SOLOMON ISLANDS ELECTRICITY ACCESS AND RENEWABLE ENERGY EXPANSION PROJECT (PHASE II) (P162902)

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

SOLOMON ISLANDS ELECTRICITY AUTHORITY

November 2017

Acronym

AXO	Abandoned Explosive Ordnance
CESMP	Construction Environmental and Social Management Plan
ECD	Environment and Conservation Division
ED	Energy Department
ESMP	Environment and Social Management Plan
ESMF	Environment and Social Management Framework
FPIC	Free, prior, and informed consultation
FTE	Fixed Term Estate
IA	Implementing Agency
IP	Indigenous Peoples
IPP	Indigenous Peoples Plan
MAL	Ministry of Agriculture and Livestock Development
MCT	Ministry of Culture and Tourism
MDPA	Ministry of Development, Planning and Aid Coordination
MECDM	Ministry of Environment, Climate Change, Disaster Management and Meteorology
MFT	Ministry of Finance and Treasury
MID	Ministry of Infrastructure and Development
MLHS	Ministry of Lands, Housing and Survey
OBA	Output Based Aid
OP	Operational Policy
PE	Project Engineering
RSIPF	Royal Solomon Islands Police Force
RSIPF EOU	Royal Solomon Islands Police Force Explosive Ordnance Unit
SIEA	Solomon Islands Electricity Authority
SOP	Standard Operating Procedure
SP	Solomon Power
SREP	Scaling Up of Renewable Energy Program in Low Income Countries
UXO	Unexploded Ordnance
WB	The World Bank

TABLE OF CONTENTS

1. INTRODUCTION

The Solomon Islands Electricity Access and Renewable Energy Expansion Project (SIEAREEP) (Phase II) (the Project) will comprise the following three components, which are described in more detail in Section 3 – Project Description:

- Component 1 – Hybrid mini-grids
- Component 2 – Connections to low-income households
- Component 3 – Grid-connected solar PV power

The Project will contribute to improved lifestyle and increase shared prosperity for the low income household which is 40 percent of the population. This will provide access of low-income households to electricity in Peri-urban and rural areas of Solomon Islands, and by increasing the generation capacity of renewable energy facilities (solar PV) in the Islands. Provision of infrastructure such as stable supply of grid-based electricity has the potential to promote economic growth, for example, by refrigeration of fish, pumped irrigation, processing of produce, and development of the tourism industry, as well as improving sustainability and affordability through the replacement of diesel generation with more affordable sources of power. It will also contribute to global efforts to mitigate climate change by promoting the use of clean energy technologies, including the use of solar energy solutions in rural areas, to displace the current use of mainly kerosene for lighting.

The Project forms part of a broader initiative of Solomon Islands Electricity Authority (SIEA), trading as Solomon Power, the state-owned enterprise responsible for energy generation and distribution within the Solomon Islands. Solomon Power has recently started to invest in strengthening and expanding its system. To date, the investment program includes installation and commissioning of an additional 10 MW of diesel generator capacity at Lungga Power Station in Honiara in 2016. The investment also includes at least 23 subprojects to expand Honiara grid, installation and commissioning of two outstations solar-diesel hybrid systems in Taro and Seghe in 2017 and development of more than 40 proposed hybrid power generation and mini-grid distribution systems in the next ten year period.

Solomon Power is committed to expand its service both in Honiara, rural areas on Guadalcanal and other outer islands. The initial connection fee is an impediment that cannot be overcome without financial support. Therefore, the Project will assist eligible low income households to connect to the existing electricity grids in Peri-urban areas of Honiara and other provinces. This project will also assist low income households in targeted rural villages, or outstations to be connected to the new micro-grids. The Project will help Solomon Power meet its goal to double the number of customers from 15,500 to 31,000 by 2021 – a goal supported by the Ministry of Mines, Energy and Rural Electrification (MMERE). Table 1 outlines summary of the sites (both new and existing sites) which the project will assist in to connect more than 15000 customers as per the goal indicated.

An Environmental and Social Management Framework (ESMF) is prepared as required under the World Bank's Operational Policy / Bank Procedure (OP/BP) 4.10 Environmental Assessment safeguard the confirmed and the proposed project sites The purpose of this ESMF is to ensure that all components of the Project meet the environmental and social safeguard policies of the World Bank and laws and regulations of Solomon Islands.

The Project will be supported by grants from the Scaling up of Renewable Energy Program in Low Income Countries (SREP) under the Strategic Climate Fund, the International Development Agency (IDA), SIDS-DOCK an initiative of the Alliance of Small Island States, the Global Environment Facility (GEF), and other as yet to be determined funding sources.

Table 1: Potential Connections to Existing Grids by Location

Item No.	Title	Type of Survey	Province	Potential Customers
1	Hauhui	Solar Hybrid	Malaita	324
2	Sasamunga	Solar Hybrid	Choiseul	336
3	Vonunu	Solar Hybrid	Western	218
4	Namugha	Solar Hybrid	Makira	272
5	Santa Ana	Solar Hybrid	Makira	462
6	Ulawa	Solar Hybrid	Makira	763
7	Visale	Solar Hybrid	Guadalcanal	153
8	Lambi	Solar Hybrid	Guadalcanal	218
9	Henderson	Network Extensions	Honiara	33
10	Kombivatu	Network Extensions	Honiara	115
11	Ngalimera	Network Extensions	Guadalcanal	44
12	Amaville Community	Network Extensions	Honiara	39
13	Henderson DC Park	Network Extensions	Honiara	38
14	Kilusakwalo	Network Extensions	Malaita	244
15	Lio Creek	Network Extensions	Honiara	221
16	Dunde	Network Extensions	Western	143
17	Mbaru (Noro)	Network Extensions	Western	85
18	Buala	Network Extensions	Isabel	300
19	TBC	56*Network Extensions	TBC	7280
20	TBC	16*Solar Hybrids	TBC	5120
				16408

2. PURPOSE AND SCOPE OF THE ESMF

The ESMF will serve as the project's umbrella for the environmental and social management document, setting out the strategy for screening the Project to ensure that key project-related environmental and social issues are captured. The purpose of this ESMF is to guide the Implementing Agency (IA) – Solomon Power – on the environmental and social screening of the Project activities and subsequent environmental and social assessment of these activities during project preparation, design and implementation. This ESMF together with Standard Operating Procedures (**Annex A**) of Solomon Power, provides:

- Project design to mitigate impacts and optimize benefits;
- Protocol during construction to mitigate environmental and social impacts to pre-construction conditions;
- Protocol for confirming and documenting authorization of impacts on any affected land and assets prior to connection;
- Consultation mechanism on the project and the ESMF and records of consultation;
- Complaint / grievance handling mechanism;
- Roles, responsibilities and capacity of those involved;
- Monitoring and reporting mechanism; and
- Budget mechanism

The ESMF was prepared based on a review of available documents provided by Solomon Power and the World Bank, as well as information provided through interviews with key Solomon Power staff, and a member of the Ministry of Lands responsible for aspects of the existing low income household electrification program.

The ESMF is based on limited social assessments. At the programmatic level, limited social assessments are undertaken to aide in the selection of potential subprojects, by determining if the right communities are being targeted, what social effects (both positive and negative) may accrue, if any, and any key social challenges that may be encountered (see later discussion on ability to obtain a license to occupied government land, and the ability to pay for the license).

At the subproject level, limited social assessment information is collected by Solomon Power during detailed site survey reports for hybrid solar / mini-grid systems (Component 1); it receives applications for electricity connections to low income houses (Component 2); and when an ESIA is prepared for a grid-connected solar facility (Component 3).

Survey reports generated for Component 1 identify the location, type and number of potential new customers that wish to receive electricity connections (permanent, semi-permanent and leaf-type houses; schools; mini-hospitals/clinics; shops/canteens; churches; and commercial buildings), land ownership and willingness of communities to sell/lease their land for the subproject, road accessibility for installations and the availability of these existing rights-of-way to be used to install the electricity infrastructure. Prior to initiating work, Solomon Power will need to consult with communities it has identified for solar hybrid / mini-grid facilities to confirm community support, the ability of individual households to pay the electricity tariff, and the availability of community land on which to implement the subproject.

For Component 2 – Connections to Low Income Household earner: Those wishing to receive electrical connections have to formally apply to Solomon Power. In filing the application, the householder must agree to a number of written conditions, including proving legal title to occupy the land, paying a security deposit that amounts to roughly the first two months of electricity tariff, paying the government approved tariff for electricity consumed, and obtaining all easements/way leaves, or statutory consents or approvals and consent of the lessor/landlord. Prior to Solomon Power initiating connections to low income households within a given community, it will need to consult with members of the community to make potential applicants aware of the program and the criteria for receiving electricity connections, particularly the requirements for proving legal rights to occupy the land, the process and cost for obtaining and retaining legal title, where not already held, and the amount of ongoing electricity tariff payments that will be required to continue to receive electricity.

As part of preparing the ESIA for grid-connected solar facilities (Component 3), Solomon Power will need to undertake a social assessment of the project-affected community. The assessment will identify such things as: the location and size of the community relative to the proposed facility; demographic makeup; livelihoods and wellbeing of community members; sensitive receptors (e.g., schools, hospitals/clinics, churches) that could be disturbed by construction or operation activities; local infrastructure (e.g., roads, water, sewerage), and community amenities (e.g., community halls, playing fields).

For all types of subprojects, consultation will need to be initiated with stakeholders (e.g., residents, businesses, landowners, communities, NGOs, government agencies, etc.) early in subproject definition and carry on construction and into operation. Solomon Power uses a range of consultation methods (community meetings, local radio and newspaper media, pamphlets, posters, customer service counters, dedicated customer call center, etc.) with which to convey information and receive input from individuals and communities regarding their support, issues and concerns. Solomon Power will follow the process of free, prior and informed consultation to obtain necessary input on its subprojects (see Section 8 – Public Consultation and Disclosure).

3. PROJECT DESCRIPTION

As noted above, the Project will involve three components as follows:

3.1 COMPONENT 1 – HYBRID MINI-GRIDS (INDICATIVE SITES)

This component will involve installation of new hybrid mini-grids in key locations within Solomon Islands. Solomon Power is planning to install more than 40 mini-grids over the next 10 years taking into account population density (number of households), public facilities such as hospitals and schools, 'anchor' loads such as tourism facilities, food processing or other commercial operations. Solomon Power has established a process of prioritizing those mini-grids based on the population, accessibility and availability of land.

Two mini-grids, at Taro (Choiseul Province) and Seghe (Western Province) have been completed. An additional four mini-grids have been approved by the Board of Solomon Power in November 2017, with the potential for these to be funded by the New Zealand government. Another four sites have been identified for inclusion in the current project, and will likely go to the Board of Solomon Power in first quarter of 2018. These four potential sites include: Lambi (Guadalcanal Province), Ulawa (Makira-Ulawa Province), Santa Ana (Makira-Ulawa Province) and Visale (Guadalcanal Province) (**Figures 1 through 4**). The number of customers in these communities is listed in Table 2. At the writing of this ESMF, site survey studies had been completed for all the sites. Details for these sites are presented in this ESMF as examples of sites that may be funded under the project; during project implementation it is possible other sites from the long-list may be prioritized.

Table 2: Potential Mini-grid Systems and Customers

Building Type	Lambi	Ulawa	Santa Ana	Visale	Totals
Permanent house	69	287	90	56	**502**
Semi – Permanent house	40	119	64	8	**231**
Leaf house	83	275	284	54	**696**
School buildings	7	22	10	22	**61**
Mini Hospital buildings	2	5	1	1	**9**
Shops or Canteen buildings	8	18	3	4	**33**
Church buildings	4	23	8	2	**37**
Rest Houses buildings	6	14	2	6	**28**
TOTAL PROPOSED CUSTOMERS	**219**	**763**	**462**	**153**	**1597**

Lambi is one of the villages located at the western side of Guadalcanal Island about 63 km from the Honiara. It serves also as a community center for the population in that part of the island.

Ulawa is one of Makira Ulawa Island. It is also one of the province's growth centers. It provides medical services, education, shops, fisheries, a police post, warehouses for copra and other essential services.

Santa Ana is a relatively small coral island (4.5 km wide by 5.6 km long) located southeast of Makira-Ulawa Province. There are three villages on the island (Gupuna, Ngataghera, and Ntinuatogo) connected by a permanent road, and serviced by a small regional airport. There are also elementary schools and the Highland Community School.

Visale is a coastal dwelling on the northwest coast of Cape Esperance on Guadalcanal, bordering Visale Bay. It is roughly 40 km west of Honiara by road. The village has a medical clinic, Catholic Church, and district village training center for girls.

Solar site, household and network reticulation surveys for each of the four hybrid mini-grid locations were carried out in the field during March 2017 (Santa Ana), May and June 2017 (Lambi and Visale), and September 2017 (Ulawa).

Surveys were undertaken by Solomon Power staff who conducted site inspections / observations and obtained spatial data using handheld GPS to locate the site boundaries. GPS data was plotted onto satellite photographs using MapInfo GIS software. Network routes, tee-junctions, line angles and terminations, power pole positions and pole-to-pole distances were measured.

Potential Solar PV sites were selected on the basis of availability of land, land type, number of households potentially affected, availability of easements for the connecting distribution network and distribution network configuration. Sites were ranked on their ability to meet the following siting criteria:

- Flooding – Solar site not prone to flood waters or within catchment areas
- Shading – must be away from features that would shade solar arrays, including hills, mountains, trees and high buildings;
- Grid connection – must be close to load centers;
- Access – must have good road access capability;
- Site size – sufficient size to accommodate PV panels to meet the specific community loads

Household surveys were undertaken to identify potential demand for electrical connections, to gather relevant information about the potential customers and to determine the types of houses and other buildings, and type of connection for each customer installation.

A network reticulation survey is also undertaken to determine how the customers will be safely supplied with electricity from the solar/mini-grid supply sites.

During project preparation, and assuming the Board of Solomon Power approves each site as a priority, additional feasibility studies will be conducted by Solomon Power to determine specific infrastructure siting and design requirements for each subproject. Land for these sites will need to be secured – a process that will likely take up to one year and will depend on the category of land (customary, perpetual estate, provincial or government land). For this ESMF, these four mentioned subprojects have been treated as “indicative sites” for the purpose of identifying potential environmental and social issues that may need to be addressed.

Once the technical and economic feasibility of potential locations is established, communities in the identified sites will be invited by Solomon Power to elect to receive a micro or mini-grid under the

project. A key component of project scoping is the development of a well-established and transparent citizen engagement and community consultation, including resolution of land-related issues.

Although there are a range of mini-grid solutions, the initial technical design will be based on solar photo-voltaic (solar PV) with or without battery storage and/or diesel back up. The installations will be modular, scalable with demand growth and will allow for other generation sources, such as small hydro (if available), to be connected in future.

The construction of the mini-grids will be competitively tendered. Solomon Power will oversee the construction of the mini grids following a supply and install contract. These mini-grids will be owned, operated and maintained by Solomon Power, rather than community managed, as Solomon Power is better equipped to reliably operate and maintain hybridized systems.

Figure 1: Potential Hybrid Mini-grid Development at Lambi, Guadalcanal Province

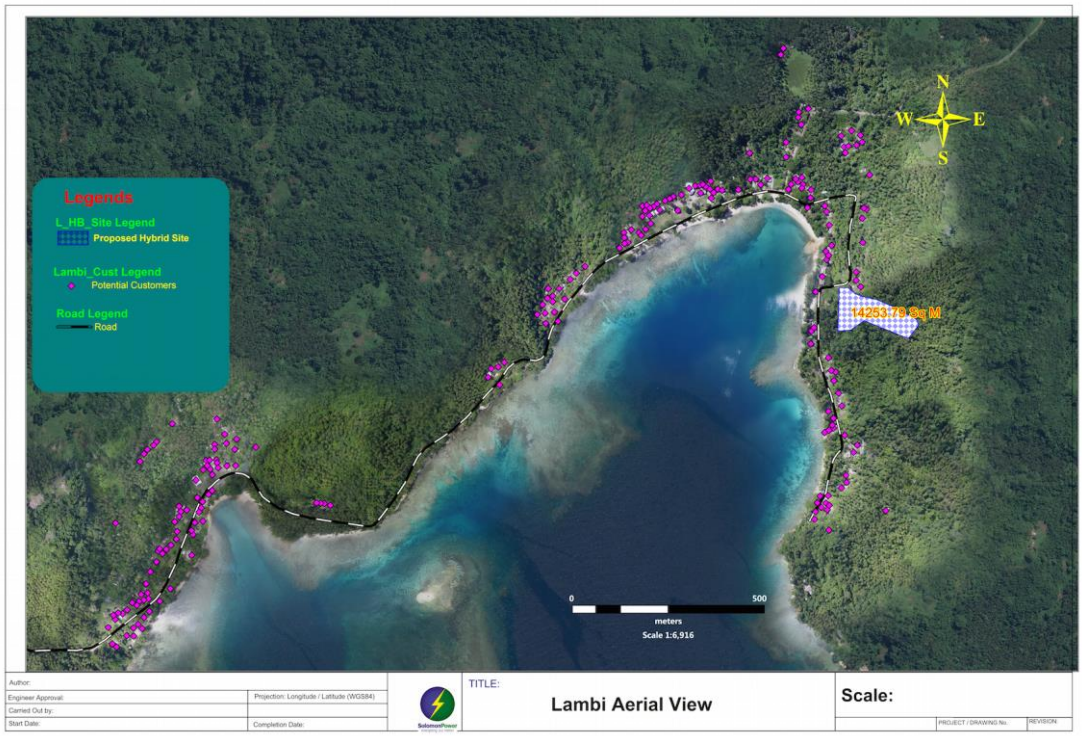


Figure 2: Potential Hybrid Mini-grid Development on Ulawa Island, Makira Province

