre-project levels. Assessment of LAR impacts and the LAR planning use quantitative and qualitative methods of research. Examples of the first are surveys and census. Qualitative studies include community meetings, focus group discussions, key informant interviews, and participant observation. The output of the PST NESO/NSSS and CLO LAR studies is the LARP which incorporates the results of LAR impacts.

6. The draft RAP is submitted by the PST NSSS/NESO and CLO to the SIRAP2 PST for review by WB Social Safeguard Specialists for endorsement. The RAP is revised, finalized and approved.
7. The draft and final RAP is disclosed in a timely manner, in an accessible place and a form and language understandable to the affected persons and other stakeholders. The CLO facilitates the disclosure of the RAP in the project location.
8. With the CAC, the PST NSSS and CLO consults with the landowners on accessing or acquiring the land. The option of granting an easement on the land through a Memorandum of Agreement (MOA) is presented to and discussed with the landowners. In the case of customary landowners, the tribal representatives or leaders are asked to discuss with their members, document the proceedings, and decide. They are also advised to seek legal counsel. Unlike the MOU, the MOA is legally binding as it will go through the review and approval of the Attorney General's Office (AGO) before taking effect.
9. If the landowners do not agree with the grant of easement through MOA, the PST coordinates with the Commissioner of Lands (COL) to initiate land acquisition through the modified land acquisition process developed by the MID (Appendix F) under Division B, Part V of the Lands and Titles Act (LTA).
10. During the detailed design phase, the land to be acquired is surveyed, physical markers are installed, geotagged and marked on the cadastral map or the detailed design drawings.
11. After the physical survey of the land, the CLO tags and photographs the affected assets and identifies their owners. An inventory of losses (IOL) report is generated. Annual crops are allowed to be grown and harvested prior to the start of civil works.
12. Valuation of the non-land assets are undertaken by a private appraiser engaged by the PST. If the non-land assets are small in number, the PST may undertake valuation using the latest schedules of the Valuer-General and the Ministry of Agriculture and Livestock Development.

13. A census is conducted among the APs. For customary land, which can have hundreds or even thousands of families as members, a survey is done instead. The census also identifies who have principal and secondary rights to the affected land. The census results are incorporated into the updated LARP. The census is done to identify those who are eligible for entitlements and the vulnerable among them. Vulnerable groups consist of poor and female headed households, widows, the elderly, persons with disabilities, and children.
14. The end of the census is the cut-off date. The safeguards team, the CAC, and the detailed design consultant publicize the cut-off date in the project site. Any person who sets up a structure for whatever purpose or introduces improvements with the exception of annual crops after the cut-off date is ineligible for compensation.
15. The RAP budget is updated to reflect the current prices of the affected non-land assets and the land purchase or rental price agreed upon by the COL and the customary landowners.
16. The updated RAP goes through another round of review and approval. With the assistance of the WB Social Safeguard Specialist reviews these documents. When the updated RAP is found satisfactory, MID accepts and discloses the RAP.

Negotiations continue during this stage, and if successfully concluded, the MID enters into a MOA with the different landowners. The MOA is signed by the landowners, the PST manager, and a third party. The MID submits the MOA to the AGO for review and concurrence. The MOA is brought to a notary who will enter into the legal record, thereby making it legally binding on the parties in agreement.

8.2.2 OHS

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 ESMP in Appendix B) 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 ESF 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 ASP for delivery of Sexual Exploitation and Abuse (SEA) training to encompass gender-based violence (GBV) and human trafficking and sexual abuse and exploitation.
- Expenses related to HIV/AIDS, GBV, human trafficking and SEA 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, SEA, literature etc.
- Alcohol testing of staff to enforce a zero-alcohol tolerance policy
- Labour 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) SEAH 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 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 which includes signing of GBV Codes of Conduct.

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 the Safety Officer 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. No injured personnel shall be transported without the Contractor first seeking medical assistance and advise, or unless the injured person is already being assisted by a certified first aid trainer.

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 footwear 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 in 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 counselling; (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 and GBV 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.

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

Table 16 shows the activities that will be undertaken on the SIRAP2 project to address GBV and SEAH. 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'.

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 Exploitation and Abuse (Appendix C). The Codes of Conduct aim to prevent and/or mitigate the risks of GBV, Human Trafficking, and SEA within the context of SIRAP2. 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 ASPs which shall include recognized NGOs and others for conducting training on GBV and SEAH. 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 and SEAH.

GBV is defined as actions which result in “physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life.” In the Solomon Islands, GBV has been largely normalized: 73% of men and 73% of women believe violence against women is justifiable, especially for infidelity and “disobedience,” as when women do “not live up to the gender roles that society imposes.” Local NGOs continue to advocate and create awareness on GBV issues on Malaita and plan to work closely with the project to minimize GBV. The Project will conduct and prepare, through consultations, a service provider mapping to identify local NGOs, along with the Provincial Women’s Council and other organisations located in Malaita who continue to advocate and create awareness on GBV issues in Malaita.

Human (including child) trafficking, sexual exploitation and abuse are challenges and issues faced throughout the Solomon Islands on job sites and work camps. Human trafficking deals with a complex range of issues involving young girls and women who are forced into servitude and sexual exploitation for economic return. Much of the trafficking in the Solomon Islands appears to occur in and around logging camps and fishing vessels. The fishing vessels may be domestic or part of a foreign fleet.

The Solomon Islands has diverse patterns of trafficking – internal and transnational; organized and small-scale; and through sex, marriage and labour. Examples include:

- Trafficking of girls and women internally in the Solomon Islands for sexual exploitation, forced marriage or to work as domestic servants (Haus gele) – including in logging camps and on fishing vessels.
- Trafficking of Asian females for sexual exploitation.
- Trafficking of men into the Solomon Islands from other countries such as Asian countries to work in logging camps or fishing ships.

Table 16: Action to address GBV/SEAH risks

When	Action to Address GBV Risks	Timing for Action	Who is Responsible for Action	Ongoing Risk Management
Identification/ Appraisal	Sensitize the IA as to the importance of addressing GBV/SEAH on the project, and the mechanisms that will be implemented.	• Preparation. • Implementation.	• Project Support team.	• PST to monitor and provide additional guidance as necessary.
	The project's social assessment to include assessment of the underlying GBV/SEAH risks and social situation, using the GBV/SEAH 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). • Decision Review (GBV Risk Assessment Tool).	IA for social assessment and ESMP. • Contractor for CESMP. • PST/FinnOC for GBV Risk Assessment Tool.	• Ongoing review during implementation support missions. • Update project ESMP and Contractor's ESMP (CESMP) if risk situation changes.
	Map out GBV/SEAH prevention and response actors in project adjoining communities. ²⁷ This should incorporate an assessment of the capabilities of the service providers to provide quality survivor centered services including GBV/SEAH case management, acting as a victim advocate, providing referral services to link to other services not provided by the organization itself.	• Preparation • Implementation	• IA • PST/FinnOC	• Update mapping as appropriate
	Have GBV/SEAH risks adequately reflected in all E&S instruments (i.e., Project ESMP, CESMP)—particularly as part of the assessment. 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 CESMP.	• Preparation • Implementation (before civil works commence)	• IA/PST	• Ongoing review during implementation

²⁷ 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
	Review the IA's capacity to prevent and respond to GBV as part of E&S preparation .	• Preparation. • Implementation.	• PST	• Ongoing review during implementation support missions. Update project ESMP if risk situation changes.
	As part of the project's stakeholder consultations, those affected by the project should be properly informed of GBV/SEAH 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/PST.	• Monitoring of implementation of Stakeholder Engagement Plan. • Ongoing consultations, particularly when CESMP 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/SEAH related issues.	• Consultations need to be continuous throughout the project cycle, not just during preparation.	• IA/PST.	• 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/SEAH 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/PST through FinnOC	Ongoing monitoring and reporting on GRM to verify it is working as intended.

When	Action to Address GBV Risks	Timing for Action	Who is Responsible for Action	Ongoing Risk Management
	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/SEAH risks become apparent over the course of the project implementation.	Preparation.	PST.	PST.
Procurement	Clearly define the GBV requirements and expectations in the bid documents .	Procurement.	IA/PST.	Review by PST.
	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/SEAH .	Procurement.	IA/PST.	Review by PST.
	For National Competitive Bidding (NCB) procurement , consider integrating the ICB SPD requirements for addressing GBV/SEAH risks.	Procurement.	IA/PST.	IA with review by PST.
	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/PST.	Review by PST.
	Clearly explain and define the requirements of the bidders CoC to bidders before submission of the bids.	Procurement.	IA/PST.	Review by PST.
	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/PST.	Review by PST.
Implementation	Review CESMP to verify that appropriate mitigation actions are included.	• Implementation.	• IA/PST	• Review by IA. • Review by PST.

When	Action to Address GBV Risks	Timing for Action	Who is Responsible for Action	Ongoing Risk Management
	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.	• PST. • IA	• Ongoing reporting. • Monitoring of complaints and their resolution.
	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 behaviour 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, Supervision Consultant, PST.	• Review of GBV/SEAH 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.²⁸ • Monitoring of GRM for GBV complaints. • Discussion at public consultations.
	Have project workers and local community undergo training on SEA and SH.	• Implementation.	• IA, PST, Contractors, supervision Consultants	• Ongoing reporting.
	Undertake regular M&E of progress on GBV activities, including reassessment of risks as appropriate.	• Implementation.	• IA, PST, Contractors, Supervision 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 • PST.	• Ongoing reporting. • Reviews during implementation support missions.

²⁸ 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.

8.2.4 Covid-19

A guidance for World Bank Projects for Covid-19 states that to prioritize and look after the well-being of their employees and to monitor and follow local and national health authority guidance. All SIRAP works will consider the Covid-19 global pandemic protection measures and will follow the WB guidance note on Covid-19²⁹ in conjunction with national health authority guidelines for all parties involved during the project phase. The Guideline provides information on COVID-19 symptoms, use of face coverings, COVID-19 testing, social distancing etc. The WB guideline should be utilised in conjunction with the national health guidelines on COVID-19.

9 Contractors ESMP

The Contractor's ESMP (CESMP) will be the Contractor guiding document for the implementation of this ESMP during works. The CESMP will be prepared in lined with this ESMP and respective Environmental and Social Standards (ESSs) of the World Bank's Environmental and Social Framework. The CESMP will be reviewed and approved based on the requirements of the ESMP and will be their management plan for the practical implementing of these requirements. The CESMP will contain the contractor's methodology and plan for adhering to their safeguard requirements. Additionally, the CESMP will detail how the Contractor plans to resource their team with personnel and financial resources as per the Contract. The Contractor will include sufficient provision in their Bill of Quantities (BOQ) to ensure that the CESMP can be developed, implemented, and monitored by their Safeguard Specialist. As this role will be key personnel within the bid document, the Contractor is obliged to ensure that their BOQ item is sufficient for this person to carry out their duties as required in this ESMP and the contract.

The CESMP and associated sub management plans will be developed, approved, and disclosed before the commencement of civil works. The bid documents will require that the CESMP be developed by the Contractors Safeguard Specialist and after internal review and approval, it will be subject to approval from the Supervision Engineer who will coordinate a review with the PST Safeguard Specialists. Once the CESMP has been approved, it will be disclosed by the Contractor and the PST using the same methods as required for the ESMP disclosure.

9.1.1 Required Sub-Plans

The Contractor is required to produce the following management plans as part of their CESMP. These management plans are referred to throughout the ESMP. In addition to these management plans being a requirement for the CESMP, they will also be required as part of the tendering process to demonstrate that the Contractor has started to consider these environmental and social impacts and has the capacity within their team to plan their safeguard management strategies.

List of Management Sub-plans required for Fiu River bridge upgrade works are:

1. Traffic Management Plan;
2. OHS and Community Health and Safety Management Plan;
3. Workers Camp Management Plan;
4. Emergency Procedure and Contingency Plan
5. Quarry Management Plan (quarry extraction Plan);
6. Hazardous Materials Management Plan;
7. Spill Response and Control plan;
8. Erosion and Sediment Control Plan;
9. Solid Waste Management Plan;

²⁹ <http://pubdocs.worldbank.org/en/324831581700447537/COVID-19-Guidance-for-Contractors-CO-Final.pdf>

10. Pollution Management Plan
11. Labour Influx Management Plan; and
12. Site Decommissioning and Restoration Plan

SOLID WASTE AND CONSTRUCTION WASTE MANAGEMENT PLAN: The SWMP guidelines in Appendix B provide the governing principles for solid waste management and disposal for construction wastes. It provides the minimum standards for each waste stream and gives the Contractor guidance on how to implement waste separation, storage, and disposal. The guidelines also set the content for the SWMP, and it is a requirement of the Contractor to provide all the required content as a minimum.

HAZARDOUS MATERIALS MANAGEMENT PLAN: The Contractor will be required to provide a Hazardous Materials Management Plan. Hazardous materials are any materials that represent a risk to human health, property or the environment due to their physical or chemical characteristics. When a hazardous material is no longer usable for its intended purpose and is intended for disposal, it is considered hazardous waste. The purpose of this Plan will be to ensure adequate management of hazardous materials throughout the construction phase of the project to prevent any negative impacts on the people's health, property and the environment.

POLLUTION MANAGEMENT PLAN: The Contractor will compile a Pollution Management Plan, covering water, soil, air and noise pollution. This Plan will ensure adequate mitigation measures in place to provide guidance on pollution management throughout the construction phase of the project to prevent any negative impacts on the people's health, property and the environment.

WORKERS CAMP MANAGEMENT PLAN: The contractors will be required to provide a Workers' Camp Management Plan as part of their bids, explicitly detailing how the labour influx impacts will be minimized. This will not only cover the physical elements, but also interactions with locals, impacts on island resources (e.g. water, waste), and potential price inflation effects. These requirements will be addressed more fully in the final ESMP for tender.