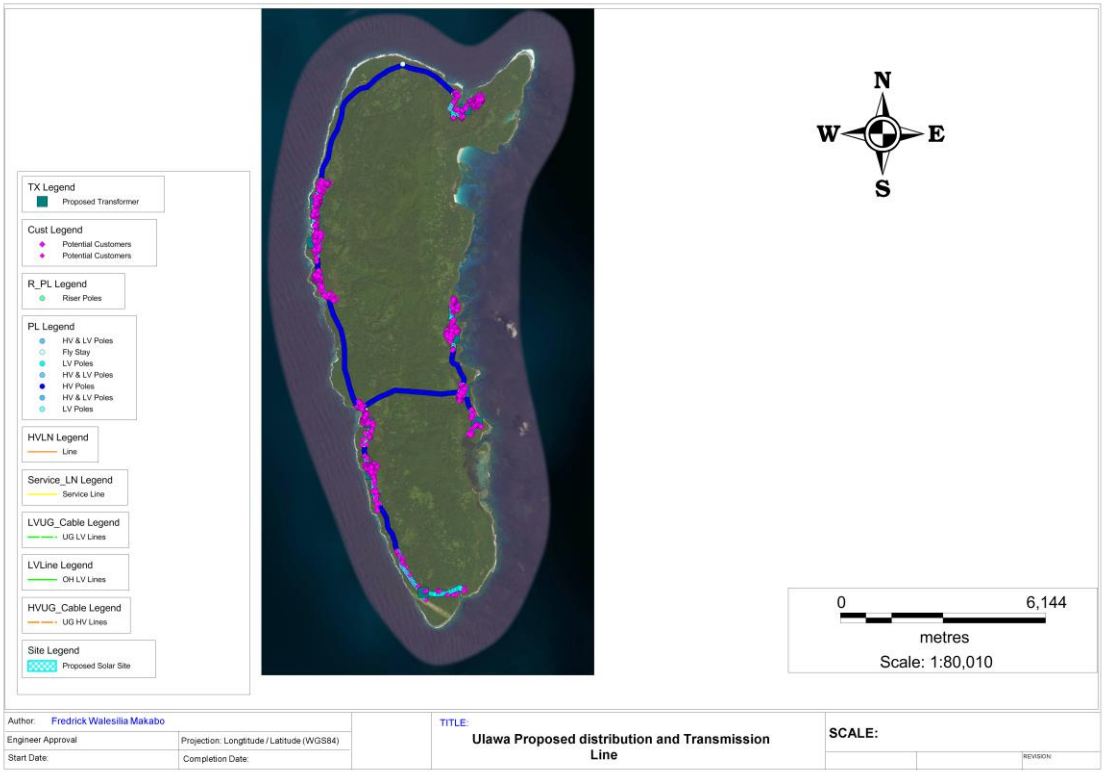


Figure 3: Potential Hybrid Mini-grid Development at Santa Ana, Makira Province

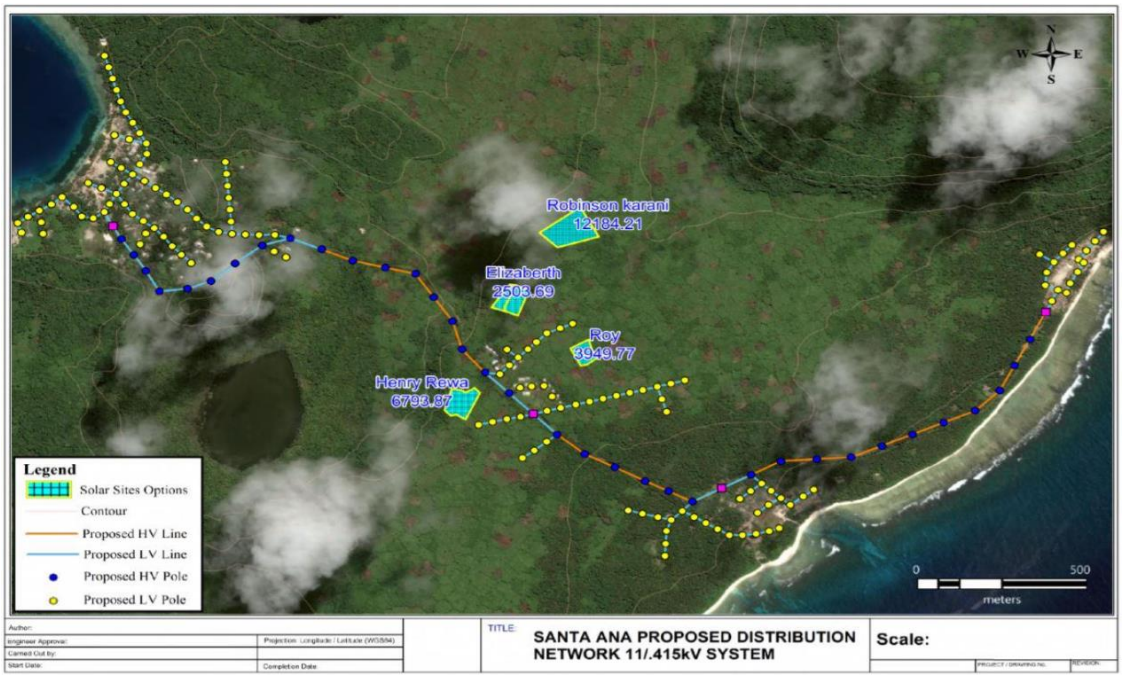
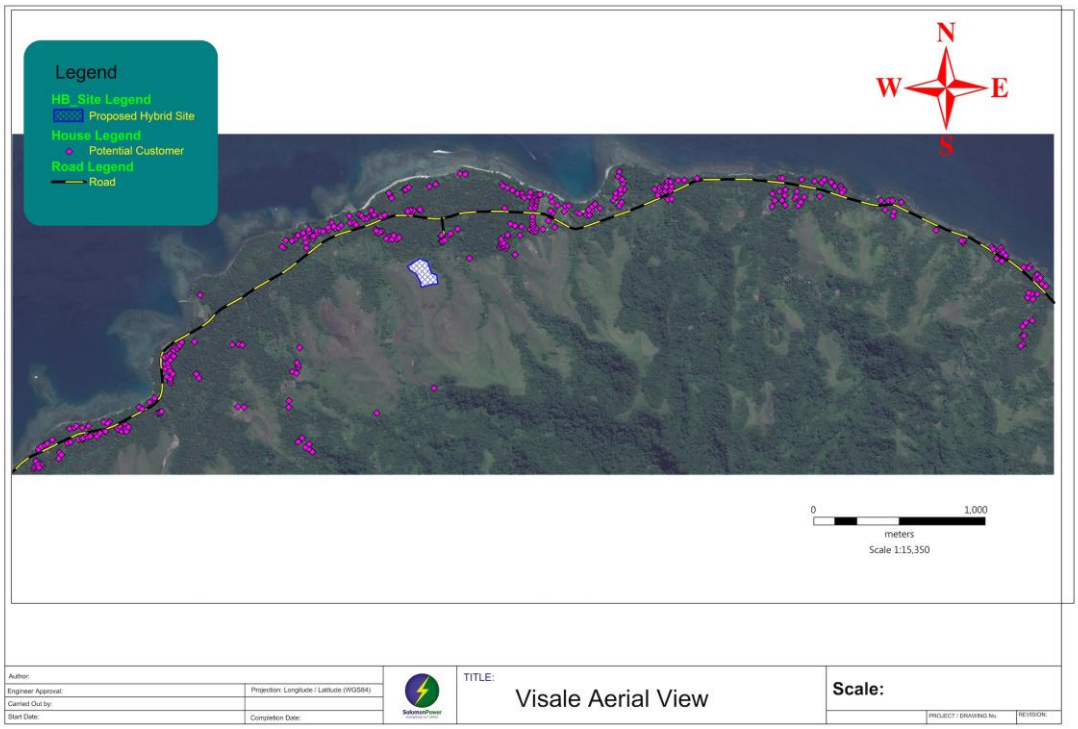


Figure 4: Potential Hybrid Mini-grid Development at Visale, Guadalcanal Province



3.2 COMPONENT 2 – CONNECTIONS TO LOW-INCOME HOUSEHOLDS

Component 2 will involve new electricity service connections and subsidies for household wiring for low-income households accessing electricity services connecting to the mini-grids to be built under Component 1, and others across Solomon Power's existing grid.

This will be accomplished through an Output-Based Aid (OBA) mechanism, administered through the World Bank, that builds on the preceding Phase I project (Solomon Islands Electricity Access Expansion Project – SIEAEP), in which the OBA mechanism has been used. As with the Phase I project, Component 2 of the Phase II project provide one-off OBA subsidies to eligible low-income households to cover a portion of the upfront cost of electricity service connections in the Honiara grid (existing service area and planned expansion areas), and in the outstations, including those being developed through Component 1, and possibly others.

The combination of improved affordability of energy and profitability is expected to contribute to improvements in the economics and financial returns from connecting new customers near existing grids, who are currently considered uneconomic to connect by the utility without an OBA subsidy.

The rationale for the OBA subsidy is based on the affordability (or lack thereof) for low-income households. As it is, a house located 30 meters from the nearest pole will have to pay about SBD2,500 (US$313) for the service line and the meter (excluding about SBD1,700 which Solomon Power shoulders for the first 20 meters of connection), and additionally pay more than SBD10,000 (US$1,250) for in-house wiring. These costs, which total SBD12, 500 (US$1,560), are unaffordable given that the monthly income of the lowest quartile in urban areas is SBD2, 000. Although Solomon Power did not

have accurate data, the OBA Consultant identified many low-income households in the existing Honiara grid area that were not connected to the grid, since they could not afford this initial connection cost, or did not have a License of Land Occupation, a prerequisite under the Electricity Act before a household can be connected to the grid.

In the outer islands, where the costs of the service line and in-house wiring is even more expensive, and further compounded by the lower monthly income of SBD850 for the lowest quartile, the affordability gap is greater. The proposed OBA grant will provide targeted subsidies to low-income households to lower the capital costs of service connections and in-house wiring, not just to provide lighting, but also to provide income-generating opportunities.

One-off OBA subsidies will be provided to cover the cost (up to a predefined limit) of households connecting to the grid and mini-grids and household wiring for the households accessing grid-based electricity services under the project. Implementation support will also be provided under Component 3 (described below in Sections 3.2 and 3.3) to cover operating costs, including environmental and social impact management, and independent verification of outputs, respectively. As part of the verification process, a Verification Agent are likely to conduct a short survey with households to assess how the household perceives that electricity connections will make a difference to their lives. The Verification Agent will also collect data on how many beneficiaries are female-headed households.

Eligibility criteria for receiving electricity connection under the OBA subsidy will be based on the geographic location, and self-selection. Consumers will apply for a service connection as per current processes (Annex B).[1]

To be connected to the electrical grid under the OBA initiative, households must apply to Solomon Power for an electricity connection. One of the Key criteria for connection is providing evidence of the legal right to reside on the land on which the home is located. This proof must be in the form of a current Temporary License to Occupy (TOL) or the more secure Fixed Term Estate (FTE) (long-term lease of typically 50 to 75 years), either of which is required for land inhabited within the Honiara area. For customary land occupied outside Honiara, Solomon Power will accept applications for electricity connections on the basis of a memorandum of understanding (MOU) between the customary landowners and Solomon Power.

For informal settlements within Greater Honiara without a TOL or FTE, Solomon Power is unable to connect households on government land using the standard application process, notwithstanding that they would otherwise meet all other criteria for connection. In essence, these applicants can be denied an electricity connection, as the household is deemed to be illegally residing on government owned land. To date, no more than 600 applications have been received out of more than 2500 potential new customers, primarily due to the inability of applicants to provide a valid land title.

To obtain a TOL, the land must be surveyed by the Ministry of Lands, Housing and Survey (MLHS), and allocated a Lot and Parcel number. This can take up to a year or more. A one-time fee is charged by

[1] Under the current program and in order to qualify, consumers will fall into the following criteria: (i) beneficiaries fall under the prepaid residential category; (ii) beneficiaries do not have a previous connection under their name; (iii) service connection is capped to 10 A for a period of 12 months; and (iv) service connections are individual, and cannot be shared with other households.

the householder to obtain the TOL, with an annual fee collected to keep the TOL current. If the annual fee is not paid, the fee accumulates as an arrears and the TOL ceases to be current.

MLHS has implemented a program of converting TOLs to the more secure FTEs in 30 areas around Honiara. However, to date the uptake of conversions has been slow, most likely because the process of communicating the offer to convert to an FTE is posted on a noticeboard that requires checking on the part of the TOL holder, or the household is unable to afford the cost of converting to, and maintaining the annual payment for an FTE, the latter of which is more costly than a TOL. To increase the potential number of conversions, Solomon Power has agreed to hold awareness raising events aimed at promoting access to electricity, educating communities on the risk of continuing to reside on government land without a current TOL, and advising on the process for obtaining a TOL, and converting TOLs to FTEs.

Still, some people may not be able to afford the cost of converting their TOL to FTE due to their lack of capacity to pay the fees, or FTEs may not yet be offered in their areas. For these instances:

- In the case of applicants whose unpaid fees are in arrears, there may be an opportunity for MLHS to agree on a schedule of payment for arrears, and for the applicant to provide Solomon Power with a letter describing the schedule, signed by the Commissioner of Lands.
- Where an applicant is located in an area that is planned to be offered FTEs in the future, the feasibility of a standard letter of support from MLHS is being investigated. The letter would describe the expected process and the future offer of an FTE, subject to the payment of all relevant charges including premium and land rent, and also be signed by the Commissioner of Lands
- Where an applicant does not hold a valid TOL and the land was purchased from a previous occupant without such documentation transferred, and/or land was transferred within a family (e.g., from parents to children), consideration could be given to obtaining a letter of support from a City Council or church representative attesting that she/he is the occupant of a given parcel of land.

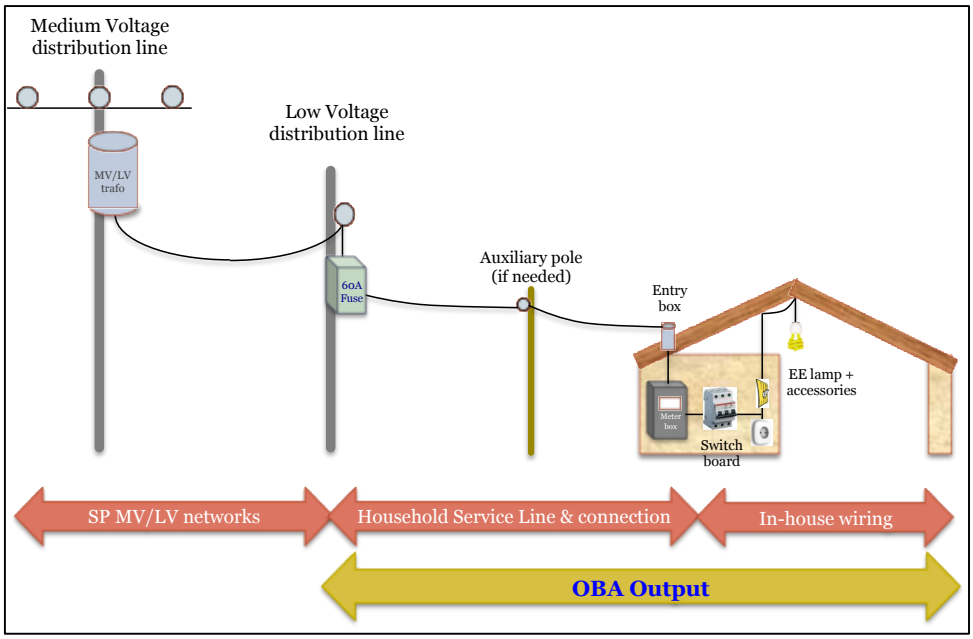
As previously described, prior to new connections being made, Solomon Power will consult with the community regarding the application process, requirements for land title and the ongoing electricity tariff payments. An Environmental and Social Management Plan (ESMP) will also be required prior to new connections being made (see Section 9.2). The ESMP is to include the finalized application process for households in arrears on their TOL/FTE, or where the land title has not been formalized and offered FTEs.

Applicants that meet the criteria for electricity connection will receive the OBA subsidy to cover the following:

- Materials and installation of the service line and auxiliary pole, when needed;
- A pre-paid meter; and
- In-house wiring including protection, earthing, GPOs and LED light bulbs.

Figure 5 illustrates the service line connection, in-house wiring and auxiliary pole (if needed). Solomon Power would competitively procure the materials for the service line and install the service line using its own staff/electrical contractors and also import in-house wiring materials in bulk. It would then contract licensed electrical contractors for large batches of works (e.g., up to 500 connections for Honiara).

1+



3.3 COMPONENT 3 – GRID-CONNECTED SOLAR (PV) POWER

Component 3 will involve installation of between 0.5MW and 2.5MW of solar (PV) generation to be connected to the existing grid on Guadalcanal and/or Malaita islands.

Given the high cost of power in Solomon Islands, adding affordable and reliable solar generation to displace diesel can go a long way in lowering the average cost of power in the country. However, there are some limits to the amount of variable sources of power that can be integrated into the country's generation mix, in particular intermittent generation without storage. At present, the amount of variable generation is limited to 50kV of solar at Solomon Power's head office, and 1MW of solar at Henderson (also known as Fighter 1). When combined with storage and with planned projects like Tina River Hydropower Development Project (TRDHP) (Honiara, Guadalcanal), there is significant room to grow renewable generation in the country.

The addition of grid connected solar power would contribute to the overall share of renewable energy in Solomon Islands energy mix. A number of renewable energy projects are being developed in Honiara, and in outstations – this is happening through additional grid-connected solar power (Solomon Power HQ; Henderson–Fighter 1), possible hydropower projects (TRHDP), or through new hybrid (solar-diesel) mini-grids and/or conversion of existing outstations from all diesel to solar-diesel. The large displacement of fossil fueled generation in both the Honiara and at various outstations is expected to improve energy affordability, relative to the present, and contribute to further improvements in financial performance of Solomon Power.

Solomon Power is interested in developing additional solar photovoltaic (PV) facilities in the near term. However, one of the main constraints for these kinds of projects in Solomon Islands is the availability of land. Solomon Power has identified four potential sites for new or expanded solar (PV) development. Three of the sites are owned by Solomon Power. These include:

East Honiara substation (0.5MW): There is space in the existing East Honiara substation site (**Figure 6**) owned by Solomon Power, according to land title registration listed in **Table 3**. This site could be used to install approximately 0.5MW to 0.6MW of grid-connected solar PV. The land is available and ready to use, and Solomon Power would like to promote this site as a 'green energy' hub. The solar PV array would be situated in the area currently occupied by overgrown gardens.

Figure 6: East Honiara Site

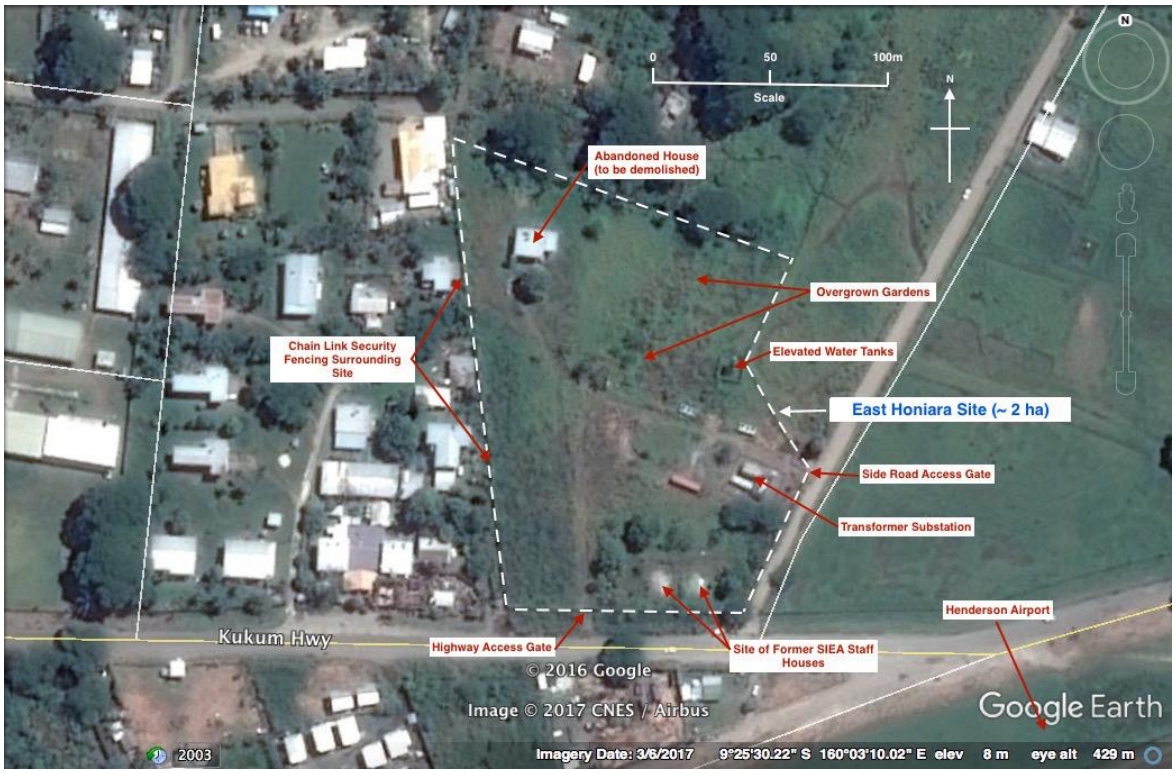


Table 3: Land Title Registration for East Honiara

Parcel Identifier No.	Parcel Size (ha)	Type of Land Acquisition	Effective Date Acquired by Solomon Power
PN192-004-14	2.028	Fixed Term Estate (75 yr. lease)	08 November 1984

Henderson–Fighter 1 (2.5 MW): Solomon Power has installed a 1MW gird-connected solar (PV) facility at this site (**Figure 7**). This is a level site owned by Solomon Power, according to land title registrations listed in **Table 4**. It is surrounded by chain link security fencing, and serviced by water supplied by a borehole. Toilet facilities connected to an engineered septic system are incorporated into the workshop / site office. The facility is controlled from the Lungga Diesel Power Generation Station via a remote telemetry link. There are two new staff houses on the Henderson site, but due to poor road conditions, the site is presently difficult to access and, therefore, staff are disinclined to take up residence.