TRAFFIC MANAGEMENT PLAN: A traffic management plan is required to detail how the safety of the pedestrians and vehicles will be maintained throughout the duration of works. Particular attention will need to be paid to the separation of the public and heavy machinery at all times. The TMP will demonstrate how this will be achieved and will detail how the public will be informed of these measurements. Additionally, the TMP will include management of traffic including international and domestic transport of equipment and machinery.

SPILL CONTROL AND RESPONSE PLAN: The Contractor will have a spill response plan in place to account for all potential instances. A Spill Response Plan will be developed to ensure that all fuels and lubricants used during the construction phase in machinery, equipment, generators are contained, collected, treated, and disposed of. The plan will (i) identify areas that are sensitive to spills and releases of hazardous materials; (ii) outline responsibilities for managing spills, releases, and other pollution incidents, including reporting and alerting mechanisms to ensure any spillage is reported promptly to the relevant parties; (iii) Include provision of specialized oil spill response equipment, and; (iv) include regular training schedules and simulated spill incident and response exercise for response personnel in spill alert and reporting procedures, the deployment of spill control equipment, and the emergency care/treatment of people or wildlife impacted by the spill.

SOIL EROSION AND SEDIMENT CONTROL PLAN (SESCP): An SES CP is required to be prepared for all areas prior to use or disturbance including auxiliary areas under the control of the contractor such as stockpile and storage areas, access and haulage tracks, temporary waterway crossing, borrow areas, compound areas, and material processing areas. Clearing and grubbing (or the use of the area for stockpiles) for that section shall not start until the SES CP for that section is assessed as suitable by the Engineer. The SES CP shall clearly detail the Erosion and Sediment Control measures, and shall be

prepared and, update the area and work that it is valid for. It is acceptable to have a primary 'over-arching' SESCO supplemented by numerous progressive SESCO on a project.

The Contractor shall be responsible for the design, installation, and maintenance of Erosion and Sediment Control for the temporary works of the project with the following principles:

- Erosion and sediment controls are integrated with construction planning;
- Effective and flexible erosion and sediment control plans are developed based on soil, weather;

Construction conditions and the receiving environment;

- The extent and duration of soil exposure is minimised;
- Water movement through the Site is controlled - in particular, clean water is diverted around the site;
- Soil erosion is minimised;
- Disturbed areas are promptly stabilised;
- Sediment retention on Site is maximised;
- Controls are maintained in proper working order at all times, and
- The Site is monitored, and erosion and sediment control practices adjusted to maintain the required performance standard.

OHS AND CHS PLAN: This plan will adhere to the supplementary management process described in Section 8.2.2 and will be written following the guidelines in Appendix B of this ESMP. The OHS Plan will form part of the CESMP but will also be considered a standalone document that will be implemented and monitored by the Contractors OHS key personnel.

EMERGENCY RESPONSE AND CONTINGENCY PLAN: This plan will detail the Contractors processes for dealing with emergencies including but not limited to medical (including Covid-19), injury, social conflict, extreme rain events, storm events, severe earthquake, or tsunamis. The plan will cover measures to protect and manage staff as well as measures to protect and manage the project and environment. Training on this plan will be described along with communication methods (posters, etc.) and the roles and responsibilities of the Contractor team.

LABOUR INFLUX MANAGEMENT PLAN (LIMP): Construction projects, especially those comprising large civil works, require labour force and associated goods and services that cannot always be fully supplied locally. A partial component of the labour force may need to be brought in from outside the project area. In many cases, this influx is compounded by an influx of other people ("followers") who follow the incoming workforce with the aim of selling them goods and services, or in pursuit of job or business opportunities.

The purpose of the IMP is to set out the objectives in relation to the management of project-induced in-migration and its impacts and to successfully implement measures to manage the in-migration and avoid, prevent, and mitigate the direct and indirect adverse impacts associated with project-induced in-migration. All stakeholders have a role to play in managing in-migration.

SITE DECOMMISSIONING AND RESTORATION PLAN: The Contractor is required to provide a Site Decommissioning and Restoration Plan as part of the CESMP to indicate the timeframes of decommissioning, the process of removing all project equipment and materials, the likely sites which will need restoration and the methods of planned restoration to the 'same or better' standard as before works commenced, taking into account all requirements of this ESMP. The plan will also clearly describe the roles and responsibilities.

CESMP PREPARATION AND IMPLEMENTATION: The CESMP must ensure that the person taking the action takes full responsibility for the content and commitments contained in the plan. The CESMP must be prepared and implemented by a qualified environmental practitioner (Environmental Representative) with at least 10 years-experience. Field audits of CESMP implementation must be undertaken on at least a monthly basis by the Environmental Representative with associated audit reports certified and submitted to the Engineer.

CESMP COMPLIANCE: Identify the internal procedure that the Contractor will follow when a non-compliance has been identified during the daily monitoring. Procedure will include notification responsibilities, rectification timeframe and reporting obligations. Procedure will also cover the process the Contractor will follow when non-compliances are reported by the Supervision Engineer. Procedure will also identify how the Contractor will action any disciplinary or training requirements following the non-compliance.

CESMP REVIEW AND AMENDMENT: The CESMP must be reviewed, updated and resubmitted to the Engineer for approval in response to an anticipated change of circumstances before any changes are permitted at the work sites. These circumstances include substantial design changes with environmental or social implications, changes to specific approved plans, new activities not contemplated in the Project ESMP, or additions to the Project's area of influence. No changes will be made to the Project or the project areas until it has either been confirmed by the Supervision Engineer that an update to the CESMP is not needed, or the update has been made and approved by the Supervision Engineer. The CESMP must also be updated where it is deemed that the mitigation measures are not adequate to mitigate the environmental and social risks.

CESMP MANAGEMENT SUB-PLANS: The Contractor must provide all sub-plans listed in this ESMP as annexes to the CESMP.

10 ESMP Implementation

MID is the implementing agency for the roads and bridges component of the SIRAP2.

The SIRAP2 Management Unit Steering Committee, comprised of representatives of different central and line agency members³⁰, will provide overall oversight of Project implementation and of the Project and PST, and to make Project strategic decisions. The Malaita provincial government PS is a member of the steering committee, and his involvement is crucial for the Malaita projects. The SIRAP2 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.

10.1 Roles and Responsibilities

The following are the roles and responsibilities:

- **SIRAP2 PST:** The SIRAP2PST reports to the Permanent Secretary of MCA and MID and is responsible for the day-to-day project implementation on behalf of the SIG. The PST will have a National Senior Safeguards Specialist based in Honiara, and together with the two (2) NESOs will conduct monthly site visits to the project sites. The National Senior Safeguards Specialist will,
 - Acts on behalf of the client and works closely with MID and all contracted parties to ensure that SIRAP2 objectives are delivered in a compliant manner consistent with client and MID requirements.
 - Conducting quarterly safeguard audits with the Supervision Engineer's International environmental social specialist and other staff
 - Responsible for working with MID and Supervision Engineer (and contractors where appropriate for CESMP) to implement consultation plans for the SIRAP2 AF2 upgrade works.
 - Oversee the full implementation of the CESMP and SIG's safeguard instruments on a day-to-day basis
 - Monitors and manages complaints/incidents logged via the GRM mechanism on the SIRAP website.
 - Provide input to the quarterly progress report and compile the Semi-annual environmental and social monitoring report
 - During the construction phase, PST receives reporting from the Supervision Engineer and shares these reports with the MID and ECD (to comply with permit monitoring requirements).
 - 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 monthly site inspection and

³⁰ 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.

quarterly on-site audit of construction works, to supervise CESMP and ESMP implementation.

PST will accommodate a Community Liaison Officer (CLO) in the SIRAP Auki project office. The CLO will:

- Establish a CAC in compliance with the MID CAC Guidelines
 - Work in the field to support the supervision engineer, Contractor and PST proactively identify project issues and worker/employee conflicts;
 - Facilitate community and other consultations to ensure that all parties involved and affected by the works are properly informed and consulted;
 - Maintain the GRM related to the Malaita projects, including Fiu bridge;
 - Provide detailed forward planning and coordination for the project activities/works related to community sensitization, pre-employment training and other project activities;
 - Help identify landowners for any project land needs.
 - Responsible for working with MID and Supervision Engineer (and contractors where appropriate for CESMP) to implement consultation plans for the SIRAP upgrade works.
 - During the construction phase, PST receives reporting from the Supervision Engineer and shares these reports with the MID and ECD (to comply with permit monitoring requirements).
 - 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 ESMP implementation.
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- **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 the works are implemented in a compliant manner consistent with the detailed designs provided and the ESMP. They are responsible for:
 - Daily monitoring the Contractors work for compliance with the CESMP and ESMP 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 the site and available for support at other times to respond to incidents, non-compliances, review of CESMP, update of the ESMP 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 and WB and final approval from WB has been secured before disclosure.
 - Updating the ESMP 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 ESMP.
- Managing instances of noncompliance by the Contractor and reporting all instances to PST, and where required issue Site Instructions and Stop Notices to contractor. They are also responsible for escalating recurring instances of noncompliance 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 5.5 and reporting all instances to PST for inclusion into statistical database.
- **Contractor:** It is the contractor's responsibility to:
 - Resource their team with an experienced and qualified full time national safeguard officers and an experienced and qualified international safeguards advisor who is resourced to make regular and ad hoc (as needed) site visits.
 - Allocate budget for implementing all requirements of the CESMP and employment of appropriate safeguard staff, including E&S officer, CLO, Safety officer and SEAH.
 - Budget for and facilitate the monthly CAC meetings at site
 - Prepare and have cleared by the Supervision Engineer the CESMP in accordance with this ESMP.
 - Carry out the works in accordance with the CESMP.
 - Action the Corrective Action Requests (CARs) issued by the supervision engineer and PST on a timely manner
 - 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 ESMP for updating.
 - Post all notifications specified in this ESMP at the site entrance including but not limited to project signboard, emergency assembly point, GRM box and procedure, GBV message and OHS matters.
 - Report all environmental and OHS incidents to the Supervision Engineer within 24 hours of occurrence
 - Attend, register and resolve grievances concerning workers and the project

10.2 ESMP Implementation Budget

The costs of implementing the ESMP listed here are related to PST costs in addition to the dedicated E&S personnel budget line item. The main costs of implementing this ESMP relate to institutional

capacity and stakeholder capacity building, ongoing consultation facilitation costs between the CLO and the project communities, PST on site monitoring and outreach road safety programs.

Item	Details	Cost (USD)
ESMP Technical Training	MID & PST Staff. Training to be given by NESO and NSSS on the ESMP and other SIRAP2-AF2 instrument.	3,000
ESMP awareness raising and sensitisation	With key Malaita stakeholders and communities.	3,000
Consultation facilitation	Fuel, MID vehicle maintenance contribution, administrative support, refreshments (per subproject – one year)	15,000
CLO Travel	Project meetings, workshop or training attendance in Honiara for CLO: travel expenses, accommodation, per diem (US\$2,000 per trip, estimate 1 trip per subproject)	2,000
Community outreach at Fiu Bridge and along haulage route	School road safety program (using local NGOs & CLO), travel cost, printed materials	5,000
Total		28,000

11 ESMP Monitoring and Reporting

A monitoring plan has been provided in Section 11.1.

OBJECTIVES: The main objectives of the construction phase monitoring will be to:

- Monitor the actual project impact on physical, biological and socio-economic receptors. This will indicate the adequacy of the ESMP.
- Recommend mitigation measures for any unexpected impact or where the impact level exceeds that anticipated in the ESMP.
- Ensure compliance with legal and community obligations including safety on construction sites.
- Monitor the rehabilitation of quarrying or extractions sites and the restoration of laydown and/or stockpile sites as described in the ESMP.
- Ensure the safe disposal of excess construction materials.

MONITORING ORGANISATION: The Contractor will be required to monitor their safeguard implementation on a daily and weekly basis, the Supervision Engineer will be required to undertake at least weekly monitoring and the PST will be required to undertake quarterly inspection audit of works.

MONITORING PROGRAM: A monitoring plan for the project has been provided in Section 11.1. The monitoring process will be carried out using best industry practice and should be undertaken jointly

between the Supervision Engineer and Contractor. Both parties will keep copies of all site records, reports, approvals, statutory documents and permits in relation to environmental matters for recording purposes.

There are monitoring requirements associated with this ESMP that are applicable once the project has concluded and operations have resumed. At this stage, there is no defined process for continuing with safeguard monitoring during operations and it is recommended that this be incorporated into existing or new MID processes.

ESMP REPORTING: Throughout the construction period, the Supervision Engineer will include results of their weekly ESMP monitoring, along with the details of any incidents report by the Contractor, in a monthly report for submission to the SIRAP2 PST who is responsible for submitting these monthly progress reports to the World Bank. 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;
- Summary of CAC meetings conducted and agenda/outcome of the meeting
- Workers GBV and SEAH awareness and training conducted
- 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.

SIRAP2 PST are responsible for compiling reports to WB. The two key ones are the quarterly progress reports and semi-annual Environmental and Social Monitoring reports. The 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 ESMP.
- 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. Particular sensitive reporting to be recorded for any GBV incidents report.