There is space within the existing fenced property to install an additional 2.5 MW of solar PV. A former issue regarding evacuation of power from the existing 1MW facility has been resolved with installation of a new underground high voltage circuit. Through a process of

consultation and negotiation with nearby landowners, an agreement was reached on acquiring an easement.

Any potential future expansion of the solar PV installation at Henderson - Fighter 1 would necessitate upgrading the road to an all-weather facility.

Additional photos of Henderson–Fighter 1 site, in its various stages of construction to its current state of operation, are included in **Annex D**.

Figure 7: Fighter 1 (Henderson) Site Showing Existing Features

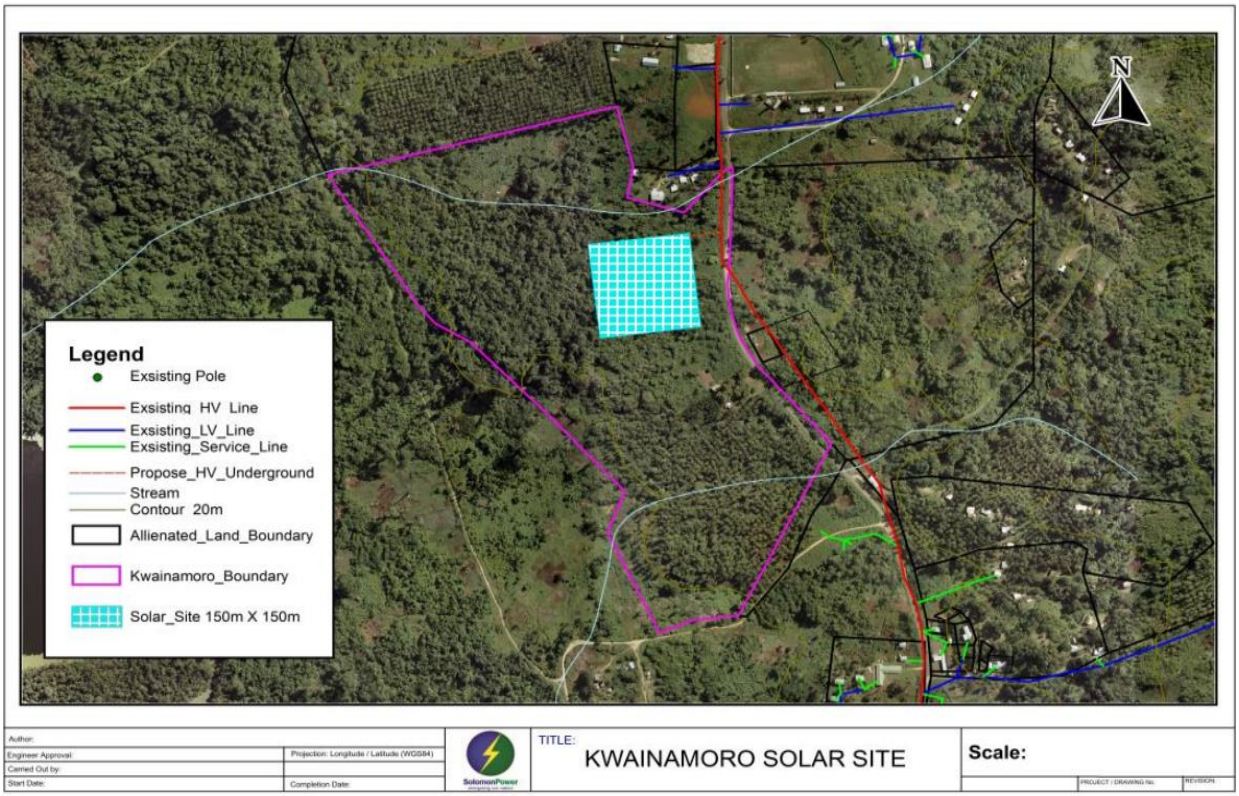
Table 4: Land Title Registration for Henderson-Fighter 1

Parcel Identifier No.	Parcel Size (ha)	Type of Land Acquisition	Effective Date Acquired by Solomon Power
PN192-004-1238	0.3500	Fixed Term Estate (50 yr. lease)	01 Jan 2013
PN192-004-1239	0.2802	FTE (50 yr. lease)	01 Jan 2013
PN192-004-1240	0.2520	FTE (50 yr. lease)	01 Jan 2013
PN192-004-1241	0.2020	FTE (50 yr. lease)	01 Jan 2013
PN192-004-1242	0.2940	FTE (50 yr. lease)	01 Jan 2013
PN192-004-1243	0.2358	FTE (50 yr. lease)	01 Jan 2013
PN192-004-1244	1.2435	FTE (50 yr. lease)	01 Jan 2013
PN192-004-1245	0.2454	FTE (50 yr. lease)	01 Jan 2013
PN192-004-1246	0.2036	FTE (50 yr. lease)	01 Jan 2013
PN192-004-1266	0.2038	FTE (50 yr. lease)	01 Jan 2013
PN192-004-1266	0.2213	FTE (50 yr. lease)	01 Jan 2013
PN192-004-1267	0.1912	FTE (50 yr. lease)	01 Jan 2013

Parcel Identifier No.	Parcel Size (ha)	Type of Land Acquisition	Effective Date Acquired by Solomon Power
PN192-004-1268	0.2080	FTE (50 yr. lease)	01 Jan 2013
PN192-004-1287	0.2080	FTE (50 yr. lease)	01 Jan 2013
PN192-004-1288	0.1669	FTE (50 yr. lease)	01 Jan 2013
Total Area	**4.5057**		

Auki (1.5 MW): Solomon Power is in the process of acquiring a 2.2 ha land sufficient to install a 1.5 MW solar PV facility. The site is as shown in the figure below.

Figure 8: Auki proposed Site



The fourth possible Solar PV site is a 3.0743 ha plot of land located at Tanagai (Tanagai), Guadalcanal. If chosen as a site for developing Solar PV, 1 MW of solar generation could be accommodated on the site.

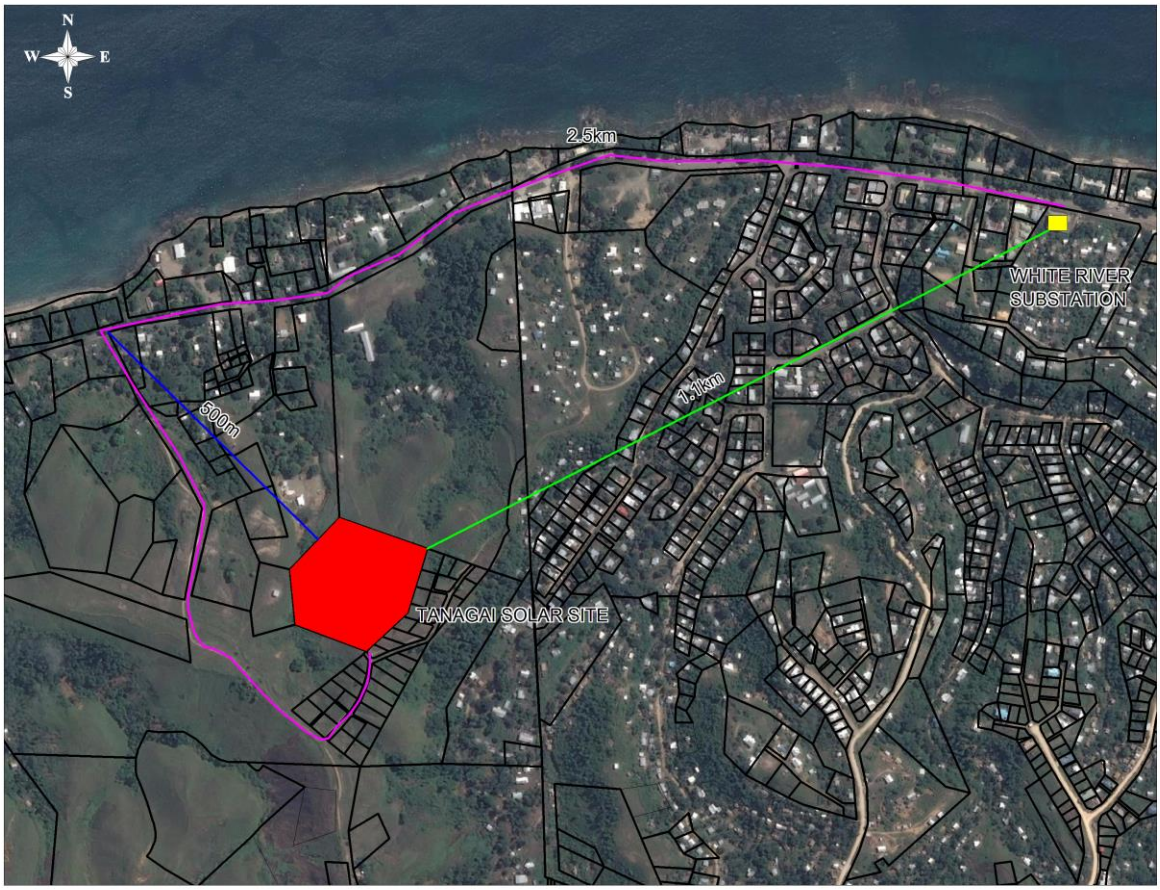
Tanagai (Tanagai) is located 500 meters north of Kakabona a Peri-urban community of approximately 1,000 inhabitants located on Guadalcanal Island along the Kukum Highway approximately 6.7 km west of Honiara CBD. The Poha River flows into the sea in the north of the village. During WW2, the main United States Marine Corps HQ was located at Tanagai where the Catholic mission station is situated. The Tanagai Solar PV site is located approximately 1 km directly southwest of White River Zone substation (WRZS), or roughly 2 km via road from WRZS (**Figure 9**).

Solomon Power does not presently have title to the land, but has negotiated a land purchase agreement with the current trustees / joint landowners Daniella Hekoia Garo, Symphorosa Buka, Christina Patanikeni Garo and Jim Muria Garo, who own the land as Perpetual Estate / freehold (Parcel Number 191-046-81). If the site is selected for a subproject under Component 3, a due diligence

assessment of the land acquisition process will be required, in order to check compliance with the Bank's resettlement policy (OP/BP 4.12). This shall be included in the Environmental and Social Management Plan prepared if the site is chosen.

With the exception of a single house, the Tanagai site is empty. One or two residences are located in the vicinity of the site, along with a church that is still under construction. Development of the surrounding lots is expected to occur over the next few years when power is available in the area.

Figure 9: Tanagai Site Showing Proximity to White River Zone Substation



The aggregation of all projects above comes to a total of about 5.5MW of generation. Depending on the envelope available for this project the World Bank has indicated that it would seek to finance one of the projects above, most likely East Honiara. If more financing becomes available from other sources, additional locations could be addressed.

Solomon Power would develop the solar plant under a supply and installation contract, with the facility being owned and operated by Solomon Power. The utility is financially stable but has limited experience in working with IPPs. The small size of the proposed facilities would also probably not be sufficient to attract serious players and/or good prices under an auction.

It is also noted that Solomon Power have considered using the roof of the Solomon Power building in Honiara for a solar plant. The building is adjacent to the west end of the Honiara Golf Course and

Club and has a roof area of approximately 0.25 ha. The panels would not require clearing of vegetation or excavation and are therefore more straightforward from a safeguards perspective compared to the other sites. It would require design considerations that ensure the structure is safe, as well as managing construction impacts. As described in this ESMF, an Environmental and Social Impact Assessment is required for any chosen Component 3 sites, which would cover the full range of potential impacts and mitigation measures.

4. POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

This section of the ESMF identifies potential environmental and social impacts as they relate to the World Bank's safeguard policies (see Section 5.3).

4.1 PROJECT COMPONENT ACTIVITIES

4.1.1 COMPONENT 1 – HYBRID MINI-GRID DEVELOPMENT

This component of the Project will involve new construction of small-scale solar PV arrays and possibly also installation of storage batteries or diesel generators (i.e., for night time generation), possibly at four locations (Lambi, Ulawa, Santa Ana and Visale). The maximum footprint of each of the Component 1 sites will be up to 2 ha. All proposed hybrid solar PV sites have been anthropogenically altered, and are vegetated with native grasses, brush and in some cases second growth trees. Currently, there are no structures on any of the potential hybrid PV sites being surveyed at any of the four locations. Construction activities will be restricted to improving road access to selected solar PV sites, removal of vegetation, installing foundations for the solar arrays, installing storage batteries (if included in the subprojects) or diesel generators and other ancillary equipment, and installing the solar arrays and controllers. Construction of the mini-grid distribution systems will involve excavating holes for placement of power poles, and possibly clearing new alignments in areas where existing roads or tracks are not available to double as the mini-grid alignment.

4.1.2 COMPONENT 2 – CONNECTION TO LOW-INCOME HOUSEHOLDS

Component 2 will involve subsidizing new electricity connections to low-income households, and installing rudimentary household wiring. The electricity installation will cover basic wiring from the nearest power pole to the house, including installation of auxiliary poles if needed, pre-paid metered connection and in-house wiring. This will involve very little construction such as installation of auxiliary power poles (if needed) to connect low-voltage over-head wires to the building.

4.1.3 COMPONENT 3 – GRID-CONNECTED SOLAR PV

This component of the Project will involve similar construction activities as installation of the Component 1 hybrid solar PV arrays, only on a larger scale and without back-up diesel generators, since the backup will be provided by existing diesel generation and, if one of the two Honiara sites is selected, backup from the future Tina River Hydropower Development Project. As it is expected that the World Bank funding may only extend to constructing a single grid-connected solar PV development, the East Honiara site has been identified as the most likely potential site.

Excavating holes for erecting power poles and laying foundations for outstation hybrid power generation facilities may result in the generation of dust, potential drainage issues and disposal of the excess excavated soil materials. However, the scale of these activities is expected to be small and the environmental impacts are expected to be minor. Nonetheless, Solomon Power and the supply/install contractor are expected to prevent pollution emanating from these activities and apply remedial measures as needed. Overall, environmental impacts for all components of the Project, including pre-construction, construction and operation activities, are expected to be minor in magnitude, extend

over a small area, be of short duration, and reversible when addressed through application of effective mitigation measures.

4.2 ENVIRONMENTAL IMPACTS

The potential environmental impacts are assessed based on the design, construction and operations activities, as well as the physical and biological environment of the project site. Mitigation measures for each potential environmental and social impact are designed to avoid, minimize or mitigate the adverse impacts and enhance the beneficial impacts. Relevant Standard Operating Procedures (SOPs) are listed in **Annex A** to support and manage activities undertaken by Solomon Power on a day-to-day basis.

The following are potential environmental impacts associated with the Project.

Vegetation and wildlife: the Project, including all of its three components, will be carried out in urban and Peri-urban areas where past human activities and land use practices have resulted in previous land clearing and an ecosystem that is maintained in an anthropogenic state. Therefore, vegetation trimming and removal will not affect areas of critical natural habitat that could otherwise support listed wildlife species.

Surface water and groundwater: Exposing soils to the erosive forces of heavy rains and flooding during vegetation removal and excavation can lead to sedimentation of surface water courses. Given the limited amount of vegetation clearing and excavation associated with the Project, relative to the proximity of sites to surface watercourses, no sedimentation of surface water is anticipated. Providing good practices are followed when fueling and servicing machinery, no fuel or lubricant spills are anticipated that could adversely affect groundwater.

Dust and emissions: The construction works will have a minor and temporary impact in the form of dust under dry, windy conditions. Exhaust emissions will be generated by vehicles transporting or erecting power poles, cables, and other construction materials, and for excavation equipment and concrete mixers. Except when installing concrete foundations for outstations and the larger grid-connected solar PV facility, there will be very little construction related activities requiring large scale stock piling of materials that could contribute to dust generation during dry windy conditions.

Construction, demolition and operation waste: It is anticipated that remains of construction and demolition wastes, in the form of solid wastes, waste concrete, miscellaneous debris, spent oils or fuel from construction machinery or plant, construction material, or waste vegetation, may be generated by project activities that requires disposal. Demolition of structures during site preparation applies only to East Honiara. During operation of Component 1 – Hybrid Mini Grid Developments, there may be wastes generated from back-up power systems, if such systems are included as part of this component of the Project. This includes waste oil from oil sumps of diesel engines, and / or spent batteries – both diesel starting batteries and storage batteries.

Unexploded Ordinance (UXO): UXO is defined as explosive ordinance that has been primed, fused, armed or otherwise prepared for use in armed conflict but has failed to explode. The Solomon Islands were the scenes of bitter fighting during World War II. While this was over 70 years ago, UXO may still

be found in locations where munitions were stockpiled and/or where heavy fighting occurred. Pre-construction impacts are expected to be associated mostly with the discovery and clearance of UXO from locations where excavations are carried out.

4.3 SOCIAL IMPACTS

Solomon Islands is one of the largest countries in Melanesia, and is spread across six large islands, dozens of smaller islands, and hundreds of islets and atolls. More than 80 percent of Solomon Islanders live in rural villages of several hundred people. Its widely dispersed population, along with a narrow economic base, makes the provision of public and infrastructure services challenging. The population is culturally diverse, with 120 indigenous languages spoken throughout the archipelago. Melanesian pidgin is the lingua franca. The social system[2] of the traditional Solomon Islands Melanesian population, with its customary tribal hierarchy, gives meaning to society. These institutions are based on a land tenure system that binds together all persons within the group. In this context, people's relationship to the land is an integral part of their relationship with each other. The tribe system is a larger grouping bound together by descent from the first pioneer to have settled and populated an area of land. The customary communities have a unique inheritance and limited distribution mechanism, with land and resources managed through village and family units[3].

The main social impacts from the Project are strongly positive. Provision of electricity supply will strengthen the socio-economic integration of the beneficiaries by providing them with the opportunity to access education, improved health outcomes and providing income generating opportunities, amongst others.

Potential adverse social impacts are associated with land acquisition and damage to physical assets, noise and vibration, health and safety, and use of local water supplies.

Land acquisition and impacts on physical assets: New hybrid mini-grid (outstation) facilities will each require roughly 1 ha of land for the solar PV arrays, battery system (if used), diesel generators and a small Solomon Power site office. Solomon Power will obtain the needed land on a long-term lease basis (i.e., 25 years), at the end of which the lease will either be extended, or the land returned to the lessor. This approach has been followed for existing hybrid generation systems by Solomon Power and 'as of right' under law. Therefore, the proposed project activities, including the implementation of associated facilities, are unlikely to encroach on any privately owned or communal land. Solomon Power has undertaken land surveys for solar PV micro and mini-grid sites at Lambi, Ulawa, Santa Ana and Visale to identify land that is either government owned or available for lease.