11.1 Monitoring Plan

PARAMETER TO MONITOR	LOCATION	MONITORING	FREQUENCY	MONITORING RESPONSIBILITY
DETAILED DESIGN/ PRE-CONSTRUCTION PHASE				
Fiu River Bridge Design	Design Document	Ensure that Fiu Bridge design includes a separated and safe pedestrian walkway Ensure that design of road realignment allows for community vehicles to access traditional gravel extraction sites on the Auki side of the river.	Prior to sign off of final design	Design Consultant
UXO survey and clearance	CESMP documents	Ensure UXO survey and clearance is conducted by a licenced UXO firm to the new bridge alignment and approaches, quarry site, laydown area and workers camp site.	Prior to commencing civil works	Supervision Engineer
Traffic safety	CESMP documents	Ensure approved TMP established for project. TMP includes all requirements of ESMP	Prior to commencing civil works	Supervision Engineer
Development Consents & Permits	CESMP Document	Development Consent, permits 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 SIRAP2 PST	Prior to commencing civil works	Supervision Engineer
OHS Plan	Design documents	Ensure safety plan established for project as per requirements of ESMP	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
Solid and hazardous waste	CESMP documents	Approved Solid Waste Management Plan in place. Waste segregation and collection at workers camp and laydown areas are established and well signed. Waste segregation and collection storage sites in place and compliant with approved SWMP.	Prior to commencing civil works	Supervision Engineer

PARAMETER TO MONITOR	LOCATION	MONITORING	FREQUENCY	MONITORING RESPONSIBILITY
Community Health and Safety	CESMP documents	HIV/GBV/SEAH Code of Conduct training and acknowledgements have been completed as per contractual requirements. Medical clearance certificates provided for all foreign workers. GRM process was available for public inspection. Worker Management Plan contains all elements and has been approved by the Supervision Engineer and SIRAP2 PST.	Prior to commencing civil works	Supervision Engineer
Soil and Water pollution	CESMP documents	Appropriate spill control and response plan in place. A standalone Pollution Management Plan will also be compiled by the contractor to cover soil, water, air and noise pollution. Staffs are trained on spill control and response plan and the pollution management plan Spill control kits and dust control measures will be implemented at the project site Overland drainage diverts water flow away from exposed areas. Sediment laden runoff from excavations or stockpiles directed to a settling area. Discharges of treated wash water are to occur to land.	Prior to commencing civil works	Supervision Engineer
Water supply	CESMP documents	Suggested water source and supply network to be included in designs	Prior to commencing civil works	Supervision Engineer

PARAMETER TO MONITOR	LOCATION	MONITORING	FREQUENCY	MONITORING RESPONSIBILITY
Ground and River water quality	Laydown sites	Ground and river water quality monitoring to determine project baseline. The parameters include pH, electrical conductivity, TDS, turbidity, dissolved oxygen, and other parameters as agreed with ECD and the SIRAP2 NSSS. A pollution Management plan will be implemented to manage ground and water pollution issues.	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. The contractor to apply for a Building material Permit (BMP) from the Mines Division, MMERE. The permit usually valid for a period of 12 months and have to be renewed by the Director of Mines. For any quarry extraction, a thorough due diligence to be conducted to ensure the proposed site is free from dispute from tribal groups. There are cases in Malaita where the land dispute is still with the local court and the other party proceed to sign an agreement with the contractor for extraction. Ensure correct resource and landowning groups have signed acceptable agreement in a form of MOU for extraction and/or land access. The MOU will identify the landowning group/tribe and the established agreement of extraction, including the rates agreed on. .	Prior to commencing civil works	Contractor/PST/Supervision Engineer

Laydown Sites, Crushing Plant and Stockpile Area	CESMP documents	Proper due diligence must be conducted to ensure the land earmarked for the camp and laydown area is free from dispute, and proper if a land title is provided. There are cases in Malaita where the concerned land is still with the local court and the other party proceed to sign an agreement with the contractor for camp and laydown area. Approved and signed rental agreements between the contractor and the landowning group must be submitted to SIRAP2 PST for their reference. Laydown and stockpile sites are at least 150m to 300m from any residential settlements or waterways. Laydown areas established on pre-approved sites as per CESMP. For register land, a land title will be provided when requested as part of the agreement for the laydown and camp area. Water runoff management systems in place to approved standard as per CESMP. Washdown areas have collection and treatments systems. The sanitation treatment system is in place as per CESMP. No runoff from laydown or stockpile sites are directed to waterways, or coastline. Bunded secure storage area for the hazardous substance is established at site as per CESMP. Bitumen is stored on the hardstand at laydown sites with safety notices in place for awareness purposes Hardstand areas are at least 150 from any any natural waterways. Crushing plant is wet crusher.	Prior to commencing civil works	Supervision Engineer
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PARAMETER TO MONITOR	LOCATION	MONITORING	FREQUENCY	MONITORING RESPONSIBILITY
		Crushing plant is screened either by the quarry or by screening vegetation to minimise noise disturbance. Water for crushing plant is sourced under permit and not to impede the community water sources.		
Concrete Production	CESMP documents	Settlement tanks/ponds and diversion drains are in place as per CESMP. Designated washdown area established in the bunded impermeable area with no permeation to ground permitted.	Prior to commencing civil works	Supervision Engineer
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 Biosecurity Solomon Islands Department	Contractor to organize prior to export from country of origin.	Supervision Engineer
CONSTRUCTION PHASE				
General	CESMP documents	The Contractor is undertaking weekly monitoring and reporting using a monitoring form approved by the Supervision Engineer in the CESMP. Community consultation is ongoing as per the ESMP. Supervision Engineer is undertaking weekly monitoring and reporting	Weekly	Supervision Engineer, SIRAP2 PST Project Manager
River flow, sedimentation and water quality	At construction sites	Contractor will be responsible to ensure river flow is not affected to a degree that it disturbs the flow regime. Contractor will monitor depth and flow at specified areas of the river.	Weekly basis	Supervision Engineer, SIRAP2 PST Project Manager

PARAMETER TO MONITOR	LOCATION	MONITORING	FREQUENCY	MONITORING RESPONSIBILITY
		Sediment load will be manage to ensure it causes no major impact on the river hydrology. Water quality monitoring will be conducted prior to construction and at a monthly basis during construction phase. The monitoring sites will be upstream and downstream of the bridge.		
Solid and hazardous waste and agreement for waste disposal	Contractor's records	Approved Solid Waste Management Plan effectively implemented. Waste collection at laydown area is secure, well signed and clean. Hazardous waste is stored according to SWMP. Good housekeeping around project sites and workers accommodation. All waste is disposed of offshore Contaminants of Concern (COC) documentation in place and reviewed. 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
Community infrastructure, OHS and JHA and method statements	At construction sites	Approved Traffic Management Plan is under effective implementation. Public signage of complaints procedure in a form of a complaint box is provided installed at site. Traffic signs and barricades restrict or direct pedestrians and public to designated area. No damage to public or community infrastructure. Dust suppression is effective along the road corridor and at the active constructions sites.	Weekly inspection as applicable and prior to commencing civil works. Weekly	Supervision Engineer

PARAMETER TO MONITOR	LOCATION	MONITORING	FREQUENCY	MONITORING RESPONSIBILITY
		Noise is within permitted limits. Required safety signage for public and workers alike are put in place. No works taking place at night times or on Sunday within 500m of communities unless a prior agreement has been sought from the community. Any damage to community infrastructure will have to be reported Contractor will conduct safety trainings to all workers, and have JHA in place to manage workplace risks		
Soil erosion	Areas of exposed soil and earth moving	Inspections at sites to ensure silt fences, diversion drain, sumps and ponds are constructed as needed. Inspection to ensure functionality of the drains and sumps. Will ensure replanting of native vegetations and restoration of the area after work completed. This will be detailed in the decommissioning and restoration plan.	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 an approved landfill. Contractor is advised to consider options for proper removal of hazardous wastes out of site and where necessary, out from the country 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

PARAMETER TO MONITOR	LOCATION	MONITORING	FREQUENCY	MONITORING RESPONSIBILITY
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 project locations. Spill kits available where hazardous substances sorted and handled. Any encounters with potentially or confirmed contaminated soil are reported to PST/MID and ECD. Inspect soakage pits siting directly above any underlying aquifer (if present). Appropriate Spill Response Plan/kit in place for the waste area. No visible spills on soil or uncovered ground. All drainage, water treatment and soakage systems clear and fit for purpose. Division bunding around large areas of vegetation clearance. Revegetation occurring once works have finished at sites as per the decommission and restoration plan Vehicles are working in defined areas. Workers sanitation facilities in good order and maintained as per design requirements. Heavy machinery not used in times of heavy rain or when the ground is waterlogged. Large pollution will have to be reported as an incident, using the incident report template as per the CESMP	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 and River water	At the construction sites	Ground and river water monitored as per parameter in ESMP. The parameters include pH, electrical conductivity, turbidity, TDS, dissolved oxygen and other parameters as agreed with ECD and the SIRA2P NSSS	Quarterly basis and one midway through implementation and one 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. Speed limit to be monitored and maintain a 30km/h when approaching communities and schools	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 in form of a complaint box installed at the camp and active construction sites 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	Weekly inspection as applicable to schedule of works and on receipt of any complaints.	Supervision Engineer

PARAMETER TO MONITOR	LOCATION	MONITORING	FREQUENCY	MONITORING RESPONSIBILITY
		asphalt processes plants to be located away from closest communities		
Occupational Health and Safety	At work sites	Workers have access to and are using appropriate, PPE for the task. All workers have undergone appropriate OHS training and ongoing refresher sessions Proper briefing of staff before undertaking work activities. Toolbox meetings prior to each work shift. OHS incidents will have to be reported in an Incident report form within 24 hours.	Weekly inspection as applicable to the 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. Checking that staff are trained on use of spill kits. Spill kits are available at site and accessible to workers. Spill training completed. No evidence of spills on the ground. Material Safety Data Sheets (MSDS) available at storage locations. Safety signages installed at the fuel storage area	Weekly as applicable to schedule of works and on receipt of any complaints.	Supervision Engineer
Accidents with hazardous materials or fuel/bitumen	All locations	Any incident of spill will have to be reported. The contractor to provide the details of the spill and apply corrective actions.	Within 24 hours of occurrence	Supervision Engineer

PARAMETER TO MONITOR	LOCATION	MONITORING	FREQUENCY	MONITORING RESPONSIBILITY
Laydown Areas and Stockpile Sites	At those sites	Laydown areas established on pre-approved sites and fully fence and fitted with sufficient lightings. Laydown areas dust levels managed efficiently. Traffic management plan correctly implemented at laydown site. Water runoff management systems are operating correctly. Dust management effectively implemented. PPE present and correctly used. Security controls in place to control illegal entry to the laydown area	Weekly	Supervision Engineer
Extraction of aggregates and quarry	Extraction sites	Approved Quarry Management Plan (QMP) being effectively implemented. Access to the quarry to be barricade from public access Daily records of extracted volumes available for inspection. No gravel/coronus materials being extracted from running water channels. Gravel and coronous materials only being extracted from a predetermined area. Machinery only working in defined areas approved in CESMP. If quarry located close to public road, flagman available at site to control movement of machines in and out of the quarry site.	Weekly	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 ESMP implemented. At a minimum, workers to be provided with steel cap boots, hi-viz vests, hard hat, safety glasses and hand gloves. Additional PPEs for tasks that involved hazardous materials/substances.	Weekly inspection as applicable to schedule of works and on receipt of any complaints.	Supervision Engineer
Construction workers and staff safety briefings (GBV any other community health and safety awareness)	At work sites	Community, Health and safety awareness briefs including GBV, SEAH and good hygiene.	Weekly team meetings as applicable to schedule of works an on receipt of any complaints	Supervision Engineer
Workers Accommodation	Accommodation sites	The camp is clean and tidy. Rooms are fitted with proper ventilations or air conditioning system if possible. At least 3-4 workers in a room and not too crowded. Separate accommodations for female workers Waste management is as per the Solid Waste Management Plan. Food supplies are sufficient and to achieve a balanced diet for workers. Clean water is available to all workers at a common area in the camp Awareness messages posted at the workers camp notice board, including notices on OHS, GRM	Weekly	Supervision Engineer

PARAMETER TO MONITOR	LOCATION	MONITORING	FREQUENCY	MONITORING RESPONSIBILITY
		procedures, GBV/SEAH and reporting and referral pathways/SAFENET contacts Workers Management Plan is effectively implemented. First Aid kit is fully stocked and readily available. Separate toilets and washing areas for female and male workers.		
Community / 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). Barricades put in place to guide the public access to community facilities/ businesses and not impede by the roads and bridges construction work	Weekly inspection as applicable to schedule of works and on receipt of any complaints.	Supervision Engineer
Community engagement and grievances	At all locations	Monthly CACs meetings convened and the minutes of the meeting are recorded and reported Regular community awareness to schools, churches and communities close to the project sites on the issue of safety, traffic controls, no-go zones and the GRM processes. Monitor the GRM database for the number and type of grievances and the average number of days to resolve a grievance.	Monthly Weekly	PST/MID CPIU
Local business grievances	At and near 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 work sites

PARAMETER TO MONITOR	LOCATION	MONITORING	FREQUENCY	MONITORING RESPONSIBILITY
Materials supply	Quarry and work sites	Evidence that trucks are not overloaded, and loads are covered with tarpaulins or other materials 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 MID)				
Drainage system operational	Roadside	Inspection and clean out of open channel drainage.	After significant rain events and 6 monthly to remove sediment.	MID
Waste disposal	Waste disposal	Inspection to ensure waste is not accumulating, and evidence waste has been stockpiled for removal to approved site, or hazardous materials to to approved dealer or recycle for other wastes like aluminium cans Inspections to ensure waste streams are sorted for re-use, recycling or waste to landfill.	Weekly inspection as applicable to the schedule of works and on receipt of any complaints.	MID
Water and soil pollution	All locations	Inspection of sites to ensure waste collection in defined areas; Spill Response Plan in place and workers are properly trained. Proper 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 the schedule of works and on receipt of any complaints.	MID
Storage of fuel, oil, bitumen, etc	All locations/training logs	Regular site inspections to ensure material is stored within bunded areas and spill response training for all workers up to date. Visual inspection of spill kit for completeness and accessibility	Weekly inspection as applicable to the schedule of works and on receipt of any complaints.	MID
Accidents with hazardous materials or wastes	All locations	Incident report.	Immediately after the occurrence	MID

12 Capacity Development and Training

12.1 Capacity Development

The SIG has delegated the delivery and management of SIRAP2 to a dedicated 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 PST is resourced with an experienced National Senior Safeguards Specialist, with the support of the 2 x National Environmental and Social officers (NESO) who will be responsible for monitoring for compliance with the ESMP, World Bank ESF and Solomon Island legislations. The PST project office in Malaita is resourced with an experienced Community Liaison Officer who will support the PST and Contractor to manage community relations, identify and facilitate negotiations for land access and provide a focal point for community contact with the PST. For any additional support in areas of expertise that may be required by PST, the WB Specialist is tasked with either providing that support directly or assisting with any procurement of additional expertise or capacity that may be required.

12.2 Training

Contractor will conduct ongoing training to its workers, covering the CESMP and subplans, safety work procedures, security controls, emergency response drill, labour laws, GBV/SEAH and signing of codes of conduct as mandatory. Ideally, the contractor should provide training as part of onboarding process to all its workers including supervisors and casuals and follow up refresher sessions over the course of the project.

The SIRAP2 PST will support the supervision consultant in conducting and E&S training to all workers, including supervisors and site managers during mobilisation. The supervision consultant and the contractor will conduct joint training at a monthly basis to complement the Toolbox meetings and safety talks.

The PST will conduct a training with the supervision consultant and contractor key personnel. The topics will cover the following.

- World Bank Environment and Social Framework
- Key documents including a project specific ESMP and CESMP
- Roles and responsibilities of the contractor E&S team, supervisors and site engineers/managers
- OHS and housekeeping
- Incident reporting and monitoring
- Grievance Redress mechanism- project and workers
- Communication and disclosure
- Monitoring, inspection and audit

A similar training was also conducted with other projects under SIRAP and SIRAP2. In early 2025, a 2-day training session was conducted with the SIRAP2 team, covering the WB ESF on ESS5 and ESS10. The Social safeguards specialist from the World Bank conducted the sessions. The first session was on the 3rd February 2026 and cover resettlement planning and the second day was on the project Grievance redress mechanism and on the ESIRT reporting toolkit.

Add on to the above training, the WB country office in Honiara also conduct monthly ES coffee series, which provide opportunity for the projects under World bank to come together and discuss issues experienced at their respective workplace. Also, during these sessions, specific projects were given a chance to share their experience on the implementation of the ESF framework, including challenges and lessons learned. SIRAP2 E&S team had a chance to share their experience in the Incident reporting during the 9th ES coffee series on the 27th February 2026. Contractors representatives also attended these sessions.

The knowledge and skills learned from these training will equip the PST E&S team to conduct effective monitoring and reporting of the project activities and potential risks and noncompliance.

12.3 Civil Works

Other parties 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 the mitigation and monitoring measures as stipulated in the resulting ESMPs. The Contractor is to ensure that they have the budget provision to conduct identified training for their workers and that sufficiently skilled resources are made available to deliver the relevant training.

The Contractor and Supervision Engineer will undergo technical training in the form of a Kick Start Safeguards Workshop to ensure that the Solomon Islands Government legislations and the World Bank environmental and social framework are well understood prior to commencement of works.

13 Emergency Response and Contingency Planning

The SIRAP2 National Project Manager is the contact person for emergency situations that may arise during the implementation of the SIRAP2 AF2 works on Malaita. The SIRAP2 National Project Manager 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 emergency, the procedures outlined below are recommended for SIRAP2/SIRAP2 AF2 to consider for implementation.

As part of their CESMP, the Contractors are required to prepare an Emergency response and Contingency Plan encompassing environmental incidents, tsunamis, flooding, earthquake, 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 and ongoing refresher session 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. As seen under section 4.2.3 of this document, rainy season usually falls between the months of November to April annually.

The Contractor is 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 Contractor 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.
- Conduct refresher training and mock drills to all workers
- Identify and marked an emergency assembly area and provide emergency contacts at key locations including camp and laydown area
- Report any incident within 24 hours of occurrence

Appendix A: Example CESMP Monitoring Checklist

Fiu River Bridge Project Weekly CESMP INSPECTION

SUBPROJECT:	Second Solomon Island Road and Aviation Project - Fiu River Bridge replacement	IMPLEMENTING AGENCY:	MID
DATE:		CONTRACTOR:	
PREPARED BY:		SUPERVISION CONSULTANT	
DISTRIBUTION LIST:			

Inspection Participants: (insert names and positions)

CESMP Items (edit as necessary based on approved CESMP for relevant subproject)	Applicable		Compliance			Noncompliance items	Status (R)/(P)	Corrective Action Required/Taken	Target Completion 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 for relevant subproject)	Applicable		Compliance			Noncompliance items	Status (R)/(P)	Corrective Action Required/Taken	Target Completion 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 for relevant subproject)	Applicable		Compliance			Noncompliance items	Status (R)/(P)	Corrective Action Required/Taken	Target Completion 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									

CESMP Items (edit as necessary based on approved CESMP for relevant subproject)	Applicable		Compliance			Noncompliance items	Status (R)/(P)	Corrective Action Required/Taken	Target Completion date
	Yes	No							
TMP Implementation: - Traffic Management Plan (TMP) under effective implementation									
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 ESMP - 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 for relevant subproject)	Applicable		Compliance			Noncompliance items	Status (R)/(P)	Corrective Action Required/Taken	Target Completion date
	Yes	No							
Workers Camp (if applicable): - Camp established in accordance with Code of Practice in ESMP. - 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, SEA and other information available									
Monitoring - Weekly safeguards compliance report completed									

Compliant, Minor Non-Compliance, Significant Non-Compliance

Status: (R) Resolved Issues, (P) Progressing

Notes:

Required Actions:

E&S Specialist:

Signed:

Date:

Appendix B: Code of practice and Management Guidelines

- Solid Waste Management
- OHS Management Plan
- Workers Camp Management Plan
- Quarry Management Plan
- Chance Find Procedure guide

Other reference Guidelines

- IFC Workers Accommodation Standards and Guidelines³¹
- Managing the Risks of Adverse Impacts on Communities from Temporary Project Induced Labour Influx³²
- World Bank Good Note Practice: Environment & Social Framework for IPF Operations, Road Safety³³
- WB General ESH Guidelines³⁴
- WB EHS Guidelines for Construction Materials Extraction³⁵WB EHS Guidelines for Ports, Harbours and Terminals (for construction works along waterways)³⁶
- WB COVID-19 Guidance³⁷

³¹https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_gpn_workersaccommodation

³² <http://pubdocs.worldbank.org/en/497851495202591233/Managing-Risk-of-Adverse-impact-from-project-labor-influx.pdf>

³³ <http://pubdocs.worldbank.org/en/648681570135612401/Good-Practice-Note-Road-Safety.pdf>

³⁴ https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_policy_esh-general

³⁵ <https://www.ifc.org/wps/wcm/connect/dad17995-66be-4280-86da-b438cf9fbefc/Final%2B-%2BConstruction%2BMaterials%2BExtraction.pdf?MOD=AJPERES&CVID=jkC-EN.&id=1323162191491>

³⁶ https://www.ifc.org/wps/wcm/connect/ddfac751-6220-48e1-9f1b-465654445c18/20170201-FINAL_EHS+Guidelines+for+Ports+Harbors+and+Terminals.pdf?MOD=AJPERES&CVID=ID.CzO9

³⁷ <http://pubdocs.worldbank.org/en/324831581700447537/COVID-19-Guidance-for-Contractors-CO-Final.pdf>

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. Satisfies 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, cardboard, 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 be eliminated. The following preventive and protective measures must be implemented in 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 of the workers) 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.

4. 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.

5. Implementation

5.1 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.

5.2 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.

5.3 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 vapours, 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, vapours.	Facemasks with appropriate filters for dust removal and air purification (chemicals, mists, vapours 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.

6. 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.

Each month, the contractor shall supply the following data to the Client's Consulting Engineer for reporting to the client. These data are to also include incidents related to any sub-contractors working directly, or indirectly, for the Contractor.

Lead Indicators	Lag Indicators
Number of drug and alcohol tests	Number of Fatal injuries
Proportion of positive drug and alcohol tests	Number of Notifiable Injuries
Number of site health and safety audits	Number of Lost Time Injuries (LTI)
Number of safety briefings	Number of Medical Treatment Injuries (MTI)
Number of near misses	Number of First Aid Injuries (FAI)
Number of traffic management inspections	Total Recordable Injuries
Number of Safety in Design workshops (Designers only)	Number of serious environmental incidents
Number of Safety in Design issues eliminated (Designers only)	Number of service strikes
Number of sub-contractor reviews	Number of property damage incidents
Number of stop work actions	Number of staff on reduced/alternate duties
Number of positive reinforcements	Lost Time Injury Frequency Rate (LTIFR)
	Total Recordable Frequency Rate (TRFR)

Definitions of the above are to be in accordance with those used by the New Zealand Transport Agency (<http://tinyurl.com/nzta-ohs-reporting>).

The Client's Consulting Engineer shall be notified of any incident in accordance with the standards below:

Incident Severity Class	Incident Classification	Notification timeframe
Class 1	Fatality	As soon as possible
	Notifiable Injury, Illness or Incident	As soon as possible
Class 2	Lost Time Injury	As soon as practicable but within 48 hours
	Medical Treatment	Within 72 hours

All Class 1 and Class 2 health and safety incidents must be formally investigated and reported to the Client's Consulting Engineer through an investigation report. This report shall be based on a sufficient level of investigation by the Contractor so that all the essential factors are recorded. Lessons learnt must be identified and communicated promptly. All findings must have substantive documentation. As a minimum the investigation report must include:

- Date and location of incident
- Summary of events
- Immediate cause of incident
- Underlying cause of incident
- Root cause of incident
- Immediate action taken
- Human factors
- Outcome of incident, e.g. severity of harm caused, injury, damage
- Corrective actions with clearly defined timelines and people responsible for implementation
- Recommendations for further improvement

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.

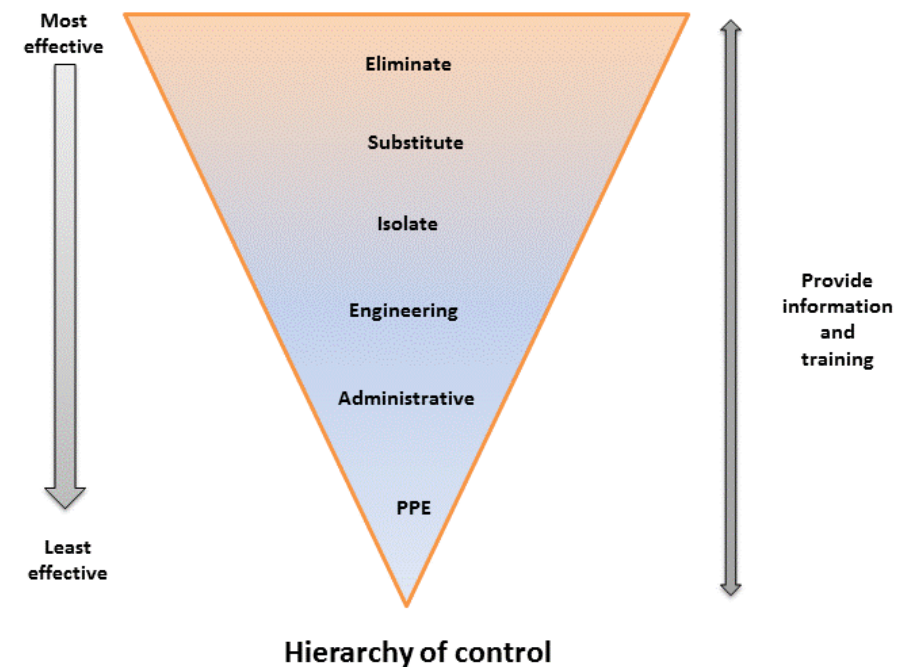
Critical risk: Unacceptable risk and further action required immediately to minimise risk.

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.



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:								

Workers and Labour Influx Management Guidelines

GENERAL

The Workers Camp and Labor Influx 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. Effective as of September 2025, the SIG has agreed that no less than 30 percent of the contractor's total labour cost will be for the employment of local workers, and this reflects the potential ratio of local workers vs international workers. No unskilled labour will be sourced from overseas. The Contractor will maximise the number of skilled and unskilled workers that are recruited from the surrounding project communities.

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.

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 for the workers at the camp.
- 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 SIRAP PST shall provide to the Contractor a list of ASPs 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 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 Acquisition

The Contractor will make lease arrangements with the titled land owner prior to any quarrying. 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 Quarry Management plan will be developed and rehabilitation work will be spelled out in the plan and 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 Quarry Management 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
- Landownership and consultations/agreements
- 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

QMP 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 to the Director of Mines. Applications shall be accompanied by such other documents as ECD may require, including the development consent. The Director of Mines 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 Director of Mines may, by notice served on the applicant, require further information in respect of the application as the director considers relevant or necessary. The applicant must comply with the notice.