The micro / mini-grid systems will involve only minor civil works such as excavation of holes for power pole installation and trimming or removing vegetation along easements to make room for over-head reticulation. Power pole installations will occupy only small footprints (< $1m^2$) each and, therefore, will

[2] Social Policies in Solomon Islands and Vanuatu. Biman Chand Pasad and Paul Kausimae. UNRISD. 2012.
[3] National Development Strategy 2011 to 2020. Government of the Solomon Islands.

require very little. All poles will be located either along existing road corridors or within communal/community owned land.

Any removal of trees/vegetation on non-road reserves to facilitate household connections will require consultation with the tree owner and will be undertaken only with the consent of the owner. Where required, Solomon Power will provide compensation for any trees that are removed in accordance with rates prescribed by the Ministry of Agriculture and Livestock Development in accordance with regulations. Where the Project has the potential to impinge or otherwise interfere with private structures, the Project will avoid the activity that would otherwise affect the structures. Therefore, it is not anticipated that there will be any impacts to private structures.

There will be no need to acquire land to provide electricity connections to low-income households. Minor damage to assets may result from the physical connections to structures and the installation of a power pole (if needed), which might involve having to place a power pole in an area such as a garden. Other minor damage may be caused by trimming vegetation to provide a clear, unobstructed aerial pathway for the overhead electrical line between the power pole and the building. This may involve arranging for an easement for over-head line from the property boundary to the house. Since the installation work will be undertaken only if there is demand by, or an application from, the applicant / customer (i.e., owner of the household), the work will only be conducted based on obtaining consent from the household owner with an acceptance that the above noted minor impacts are acceptable. The customer will organize the access from the street boundary to the property boundary as well as from the property boundary to the house, including trimming vegetation. Installation of power poles and in-house wiring will be carried out by a licensed service-provider (i.e., electrical contractor). Compensation for any damage to private property resulting from installing power poles or household wiring will be the responsibility of the contractor.

Likewise, for the grid-connected solar PV facilities, there will be no need to acquire land, since Solomon Power either already owns each of the sites being considered for development or, in the case of Tanagai, will only consider developing this site if it is acquired through a willing seller / willing buyer land acquisition process that is unencumbered.

Noise and vibration: There is no noise or vibration standard in Solomon Islands. Notwithstanding, Solomon Power will follow good international industry practice (GIIP) to mitigate potential impacts.

For the type of activities associated with Component 1 and 2 subprojects, there will be some temporary adverse impact due to the noise of the construction equipment. However, noise impacts are expected to be temporary and intermittent, and attenuate quickly with distance depending on the type of work being undertaken, and the location and type of equipment being used at the time. For the most part, construction will be short in duration and carried out in fairly remote areas, away from schools or residences.

Solar PV facilities and electricity distribution systems will not generate any discernable noise during operation. There will some low level humming noise from the diesel generator that forms part of the hybrid generation system at the outstations. However, the noise is unlikely to be discernable given the remote locations of the facilities, the distances to receptors, and the use of equipment that incorporates noise suppression devices such as exhaust mufflers and noise baffles.

Traffic: The project may generate temporary negative traffic impacts, including inconvenience to travelers caused by minor disruptions to traffic movements along local roads and due to temporary blockage of road or driveway access to residential or business properties during the construction period, especially for mini-grid installations.

Health and safety: The project's construction phase may cause minor potential health and safety impacts. The main impacts on health and safety are associated with (i) risk of accidents at work sites, and (ii) traffic related safety issues; and (iii) disturbance from noise and vibration. The risk of spread of communicable disease is considered to be negligible, since only small construction teams will be involved in implementing the Project. There will be no large influx of people in search of jobs at project sites.

Traffic within and adjacent to work sites will be managed to avoid accidents. Noise generating activities will be prohibited outside normal construction hours to avoid disturbing nearby residents.

Water supply: water will be required at the solar PV facilities (hybrid generation sites; grid-connected solar PV site) for panel washing (if required), potable water for site offices, and emergency firefighting (hybrid generation sites where diesel will be stored in tanks for use in the diesel powered generators. It is anticipated that water would be supplied from dedicated boreholes, as is currently the case for Henderson – Fighter 1 solar PV facility.

Table 6 provides a summary of environmental and social impacts that may accrue as a result of the Project.

Table 6: Potential Environmental and Social Impacts

Preconstruction Impacts	Construction Impacts	Operation Impacts
Environmental Impacts		
Demolition wastes including disposal of oil, chemicals, debris, concrete, contaminated soil, scrap metals, septic tanks (and its contents), etc. Transportation of demolition wastes creating dust; Accidental spills of fuels, lubricants or other toxic chemicals causing pollution of soils, surface water and/or groundwater; Clearance of UXO from high probability UXO locations (e.g., if Henderson – Fighter 1 chosen for solar PV expansion).	Vegetation clearing and excavation leading to sedimentation and siltation to adjacent water bodies; Accidental spills of fuels, lubricants or other toxic chemicals causing pollution of soils, surface water and/or groundwater; Noise, vibration and emissions from construction machinery; Dust resulting from windblown soils coming off cleared land, from stockpiles and from vehicles transporting same; Accumulation of construction debris.	Operation of diesel powered generators creating noise and emissions (NOx, SOx, CO_2, CO and particulate matter); Accidental spills of fuel and lubricants used for diesel generator at hybrid power station, or when being transported to site; Wastewater disposal (sewage) from site offices. Storm water drainages; Continuous supply of water to project sites (power station) for use by generators, periodic washing of solar panels (if required), and for emergency firefighting response;

Preconstruction Impacts	Construction Impacts	Operation Impacts
		Disposal of spent storage batteries (if used at hybrid solar PV sites)
Social Impacts		
Operation of demolition machinery creating noise and vibration; Worker safety concerns.	Operation of construction machinery creating noise, vibration and atmospheric emissions; Traffic delays and temporary blockage of road and driveway access to properties; Health and safety impacts.	Accidents arises posing risk to workers (worker health and safety).

5. LEGAL, POLICY FRAMEWORK AND REGULATORY REQUIREMENTS

This section of the ESMF identifies the Solomon Islands institutional framework, key regulatory agencies, policies and legislation, and World Bank policies that have a bearing on how the Project will be regulated.

5.1 INSTITUTIONAL FRAMEWORK

This section presents information on the government agencies and NGOs that will most likely play a role in Project implementation.

5.1.1 MINISTRY OF MINES, ENERGY AND RURAL ELECTRIFICATION (MMERE)

The Ministry of Mines, Energy and Rural Electrification (MMERE) is responsible for mining, energy and water resources in the country. It consists of a number of strategic divisions, including the Energy Division (ED), which is the lead agency directly implementing the Project through Solomon Power. The ED will play an oversight role and ensure that Solomon Power implements the Project according to the directions set by the government. A major constraint faced by the ED is the limited number of officers available to manage quite a broad range of issues relating to energy in the country. In this context Solomon Power provides dedicated personnel for the Project.

5.1.2 SOLOMON ISLANDS ELECTRICITY AUTHORITY

The *Electricity Act 1996* establishes the Solomon Islands Electricity Authority (SIEA), operating under the brand of Solomon Power, as the central entity to generate electricity in the Solomon Islands. SIEA is in charge of all matters related to electricity production and transmission/distribution, including ensuring standards of safety, efficiency and economy. It also advises the Government on matters related to electricity and can make recommendations regarding regulatory instruments. The SIEA is set up as a "corporate body", with independent liability and the capacity to independently enter into contracts.[4]

5.1.3 MINISTRY OF ENVIRONMENT, CLIMATE CHANGE, DISASTER MANAGEMENT AND METEOROLOGY (MECDM)

The Ministry of Environment Climate Change, Disaster Management and Meteorology (MECDM), has four divisions, each with its own respective directors. The Environment and Conservation Division (ECD) is the key department responsible for assessing, monitoring and mitigating the environmental and social impacts of developments in Solomon Islands. The *Environment Act 1998*, *Wildlife Protection Act 1998*, and the *Protected Areas Act 2010,* together with their respective regulations, guide its mandate. The ECD will play an important role under the *Environment Act* in evaluating and issuing the development consent for the Project and in monitoring the environmental impacts of the Project.

[4] *Electricity Act*

5.1.4 MINISTRY OF LANDS, HOUSING AND SURVEY (MLHS)

The complex task of administering land lies with the Ministry of Lands, Housing and Survey (MLHS). The Registrar of Titles serves a core function in formally registering land transactions. The Commissioner of Lands is empowered under the *Lands and Titles Act 1988 (Amended 1996)* with the administration of registered land in the country. While customary lands are beyond the Commissioner's jurisdiction, it is the Commissioner's role to acquire and oversee the registration of customary land for development. With respect to the Project, the Commissioner of Lands has responsibility under the *Land and Titles Act* to oversee the acquisition of customary land, should such lands be required. MLHS is also responsible for enacting the subdivisions and transfers of registered land required for transmission line corridors.

5.1.5 MINISTRY OF CULTURE AND TOURISM (MCT)

The primary role of the Ministry of Culture and Tourism (MCT) is to develop, protect and promote Solomon Islands' culture, art and heritage. Cultural heritage is the responsibility of the MCT's National Museum of Solomon Islands. In the event that cultural artefacts are encountered as chance finds during project implementation, the National Museum will be contacted.

5.1.6 MINISTRY OF DEVELOPMENT PLANNING AND AID COORDINATION (MDPAC)

The Ministry of Development Planning and Aid Coordination (MDPAC) is responsible for coordinating development partner activities and for securing donor funding for new projects/programmes. Aid coordination also includes frequent liaison with aid donor representatives and for the organisation of high-level talks with some development partners. MDPAC is the lead coordinating agency for donor-funded projects and, therefore, is a key stakeholder.

5.1.7 MINISTRY OF FINANCE AND TREASURY (MFT)

The Ministry of Finance and Treasury (MFT) is responsible for delivering high quality, professional financial and economic services to the Minister of MFT, the Solomon Islands Government, other ministries, and the wider community.[5] MFT will be active in structuring and sourcing the financing for the Project.

5.1.8 MINISTRY OF AGRICULTURE AND LIVESTOCK DEVELOPMENT (MAL)

Established in the 1950's, the Ministry of Agriculture and Livestock Development (MAL) is one of the oldest ministries, and has played a key role in the development of the country. While MAL has no direct inputs to the Project, development activities to compensate for impacts on livelihoods could be agriculturally based and, therefore, their inputs in any such initiatives will be important.

[5] Ministry of Finance Corporate Plan

5.1.9 PUBLIC SOLICITORS OFFICE

The Public Solicitors Office provides legal assistance and representation including free legal advice sessions and formal representation of test cases to landowners across the country. The Land Advocacy Legal Support Unit (LALSU) also conducts regular legal awareness trips to each province and is active in advocating for policy and law reform effecting customary landowners. LALSU works closely with NGOs in the environment space and has strong relationships with the Ministry of Environment, Climate Change and Disaster Management. If requested, LALSU will provide assistance to identified landowning owning tribes in the compulsory acquisition process.

5.1.10 PROVINCIAL GOVERNMENTS

Provincial governments, under Schedule 3 of the *Provincial Government Act 1997* (PG Act), have been given responsibility for minor local matters. They have not been empowered with control over the delivery of services for the people. With respect to the Project, the Guadalcanal Provincial Government's newly constituted Town and Country Planning Board will have a role in granting planning consent for project components on Guadalcanal (e.g., Grid-connected solar PV power) under the *Town and Country Planning Act*. This consent is separate to the Development Consent to be issued by the ECD under the *Environment Act*. The Province will also have a key role in issuing business licenses for the developer and other sub-contractors under the *Guadalcanal Province Business and Hawkers Licence Ordinance*.

5.1.11 CIVIL SOCIETY / NON-GOVERNMENT ORGANISATIONS (NGOS)

There is a range of civil society groups and non-government organisations (NGOs), some of whom may take an interest in the Project, including review of the Component 3 – Grid connected solar PV ESIA.

5.2 SOLOMON ISLANDS POLICIES, ACTS AND REGULATIONS

5.2.1 DOMESTIC REGULATORY REQUIREMENTS

Solomon Islands legislation that applies to environmental and social aspects of the Project is summarized in **Table 7**.

Table 7: Relevant Solomon Islands Policies, Acts and Regulations

Policy, Act or Regulation	Main Objectives
Constitution of Solomon Islands	The Constitution provides additional safeguards for the compulsory acquisition of customary land.
Solomon Islands National Energy Policy 2014	The Policy outlines the National Government's policies for the planning and management of the energy sector over the next 10 years. The Policy provides the base for appropriate coordination, planning, promotion, development and management, and efficient use of energy

Policy, Act or Regulation	Main Objectives
	resources".[6]
Environment Act 1998 and Environment Regulations 2008	The Environment Act of 1998 and the Environment Regulation of 2008 require development consent for prescribed activities to be obtained from the Ministry of Environment, Climate Change and Disaster Management (MECDM). A development consent application must include an environmental assessment that complies with the Environment Act and Environment Regulations requirements. The Project is a prescribed development under schedule 2 (section 16) of the Act and, therefore, requires the preparation and submission of an Environment Impact Statement (EIS) through the Environment and Social Impact Assessment (ESIA) Process. The scope of the Act and its Environment Regulations encompass a number of processes, and procedures, and the establishment of an institution, to regulate them. The following key issues are addressed by the legislation: • Provides the guiding principles and definition for environmental management. • Establishes the Environment and Conservation Division as a key institution responsible for managing environmental issues in the country. • Sets out the procedures for undertaking and approving Environmental and Social Impact Assessments. • Develops requirements for robust stakeholder engagement processes through public consultation as part of assessment and in the decision making process. • Requires the formulation of appropriate environmental and social safeguards as part of the environment and social impact assessment process (section 31) • Requires environmental monitoring of the development (section 31) • Establishes the Environment Advisory Committee as the appeal body where the Developer or any person may, within 30 days of the publication of the Director's decision, appeal against the Director's decision concerning the issuing of development consent.
Labor Act 1978	This Act makes provisions for the protection of workers and their rights. It establishes the Office of the Commissioner of Labour to address all labour related issues. The legislation broadly covers the roles and powers of the office, identifies the commissioner as the relevant administrative body, and outlines specific guidance on minimum wages and hours of work for all workers in the country. It also makes provision for the manner in which contracts for employment are made for both national and foreign workers. The provisions of both the Act will be important during the construction phase. Part IX care of workers, requires the employer under: • Article 65: to provide workers with rations. • Article 66: to protect workers and dependent from malaria

[6] Solomon Islands National Energy Policy Framework

Policy, Act or Regulation	Main Objectives
	• Article 67: to provide workers with an accessible supply of clean, non-polluted water for drinking, washing and for other domestic purposes. Water supplies may be inspected by a Health Officer. • Article 68: requires the employer to make sufficient and proper sanitary arrangements for workers. • Articles 69: requires employer to provide accommodation for the worker and his family it they are not conveniently located to the work place. • Article 70: requires the employer to provide medical care at the workplace • Article 71: states that depending on the circumstances the employer may be required to provide medical facilities
Safety at Work Act 1996	This Act deals with worker health and safety. Key sections of the Act include: • Part II: o Article 4 states that it is the duty of every employer to ensure the health and safety at work of his employees. o Article 6: states that it is the duty of the employer to provide a safe workplace for persons other than his employees. o Articles 7 and 8: require manufacturers, suppliers of tools and equipment, and suppliers of chemicals and other hazardous substances to ensure that these are safe and without health risks. o Article 12: states that any employer who operates unsafe machinery or substances that leads to injury will be responsible for the damages. • Part III: o Article 15 requires the employer to protect people from dust, fumes, etc. o Article 16 provides for limits of exposure to dust and fumes. o Articles 17, 18, 19 and 20 require employers to comply with the operating requirements for: (i) pressure and vacuum systems, (ii) machinery; (iii) dangerous machinery, and (v) electrical installations. o Articles 21 and 22 require the workplace to have fire protection and to take precautions against explosions.
River Waters Act 1973	Control over waters for equitable and beneficial use; establishes activities for which permits are required.
Land and Titles Act 1988 (amended 1996)	Consolidates the law relating to the tenure of land, registration of interest in land, and compulsory acquisition of land, and establishes the procedure for the registration and acquisition of customary land. The Act covers customary land rights. Part V of the Act deals with the purchase or lease of customary land by private treaty, and compulsory acquisition of land. For public works the land is not acquired as such, it is gifted or contributed following an extensive period of consultation and agreement through the signing of a Memorandum of Understanding (MOU). The MOU waives the customary interest in the land in lieu of the public infrastructure. Article 12, the Constitution allows the compulsory acquisition of customary land or any right over or interest in it, as long as there have been negotiations with the owner(s) of the land, right of interest prior to the acquisition, the owner have a right of access to independent legal advice, and the interest in the acquired land is limited to a fixed-term interest. The Act also makes provision for preservation orders to be applied to land of "historic, architectural, traditional, artistic, archaeological,

Policy, Act or Regulation	Main Objectives
	botanical or religious interest", and permits the establishment of nature reserves.
Electricity Act 1996	The Act sets out in very wide terms the functions and duties of the Solomon Islands Electricity Authority (SIEA). The SIEA (trading as Solomon Power) is generally in charge of all matters related to electricity production and transmission/distribution in Solomon Islands, including ensuring standards of safety, efficiency and economy. It also advises the Government on matters related to electricity and can make recommendations as to regulatory instruments. Sections 33 provides the legal basis for land acquisition and dealings in land. It states that "Subject to the provisions of the Land and Title Act, the Authority (Solomon Power) may for all the purposes of any of its functions under this Act, by agreement acquire, whether by way of purchase, lease, gift or exchange, any land situated within Solomon Islands, whether such land is immediately required or not." The Act provides power to the authority, among others, to enter and dig out and to consult with relevant parties and provide notice prior work will be conducted. The Act also provides for a grievance redress mechanism that any person who sustains any damage or loss by reason of the exercise of any of the powers conferred by this section upon the Authority or a licensee may make application for compensation in writing in that behalf to the Authority or licensee.
Provincial Government Act 1997	Schedule 3 of the Act provides a list of activities for which the provinces have responsibility, including make their own environment and conservation legislation, and the power to pass ordinances (Section 3). Provincial legislation powers extend to: • Trade and Industry - Local licensing of professions, trades and businesses, local marketing. • Cultural and Environment Matters - Protection of wildlife, coastal and lagoon shipping, • Agriculture and Fishing - Protection, improvement and maintenance of fresh-water and reef fisheries. • Land and Land Use - Codification and amendment of existing customary law about land. Registration of customary rights in respect of land including customary fishing rights. Physical planning except within a local planning area • Local Matters - Waste disposal • Rivers and Water - Control and use of river waters, pollution of water • Corporate or Statutory Bodies - Establishment of corporate or statutory bodies for provincial services including economic activity. (Provincial services include "Conservation of the Environment" and "Fishing"). The Guadalcanal Province Wildlife Management Area Ordinance 1990 (GPWMAO) applies to the protection of wildlife. This ordinance applies to the Project to ensure that wildlife impacts are understood. Other requirements also include business license during construction and approval for construction permit of buildings under the provincial Town and Country Planning Board.