Appendix C: SIRAP2 GBV Code of Conduct and Action Plan

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 (CESMP):** 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). 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 contractor, and the responsibilities of managers and individuals with regards to ESHS, OHS and GBV.
- **Key Project Actors:**
 - **Consultant:** is as any firm, contractor, 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, contractor, 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 labour 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 labour 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 , there are a number of key definitions for understanding GBV:

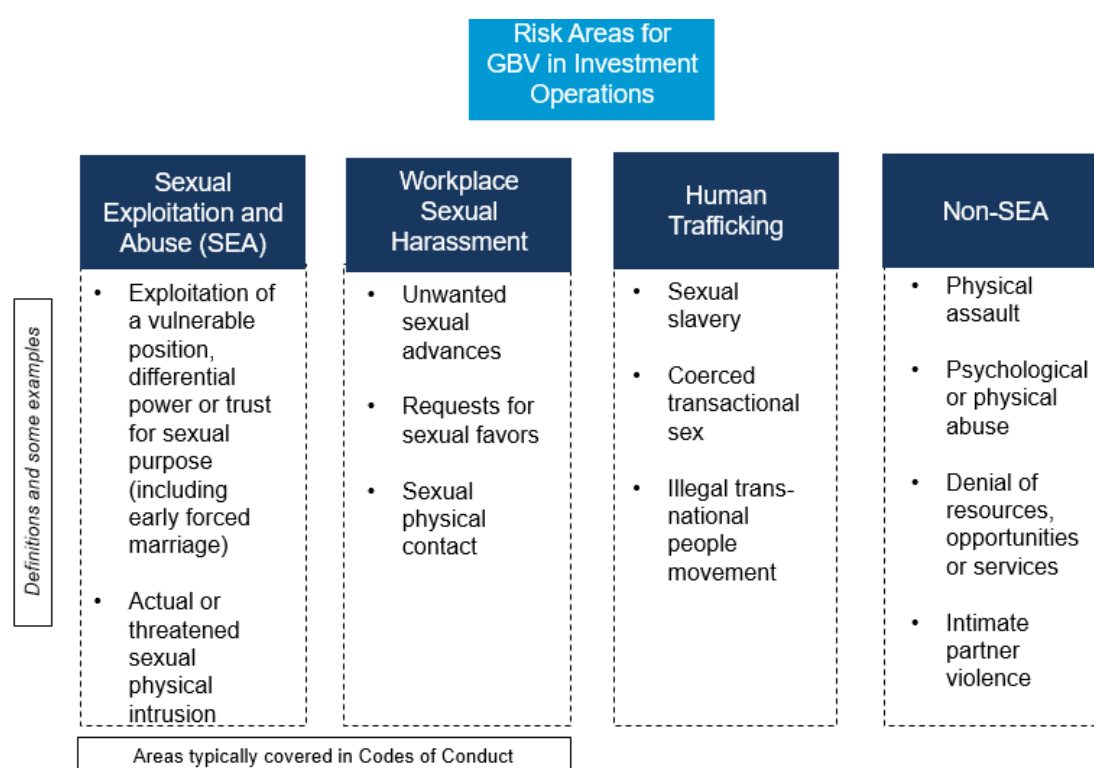
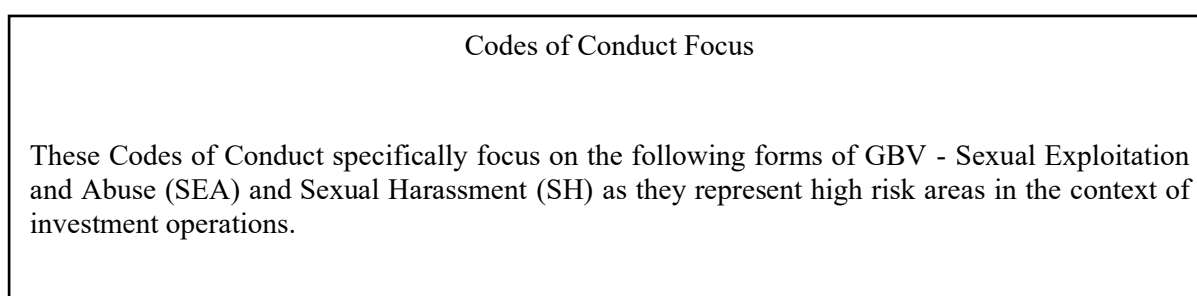


Figure 18: Types of GBV that may be exacerbated



- **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 defence.
- **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 favours:** is a form of sexual harassment and includes making promises of favourable treatment (e.g. promotion) or threats of unfavourable treatment (e.g. loss of job) dependent on sexual acts—or other forms of humiliating, degrading or exploitative behaviour.
- **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, labour, 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 behaviours 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 defence. 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 Approved 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.
 - **GCT:** a team established by the project to address GBV issues.

Codes of Conduct

This chapter presents three (3) Codes of Conduct for use:

- i. **Contractor Code of Conduct:** Commits the contractor to addressing EHS, OHS and GBV issues;
- ii. **Manager's Code of Conduct:** Commits managers to implementing the Contractor Codes 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.

Contractor Codes of Conduct

Implementing ESHS and OHS Standards

Preventing Gender Based Violence

The contractor 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 contractor 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 (SH) 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 contractor.

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

General

1. The contractor—and therefore all employees, associates, representatives, sub-contractors and suppliers—commits to complying with all relevant national laws, rules and regulations.
2. The contractor commits to full implementing its ‘Contractors Environmental and Social Management Plan’ (CESMP) as approved by the client.
3. The contractor commits to treating women, children (persons under the age of 18), and men with respect regardless of race, colour, 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 contractor 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 behaviour are prohibited among all contractor employees, associates, and its representatives, including sub-contractors and suppliers.
6. The contractor will at all times during the course of the project follow all reasonable work instructions from the supervision engineer and PST (including regarding environmental and social safeguards).
7. The contractor will protect and ensure proper use of property facilities (for example, to prohibit theft, good housekeeping and proper waste management and disposal).

Health and Safety

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

11. The contractor will ensure that adequate sanitation facilities are available on site for both male and female workers and at any worker accommodations provided to those working on the project.
12. The contractor 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 service providers including the Police for further action.
14. All forms of GBV, are unacceptable, regardless of whether they take place on the work site, office, the work site surroundings, at worker's camps or within the local community where the project operates.
15. Sexual harassment of work personnel and staff (e.g. making unwelcome sexual advances, requests for sexual favours, and other verbal or physical conduct of a sexual nature) are acts of GBV and are prohibited.
16. Sexual favours (e.g. making promises of favourable treatment such as promotions, threats of unfavourable treatment such as losing a job, payments in kind or in cash dependent on sexual acts) and any form of humiliating, degrading or exploitative behaviour 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 consent³⁸ by all parties involved in the sexual act, sexual interactions between the contractor's employees (at any level) and members of the communities surrounding the workplace 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 contractor sanctions, legal prosecution of those who commit acts of GBV will be pursued if appropriate, and is through the Solomon Islands SAFENET referral pathways.
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 contractor or not. Reports can be done to the supervisors, CLO, CAC members, Police officer and 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 contractor's commitments and hold their direct reports responsible.

Implementation

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

³⁸ **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.

23. Ensuring that all managers sign the project's 'Manager's Code of Conduct' detailing their responsibilities for implementing the contractor'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.
25. Displaying the Contractor's and Individual Codes of Conduct prominently and in clear view at workers' camps, offices, and in public areas of the workspace. Examples of areas include waiting, resting areas of sites, canteen areas and health clinics.
26. Ensuring that posted and distributed copies of the Contractor's and Individual Codes of Conduct are translated into the appropriate language that can be understood by all workers in the work site areas as well as for any international staff in their native language, or language they can understand.
27. Ensuring that an appropriate person is nominated as the contractor's 'Focal Point' for addressing GBV issues, including representing the contractor 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;
 - ii. **Accountability Measures** to protect confidentiality of all involved (; and,
 - iii. **Response Protocol** applicable to GBV survivors and perpetrators.
29. Ensuring that the contractor managers and supervisors understand and effectively implement the agreed 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 contractor'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 Contractor Code of Conduct, and on behalf of the contractor 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 Contractor's Codes of Conduct or failure to act mandated by this contractor Code of Conduct may result in disciplinary action.

Contractor name: _____

Signature: _____

Printed Name: _____

Title: _____

Date: _____

Manager's Codes of Conduct

Implementing ESHS and OHS Standards

Preventing Gender Based Violence

The contractor 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 contractor 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 (SH) have no place. Improper actions towards children, SEA and SH 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 contractor.

Managers at all levels have a responsibility to uphold the company's commitment. Managers need to support and promote the implementation of the Codes 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 (CESMP), 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 contractor and Individual Codes of Conduct:
 - i. Prominently displaying the Contractor 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, resting bay at sites, canteen areas and health clinics.
 - ii. Ensuring all posted and distributed copies of the Contractor and Individual Codes of Conduct are translated into the appropriate language understood by all workers in the work sites as well as for any international staff in the language they can understand..
2. Verbally and in writing explain the Contractor 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 Codes 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 Contractor 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 CESMP and are trained as appropriate to implement the CESMP 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 Contractorpany, 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 Contractor and the GCT. The Contractor 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 contractor'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 contractor'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 Contractor 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 (CESMP).
- 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, colour, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
- Not use language or behaviour 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 favours, 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 favours—for instance, making promises of favourable treatment (e.g. promotion), threats of unfavourable 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 behaviour.
- 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 defence. Consent from the child is also not a defence or excuse.

- Unless there is the full consent³⁹ 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 contractor 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 labour 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 labour laws in relation to child labour and World Bank’s safeguard policies on child labour 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 endeavour 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.

³⁹ **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.

Sanctions

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 behaviours 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 E&S specialist from the client;
- b. The occupational health and safety manager from the contractor⁴⁰, 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 ASP with experience in GBV—the ‘GBV Service Provider’ (Example is Family Support Centre); and optionally,
- e. Members representing the local community, government, CAC 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

⁴⁰ 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 contractor 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 GRM. The GCT will follow up on cases of GBV and Code of Conduct breaches reported through the GRM.

Addressing Complaints about GBV

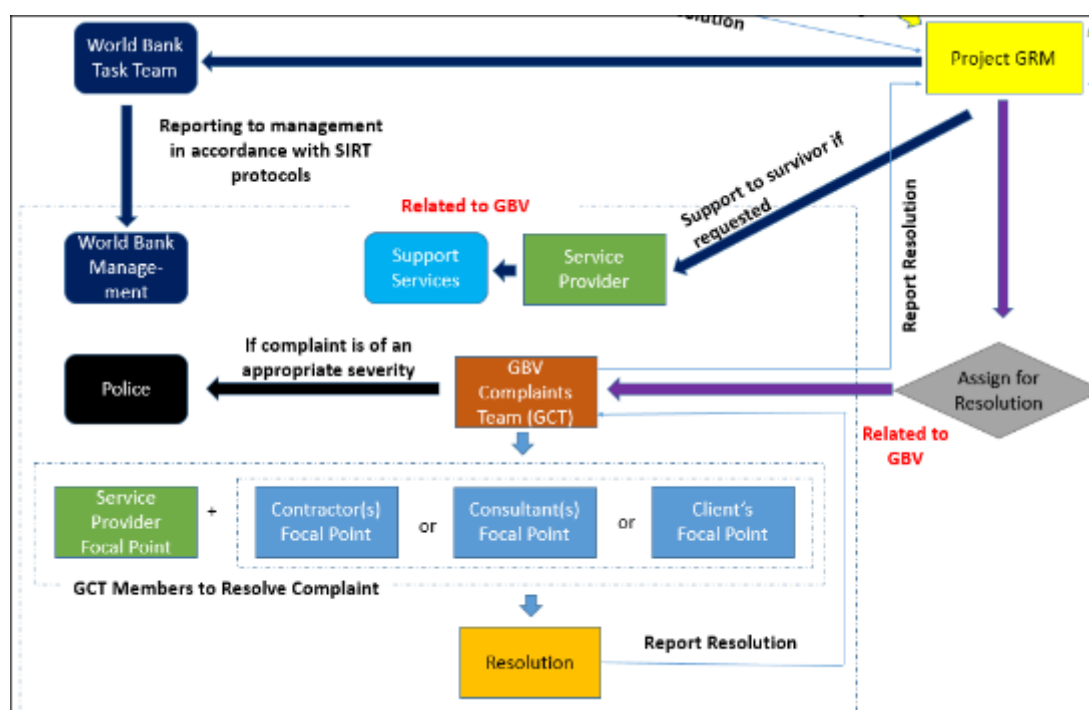
Each project needs to put in place appropriate protocols for addressing GBV complaints. The protocols will vary between projects based on local circumstances, but there are key principles which are required in all projects.

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 workflow adopted for SIRAP2.



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 through SAFENET. SIRAP2 GCT can only report GBV cases, NOT to investigate the case.

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 through the SAFENET using their existing survivor-centred approach. This information shall be confidential and not part of the SIRAP2 GRM process.

The GRM operator will refer complaints related to the approved service providers 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 side of the GBV and ultimately provide the GRM operator with a resolution to the complaint, or the Police if appropriate. The GBV case will be the responsibility of the Approved Service provider through the SAFENET to address, considering the victim's confidentiality should also be kept in mind when reporting any incidences. 7

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

GBV Service Provider

The SAFENET is a local establishment which has linkages to the approved service providers and 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. SAFENET is a referral network made up of organisations that provide essential services to victims and survivors of GBV, comprised of all the approved service providers, including the medical and the police. SAFENET members include Seif Ples, Christian Care Centre, Family Support Centre, Solomon Islands Planned Parenthood Association (SIPPA), RSIPF Family Violence Unit and Sexual Assault Unit, Public Solicitors Office, HCC Clinics, the NRH, Social Welfare Division and Integrated Mental Health.

The PST, the contractor(s) and supervision consultant(s) must establish a working relationship with the GBV Service Provider through SAFENET, 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 managed 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) ‘GBV Focal Point’ from the contractor(s), consultant(s) and SIRAP2 PST; and optionally, (iii) members of the local community, and MID.