5.2.2 INTERNATIONAL ENVIRONMENTAL AND SOCIAL TREATIES

A number of international environmental and social treaties have been signed and ratified by the Solomon Islands, and were analysed for their applicability to the Project (see **Annex E**). Only two of these treaties have a potential bearing on the Project. These include:

- World Cultural and Natural Heritage Convention (Acceded 1992) – Its purpose / aim is the protection and management of cultural and natural heritage. It is administered by the Solomon Islands National Museum under the Ministry of Home Affairs. It is potentially aapplicable if cultural heritage resources are encountered during construction. A chance find procedure will be implemented for Project.
- United Nations Framework Convention on Climate Change (UNFCCC) (Ratified 28 Dec 1994) – Its purpose / aim is to set an overall framework for intergovernmental efforts to tackle the challenges posed by climate change. It is administered by the Solomon Islands Ministry of Environment, Climate Change and Disaster Management. It is relevant since the Project will provide benefits in the form of reduced use of fossil fuel for electricity production.

5.3 WORLD BANK SAFEGUARD POLICIES

The World Bank's environmental and social safeguard policies are a foundation to achieve sustainable poverty reduction. The objective of the policies is to prevent and mitigate undue harm to people, their livelihoods and their environment in the development process. **Table 8** identifies the safeguard policies triggered by the Project and the reasons for the trigger. Some of the policies are triggered because the Project will involve various physical investments, including construction of distribution lines on land identified and provided by the communities (based on willing buyer-willing seller, negotiated lease/license or other agreed and documented arrangement), line drop extensions from existing grids, and one or more large new solar plants.

Further information on the operational policies that are triggered is provided below in Sections 5.1.1 and 5.1.2.

Table 8: World Bank Safeguard Policies and Project Triggers

Safeguard Policy	Project Component	Policy Triggered?	Reason for Triggering Policy
OP/BP 4.01 Environmental Assessment	1 – mini-grids	Yes	Environmental impact of the works expected to be limited, with relatively minor local environmental impacts during construction. There are potential impacts associated with the disposal of batteries and solar panels
	2 - connections	Yes	Works under component 2 will have limited impacts that can be managed during the construction phase. Potential to cause social impacts in the selection of households for grid connection. Currently households cannot be connected if they do not have a Temporary License to Occupy or Fixed Term Estate (TOL/FTE). There is not sufficient data at present, but it is possible this condition will result in

Safeguard Policy	Project Component	Policy Triggered?	Reason for Triggering Policy
			households that cannot afford the TOL/FTE being denied electricity.
	3 – solar PV	Yes	Diligence will be required for the land acquisition which has already been largely completed (and is expected to be completed in the next 3 months), environmental impacts are likely to be minor as the sites are already cleared and the solar panels will not impact on the surrounding land. There are potential impacts associated with the disposal of batteries and solar panels
OP/BP 4.04 Natural Habitats	1 – mini-grids 2 - connections 3 – solar PV	No	It is not expected that the project would cause any impacts on critical natural habitats, as the project sites will be in already developed rural and urban areas.
OP/BP 4.36 Forests	1 – mini-grids 2 - connections 3 – solar PV	No	The project activities are not expected to create or induce deforestation and their environmental impact is not expected to compromise the integrity and health of forested areas. Some minor clearings of trees, shrubs and undergrowth within urban areas may be necessary under the physical investments.
OP/BP 4.09 Pest Management	1 – mini-grids 2 - connections 3 – solar PV	No	The Project will not involve use of pesticides or herbicides.
OP/BP 4.11 Physical Cultural Resources	1 – mini-grids	Yes	It is possible, although unlikely, that physical cultural resources may be encountered in excavations during the construction phase as there is relatively minor excavation. A chance-find protocol will be included in the ESMF to address chance find of physical cultural resources.
	2 - connections	Yes	It is possible, although unlikely, that physical cultural resources may be encountered in excavations during the construction phase, as there is relatively minor excavation. A chance-find protocol will be included in the ESMF to address chance find of physical cultural resources.
	3 – solar PV	Yes	It is possible that physical cultural resources may be encountered in excavations during the construction phase, especially for this component in which larger earthmoving may be required.
OP/BP 4.10 Indigenous Peoples	1 – mini-grids	Yes	Activities in rural areas, which on a national level, are inhabited primarily by indigenous peoples. Indigenous peoples are also the

Safeguard Policy	Project Component	Policy Triggered?	Reason for Triggering Policy
			principal beneficiaries and, therefore, a separate Indigenous Peoples Development Plan is not required. Instead, FPIC will be incorporated into project design.
	2 - connections	Yes	Activities in rural areas, which on a national level, are inhabited primarily by indigenous peoples. Indigenous peoples are also the principal beneficiaries and, therefore, a separate Indigenous Peoples Development Plan is not required. Instead, FPIC will be incorporated into project design.
	3 – solar PV	No	All prospective solar PV sites are owned by Solomon Power.
OP/BP 4.12 Involuntary Resettlement	1 – mini-grids	Yes	Land acquisition for the small areas of land is required for the physical works is anticipated to be based on willing buyer-willing seller, negotiated lease/license or other agreed and documented arrangement and not to cause physical or economic displacement as a result of the taking of land.
	2 - connections	Yes	Land acquisition for the small areas of land is required for the physical works is anticipated to be based on willing buyer-willing seller, negotiated lease/license or other agreed and documented arrangement and not to cause physical or economic displacement as a result of the taking of land. Extensions of the national grid around Honiara and Auki will be implemented in Peri-urban and rural areas that fall within Solomon Power's concession and it is not expected that land acquisition will be required to serve these ends. The extension of mini grids will require small amounts of land on which to establish drop line connections (the physical connection between the wires in the street and the house). Although the land required for these connections will widely be held under customary title, it is foreseen that the land will be acquired through voluntary arrangements with communities. If Voluntary Land Donation is envisaged, it will follow the VLD protocol developed for the Pacific Islands.
	3 – solar PV	No	All three sites are owned by Solomon Power, a state-owned executing agency. All three sites are free of squatters.
OP/BP 4.37 Safety of Dams	1 – mini-grids 2 - connections	No	No dams will be affected by the Project.

Safeguard Policy	Project Component	Policy Triggered?	Reason for Triggering Policy
	3 – solar PV		
OP 7.50 Projects on International Waterways	1 – mini-grids 2 - connections 3 – solar PV	No	No project activities will take place on international waterways.
OP 7.60	1 – mini-grids 2 - connections 3 – solar PV	No	There are no known disputed areas in the project areas of influence.

5.3.1 OP. 4.01 ENVIRONMENTAL ASSESSMENT

The proposed project to be financed by World Bank requires Environment Assessment to ensure that it is environmentally friendly and sustainable. OP 4.01 (Environment Assessment) sets out the general policies and principles for environmental and social protection for projects financed by the World Bank and requirements for assessment of impacts and implementation plans, and measures to mitigate or manage impacts. OP 4.01 has been used to classify the project category. The proposed project is expected to have minimal adverse environmental impacts. Therefore, the Project has been classified as a Category B activity with this ESMF largely satisfying the environment assessment requirements for the overall project. These impacts are expected to be temporary and can be readily mitigated.

5.3.2 OP/BP 4.11 PHYSICAL CULTURAL RESOURCES

Physical cultural resources are defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Physical cultural resources may be located in urban or rural settings, and may be above or below ground, or under water. Their cultural interest may be at the local, provincial or national level, or within the international community. They are important as sources of valuable scientific and historical information, as assets for economic and social development, and as integral parts of a people's cultural identity and practices. Efforts must be made to avoid or mitigate adverse impacts on physical cultural resources from development projects that the World Bank finances.

The proposed project is expected to have minimal adverse impacts on physical cultural resources given the small footprints of the various project components and/or the state of previously developed land on which they will be implemented. Component 1 – Hybrid mini-grid development – will result in a very small footprint, primarily for small solar PV sites and power pole footprints. Component 2 – Connection to low-income households – is expected to have even less of a footprint that could potentially affect physical cultural resources, given that power poles will only be installed if a house is not within 20 m of an existing pole, and the lands on which the households are situated is likely to have already been anthropogenically altered. Component 3 – Grid-connected solar PV development – will occur on sites that have undergone previous development, reducing the likelihood of encountering physical cultural resources. Notwithstanding the above, a chance find protocol (see **Section 6**) will be implemented for the Project, in the event that any physical cultural resources are encountered.

5.3.3 OP/BP 4.10 INDIGENOUS PEOPLES

OP 4.10 ensures that the development process fully respects the dignity, human rights, economies, and cultures of Indigenous Peoples (IP). The World Bank recognizes that the identities and cultures of IP are inextricably linked to the lands on which they live and the natural resources on which they depend. These distinct circumstances expose IP to different types of risks and levels of impacts from development projects, including loss of identity, culture, and customary livelihoods, as well as exposure to disease. IP are defined under OP 4.10 as distinct, vulnerable, social and cultural groups possessing the following characteristics in varying degrees:

- self-identification as members of a distinct indigenous cultural group and recognition of this identity by others;
- collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and territories;
- customary cultural, economic, social, or political institutions that are separate from those of the dominant society and culture; and
- an indigenous language, often different from the official language of the country or region.

Country-level social analysis undertaken during the preparation of the Environmental and Social Safeguard Instruments for the Pacific Islands (ESSIP) suggests that groups meeting the four defining characteristics of OP 4.10 are likely to be found in Solomon Islands, which is recognized as including numerous self-identifying groups with distinctive institutions, with patterns varying from island to island.

While there are indeed many groups within Solomon Islands that meet the IP definition, the key qualifier for the applicability of the policy is whether these groups are present in the project area of influence.

Project investments will be predominantly within existing urban or Peri-urban areas (e.g., Honiara and outstation sites) with infrastructure sited on Government-owned land. Beneficiary populations within these urban areas are expected to be heterogeneous with individuals from various cultural groups, both local and from further afield in Solomon Islands. Hence, while individual members of IP communities may reside within the project area of influence the nexus with distinct habitats or ancestral territories within the project area may not exist. Notwithstanding, ancillary infrastructure (e.g., power lines) may traverse customary land outside the boundaries of existing urban areas and there is the potential for grid extensions into IP areas.

If there is potential for IPs to be affected by a subproject, the policy requires:

- a process of free, prior and informed consultation (an inclusive, transparent, and continuing process of consultation with affected Indigenous Peoples);
- a social assessment by the borrower to evaluate the project's potential positive and adverse effects on Indigenous Peoples, and to examine project alternatives where adverse effects may be significant;

- a summary judgment by the Bank that affected Indigenous Peoples have provided broad community support to a proposed project;
- preparation of an Indigenous Peoples Plan (IPP) guided by the Indigenous Peoples Planning Framework (IPPF)[7] (**Annex F**);
- public disclosure of the social assessment report and the relevant safeguard instrument;
- attention to emerging issues affecting Indigenous Peoples / Ethnic Minorities, which may include, for example: an action plan for the legal recognition of Indigenous lands and territories, equitable benefits in commercial development of natural resources, or prior agreement to the commercial development of their cultural resources and knowledge.

5.3.4 OP/BP 4.12 INVOLUNTARY RESETTLEMENT

Involuntary resettlement refers to management of adverse impacts of loss of, or damage to, land, assets or livelihoods, where the affected persons have no choice. All three components of the project will involve physical works to varying degrees, some of which may have limited impacts on land.

For the micro / mini-grid works of Component 1 – Hybrid mini-grid development – only minor civil works, such as excavation of holes for power pole installation, is anticipated. Land requirements will be limited to the very small footprints required for power pole erection and obtaining easements for over-head electrical conductors. Wherever possible, all power poles will be located either along existing road corridors or within communal/community owned land.

For the hybrid power generation works at out station locations approximately 1 ha of land will be required for solar panel arrays, battery systems (possibly), diesel generators, and a small site office for Solomon Power. Solomon Power will obtain the required land on a negotiated lease basis. This approach has successfully used for existing hybrid generation systems by Solomon Power and 'as of right' under law (Electricity Act). Every effort will be made to ensure that the proposed project activities, including the implementation of associated facilities, do not encroach any privately owned land or communal land.

Involuntary land acquisition in the Solomon Islands is extremely time consuming and can lead to social unrest and substantial project delays, which is part of the reason why Solomon Power has no intention of applying eminent domain for the purposes of land acquisition. Notwithstanding, it is possible that involuntary land acquisition (and preparation of an Abbreviated Resettlement Action Plan – ARAP) may be required if additional land is required during project implementation, the landowner is not a beneficiary of the project, and the pre-requisites for negotiated settlement / voluntary land donation (VLD) are not satisfied. Solomon Power has indicated that this is considered very unlikely as subprojects will be scoped and designed by Solomon Power in close collaboration with the community. Land acquisition through involuntary resettlement is considered by Solomon Power as an absolute measure of last resort and would, in all likelihood, cause them to find other land alternatives or move the sub-project to a different location. Notwithstanding the above, a Resettlement Policy Framework (RPF) has been included in this ESMF (**Annex G**) to provide guidance in the unlikely event

[7] Note: the World Bank has determined that this is not required for the current project – see Table 5 above

that involuntary land acquisition is contemplated. **Annex G, Appendix 2** is a checklist for preparing and ARAP.

Where a landowner would like to donate his/her land voluntarily to the Project, or allow it to be used for the Project, the ESMF provides procedures for acquiring access to the land through the VLD protocol, as well as the procedure for entering into a land use agreement, should this be required (although not envisaged) (**Annex G, Appendices 1 and 3; and Annex H**).

Under Component 2 – Connection of low-income households - the Project will subsidize basic wiring from the nearest power pole to the house, and install an electricity meter and in-house wiring. The Project itself will not need to acquire any land.

For Component 3 – Grid-connected solar PV power – all three potential sites for building new, or expanded, solar PV arrays are owned by Solomon Power, a state-owned enterprise. Both the East Honiara and Henderson–Fighter 1 site are secure sites that are unoccupied. The Auki site is also unoccupied.

5.4 GAP ANALYSIS

There are a few gaps between the Environment Act 1998 / Environment Regulations 2008, and the World Bank's OP/BP 4.01 Environmental Assessment.

While both the legislation/regulation and OP/BP 4.01 specify the need for an ESMP, with contents that are more or less aligned, the legislation does not specifically reference solar PV projects as a prescribed development (Second Schedule, Section 16 of the Act) or as a prescribed premise (Schedule 1, Regulation 19 of the Regulations) for which an ESIA must be prepared and Development Consent obtained. The Act makes reference to infrastructure developments as a prescribed development, while the Regulations make reference to industrial installations for production of electricity as a prescribed premise. Prescribed developments must undergo an ESIA and obtain Development Consent, while prescribed premises must obtain a waste discharge permit. It would appear that solar PV developments are captured by the Act as prescribed developments for the purpose of submitting an ESIA, and obtaining Development Consent, and so are aligned with the ESIA and permitting requirements of OP/BP 4.01. However, it is not clear whether solar PV facilities are captured as prescribed premises for the purpose of obtaining a waste discharge permit, since the operation of such developments are relatively benign from a waste production perspective.

The Lands and Titles Act explicitly excludes informal settlers from receiving compensation if they do not hold a valid License of Occupation, notwithstanding that the informal settler may lose access to a portion of land on which they derive livelihood (e.g. a garden). This is contrary to the World Bank's OP/BP 4.12 Involuntary Resettlement. Under OP/BP 4.12, compensation is to be provided to any party that loses access to livelihood, including informal settlers.

The processes will be harmonized so that the requirements of Solomon Islands and the World Bank will be met with any safeguard instruments that are prepared.

6. MEASURES TO ADDRESS ENVIRONMENTAL AND SOCIAL ISSUES

6.1 ENVIRONMENTAL MITIGATION MEASURES

The following measures are proposed to mitigate the environmental impacts that were identified in Section 4.2. A summary of environmental and social mitigation measures is provided in **Table 6** at the end of this section.

Vegetation and wildlife: Vegetation provides protective ground cover (see erosion and sedimentation below), as well as habitat for local wildlife. Where possible, it should be protected as follows:

- Retain vegetation that does not pose an electrical hazard, danger to a distribution line, or which does not shade solar arrays;
- During operation, use mechanical (as opposed to herbicide) methods of controlling vegetation in rights-of-way, along road margins, and between solar panel arrays.

Sediment and erosion control: The following methods for sediment and erosion control should be implemented as required to minimize exposure of soils to the erosive forces of wind (during dry periods) and rain and floodwaters:

- For solar PV construction sites, remove only that vegetation that is required to construct the facility, minimizing the area of soil exposed until the area is required for construction – schedule site clearing activities to keep pace with construction activities will help to minimize the extent of soils exposed to wind and water erosion;
- Where for reasons of optimizing available equipment or for project scheduling it is not possible to phase vegetation removal, consider installing perimeter drains and settling ponds to intercept sediment-laden runoff, especially if local watercourses may be affected;
- Install sediment and erosion control measures as appropriate, including such devices as silt fences, check dams, geotextile matts, etc.;
- Install tarpaulins over soil stockpiles or slopes from which vegetation has been removed, to prevent eroded soils from being washed into stream courses

Surface water and groundwater: To prevent contamination of surface water and groundwater, the following measures should be implemented:

- Store fuels, lubricants and other toxic liquids in sturdy containers (e.g., drums or tanks) on impermeable surfaces under cover within secondary containment areas;
- Dispose of wastes having the potential to contaminate soil, surface water or groundwater in an approved manner;
- Immediately contain and cleanup any spills of toxic substances; and
- Ensure that a fully stocked, fit-for-purpose spill prevention cleanup kit is stored on each site.

Dust and emissions: There are a number of good engineering practices that can be employed to ensure that dust and vehicle related air quality emissions impacts are mitigated during construction. These include:

- Water down non-sealed roads and construction areas to keep dust from being generated;
- Ensure that all vehicles transporting potentially dust-producing material are not overloaded, are provided with adequate tail-boards and side-boards, and are adequately covered with a tarpaulin (covering the entire load and secured at the sides and tail of the vehicle) during transportation;
- Locate material stockpiles in sheltered areas and covered with tarpaulins or other such suitable covering to prevent material becoming airborne; and
- Conduct periodic qualitative air quality monitoring (by observation rather than testing);
- Maintain construction equipment in good working order, and inspect all motorized equipment at regular intervals to ensure they are being properly maintained. Record the results of inspections as part of Solomon Power's environmental monitoring; and
- Prohibit the use of equipment and machinery that causes excessive pollution (i.e., visible smoke) at the project sites;

Construction and demolition waste: Demolition and construction wastes will be disposed of at designated sites approved by Solomon Power and ECD. These wastes will be removed as soon as possible during the construction phase to allow accessibility to areas of the site and for health and safety reasons. Solid wastes, debris, spent oil or fuel from construction machinery or plant, construction material, or waste vegetation removed from worksites will not be dumped in streams or near streams.

Unexploded Ordinance (UXO): The proposed project areas and alignments will be surveyed for UXO using detection equipment and, if UXO is found, it will be cleared as per the established procedures before the site is ready for construction. Should UXO be discovered, Solomon Power or its contractor will immediately cordon off the area, arrange the evacuation of nearby residences and inform the police on the finds. Currently all UXO finds are reported to the police who arrange the pickup, transport, storage and ultimate disposal of the finds. While construction sites are expected to be swept for and cleared of UXO prior to commencement of construction, there is always a chance that UXO may be missed by the pre-construction survey and encountered as a 'chance find' once construction is underway. Therefore, a chance-find procedure for handling UXO during construction is included in the ESMF (**Annex I**).

6.2 SOCIAL MITIGATION MEASURES

The following measures are proposed to mitigate the social impacts that were identified in Section 4.3. Overall, the adverse social impacts of the proposed project are predicted to be minor, site specific, of short duration, reversible and can be fully mitigated.

Land acquisition and physical assets: Social impacts will largely be associated with consensual land acquisition or alienation of land for hybrid mini-grid facilities, including sites for solar PV / diesel generation, and alignments for distribution lines, and footprints for power poles and auxiliary poles, if needed. Some trimming or removal of vegetation may be required during construction to provide safe clearance distances for over-headlines, and a clear patch of ground in which to install power poles. If a landowner refuses to allow power related facilities on his/her property, then the Project will look for alternative locations to install the facilities.