All the Focal Points on the GCT must be trained and empowered to address 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 GCT⁴¹.

The GCT shall confirm that all complaints related to GBV have been: (i) referred to the SAFENET 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 PST, contractor and supervision 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 supervision 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) CAC members; 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 PST 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.

⁴¹ 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.

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

Response Protocol

The GCT will be responsible for developing a written response⁴² 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 Survivor Support Measures below.

The contractor(s), supervision consultant(s) and PST 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;
- 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.

The contract with the GBV Service Provider shall explicitly detail the services to be provided, and how

⁴² 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.

the associated costs shall be financed by the project.

If the survivor is an employee of the contractor(s), consultant(s) or PST, to ensure the safety of the survivor, and the workplace in general, the client, contractor or supervision 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. The employer will provide adequate leave to survivors seeking services after experiencing violence (see Annex 1 for details).

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 Codes 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 labour 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 is 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 include⁴³:

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

⁴³ 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.

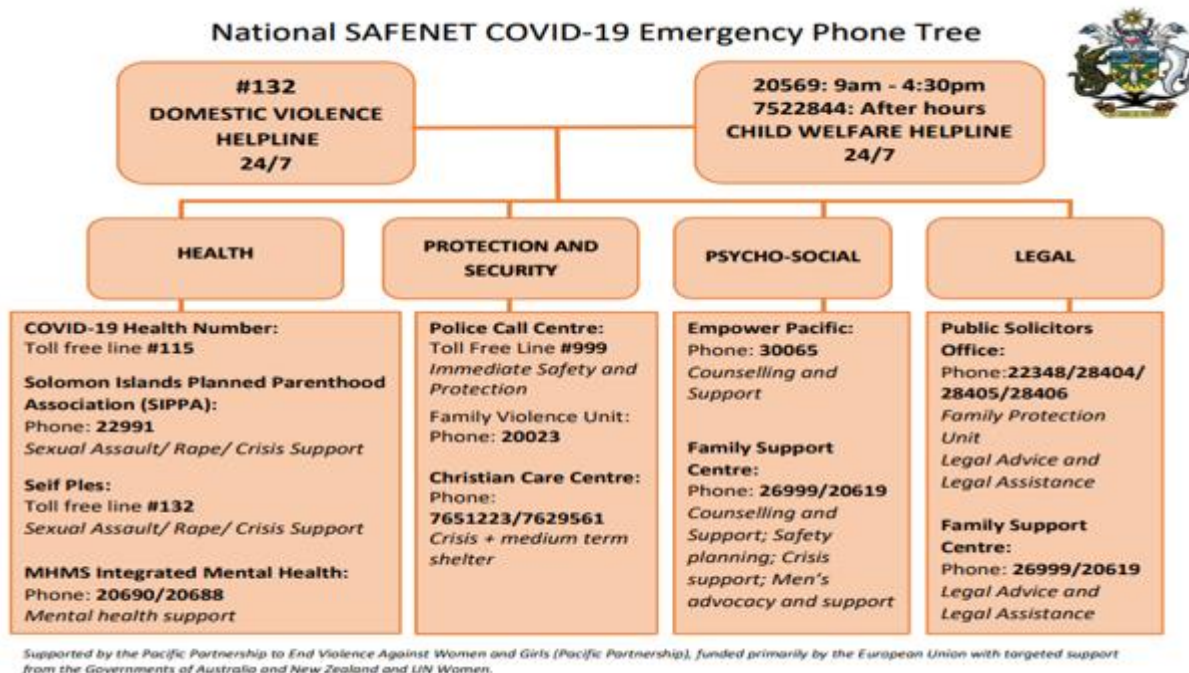
among other services that may be needed.

2. An employee who supports a person experiencing sexual harassment may take care givers leave, 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. See the 24/7 Helpline for Reporting GBV/SEAH cases in Solomon Islands under the SAFENET arrangement.



Appendix D: E&S Supervision for the SIRAP2 Fiu Bridge works

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 SIRAP2 Project on Malaita, the following plan has been prepared which should be adhered to by all Contractors and his employees:

- The Environmental and Social Management Plan (this document) plus other site specific plans as listed in Appendix B;
- The mitigation measures included in tender and contract documents;
- The specifications, procedures, and best practices included in the subproject ESMPs. These specifications will 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, and in the technical specifications and contract documents. It will need to be closely followed and implemented by the contractor. The implementation of the ESMP will therefore involve four parties:

- **PST** - The **National Senior Safeguards Specialist (NSSS)** is the person responsible for overall coordination of ESMP implementation. This person will be appointed directly by PST.
- **Contractor** - The **Contractor’s Safeguard Specialist** responsible for implementing the CESMP and other construction related environmental and safety issues.
- **Supervision consultant** - The **Supervision Engineers** who are responsible for supervising and monitoring all construction activities and for ensuring that contractors comply with the requirements of the contracts and the ESMP. The Supervision engineer E&S specialist will work closely with the contractor’s E&S specialists/officers,
- A Client’s International Safeguard Specialist, who provide support to the NSSS for oversight of ESMP implementation throughout the works.

This Terms of Reference is for the **E&S Specialist** to be part of the Construction Supervision Engineers.

Scope of Services:

The general services to be provided by the SSS are to inspect, monitor and audit the construction activities⁴⁴ 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 E&S specialist. The E&S specialist is

⁴⁴ The term ‘construction activities’ in this TOR pertains to all aspects related to the SIRAP Malaita Works 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.

therefore to be an independent monitor to ensure compliance with the ESMP and to ensure adequate performance of the Contractors on environmental issues.

The E&S specialist will inspect, monitor and carry out environmental review of all road and bridge contracts packages and lots. The E&S specialist 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 E&S 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 supervision engineer, the E&S specialist 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 E&S specialist 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 E&S specialist; and, (iv) develop and execute a training program for all involved in construction activities.

The main tasks in this phase are:

Review of Project Documents: The E&S specialist 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 NSSF updates to the ESMP and the design and technical specifications to address these issues. Once approved by NSSF, the E&S specialist shall update the ESMP.

Environmental Supervision Checklist: The E&S specialist 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 E&S specialist 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 NSSF shall verify the log-book as part of his environmental audit.

Environmental Training: The E&S specialist shall design and execute a comprehensive training program for all actors: Supervision Engineers, NSSF, Contractor's E&S specialist (and workers as part of the trainings given to the contractor's E&S specialist), 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 NSSS (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 contractor E&S specialist shall sign a similar statement confirming their understanding of the supervision responsibilities. This shall be provided to PST and the World Bank

Phase II: Supervision of Construction Activities

On behalf of the NSSS and the Chief Supervision Engineer, the E&S specialist 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 E&S specialist
- 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 PST;
- 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 NSSS and contractor E&S specialist 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 Country Safeguards System (CSS) and PST 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 ESMP requirements / remedial actions instructed by the supervision engineer.

Review of Site CESMP: To ensure consistency across the project, the E&S specialist 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 E&S specialist shall work with the Contractor E&S specialist and Contractor to establish a suitable solution.

Site Inspections: The E&S specialist 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 E&S specialist shall have their own handheld 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 E&S specialist 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 noncompliance with the ESMP, the E&S specialist shall be immediately inform Contractor's Chief Engineer, Supervision Chief Engineer and NSSS. The E&S specialist shall also report all infringements to the PST as part of the monthly reporting.

Regular joint environmental site inspections (e.g. weekly) should be organized by the E&S specialist and contractor's E&S specialist, with participation from the Contractor's E&S team, including CLO and safety officer. These should be used as an opportunity for the E&S specialist to further train the contractor's E&S specialist and Contractor's staff.

E&S specialist 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 E&S specialist shall also regularly review the records of the contractors to ensure that they are up to date, factual and meet the ESMP 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 contractor's E&S team shall be responsible for processing, addressing or reaching solutions for complaints brought to them. The E&S specialist 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 E&S specialist shall ensure that these complaints are logged into the SIRAP2 GRM Register.

Unforeseen Impacts: In the event that an incident arises which was not foreseen in the ESMP, the E&S specialist shall work closely with the Contractor E&S team, the Contractors, and the NSSS to confirm satisfactory resolution to the incident. The E&S specialist shall then update the ESMP and the implementation guidelines, training the Contractors' staff accordingly.

Monthly Payments: The E&S specialist shall confirm the monthly payments for environmentally related activities as recommended by the E&S specialist to the client.

Site Restoration and Landscaping: The E&S specialist 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 E&S specialist 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 bridge.

Project Initiation and Staffing: It is anticipated that the contractor E&S team and the E&S specialist, will be mobilized one month before the start of the construction activities. The one month start up time will be utilized by the E&S specialist 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 E&S specialist 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 PST about how best to improve the implementation of the ESMP.

The E&S specialist is expected to be mobilized at the beginning of the contract, to prepare the necessary guidelines, documentation, training, *etc.*

Reporting: As a minimum the E&S specialist 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 E&S specialist shall also collect and report on data as requested by the PST.

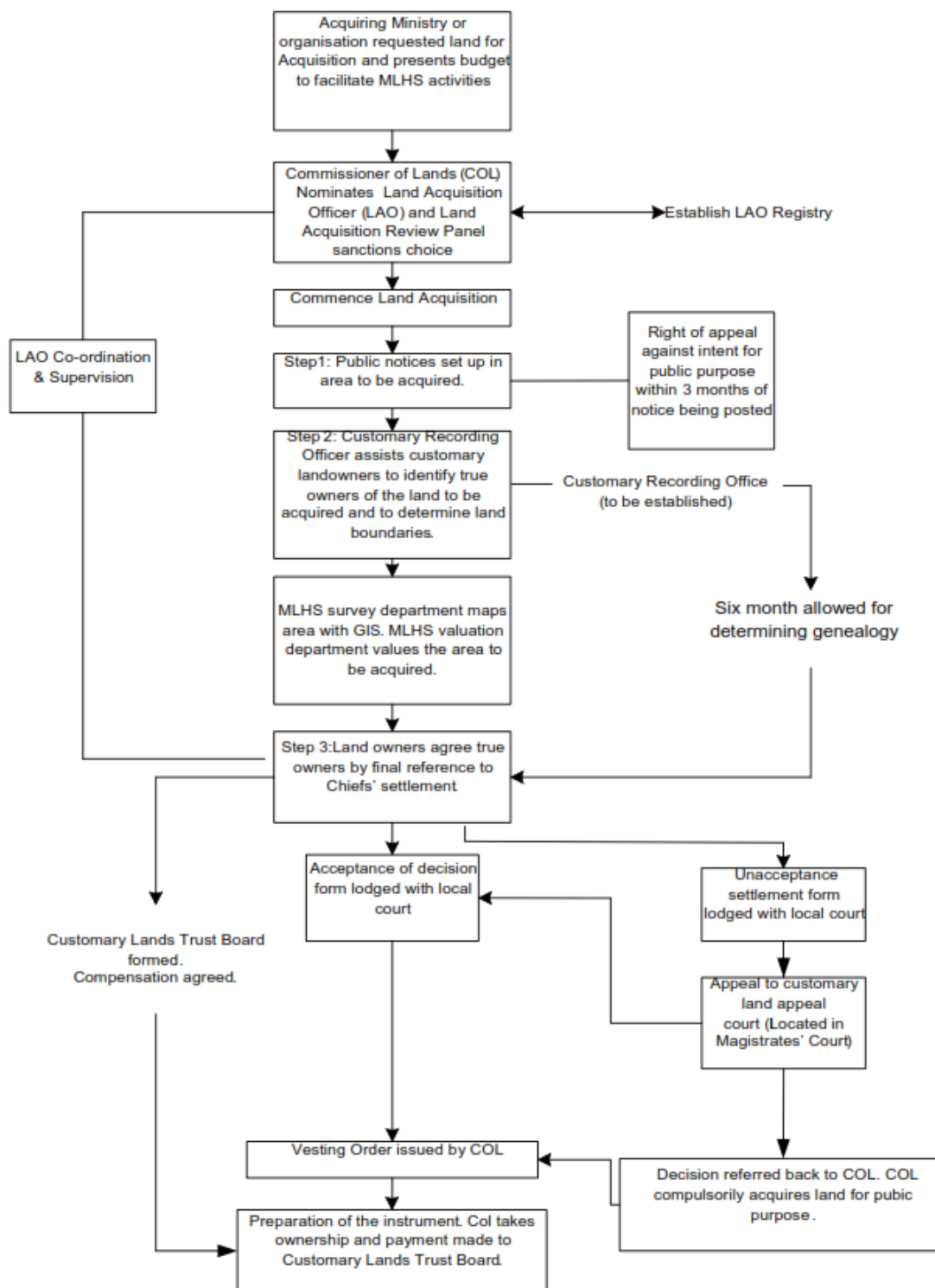
At the end of the project the E&S specialist shall prepare a final report summarizing the key findings from their work, the number of infringements, resolutions, *etc.* as well as advice and guidance for how such assignments should be conducted in the future.

During the course of the project the E&S specialist shall provide briefings as requested by the PST, environmental agencies, the World Bank and MID 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 E: Outline of Resettlement Action Plan (RAP)

1. Introduction
2. RAP objectives and Methodology
3. Project Potential Impacts
4. Socio-economic baseline studies
5. Legal and Policy Framework
6. Eligibility Criteria and Entitlements
7. Valuation
8. Resettlement Budget and Financial Plan
9. Institutional Responsibility
10. Implementation Schedule and preparatory Actions
11. Consultation, participation and Information Disclosure
12. Grievance Redress Mechanism
13. Monitoring and Reporting
14. Appendices

Appendix F: MID Proposed Modified Land Acquisition Process



Appendix G: Chance Find Procedure

If artefacts, objects are exposed during construction phase, the contractor and other relevant party conducting construction works will follow the procedures including filling up this form:

Importantly, the first step is to stop the construction activities in the area of the chance find.

Delineate the discovered site or area.

Notify the site supervisor and contractor safeguards supervisor/Manager.

Date:	Time:
Subproject name:	
Province:	
Officer assigned for discovery	
UXO discovery contact	RSIPF EOD team - 23666
Artefacts/objects of cultural significance contact	Ministry of Culture and Tourism - 27314
Discovery type and location:	
Witness:	
Details of the discovery (if known):	
Immediate action from the contractor.	
Corrective actions from contractor:	
Immediate action from PST:	
Follow-up action from PST:	
Recommendation(s):	
Corrective actions taken and conclusion:	

UXO Response Plan

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.

Additionally, 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

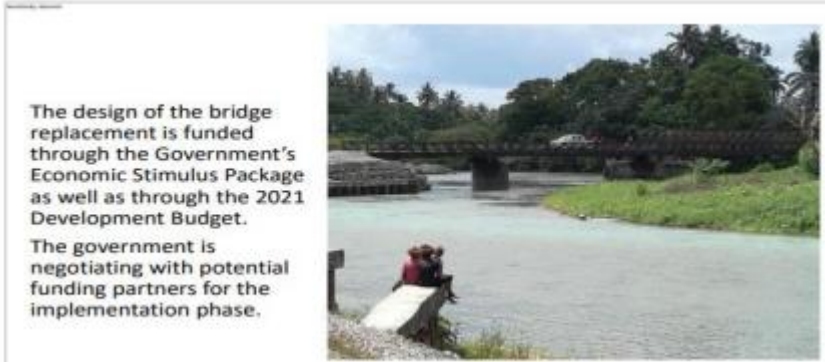
Detailed Contamination Survey for minefields shall be measured by square metre of area surveyed and recorded in accordance with these Specifications.

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: Community consultations presentation

1/12  Fiu River Bridge Replacement Detailed Design Consultation Image source: http://www.vh.com.ph/2-whatagood/18/fiu-river-bridge-replacement-subtitle	2/12 Fiu River Bridge Replacement The existing bridge over the Fiu River is going to be replaced with a new bridge. The Fiu Bridge currently links communities living in North and East Malaita with those living in Auki and South Malaita. However, the existing bridge is not in good condition. Future climate change will mean the river is flooded more often and the existing bridge is likely to be closed more frequently if this occurs. The existing bridge therefore needs to be replaced with a new bridge that is higher quality and less likely to be flooded. The new Fiu River Bridge will provide enhanced resilience in future natural disasters and emergencies. 
3/12  The design of the bridge replacement is funded through the Government's Economic Stimulus Package as well as through the 2021 Development Budget. The government is negotiating with potential funding partners for the implementation phase.	4/12 What will the replacement involve? • Constructing a new bridge – 84m long, 3 span bridge with a 100-year design life • Adding a pedestrian walkway to the new bridge • Protecting the riverbank around the bridge so that the bridge is supported and stable • Realigning the roads leading to and from the bridge so that they line up with the new bridge • Providing a new access road to Fiu village and track to the South bank of the river • Adding stormwater drainage, signage, guard rails on approach embankments • Disassembling and removing the existing bridge
5/12	6/12

What has been done in Detailed Design phase

Design of the bridge is nearly complete.

Beca has used the information from site investigations and surveys to complete Detailed Design.

Following previous consultation and discussion with the Ministry of Infrastructure Development Beca has:

- Determined a 'preferred option' for the design of the bridge
- Assessed 100-year flood events so the bridge will be above flood level
- Designed road alignments and approach embankments connecting existing roads to the new bridge
- Designed the bridge structure to carry two lanes of traffic plus a footpath
- Included new river walls and scour protection to resist flood waters

Existing bridge



Location of the new bridge alongside the existing bridge on the downstream side

7/12



Cross section of the new bridge downstream from the existing bridge

9/12

8/12

Community consultation

We want to discuss the final design of the bridge with affected communities.

We will be meeting with communities from each of these five villages:



10/12

Community consultation There are two rounds of community consultation: Round one was in late 2022: Shared information about the project and collected feedback from the community on topics like footpath width and connections with local roads. Your feedback helped us to develop the detailed design of the bridge.	Community consultation There are two rounds of community consultation: Round two (this meeting): Community meetings in each of the villages to share the Detailed Design of the bridge, let you know about any potential social and environmental impacts expected from the construction and operation of the bridge and give an opportunity for any feedback.
11/12 What to expect – Construction phase Construction of the bridge will likely take around 2-3 years. • You might notice some noise and dust from the construction. There will be construction plans in place to help manage this. • There will be some temporary traffic management to make sure people can continue using the roads around the bridges in a safe way. • Road connections from the existing bridge will be realigned to allow construction of the bridge. The new bridge will be built alongside the old bridge, then the new roads will be connected to it. • The existing bridge will remain operational while the new bridge is being constructed, so people will still be able to get across the river.	12/12 END OF PRESENTATION

Attendance sheet

Community Consultation – Gwaialiki

Date: Saturday 11, November 2023
Time: 10:38 am – 11:55 am

Community Consultation & Participation Attendance List – ^{Fiu} ~~Fiw~~ Bridge Subproject

No	Names	Village	Designation	Signature	Contact
1	SAMMY. Malosau	Gwaialiki			7166415
2	Buratrila . Mae	Dadrasale			
3	Sofiloa	Gwaialiki			
4	EDWIN SIKWAI	Dudogale			
5	Joseph Buama	Gwaialiki			
6	Steven Ani				
7	DAVID OLI	Gwaialiki			
8	CASPER Oiramo	Faidadale			7644838
9	CHRISTOPHER Laakda	Gwaialiki			
10	ROCKLENG KAHAI TETE FUIBADA				7942592
11	EDDIE Tui	Gwaialiki			
12	BANABAS	Gwaialiki			
13	Brian Idutou	Faidadale			7868459
14	BATHOLMEW MERRIES	Tatafuerade			
15	David Oliver Buama	Gwaialiki			7662163

Community Consultation – Kilusakwalo Village

Date : 11 November 2023
Time: 2pm

Community Consultation & Participation Attendance List ^{Fu} ~~Bridge~~ Bridge Subproject

No	Names	Village	Designation	Signature	Contact
1	Solomon Meeasia	Kilusakwalo	PASTOR		7429464
2	Oliver Kwuli	Kilusakwalo			7535771
3	Roseley Korams	Kilusakwalo			7740257
4	Noaman Lagai	Kilusakwalo			7918697
5	Cystal Tiana	Kilusakwalo			
6	Rose maenabulu	Kilusakwalo			
7	Susan Rame	Kilusakwalo			
8	Alice Meeasia	Kilusakwalo			
9	Ruth Ronjeau	Kilusakwalo			
10	Gladi's Bataki	Kilusakwalo			
11	Rose nowae	Kilusakwalo			7425803
12	PATRICK LMAITOLA	Kilusakwalo			7221853
13	ALLEN MAENUA	Kilusakwalo			7499838
14	Billy Dammua	Kilusakwalo			7538282
15	MILTON Maelikini	Kilusakwalo			7778375

Malaita Roads and Bridges Community Consultation presentation 2026

1/12 COMMUNITY CONSULTATION  SECOND SOLOMON ISLANDS ROADS AND AVIATION PROJECT, SECOND ADDITIONAL FINANCING (SIRAP2 AF2) – MALAITA ROAD  27th Feb – 1st March 2026	2/12 1. WELCOME & OBJECTIVES 1. Welcome and acknowledgement 2. Purpose of consultation To inform, engage, and gather feedback from affected communities regarding the Malaita Road upgrades under SIRAP2 AF. 3. Goals of consultation Ensure transparency Promote community ownership Identify and mitigate social and environmental impacts
3/12 2. PROJECT OVERVIEW 1. Brief Introduction to SIRAP2 AF2 The Solomon Islands Government, with World Bank financing, is implementing the Second Solomon Islands Roads and Aviation Project Additional Financing (SIRAP2-AF) to improve the safety, efficiency and climate resilience of the nation's road and aviation sectors. In 2026, the Solomon Islands Government requested the second additional financing (AF2) for SIRAP2-AF, given the need to expand further infrastructure development and as a 'Special Anniversary Package', i.e., priority projects SIG would like to complete before the country's 50th Independence Anniversary. The investment priorities under the SIRAP2 AF2 are located on the following islands: - Upgrading of 7.4km of the sealed Road Auki Gwamuru'u Junction and Klu'u'fi Junction, Malaita Province - Replacement of the Fiu River Bridge, Malaita Province - Sealing of 5km of the gravel road between Kwaisulinu and Dala Market, Malaita Province	4/12 3. SCOPE OF WORK IN MALAITA i. Upgrading of 7.4km of the sealed Road Auki Gwamuru'u Junction and Klu'u'fi Junction - This is a follow-up consultation to previous consultations conducted in 2020 by MID and SIRAP. - All the activities will be within the road right-of-way. ii. Replacement of the Fiu River Bridge - This is a follow-up consultation to previous consultations conducted in 2020 and 2023 by MID and BECA. iii. Sealing of 5km of the gravel road between Kwaisulinu and Dala Market - This is a follow-up consultation to previous consultations conducted in 2020, MID and SIRAP. - There was routine maintenance done by EDTL under SIRAP. 
5/12	6/12

3. WHY THIS PROJECT MATTERS

✓ Benefits to the Community:

- ❑ Improved road and bridge safety and access
- ❑ Better connectivity to markets, schools, and health services
- ❑ Job creation and local economic opportunities



4. COMMUNITY INVOLVEMENT



- ❑ Importance of Your Voice
- ❑ How Feedback Will Be Used
- ❑ Opportunities for Participation

4. COMMUNITY INVOLVEMENT

❑ Importance of Your Voice – comments, concerns, feedback

❑ How Feedback Will Be Used:

i. Improve project design

Community feedback helps the project team adjust the technical design or implementation approach to reduce impacts on local communities.

Examples: Adjusting road alignment to avoid houses, gardens, or sacred site; Improving drainage design where communities report flooding; and including pedestrian walkways or safety measures

ii. Identify Environmental & Social Risks (ESMP/PER)

Communities often provide local knowledge that may not appear in technical surveys. Their feedback can highlight: Flood-prone areas, Land ownership or customary land issues, Cultural heritage sites, Safety concerns (traffic, dust, noise)

This information is then incorporated into project safeguards documents such as: ESMP (Environmental and Social Management Plan), PER / EA reports, Resettlement plans (RAP)



7/12

8/12

☐ How Feedback Will Be Used: iii. Develop Mitigation measures. Community concerns help determine specific mitigation actions to minimize project impacts. Examples: Dust control measures near villages; traffic management near schools or markets; Noise control near residential areas These measures are included in the ESMP or CESMP and implemented during construction. iv. Identify Affected Persons (APs). Consultations help identify people who may be physically or economically affected by the project, such as: Structures in the road right-of-way (ROW); Market vendors; Garden or tree owners. This information is used to prepare compensation, and resettlement plans in line with ESS5 (Land Acquisition, Restrictions on Land Use and Involuntary Resettlement)	☐ How Feedback Will Be Used: v. Improve Project Acceptance and Transparency Consultations ensure that communities: Understand the project scope and impacts; <u>Have the opportunity to raise concerns</u>; Are informed about their rights and the grievance mechanism (GRM). vi. Inform Decision-Making All consultation feedback is: Documented in consultation reports; Reviewed by the World Bank; Used to revise project documents before approval vii. Support Monitoring During Implementation Community feedback also continues during construction through: GRM complaints; Follow-up consultations; Community liaison officers This helps the project monitor whether mitigation measures are working.																										
9/12 5. ENVIRONMENT & SOCIAL RISKS <table border="1"> <thead> <tr> <th>Environmental & Social Risks</th><th>Examples</th></tr> </thead> <tbody> <tr> <td>1. Environmental Risks:</td><td>Soil erosion and sedimentation ; Water pollution from fuels; Air pollution from dust; Noise pollution and vibration; Improper waste management; Vegetation clearance and habitat disturbance; Poor management of gravel extraction</td></tr> <tr> <td>2. Community Health & Safety Risk:</td><td>Traffic Accident and increase safety risks; Public access to the construction site; Spread of communicable disease; Gender Based Violence (GBV)/ Sexual Exploitation Assault, and Harassment (SEAH)</td></tr> <tr> <td>3. Land Acquisition and Resettlement Risks</td><td>Loss of houses, structures, or market stalls; Loss of fruit trees, gardens, or crops; Encroachment within road right-of-way (ROW); Temporary restriction of access to land or livelihoods</td></tr> </tbody> </table> Infrastructure projects may require land or affect people's assets.	Environmental & Social Risks	Examples	1. Environmental Risks:	Soil erosion and sedimentation ; Water pollution from fuels; Air pollution from dust; Noise pollution and vibration; Improper waste management; Vegetation clearance and habitat disturbance; Poor management of gravel extraction	2. Community Health & Safety Risk:	Traffic Accident and increase safety risks; Public access to the construction site; Spread of communicable disease; Gender Based Violence (GBV)/ Sexual Exploitation Assault, and Harassment (SEAH)	3. Land Acquisition and Resettlement Risks	Loss of houses, structures, or market stalls; Loss of fruit trees, gardens, or crops; Encroachment within road right-of-way (ROW); Temporary restriction of access to land or livelihoods	10/12 <table border="1"> <thead> <tr> <th>Environment & Social Risks</th><th>Examples</th></tr> </thead> <tbody> <tr> <td>4. Labor and Working Conditions Risks</td><td>Workplace accidents and injuries; Lack of personal protective equipment (PPE); Poor workers' accommodation conditions; Worker disputes or grievances; Child labor or forced labor risks; Security incidents at construction camps.</td></tr> <tr> <td>Risks related to project workers and contractor staff.</td><td></td></tr> <tr> <td>5. Social Conflict and Community Relations</td><td>Disputes over compensation payments; Conflict between landowners or tribes; Unequal benefit sharing; Community dissatisfaction with project impacts.</td></tr> <tr> <td>Projects may create tension or disputes within communities.</td><td></td></tr> <tr> <td>6. Cultural Heritage Risks</td><td>Disturbance of customary sites; Damage to archaeological or burial sites; Discovery of chance finds during excavation</td></tr> <tr> <td>Construction activities may affect sites of cultural or historical importance.</td><td></td></tr> <tr> <td>7. Climate and Natural Hazard Risks</td><td>Flooding of roads and bridges; Increased storm intensity; Landslides or erosion; Sea level rise in coastal areas</td></tr> <tr> <td>Infrastructure projects may face risks related to climate change and natural hazards.</td><td></td></tr> </tbody> </table>	Environment & Social Risks	Examples	4. Labor and Working Conditions Risks	Workplace accidents and injuries; Lack of personal protective equipment (PPE); Poor workers' accommodation conditions; Worker disputes or grievances; Child labor or forced labor risks; Security incidents at construction camps.	Risks related to project workers and contractor staff.		5. Social Conflict and Community Relations	Disputes over compensation payments; Conflict between landowners or tribes; Unequal benefit sharing; Community dissatisfaction with project impacts.	Projects may create tension or disputes within communities.		6. Cultural Heritage Risks	Disturbance of customary sites; Damage to archaeological or burial sites; Discovery of chance finds during excavation	Construction activities may affect sites of cultural or historical importance.		7. Climate and Natural Hazard Risks	Flooding of roads and bridges; Increased storm intensity; Landslides or erosion; Sea level rise in coastal areas	Infrastructure projects may face risks related to climate change and natural hazards.	
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6. LAND AND COMPENSATION