With the exception of the hybrid solar PV and grid-connected solar PV subprojects, construction will involve only minor civil works such as excavating holes for installing power poles, and trimming vegetation along alignments to remove obstructions to overhead lines. This activity will be undertaken along existing road rights-of-way and within communal land.

The process of planning the distribution network within the four potential project-affected communities will ensure that construction related damage to individual or community assets is avoided wherever possible. In the unlikely event that a structure is damaged, it will be restored with the agreement of the owner of the asset. In such cases, Solomon Power will apply its standard operating procedures to address any damage caused by its activities, or that of its contractors.

Under Component 1 – Hybrid mini-grid development – land needed for the hybrid solar PV facilities and new micro / mini-grid developments will be obtained via land lease arrangements. Therefore, this component of the Project will not involve permanent land acquisition and/or involuntary relocation of physical assets such as houses or other structures. Under Solomon Power's standard operating procedures for land acquisition, Solomon Power will send notification to the Ministry of Infrastructure and Development (MID) to obtain consent to use government owned road rights-of-way for grid extension activities and to avoid any encroachment onto private land. A similar process will be followed in the event that Solomon Power proposes to use customary land on which to install power poles for the distribution network – Solomon Power will obtain consent from the Ministry of Lands, Housing and Survey (MLHS) once it has obtained agreement of the customary land holders.

To facilitate Component 2 – Connections to low-income households – new consumers will be required to submit an application for electricity connection (**Annex B**) to Solomon Power, along with proof that the applicant has the right to occupy the land either as the holder of a Fixed Term Estate (FTE) or, in the case of communal land, is able to provide a consent letter from 50% of the land owning tribe, as well as letter of consent from the adjoining land owner, for line access. Without this documentation, Solomon Power is prevented by legislation to authorize electricity connections. Solomon Power will follow its standard operating procedure for vetting each application for new electricity connection.

Connections to low-income households will proceed once an application has been approved and consent has been provided by the homeowner, with full acceptance of any land related impacts. This is consistent with current Solomon Power policy, which ensures that no involuntary impacts accrue to land or assets owned by homeowners or other potentially affected parties.

Connection of power from the street to the property boundary, and from the property boundary to the house, including trimming vegetation if necessary, as well as installation of wiring within buildings, will be organized by the homeowner. The installation itself will be conducted by a licensed service provider (contractor). Thus, any damage to property associated with auxiliary pole installation and household wiring will be handled by the contractor and will be monitored by Solomon Power. Solomon Power will be responsible for rectifying any damage to property associated with installation of power poles along existing road corridors or within communal land. Any removal of trees or vegetation that is not on government-owned road reserves, to facilitate household connections, will require prior consultation with the tree owner to obtain willing consent for its removal or trimming. Solomon Power will provide compensation for the trees in accordance with rates prescribed by the Ministry of Agriculture, under governing legislation.

Construction of the hybrid solar PV facilities under Component 2 subprojects will generate social impacts similar to those identified for grid-connected solar PV.

Noise and vibration: As mentioned in Section 4.3, during construction there will be a temporary adverse impact due to noise and vibration caused by the operation of construction equipment. For sites in relatively close proximity to receptors (e.g., schools, homes, businesses), the following general measures will be taken to mitigate the effects of noise:

- Solomon Power and/or the contractor will be required to conduct regular inspections of all noise generating equipment, including vehicles, compressors, generators, drilling equipment, etc., to ensure that it is in good working order. All vehicle exhaust systems, mufflers and noise shrouds will be maintained in good working order;
- No construction activities between 9pm and 6am in, especially in areas where construction will be carried out in close proximity to receptors;
- Solomon Power will prepare a construction schedule that will be approved by affected stakeholders. The schedule will establish the days, including identifying days on which there should be no work, and hours of work for each construction activity. The schedule will identify the types of equipment required to construct the subproject;
- Workers will be provided with noise abatement equipment as may be required; and
- Any noise complaints received by Solomon Power will be addressed through its grievance redress mechanism.

Traffic management: The following traffic management measures will be used:

- Inform local government or chiefs of planned road closures or traffic control measures;
- Minimize traffic disruptions, including minimizing closure / blockage of access to homes, business, and other thoroughfares during construction; and
- Use appropriate traffic safety measures such as posting signs, placing traffic cones or temporary barriers, and using traffic flaggers to indicate construction works are being undertaken and/or divert traffic safely around a works site.

Impacts on health and safety: To reduce the risk of accidents at the work sites, health and safety measures will be implemented as follows:

- Construction workers will receive training in health and safety issues, and on the specific hazards of their work;
- Workers will be provided with the appropriate level of personal protection equipment commensurate with the risks they will be exposed, such as safety boots, safety glasses, reflector vests, helmets, gloves, and protective clothing; and
- Adequate protection will be provided to the general public in the vicinity of work sites, including advance notice of commencement of works, installing safety barriers / fencing if required and signage or marking of the work areas.

Water supply: Water required for the hybrid power generation sites and the grid-connected solar PV facility will be obtained from boreholes and, therefore, will not rely on, or put strain on, local community water supplies.

Physical Cultural Artifacts: As described previously, a chance-find protocol will be implemented for each of the components, in the case that artifacts are found during excavation and construction. A sample protocol is given below, to be followed in the event that archeological or historical objects or artifacts are encountered:

1. Cordon off the discovered object or site to prevent damage in the short term. If works appear to have significant value, arrange overnight supervision until the site can be handed over to authorities.
2. Notify the Work Supervisor or equivalent supervisory role, who will then notify Solomon Power and the relevant local or national authorities (e.g. National Museum) within 24 hours.
3. Consult with the authorities as to the next steps in managing the finding. It may be removed or left in place, and it may require changes to the layout of the site to allow it to remain undisturbed. In some cases, the subproject may have to make significant design changes to allow the site to be preserved.
4. Resume construction works once the authorities are satisfied damage will not be caused and they give the go-ahead to resume.

This protocol can be developed and expanded for a particular subproject.

Table 9 provides a summary of the potential environmental and social impacts, and the interventions to be applied.

Table 9: Potential Environmental and Social Mitigation

Impact	Mitigation Measures	Implementing Agency
Environmental		
Vegetation and wildlife	Retain vegetation where possible; use mechanical methods of vegetation control during operations (no herbicides permitted)	Solomon Power; contractors
Surface water and groundwater	Minimize area from which vegetation removed until construction required; install sediment and erosion control measures; follow good practice for equipment fueling and lubricating.	Solomon Power; contractors
Dust and emissions	Minimize vegetation removal; tarp stockpiles; water down roads and open areas during dry periods; tarps over truckloads of dust generating material; motorized equipment to be regularly inspected and maintained, and kept in good working order.	Solomon Power; contractors

Impact	Mitigation Measures	Implementing Agency
Construction and demolition waste	Remove from site as soon as possible; dispose of in approved manner at an approved site	Solomon Power; contractors; ECD
UXO	Pre-construction survey of high potential UXO areas; removal and disposal of UXO; chance find procedure to be put into place	Solomon Power; Royal Solomon Islands Police
Social		
Land acquisition and assets • Hybrid power generating facilities	To be constructed by Solomon Power on leased land.	Solomon Power
• Mini-grid distribution system – alignment, siting and erecting power poles	Use existing road rights-of-way and communal land (based on obtained consent from community). Solomon Power will obtain consent from Ministry of Infrastructure Development and/or Ministry of Land.	Auxiliary poles will be installed and connections to households will be made by Solomon Power's contractor; activities will be monitored by Solomon Power; low voltage poles in the mini-grid will be installed, and conductors will strung, by Solomon Power.
• Damage to assets. • Removal of privately owned trees / vegetation to facilitate household connections	The Project will avoid any impacts to privately owned or community structures. Any damage (accidental or willful) will be restored to the previous status before construction. Consultant with the tree owner to obtain consent. Solomon Power to provide compensation for the trees in accordance with rates prescribed by the Ministry of Agriculture in accordance with legislation	Solomon Power (or the contractor responsible for household connections) Solomon Power
Noise and vibration	Regular equipment inspections and maintenance; equipment to be kept in good working order; no work between 9:00pm and 6:00am; use of noise abatement equipment; grievance mechanism in place	Solomon Power; contractors
Traffic management	Inform local authorities; minimize traffic disruptions; use of signage and traffic barriers	Solomon Power; contractors

Impact	Mitigation Measures	Implementing Agency
Health and safety	Safety training, use of PPE, protect public by excluding from sites, and/or posting warning signage	Solomon Power; contractors
Water supply	Dedicated bore hole on hybrid or solar PV sites	Solomon Power

7. GRIEVANCE REDRESS MECHANISM

Solomon Power has an existing grievance redress / complaints resolution mechanism. Information regarding the mechanism will be conveyed to potential project-affected people at each of the project locations, as part of the consultation process prior to project implementation.

It is anticipated that most complaints arising during construction will be minor. In particular, complaints concerning noise, dust, health and safety issues, and vegetation trimming or removal, should be relatively easy to resolve. Simple matters such as obstruction of access to a complainant's premises or more complex matters, such as unexpected issues with internal wiring, accidental damage to premises, etc., are dealt with as soon as possible. Complaints submitted by individuals will be handled on an individual basis. Complaints raised by communities will be handled through consultation with the affected community to resolve the grievance.

Any complaint regarding the implementation of the Project that is submitted to Solomon Power will be entered into Solomon Power's complaints register, which identifies:

- The complainant and contact details;
- Date of registration of the grievance or claim;
- Nature of grievance or claim;
- Amount of the claim, if applicable;
- Process for resolution;
- Date and record of resolution; and
- Number of unresolved complaints and reasons, where applicable.

A duplicate copy of the entry is given to the complainant for his/her record. The register also indicates who has been directed to deal with the complaint and the date when this referral was made, together with the date when the complainant was informed of the follow-up decision to their complaint and how the decision was conveyed to the complainant. All complaints are reviewed and a written response is provided to the complainant informing him/her of the proposed solutions to the matter, with an indication of the process and time for resolution. The Register is then signed off by the person who was responsible for making the decision, and dated. The Register is kept at the front desk of Solomon Power's office and is a public document. The duplicate copy given to the affected person will also show the procedure that will be followed in assessing the complaint, together with a statement affirming the rights of the complainant to make a complaint. There will be no cost to the complainant for making the complaint.

Complaints related to billing, bill payments, electricity metering, or other electricity services related issues, will be received by Solomon Power's Customer Service Department. The complaint will be recorded, categorized and directed to the relevant department for resolution. Solomon Power will have a physical presence in the form of a site office and/or security personnel for every hybrid mini-grid sub-project location (Component 1) and for the grid-connected solar PV sub-project (Component 3). At each site office there will at least two Solomon Power staff, one of which will be Customer Service Officer whose task will be to liaise with members of the community, including receiving applications for electricity connection, and receiving complaints (if any) that may be raised.

For site related environmental or social issues associated with construction of operations, for which a complaint has been raised, the affected party will have their complaint referred directly to the Project Engineer (PE), who will meet with the complainant. For issues that are easily addressed on site, the PE can make an on-the-spot determination to resolve the issue. For more complicated complaints, the PE will forward the complaint to the appropriate department manager at Solomon Power's head office in Honiara. Once received, Solomon Power management has a maximum of two days to resolve the complaint and respond with a decision back to the affected party, who may elect to discuss the complaint directly with Solomon Power management.

If the complaint pertains to an environmental issue, a copy of the decision will also be sent to Environment Conservation Division (ECD). In the event that a complaint is dismissed, the complainant will be informed of his/her rights to appeal the decision, in which case, the affected party may take the complaint to the Permanent Secretary (PS) in Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM), who will appoint the Director of the ECD to review the matter. The PS will have 15 days to make a determination.

Although it is not anticipated, if complaints are raised in response to land acquisition or land access issues, then existing community processes can be used for dealing with this type of complaint, particularly for customary land or other project-related concerns. Community processes for dealing with complaints involve the village chief, other elders, church leaders and other recognized civil society leaders.

In addition to the Solomon Power grievance mechanism, communities and individuals who believe that they are adversely affected by a World Bank supported project may submit complaints to existing project-level grievance redress mechanisms or the World Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed to address project-related concerns. Project-affected communities and individuals may submit their complaint to the World Bank's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of World Bank non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. Information on how to submit complaints to the World Bank's corporate GRS can be found by visiting http://www.worldbank.org/GRS. Information on how to submit complaints to the World Bank Inspection Panel can be found at www.inspectionpanel.org.

More detail regarding Solomon Power's grievance redress mechanism will be provided in the Project Operation Manual.

8. PUBLIC CONSULTATION AND DISCLOSURE

8.1 PUBLIC CONSULTATION

Solomon Power's Customer Service Department, which also handles public relations and stakeholder consultation, will undertake a targeted consultation and awareness campaign to reach potential beneficiaries and inform them of the objectives and structure of the Project and its three components.

The World Bank's Safeguard Policies and the Government of Solomon Islands' regulations require that a project related ESMF be made available for public consultation and disclosure. The aim of the consultation is to inform the general public and potential beneficiaries about the project, the access, land requirements and construction activities that will be the focus of the mini-grid installations, the access requirements for subsidized connections to low-income households, and the siting requirements, construction and operation activities associated with installation of a solar PV facility. The consultation program will encourage inputs from the stakeholders on environmental and social issues related to the three project components. Comment will be invited and the public will be made aware that there is a mechanism for registering complaints.

Solomon Power's Customer Service Department employs a media outreach program to increase public awareness of its various activities. This media outreach is conducted through weekly (Saturday) and monthly (end of month) local radio station broadcasts. Through this program, communities are able to raise questions and submit complaints, to which Solomon Power will provide direct responses. Solomon Power also uses its media outreach program to introduce information on their projects / programs, to provide safety awareness regarding electricity, electrical equipment and its use. The program also provides information on procedures to follow to apply for an electricity connection, complaint mechanisms, and other useful information. The Project will also be publicly launched using media outreach to inform as many people as possible about the Project and its various components.

In addition to its media outreach, Solomon Power is in the process of establishing a 'Call Centre' that will be staffed by three trained employees, initially for 14 hours per day, 7 days per week. Customers and members of the public seeking information or wishing to lodge complaints will be able to do this by calling a dedicated telephone number. Their issues will be followed-up by Solomon Power within a reasonable timeframe that is currently being determined.

The consultation process will be conducted and expanded during the project implementation to ensure that stakeholders are fully engaged in the Project and have the opportunity to participate in its development and implementation and understand that there is a process in place for them to submit any grievances or complaints.

For Component 1 – Hybrid mini-grid activities – prior to commencing work on the micro or mini-grid component of the Project, Solomon Power will work together with the chiefs of villages to arrange community meetings, and distribute information pamphlets. Local project-affected people will receive information on the hybrid solar PV site mini-grid alignment(s) and the preferred location of power poles, transformers and overhead conductors. Potentially affected parties will be consulted on the location and method of installing these structures, and any environmental and social issues, such as the need to remove vegetation to provide for safe clearance of conductors, and land issues related to

easement requirements for pole placement and overhead lines. They will be advised that the work may create some possible inconvenience (noise, dust, traffic disturbance, crowded area caused by workers, material, equipment and vehicles). Further, Solomon Power will inform the affected community on measures that will be taken to minimize such effects to the people and make them aware of the grievance procedure.

For Component 2 – Connection of low-income households, Solomon Power will encourage stakeholders not already connected to power, and who would otherwise likely satisfy criteria for the OBA one-off subsidy, to apply for the power connection subsidy. Solomon Power will also provide communication material and information on the safe use of electricity, in the form of pamphlets, posters, focus groups, and radio spots, among others.

The awareness campaign will consist of public consultations and face-to-face interviews with beneficiaries to illustrate how the OBA subsidy scheme works. It is the responsibility of Solomon Power to properly explain the program to eligible households and provide advice on the benefits, costs, and tradeoffs of grid electricity, as well as how the program works, who can benefit, and the procedures that need to be followed to apply for grid connection.

The objectives of the identification process and the awareness campaign are:

i) to inform members of the community and, ultimately, obtain community consensus on the list of eligible participants;
ii) to ensure that all eligible households that decide to participate are well advised of the costs, obligations, and financial requirements of participating; and
iii) to raise awareness of the whole community on the OBA program. Posters and schematic drawings written in local language will be provided highlighting the dangers of inappropriate use of electrical appliances, and recommending best practices. The OBA Program Manager will support Solomon Power in the preparation and design of the awareness campaign.

Since both Component 1 and Component 2 of the Project trigger OP 4.10 on Indigenous People, consultation conducted by Solomon Power must follow the key principles for free, prior and informed consultation (FPIC). Although there is no single internationally agreed definition of FPIC and “no single, nor a one-size fits all mechanism for its implementation” (UN Collaborative Program on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries, 2013), international development agencies define FPIC as follows:

- FREE – implies that information should be transparent and free from coercion or bias and conducted in a manner that allows Indigenous Peoples to openly express their preferences or concerns without intimidation or manipulation;

- PRIOR – implies that sufficient time is provided to indigenous communities and stakeholders during consultations and decision-making processes. Consultation should start as early as possible in the project planning stage. This allows community members and stakeholders to receive adequate information, come together, discuss the proposal, and make decisions prior to providing any formal response (e.g., consent). This includes giving Indigenous Peoples sufficient time to go through the traditional processes of decision making, deliberation and consensus-building, such

that the preferences or concerns raised by Indigenous Peoples' communities may be considered before project design decisions or implementation arrangements are finalized;

- INFORMED – implies that the affected communities and stakeholders have access to relevant information on the Project to engage in consultations and decision-making processes. Providing 'access' to information implies that the information is:
  - in a form and language that is suitable for the particular communities and stakeholders;
  - accurate;
  - delivered in a culturally appropriate and inclusive way; and
  - made available to every member of the community.

  Indigenous Peoples must be given enough information – information that is transparent regarding the project scale, delivered in such a way that it allows them to fully understand the impacts being discussed, feeds into the decision-making process where appropriate, and provides sufficient opportunity to consider relevant information about the Project;

- CONSULTATION – An inclusive and fair process of interaction, engagement and dialogue between various stakeholders with respect to a proposed development or activity. Consultation should be conducted in a manner that allows Indigenous Peoples to participate meaningfully in decisions directly affecting them, including proposed management and mitigation measures and benefit sharing or distribution, through methods that enable concerns of women, the elderly, or others who customarily may not be expected or allowed to participate in community meetings, to be considered. The desirable outcome of consultation is broad agreement within the community that the proposed project or activity can proceed, as determined through local customary decision-making practice.

For Component 3 – Grid-connected solar PV, Solomon Power will consult adjacent land owners and residents about the proposed siting and layout of solar PV arrays and transmission lines, construction timing and methods, and operation characteristics of the solar PV facility.

8.2 INFORMATION DISCLOSURE

Disclosure will conform to the Public Communications Policy of the World Bank: Disclosure and Exchange of Information, which requires that the ESMF document for World Bank projects be accessible to interested parties and the general public. Prior to project appraisal, the ESMF document will be disclosed in the World Bank Info shop and on the World Bank's website, and made available to the public via the Solomon Power website: http://siea.com.sb/

9. INSTITUTIONAL ROLES, RESPONSIBILITIES AND CAPACITY

This section identifies the roles and responsibilities of the World Bank, Solomon Power and ECD in managing project-related environmental and social issues. It also addresses the capacity of Solomon Power in this role. **Table 10** summaries the roles and responsibilities of the three organizations.