□ All construction activity will be on the Gazette road corridor (30m, i.e. 15m on both sides from the road centreline) – no land acquisition.

□ Land required: Temporary use for Contractor's camp and laydown:

◦ Contractor and landowner MOU.

□ Quarry/Gravel:

◦ Contractor and landowner MOU.

◦ BMP permit and Quarry management plan.

8. GRIEVANCE REDRESS MECHANISM

□ Any complaints regarding issues with construction (dust, noise, safety), GBV or SEAH

□ GRM Channels

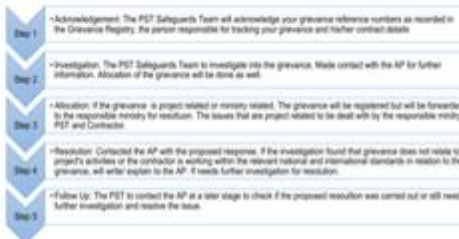
- Local Focal Points (Chief, church leader, CAC, CLC etc...)

- Hotline (Phone numbers)

- Written Complaints

- Complain box

□ Response Timeline and Escalation



7. EMPLOYMENT AND LOCAL BENEFIT

□ Job Opportunities During Construction

□ Preference for Local Workers

□ Training and Capacity Building



9. CONSULTATION SCHEDULE

□ The next follow-up consultation:

✓ Detailed design and PER application

✓ Construction phase:

- Introduce the contractor

- Establishment of CAC

□ Feedback, queries or concerns raised through community consultations, Community Advisory Committee, Community Liaison Officer

□ Contact information:

1. **PST Community Liaison Officer** – Joy Faulkner - 7428857

2. **PST Nation Environmental & Social Officer** - Hilda Poloso - 7740586

	10. OPEN DISCUSSION FEEL FREE TO COMMENT OR ASK QUESTIONS •TAGIO TUMAS Your support is vital to this project's success.	
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Appendix I: Public Notice for the structures



Appendix J:ESMP Screening Checklist – Fiu River Bridge

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN SCREENING FORM				
Province: Malaita Province			Ward: Buma Ward (West Kwaraáe Constituency)	
Type of Works:				
▪ Bridge construction ▪ Removal and disposal of debris associated with any eligible activity ▪ Quarrying for River Gravel				
Brief description of works/activities: [i.e., purpose of works, proposed works (list/explain activities), number of villages (approx. population) to benefit]				
This project involves replacing the Fiu River Bridge located approximately 7km from Auki. Fiu River Bridge is an 84m long three span structures comprised of two 25m side spans and a central span of 34m.				
A. ACCESSIBILITY & TOPOGRAPHY				
No.	Questions	Yes	No	Comments
	Is the site located on a slope or hilly area made of soft/loose formations with high erosion/landslide potential?			
	Is the site located in vulnerable areas subject to (that may affect the stability of the facility to be built?):			
	i. Flooding		✓	
	ii. Tidal / Storm Surge	✓		
	iii. Saltwater Inundation		✓	
	iv. Steep Slopes		✓	

	v. Land Slides		✓	
	vi. Is it less than 10m away from the sea or river?	✓		
	Is the project site located in a flood plain area or in areas at low elevation above sea level so that it is at risk of inundation in the long term?		✓	
	Is the existing ground level lower than the historical flood level?		✓	
	Is the ground where the construction will take place lower than the surroundings, where rainwater may concentrate and cause flooding easily?		✓	
	Is the site at or below sea level?		✓	
	Is it safe and easy to access the site in rainy weather?	✓		
B. ECOLOGICAL – FLORA & FAUNA				
1.	Is the project located in the following area:			
	i. In/near the gazette Protected Area? (Marine or Terrestrial Protected Areas by Communities or NGOs (Please provide details)		✓	
	ii. Declared conservation area,		✓	
	iii. Sensitive environment (mangrove, forests, high biodiversity area), or 400m or above sea level?	✓		
	iv. Is there any vegetation cover that may be disturbed or cut down – Grass, Shrubs, Big Trees, Mangroves, Others (please specify)		✓	

	v. Is the site located on any crop or cultivated land?		✓	
2.	Is it possible that the activity may impact on any wildlife or endangered species?		✓	
3.	Is it possible that any wildlife or insects that may attack humans, such as snakes, bees, fire ants, etc., will be present at the site?		✓	
4.	Forest land will be used, or will existing forest land be converted into agricultural land?		✓	
5.	During construction, will it affect any of the following:			
	i. Food trees, gardens, or crops	✓		
	ii. Ecologically important areas in outer reef and lagoon islands		✓	
	iii. Swamps		✓	
	iv. Wetlands		✓	
	v. Mangroves		✓	
	vi. Close to the coast		✓	
	vii. Riverbank or Stream	✓		
	viii. Rare and endangered species		✓	
6.	Will materials be extracted from (If so, has permission been given by relevant person)?		✓	
	i. Lake/riverbed	✓		
	ii. Coral reef		✓	

	iii. Hillside			
	iv. Local Quarry		✓	
7.	Will cutting of timber be required? If so, has permission been given by the relevant person?		✓	
C. CLIMATE & HYDROLOGY				
1.	Is the site located within the river buffer zones (50 - 100m) or 50m from a log pond?	✓		
2.	Has the area undergone severe drought in the most recent 5 years?		✓	
3.	Has the area undergone frequent flooding during the wet season?	✓		
4.	Was the area severely affected by thunderstorms and lightning before?	✓		
5.	Has an earthquake happened in the area before?	✓		
6.	Will construction place demand on the local drinking water supply?		✓	
7.	Will it cause water contamination or pollution?	✓		
8.	Will natural waterways be diverted, or flow reduced? If so, will this affect upstream/downstream users and the natural environment?		✓	
9.	Will the groundwater supply be affected?		✓	
10.	Is groundwater supply safe for drinking?	✓		

11.	Is there likely to be any water contamination, or will it remain safe for drinking during the operation phase?	✓		
D. CULTURE				
1.	Are there any of the following areas within the proposed sites:			
	i. Sacred tree that may be affected?	✓		
	ii. Grave within 50m from the site?		✓	
	iii. Statues within 50m from the construction site?		✓	
	iv. Cultural heritage,		✓	
	v. Sacred areas	✓		-
	vi. Tambu/ kastom	✓		-
	vii. Archeological sites in/near the site?		✓	
2.	Are there any other objects/structures of spiritual importance to local communities that may be affected by construction or operation phase?		✓	
3.	Other cultural characteristics to be noted. (Specify)			
E. NATURAL RESOURCES				
1.	Will the use of water, energy, land, and forest during the construction and operation phase restrict access to some communities?		✓	
2.	Other Natural Resources characteristics to be noted. (Specify)		✓	

F. PEOPLE & LAND				
1.	Does the land require significant involuntary land acquisition?		✓	
2.	Does anyone live on the land?			
3.	Is the land			
	i. Privately Owned			
	ii. Crown Land (Provincial or Government)			
	iii. Customarily Owned	✓		
4.	Will site clearance remove any person? (If so, has permission been given by the relevant person)		✓	
5.	Will the site clearance affect any livelihoods? (Garden crops, tree crops, etc.)		✓	
6.	Are there any food trees that belong to individual households that may be cut off?	✓		
7.	Have upstream and downstream communities been excluded from consultations?		✓	
8.	Will there be any likely conflict with downstream users?		✓	
9.	Are there any disputes over the ownership of the preferred site(s) or absentee landowners?		✓	
10.	Does the land equate to more than 10% of the total landholdings of one landowner or household? If so, has alternative land been provided by the community?			
G. HEALTH AND SAFETY				

1.	Are there sanitation, hygiene, and public health risks?	✓		
2.	Will toxic chemicals or hazardous materials be generated or used? (Fuel, paint, chemicals, batteries, asbestos, etc.)	✓		
3.	Is asbestos present in any buildings or structures?		✓	
4.	Will the subproject generate waste materials? If so, where will these be disposed of?	✓		
5.	Will it generate air pollution (dust, smoke hazards)?	✓		
6.	Will it generate noise and vibration disturbance?	✓		
7.	Will the works result in increases in, or changes to the type of, traffic using the road?	✓		
8.	Will any of the works require the use of toxic chemicals, herbicides, and/or explosives?			
9.	Is there likely to be any soil pollution or erosion?	✓		
H. EXISTING FACILITIES				
1.	Is power available for the construction?		✓	
2.	Is there a safe place to stockpile or store materials?	✓		
3.	Is there any security risk (damage, theft)?	✓		There is possibility, therefore, security measures must be in place by contractor
4.	During the construction phase, are there any public health and safety risks management for the communities such as:			
	i. Traffic	✓		

	ii. Water	✓		
	iii. Power		✓	
5.	Will the following facilities be provided to the workers during construction?			
	i. Safe drinking water	✓		
	ii. Sanitation	✓		
	iii. Medication (First Aid Kit)	✓		
	iv. Personal Protective Equipment (PPE)	✓		
	v. Rubbish Bin	✓		
	vi. Proper Rubbish Disposal Site	✓		
6.	Are the following services close to the proposed site?			
	i. School	✓		
	ii. Clinic	✓		
	iii. Communication Mode	✓		
	iv. Clean and safe Drinking Water		✓	
	v. Market	✓		Community market and other small canteen along the road.
	vi. Wharf		✓	
	vii. Airstrip	✓		
7.	Are there any existing natural drains at the site?	✓		

8.	Are there any existing water pipes crossing the site?	✓		
9.	Is there an existing road that might be impacted or damaged during construction?	✓		
10.	Will the subproject likely impact the beneficiaries with noise, odor, or visual impacts during the operation phase?	✓		During the operation period, noise, odor & dust will come from the asphalt plant. Noise from the machines working on the road. Mitigation and management plan must be in place.

Risk Screening summary:

Management and Mitigation Recommendations
Summary notes: From the risk screening above, ESS1, ESS2, ESS3, ESS4, ESS5, ESS6, ESS7 and ESS10 will be considered in this subproject.
ESS1: Risk of flooding to be consider and impacts may include polluted water/streams. Contractor to compile Stormwater management plan, spill control plan, sediment and soil erosion plan and SWMP. Ongoing water quality monitoring by the contractor. Also GHG emissions to be considered in the CESMP.
ESS2: Workers and community safety. Include OHS management Plan, TMP and Workers camp and Labour Influx and GBV/SEAH , including CoC for workers.
ESS3: Contractor will extract quarry from landowning groups, so Quarry Management Plan (QMP) will be compiled for approval. Also BMP from government(MMERE) and MOU with landowning groups.Also Workers camp plan, hazardous waste materials plan and SWMP as part of the CESMP.
ESS4: Risk of community impacts and can be mitigated through Workers camp, TMP, SWMP, spill prevention plan, Stormwater management plan and Rehabilitation plan to be part of the CESMP. Also risk of biosecurity threat is triggered. Finally, workers code of conduct, GBV/SEAH policies to be part of the CESMP.
ESS5: A Resettlement Action Plan (RAP) will be compiled by PST to address issue of involuntary resettlement for th Fiu River bridge structures.
ESS6: Risk of flooding for contractor to consider. RAP for the affected parties.
ESS7: RAP to be drafted for the affected parties of Fiu River bridge. At least 3 x structures will be affected and require relocation/compensation/deed of settlement. Include gazetted roads in Malaita in the ESMP.
ESS8: Chance Find procedure as mentioned in this ESMP. See Appendix G.
ESS10: Labour Influx plan will be compiled as part of the CESMP. Codes of conduct for workers, GBV/SEAH awareness. MOU to be signed with the Landowning groups of the quarry sites, camp and laydown areas.

Appendix K: Fiu Bridge Concept Design Plans