9.1 WORLD BANK

The World Bank will:

- Advise Solomon Power about World Bank Environmental and Social Safeguard Policies and requirements;
- Screen and determine environmental categorization of projects, including the environmental assessment requirements;
- Review and clear environmental assessment reports as a basis for project approval;
- Publicly disclose the ESMF in the Infoshop and on the World Bank website;
- Review all statutory environmental clearance granted by ECD, particularly the conditions of the Development Consent and note all conditions in approving a project;
- Review ESMP implementation and, where appropriate, take actions (as necessary) in close consultation with ECD;
- Monitor the ESMP implementation and conduct due diligence as part of review missions;
- Ensure there is no involuntary land acquisition for the Project and that land donation (if any) is conducted voluntarily, and without coercion; and
- Ensure that Solomon Power conducts the required consultation with community and project beneficiaries, including Indigenous Peoples, women, and other relevant stakeholders in the project area, and discloses relevant information for each of the three component subprojects, including project information on design, land requirements, construction, operation, and related project impacts, including the grievance redress mechanism in an appropriate form, manner and language (s) accessible to those being consulted.

9.2 SOLOMON POWER

Solomon Power will be the implementing agency for the project and will have overall responsibility for project management. MMERE will oversee the implementation of the project on behalf of the Solomon Islands Government.

Solomon Power, supported by its consultants, where applicable, will be responsible for undertaking environmental and social screening of project sub-components (subprojects). The Following process is recommended:

Identify Subproject Concept and Candidate Sites – potential candidate sites will be identified by Solomon Power, which will identify: the type of subproject to be developed; size of site required; minimum site parameters to satisfy subproject development; potential site locations; and preferred timeframe for completion.

Conduct Desktop Review of Candidate Sites – based on the concept level information provided, environmental and social specialists from Solomon Power (or its sub-consultants) will obtain and review existing available information on the candidate sites. The review will provide an initial indication of the potential environmental and social issues that may favour some sites over others. At the very least, the team will be better prepared for conducting visits to the candidate sites.

Conduct Visits to Candidate Sites – Solomon Power's environmental and social specialists, accompanied by engineering staff, will visit each of the candidate sites to conduct a rapid environmental and social screening evaluation of each site, and its surroundings. Key environmental resources and social attributes will be identified for each potential development site, as well as for new or upgraded infrastructure that would also need to be developed to support the site, including access roads, transmission lines, water supplies, etc. The site visits will also provide the opportunity to identify any "red flag" issues that would preclude a site from any further consideration.

Consult with Local Community Authorities and Leaders – while in the field, the team will meet with local government and community leaders to review the candidate sites being considered. The objective of these meetings would be to gather more information on the location of sensitive environmental areas or areas of biodiversity concern, proximity of communities to the candidate development site, the presence of indigenous peoples, and other matters related to social conditions.

Complete Summary Environmental and Social Screening Matrix – information obtained from the desktop review and the visits to the candidate sites will be incorporated into a screening matrix that summaries the environmental and social issues and concerns for each candidate site. For each candidate site, the character of the receiving environment, potential impacts to valued environmental and social components, resilience of natural and human environments to cope with change, and degree of government regulatory agency and community interest or concern will be summarized.

Rank Candidate Sites Based on Environmental and Social Screening –the pros and cons will be listed for each candidate site from an environmental and social perspective, and each site will be ranked from most preferred to least preferred, based on the potential severity of concerns or issues. In particular, any "red flag" issues will be identified that could prevent a site from being approved by government regulatory agencies or raise significant objections from nearby communities or residents, such that the likelihood of a given subproject proceeding at the location in question is low.

Prepare Environmental and Social Screening Report – the evaluation process, findings and recommendations (with rationale) will be recorded for site screening in a brief screening evaluation report, to which the completed rapid appraisal checklists and summary screening matrices and related documents (Google air photos, maps, photographs, etc.) will be appended.

Present Findings to Other Members of Screening Team – the findings of the environmental and social screening will be presented to the other members of the team (engineering, financial, legal, etc.). A recommendation will be made regarding the ranking of sites based on the environmental and social criteria. These criteria, along with other site selection criteria

(engineering, financial, legal, etc.), will be used to come up with an overall ranking of candidate sites. A written recommendation will then be made to senior management regarding the preferred site(s) and rationale for selection.

An example environmental and social screening matrix is included as **Annex J**.

Solomon Power will also be responsible for preparing and ensuring implementation and compliance of the ESMF. Considering the activities of the three project components are within Solomon Power's key areas of expertise, and that the impacts of the project are deemed to be minor, site specific, of short duration, and reversible, the ESMF will be implemented as part of Solomon Power's usual business operations. The impacts of the Project will be mostly addressed by Solomon Power's Technical Department.

While Solomon Power has the requisite experience as an organization to implement the ESMF and to handle any possible impacts of the Project, its staff resources are limited. Currently, environmental matters come under the direction of the General Manager Corporate Services, but the organization presently lacks in-house environmental and social specialists. Therefore, it must look to outside consultants to provide these services. Notwithstanding, Solomon Power is taking steps to develop its in-house environmental and social capacity. To this end, it has developed a role statement for an environmental position as a first step toward developing an in-house environmental department. Solomon Power will need to plan for and then procure their in-house environmental and social officers. If there are delays or obstacles to filling these in-house positions, Solomon Power will need to rely on external consultants to fill these roles on the Project.

Installation of hybrid mini-grids (Component 1) and connections to low-income households (Component 2) will be carried out under competitively bid supply and install contracts, with Solomon Power providing the designs and direct construction supervision. As environmental and social impact assessments (ESIAs) are not required, per se, for these component sub-projects, due to the limited adverse impacts, the company will use the ESMF as a guide to prepare environmental and social management plans (ESMPs) for each hybrid mini-grid and for the overall low-income household connections, once the detailed design and site surveys are available. A template for developing an ESMP is provided in **Annex K**.

For Component 3 - once Solomon Power has determined which of the three potential sites will be developed as a new or expanded (in the case of Henderson-Fighter 1) solar PV facility, an ESIA will need to be prepared, commensurate with the level of impacts associated with a Category B project. Since Solomon Power will oversee construction of the solar PV sub-project, that will be provided under a supply and install contract, it will need to develop an ESMP. The ESMP will be based on the information provided in the ESIA.

The ESMPs developed for each component of the Project will be submitted to the ECD for review, comment and approval. The revised ESMPs will then be provided to the World Bank for review and 'No Objection'. The ESMPs will be included as an integral part of the bid documents to enable the contractors to bid on the Project with awareness of the environmental and social issues and mitigation measures to be implemented as part of the respective project components. Each successful contractor will prepare a Construction Environmental and Social Management Plan (CESMP) that outlines how

environmental and social mitigation measures will be implemented and monitored during construction, based on the work methods to be used and schedule that will be followed.

Solomon Power will be responsible for updating the component ESMPs during the construction stage, whenever additional engineering information is available and for implementing the environmental, health and safety actions included in the ESMPs. Solomon Power (or its environmental and social consultants) will be responsible for environmental monitoring during construction and operation of the project. The ECD will also be responsible for verifying, through a process of targeted and random audits, that Solomon Power is fulfilling its monitoring obligations. The outcomes of the monitoring will be included in the overall monthly progress reports to be submitted by Solomon Power to ECD.

Solomon Power will be responsible for following the government mandated process for obtaining land for the Project as well as meeting the World Bank's requirements for addressing involuntary resettlement issues, in the event that alienation of land access becomes an issue. Solomon Power will ensure that relevant stakeholders, including Indigenous Peoples, are involved and participate in the Project and obtain benefits from the Project. It will also be responsible for receiving, resolving and maintaining a register of any complaints or grievances submitted by potentially project-affected people, as guided in the ESMF.

9.3 ENVIRONMENTAL AND CONSERVATION DIVISION (ECD)

As the national agency responsible for environment and conservation in Solomon Islands, the ECD will be involved in various environmental management activities. Under the requirements of the Environment Act 1998, ECD review the ESIA for the Component 3 – Grid-connected Solar PV subproject, and monitor the progress of implementation activities if Development Consent is given.

Although the ECD is fully aware of the Phase I Electricity Access Expansion Project, it has not afforded itself of the opportunity to discuss the proposed Phase II Electricity Access and Renewable Energy Expansion Project with Solomon Power. Attempts were made to meet with the ECD Director during the week of 22 May 2017, to inform him of the proposed project and discuss the timeline for preparing and submitting the ESIA. Although a meeting was confirmed with the Director, he did not attend. Therefore, once the World Bank has reviewed and provided comments on this ESMF, Solomon Power will make further attempts to meet with the ECD Director to discuss the Project and the ESMF and the Draft PER.

The ECD will be consulted during the construction phase of the various component sub-projects to ensure that Solomon Power and its contractors are adhering to all monitoring requirements. The ECD will also be tasked with auditing implementation of the ESMPs and ensuring that environmental management and mitigation of the Project is undertaken to an acceptable standard.

9.4 ENVIRONMENTAL MANAGEMENT AND REPORTING ARRANGEMENTS

Monitoring is required to address unanticipated impacts, to ensure mitigation measures are working and to reassure the public on the progress of the development. Progressive monitoring will coincide

with each stage of the Project (pre-construction, construction and operation). The ESMPs will be based on the potential impacts, significance of impacts and mitigation approaches identified in the ESIA (Component 3 – Grid-connected Solar PV), and through simple screening assessments conducted for Components 1 and 2. The ESMPs will identify the parameters to be monitored, monitoring frequencies, and the parties responsible for undertaking the monitoring. ECD will be responsible for monitoring compliance, reviewing Solomon Power's monthly monitoring reports and suggesting ways to improve or strengthen mitigation approaches.

The ECD is required to:

- Co-ordinate compliance monitoring programs; and
- Review Solomon Power monthly monitoring reports and suggest ways to strengthen mitigation approaches.

Table 10: Responsibilities for Environmental Management and Monitoring

Project Stage	Responsible Organization	Responsibilities
Pre-feasibility study	Solomon Power (and its consultants)	• Develop project concept • Identify land requirements • Confirm land ownership and method of land acquisition (leasing; negotiated acquisition; voluntary land donation; etc.)
Feasibility study - Preparation	Solomon Power (and its consultants)	• Prepare preliminary designs • Prepare feasibility study, including carry out environmental screening (Components 1 and 2), prepare ESIA (Component 3) and prepare ESMPs based on preliminary designs
	World Bank	• Review feasibility study terms of reference and issue 'No Objection' • Advise on consultant procurement process and issue 'No Objection' for consultant selection
- Review	ECD	• Review and approve overall ESMF, ESIA (Component 3), and component ESMPs • Provide inputs to monitoring requirements
	World Bank	• Review all feasibility study documentation, including overall ESMF, ESIA (Component 3), and component ESMPs, issue 'No Objection, prepare Board presentation and submit to Steering Committee (as required)
Detailed design	Solomon Power	• Prepare detailed design • Update ESMP based on specifics of detailed design and contractor work methods

Project Stage	Responsible Organization	Responsibilities
		• Submit ESMPs to ECD and World Bank for review
	ECD	• Review and approve ESMPs
	World Bank	• Review and issue 'No Objection for ESMPs
Construction	Solomon Power and/or contractor	• Implement the component ESMPs • Monitor and supervise construction phase through environmental inspections and review monitoring data • Prepare and submit monthly environmental reports • Provide awareness/training to workers
	ECD	• Ensure compliance with Government requirements • Review complicated issues arising from the Project
	World Bank	• Conduct supervision missions to ensure compliance with conditions of loan
Operation	Solomon Power	• Provide budget to undertake long term environmental monitoring • Undertake environmental monitoring and prepare bi-annual reports

9.5 MONITORING AND SUPERVISION

As the project implementation agency, Solomon Power will monitor and report on project progress to the World Bank with a frequency to be defined in the grant agreement and Project Operation Manual.

During the construction phase of the Project, will undertake monitoring and supervision of its contractors to ensure compliance with the following:

Environmental

- Required environmental permits and approvals are in place;
- Handling, collection and disposal of demolition and construction wastes are carried out in accordance with ECD requirements;
- Only that vegetation identified as being required to construct the Project will be trimmed or removed;
- Prohibitions on hunting and poaching are in place and communicated by the contractor(s) to workers;
- Motorized equipment is being kept in good working order to minimize emissions;
- Procedures are being implemented to prevent generation of fugitive dust from roads, excavation areas, stockpiles and vehicle loads;

- Construction works are being carried out within agreed hours of the day / days of the week so as to prevent noise disturbance occurring outside these hours;
- Motorized equipment is equipped with exhaust / muffler systems to minimize noise generation, or surrounded by movable noise baffles;
- Solid and liquid wastes are being regularly removed and disposed of in accordance with ECD requirements;
- Fuels, lubricants and other chemicals are being stored within secondary containment devices;
- Incident reporting and emergency response plans in place;
- Appropriate soil erosion and sediment control measures are being implemented;
- Proper use and servicing of temporary toilet facilities.

Social

- UXO surveys have been completed and chance-find UXO procedures are in place;
- Community consultation is being carried out to address issues of concern and a grievance redress mechanism is in place;
- Workers are equipped with personal protective equipment (PPE) appropriate to the work being undertaken;
- Chance-find physical cultural resource procedures are in place;
- A traffic management plan is in place and is being implemented;
- Measures are in place to prevent mud from being tracked from the construction site onto public roads.

Monitoring and supervision reports will include the following documentation:

- Consultation undertaken for each project area for each of the three project components, including evidence of free, prior and informed consultation;
- Evidence regarding land agreements, as applicable, in the form of:
    - Leasing contracts for project required land;
    - Proof of voluntary land donation (if any); and
    - Summary of complaints and outcomes and any incidents in relation to the ESMF.

Solomon Power will submit the report to MMERE for review and forward the report to the World Bank, which will provide feedback.

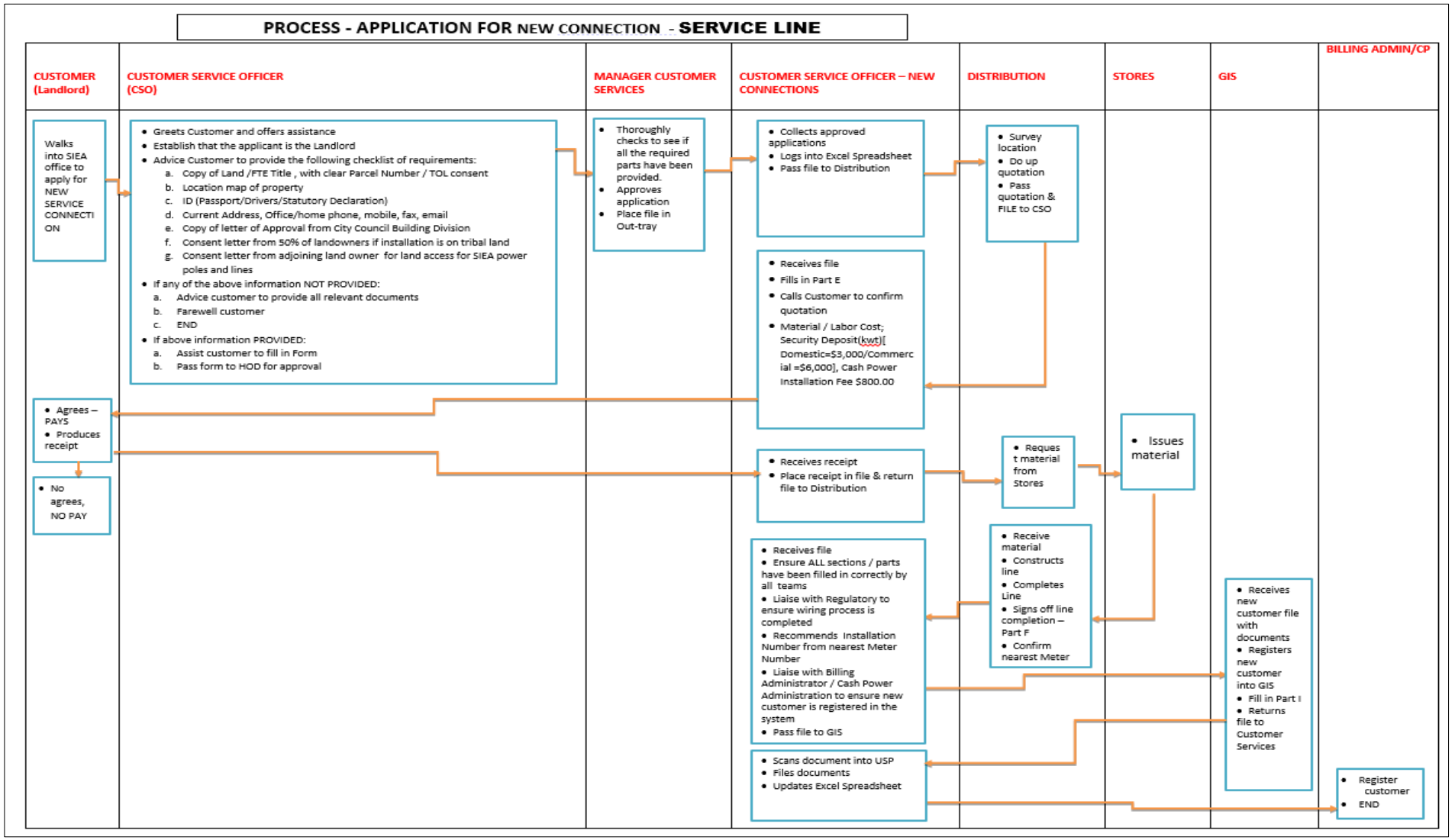
10. BUDGET PROVISION

All of the requirements in the ESMF will fall within Solomon Power's 'business as usual' operations including handling of customer complaints through its existing grievance process. Consultation, outreach and awareness activities and logistics costs associated with project supervision and compliance with the ESMF will be covered by each of the three project components for which World Bank funding will be provided.

ANNEX A - RELEVANT STANDARD OPERATING PROCEDURES OF SOLOMON POWER

- Managing Air Quality during Construction and Operation
- Fueling Vehicle
- Transportation of Fuel + Chemicals to Project Site
- Surface Water Quality Monitoring
- Waste Oil Collection Storage and Removal
- Hydrocarbon Spills
- Erosion and Sediment Control
- Storm Water Design – Drainage Techniques
- Vegetation Clearing
- Wood Waste and Timber Off-cuts Handling, Disposal and Management
- Oily Rags Waste Handling, Disposal and Management
- Waste Scrap Steel and Metals Handling, Disposal and Management

ANNEX B - APPLICATION FOR SERVICE CONNECTION



ANNEX C - PRELIMINARY ESIA / DRAFT PROJECT ENVIRONMENT REPORT (PER) FOR EAST HONIARA SOLAR PV GENERATING PROJECT

[Document not available]

ANNEX D – ADDITIONAL PHOTOS OF HENDERSON – FIGHTER 1 SOLAR PV FACILITY

▲ Photo 1 – Aerial view of Henderson – Fighter 1 Solar PV facility nearing completion in 2015 (View looking to the West)

▲ Photo 2 – Henderson – Fighter 1 Solar PV facility as viewed from the Southwest toward the Northeast roughly ¾ km away. Two SIEA staff houses on site visible middle left of photo.

▲ Photo 3 – Henderson – Fighter 1 Solar PV in its original pre-construction state in 2015. Tower in upper left of photo is a communications tower belonging to another party.

▲ Photo 4 – Pre-construction site clearing and grading in preparation for installation of solar PV arrays and ancillary equipment (2015).

▲ Photo 5 – UXO unearthed at Henderson – Fighter 1 Solar PV site during site UXO survey (2015).

▲ Photo 6 – Culverts installed under access road at entrance to Henderson – Fighter 1 solar PV site on Southwest end of the property (2015).

▲ Photo 7 – Installation of septic tank for treating sewage wastes generated from construction and operating staff (2015).

▲ Photo 8 – Installation of chain link security fencing around the perimeter of the Henderson – Fighter 1 solar PV property (2015).

▲ Photo 9 – Installation of solar PV arrays and electrical conduits at Henderson – Fighter 1 solar PV site (2015).

▲ Photo 10 – Solar PV panel installation at Henderson – Fighter 1 solar PV facility (2015).

ANNEX E - INTERNATIONAL TREATIES RATIFIED BY SOLOMON ISLANDS

Multilateral Environment Agreement	Status	Purpose/Aim	Agency Responsible	Relevance to Project
Regional Multilateral Environment Agreements				
Pollution Protocol for Dumping	Ratified 10/9/98	Prevention of pollution of the South Pacific region by dumping.	Marine Div/MECDM	NA
Pollution Protocol for Emergencies	Ratified 10/9/98	Cooperation in combating pollution emergencies in the South Pacific region.	Marine Div/MECDM Project: National Pollution Prevention Plan	NA
Natural Resources & Environment of South Pacific Region (SPREP Convention)	Ratified 10/9/98	Protection of natural resources and environment of the South Pacific Region in terms of management and development of the marine and coastal environment in the South Pacific Region.	MECDM	NA – the Project will not affect the marine and coastal environment.
Waigani Convention on Hazardous & Radioactive Wastes 1995	Ratified 7/10/1998	Bans the importation of hazardous and radioactive wastes into Forum Island countries and to control the trans-boundary movement and management of hazardous wastes within the South Pacific region.	MECDM	NA – the Project will not use or generate hazardous or radioactive wastes.
International Multilateral Environment Agreements				
Chemicals, Wastes and Pollution				

Multilateral Environment Agreement	Status	Purpose/Aim	Agency Responsible	Relevance to Project
Liability for Oil Pollution Damage	Ratified	Strict liability of ship owner for pollution damage to a coastal state within a certain amount.	Marine Div	NA
Marine Pollution Convention (London)	Ratified	Prevention of marine pollution by dumping of wastes and other matter.	MECDM/Foreign Affairs	NA
United Nations Convention to Combat Desertification (UNCCD)	Acceded 16/4/1999	Agreement to combat desertification and mitigate the effects of drought in countries experiencing drought or desertification.	MAL/MECDM Project: National Action Plan on Land Degradation and Drought	NA
POPs Convention (Stockholm)	Acceded 28.7/2004	Protection of human health and environment from persistent organic pollutants (POPs).	MECDM/Environmental Health Div. Project: National Implementation Plan	NA as no POP chemicals will be used during construction or operation.
Biodiversity				
CITES	Instrument of ratification being prepared	Regulations and restriction of trade in wild animals and plants through a certification system of imports and exports.	MECDM	NA
World Heritage Convention (UNESCO)	Acceded 10/6/1992	Protection of sites of Outstanding Universal Values. Solomon Islands currently has East Rennell Island as a World Heritage site.[8] Mt. Popomanaseu is on the Tentative list of the UNESCO	National Museum/ MECDM	NA

[8] World Heritage Convention

Multilateral Environment Agreement	Status	Purpose/Aim	Agency Responsible	Relevance to Project
UN Convention on Biological Diversity (UNCBD)	Ratified 3/10/1995	Conserve biological diversity through the sustainable use of its components and the fair and equitable sharing of the benefits arising out of utilizing genetic resources.	MECDM Project: NCSA; National Biodiversity Strategy and Action Plan; International Waters Program; 3rd National Report	NA since the complete area of the site has undergone previous development.
Cartagena Protocol to the UNCBD	Acceded – 26/10/2004	Protection of human health and the genetic diversity.[9]	MECDM	NA
Coral Triangle Initiative (CTI) Agreement		Protection and conservation of marine resources within the coral triangle region.		NA
Cultural and Natural Heritage				
World Cultural and Natural Heritage Convention	Acceded in 1992	Protection and management of cultural and natural heritage	National Museum under the Ministry of Home Affairs	Applicable since cultural heritage is valued by local communities
Climate Change Related				
United Nations Framework Convention on Climate Change (UNFCCC)	Ratified – 28/12/1994	Set an overall framework for intergovernmental efforts to tackle the challenges posed by climate change.	MECDM	This is relevant since the Project will reduce the use of fossil fuel for electricity production.

[9] artegena Protocol to the UNCBD

Multilateral Environment Agreement	Status	Purpose/Aim	Agency Responsible	Relevance to Project
Kyoto Protocol	Ratified – 13/03/2003	Reduce greenhouse gases especially carbon dioxide for the 39 industrial/ developed countries by an average pf 5.2% by 2012.	MECDM	NA - emissions from the construction of the Project are limited in time scale and time.
Montreal Protocol	Acceded - 17/06/1993	Allows phase out of substances that deplete the ozone layer according to a fixed schedule.	Energy Division	NA
Ozone layer Convention	Acceded – 17/06/1993	-Protection of the ozone layer through intergovernmental cooperation on research. -observation of ozone layer - monitoring of CFC		NA

ANNEX F - INDIGENOUS PEOPLES PLANNING FRAMEWORK (IPPF)

1 Introduction

Country-level social analysis undertaken during the preparation of the previous Phase I Electricity Access Expansion Project suggests that groups meeting the four defining characteristics of OP 4.10 Indigenous Peoples (IP) are likely to be found in the Solomon Islands, which is recognized as including numerous self-identifying groups with distinctive institutions, with patterns varying from island to island.

Each subproject of the proposed new Electricity Access and Renewable Energy Expansion Project (Phase II) (the "Project") will need to be screened in accordance with OP 4.10 to determine if IP communities are present within a subproject's area of influence. As project information on the subproject sites for the new (Phase II) project was lacking prior to preparation of the ESMF, the following Indigenous Peoples Policy Framework (IPPF) is based on the Phase I project and, therefore, may need to be revised once the new Phase II project is further defined.

2 Potential Issues and Impacts Relating to Indigenous Peoples Communities

The ubiquitous nature of IP communities in Solomon Islands combined with the geographic spread of potential subprojects suggests that these communities have the potential to be present in subproject areas. The potential positive and negative social impacts on IP communities are similar to those for non-indigenous populations. While subproject locations have been proposed, surveys to confirm potential IP interactions have yet to be completed. However, it is conceivable that they may be located in IP community homelands. If the majority of beneficiaries of a subproject are IP the elements of an Indigenous Peoples Plan (IPP) will be incorporated into overall subproject design.

These elements include:

- identifying issues relating to the particular IP community via a social assessment process;
- undertaking free, prior and informed consultations and reviewing outcomes to determine broad community support;
- ensuring equitable access to culturally-appropriate benefits for the IP community;
- actions to avoid, minimize or otherwise mitigate any adverse impacts affecting the IP community;
- accessible and culturally appropriate means to address grievances; and
- monitoring and information disclosure arrangements.

Investments are unlikely to meet the four defining criteria for IP communities in Solomon Islands under the *Environmental and Social Safeguard Instruments for the Pacific Islands Countries* (ESSIP) as most infrastructure will be sited within urban or peri-urban areas which are expected to comprise heterogeneous populations. However ancillary infrastructure (e.g., mini-grid distribution lines) may traverse customary/IP community lands beyond the urban boundary in which case OP 4.10 would be triggered.

3 Legal, Policy and Institutional Framework

Should any community within a sub-project area exhibit all of the following then OP 4.10 will be triggered:

- Self identification as members of a distinct indigenous cultural group that is recognised by other members of the community.
- Collective attachment to geographically distinct habitats or ancestral territories or have access to specific natural resources in these habitats or territories.
- Customary cultural, economic, social, or political institutions that are separate and distinctly different from the dominant surrounding community.
- An indigenous language that is different to the official language of the region.

The relevant subprojects will be planned and implemented in a manner consistent with the principles and procedures of OP 4.10.

4 Implementation Arrangements

The Solomon Islands Government bears official responsibility for ensuring that any IPP (where required) is prepared and implemented. Direct authority for IPP development and implementation is vested in Solomon Power, which will exercise its authority as necessary to coordinate actions with any other agencies or jurisdictions involved in planning or implementation. If an IPP is required for a particular subproject a technical consultant (anthropologist) will be engaged by Solomon Power to develop, implement and monitor the plan.

5 Consultation Arrangements

Initial consultations will be undertaken at the subproject screening stage to establish if IP communities are present with the respective area of influence. If IP are present the consultation process, to be coordinated by the relevant agency, will be undertaken in a free, prior and informed manner that results in a collective expression by IP communities of broad community support for the Project. The consultation process will be conducted in a manner that is:

- free, allowing Indigenous Peoples communities to openly express their preferences or concerns without intimidation or trepidation;
- in a timely manner, such that the preferences or concerns raised by Indigenous Peoples communities may be considered before project design decisions or implementation arrangements are finalized;
- informed in that Indigenous Peoples communities have been provided, and have had sufficient opportunity to consider, relevant information about the Project;
- inclusive, with special consultation arrangements included where necessary to obtain the preferences or concerns of women, the elderly, or others who customarily may not be expected or allowed to participate in community meetings.

A summary (including date, location, approximate number and status of persons in attendance, and summary of issues discussed and any agreements reached) will be prepared and recorded for each consultation meeting.

6 Arrangements for Social Assessment

A social assessment will be undertaken where an IPP is required, with the scope, level of detail, and methodological aspects of the assessment commensurate with the nature and extent of subproject-related impacts and risks. The social assessment will be incorporated in the sub-project ESMP and will include the following elements (as relevant):

- description of the subproject and potential issues or impacts relating to IP communities;
- identification of relevant IP communities and other key stakeholders to be consulted in the social assessment process;
- baseline information on the demographic, social, cultural, economic and political characteristics of relevant IP communities;
- elaboration of a culturally appropriate process for free, prior and informed consultations with IP communities during IPP preparation and project implementation;
- assessment of the potential adverse impacts and benefits likely to be associated with the project based on consultation; and
- summary of preferences and concerns of IP communities relating to project objectives, access and cultural appropriateness of project benefits, mitigation of any adverse impacts, and project implementation arrangements.

7 Broad Community Support

Based on results of consultations and the social assessment process, Solomon Power will determine whether there is broad community support for the Project among relevant IP communities. This determination generally is based upon collective and often informal expression of supportive views regarding project purposes, plans, and implementation arrangements. This determination does not require unanimity; broad community support may exist even when there is internal disagreement within the community or when there is limited opposition to project purposes or proposed arrangements. The IPP explains the basis upon which the determination has been made.

8 Outline of an Indigenous Peoples Plan

The scope and level of detail required in the IPP is commensurate with the nature and extent of subproject-related impacts and risks which, in the case of the Project, are likely to be low. The IPP will include the following contents:

- project description and summary description of issues relating to Indigenous Peoples;
- a brief summary of relevant issues and findings of the social assessment process;
- a summary of results from consultations and review of determination of broad community support;
- actions to ensure equitable access to culturally appropriate benefits for IP communities;
- actions to avoid, minimize or otherwise mitigate any adverse impacts affecting IP communities;
- cost estimates, budget and financial responsibilities for implementation of the IPP;
- accessible and culturally appropriate means to address grievances raised by IP (individually or collectively);
- monitoring arrangements; and
- arrangements for information disclosure.

9 Disclosure Arrangements

The Solomon Islands Government, through Solomon Power agrees to disclose relevant information regarding project design and implementation arrangements to IP communities and to the broader public. Specifically, results of the social assessment process, the ESMF to which this Annex is included

and IPPF, and any subsequently prepared IPP will be made available in a manner, location and language accessible to IP communities. If a draft IPP or IPPF is subject to subsequent revision, the revised documents will also be disclosed in a similar manner.

Disclosure of documents will be facilitated through the World Bank's InfoShop, the Solomon Power website and in hard copy at a location accessible to the relevant IP community. If necessary, the IPP technical consultant will provide interpretation of the relevant documentation to the IP community during the implementation of the IPP.

10 Monitoring Arrangements

If the IPP contains any specific actions to benefit Indigenous Peoples communities, or measures to mitigate any adverse impacts upon them, a monitoring process will be defined in the IPP to assess the effectiveness of actions or mitigation measures, and to provide a means for ongoing consultation with those communities throughout the implementation period.

11 Grievance Procedure

Arrangements will be established to ensure that IP communities may bring complaints to project management attention, and that Solomon Power responds to complaints in a timely and considered manner. Within IP communities, complaints can be raised by individuals, groups, or by the community as a whole. Specific arrangements for raising and addressing grievances will be defined and described within the relevant subproject IPP. It has been agreed that the grievance procedures will:

- be accessible (e.g., location, language, and socially inclusive) to all community members;
- use local customary arrangements for conflict resolution in an initial stage of review, as appropriate in the project context;
- have a second stage of review at the project management level, with a grievance committee chaired by the CEO of Solomon Power; and
- have defined and disclosed performance standards for replying to grievances received at both initial and project management-level review stages.

Individuals or communities with complaints that have not been resolved to their satisfaction may also seek legal recourse consistent with laws and procedures of the country.

ANNEX G - RESETTLEMENT POLICY FRAMEWORK (RPF)

(Including Voluntary Land Donation Protocol)

A. Introduction

In consideration of the complex land acquisition arrangement in the Solomon Islands, the Solomon Islands Electricity Access and Renewable Energy Expansion Project (Phase II) (the "Project") has been designed to avoid to the greatest extent possible the need to use land other than Government owned land or land owned by substantial land owners with whom equitable negotiations towards either "willing buyer – willing seller", long term leases or "voluntary land donations" (VLD) can be executed such as with the major church organizations. Where land not fitting these criteria may be required, the Project would screen out these sub-projects from project support. The only exception to this would be where individuals or customary groups (far more likely in the Solomon Islands as approximately 85% of land holding is under customary title) would be able to donate the land or enter a negotiated agreement (such as a lease) with Solomon Power.

Involuntary land acquisition in the Solomon Islands is extremely time consuming and can lead to social unrest and substantial project delays which is part of the reason Solomon Power has no intention of applying eminent domain for the purposes of land acquisition.

Notwithstanding this, it is possible that land may need to be obtained through involuntary land acquisition, which would necessitate preparation of an Abbreviated Resettlement Action Plan – ARAP (see **Appendix 2** for ARAP Checklist). It is considered very unlikely that additional land could not be acquired by negotiated settlement / VLD, as subprojects will be scoped and designed by Solomon Power in close collaboration with the community.

However, if negotiated settlement / VLD is not possible, the requirements of this Resettlement Policy Framework (RPF) will need to be implemented.

B. Project Description

The Project will subsidize the cost of new hybrid mini-grid developments at outstations, electricity service connections and in-house wiring for low-income households in the Honiara grid (existing service area and planned expansion areas), and in the outstations including prospective / indicative locations at Lambi, Ulawa, Santa Ana and Visale, and construction of an additional grid-connected solar PV facility at one of three locations – East Honiara or Henderson-Fighter 1 on Guadalcanal, or Auki on Malaita Island. A summary of the project components follows:

Component 1: US$ 8million to install up to four hybrid mini-grid developments, possibly at locations indicated above. These would consist of distribution systems (e.g. poles and wires) connected to solar PV arrays, with or without battery storage and/or diesel backup. The installations will be modular, scalable with demand growth and will allow for other generation sources, such as small hydro (where potentially available), to be connected in future.

Component 2: US$ 1.5million for electricity service connections for to approximately 3,366 low-income households to the Honiara grid and another 1,105 customer connections, the majority of which are households, to micro or mini-grids constructed under Component 1. This includes materials and installation of the service line and auxiliary pole, when needed; a pre-paid meter; and in-house wiring including protection, earthing, and two LED light bulbs. The project only involves providing

targeted subsidies to provide service connections from the nearest distribution to the beneficiary's dwelling and the in-house wiring within.

Component 3: US$ 2.5million to add grid-connected solar power to contribute to the overall share of renewable energy in Solomon Islands energy mix. Solomon Power has identified three possible sites for grid-connected solar PV, not all of which are likely to be funded under the Project. These include:

East Honiara substation (0.5MW to 0.6MW, US$ 2.5million): There is space in the existing East Honiara substation owned by Solomon Power that could be used to install approximately 0.5MW to 0.6MW of grid-connected solar PV. The land is available and ready to use, and Solomon Power would like to promote this site as a 'green energy' hub. The solar PV array would be situated in the area currently occupied by overgrown gardens.

Henderson - Fighter 1 (2MW; US$ 10million): Solomon Power has installed a 1MW gird-connected solar (PV) facility at this site. There is space within the existing fenced property to install an additional 2MW. A former issue regarding evacuation of power from the existing 1MW facility has been resolved with installation of a new underground high voltage circuit that necessitated consulting with nearby landowners to reach agreement on acquiring an easement. Any potential future expansion of the solar PV installation at Henderson-Fighter 1 would necessitate upgrading the road to an all-weather facility.

Auki (1MW; US$ 2.5million): Solomon Power is in the process of acquiring around 2 ha of land near Auki, Malaita Island. There is sufficient room on the site to install a 1MW solar PV facility.

C. Land Acquisition for the project

Project components have specifically been selected to minimize land acquisition issues. No physical relocation or loss of income is expected from the implementation of the Project as the components will be constructed either along existing road corridors or within communal/community owned land. Although the land required for these connections will widely be held under customary title, it is foreseen that the land will be acquired through voluntary arrangements with communities. If Voluntary Land Donation is envisaged, it will follow the VLD protocol developed for the Pacific Islands as documented in the (**Appendix 1**), which was prepared by the World Bank as part of its Environmental and Social Instruments for the Pacific Islands (ESSIP) to address the specific needs of the Pacific Island Countries.

The VLD protocol is used extensively throughout the Pacific, including in other projects in the Solomon Islands, to allow the donation of land subject to certain criteria being met. Notwithstanding this, it is possible that involuntary land acquisition (and preparation of an ARAP) may be required if additional land is needed during project implementation. This would apply where the landowner is not a beneficiary of the Project and the pre-requisites for negotiated settlement / VLD are not satisfied, or where land acquisition is for some reason restricted and involuntary land acquisition processes need to be applied. Accordingly, OP4.12 (Involuntary Resettlement) has been triggered as a precautionary measure in this case. It is noted, however, that this is considered very unlikely that additional land could not be acquired by negotiated settlement / VLD, as subprojects will be scoped and designed by Solomon Power in close collaboration with the community.

D. Justification for Preparing a Resettlement Policy Framework

The specific locations for siting infrastructure works for the subprojects has not been determined, and will be decided largely based on feedback from consultations with stakeholders and affected people

(APs). Furthermore, a fundamental part of the project identification process will be ensuring that there is a high level of community demand and "ownership" of the Project. The bulk of land required is expected to be either owned by the Government or the Church. In some instances, however, private or customary land may be traversed. In these rare circumstances, a negotiated arrangement culminating in a "willing buyer-willing seller" transaction or lease/easement or VLD will be the mechanism for land acquisition. In most cases, the only private land traversed will be owned by the beneficiary households. Any VLD will be based on guidance provided in **Appendix 1**.

A Resettlement Policy Framework (RPF) therefore is the appropriate social safeguard instrument, as no physical displacement is envisaged.

If involuntary land acquisition is unavoidable, an Abbreviated Resettlement Action Plan (ARAP) will be developed as per Operational Policy 4.12, Annex A, paragraph 22. In the event an ARAP is required, then it would form part of the agreement between the Solomon Islands Government and the World Bank.

E. Objectives, Definitions and Key Principles

The guiding principles for the project are that involuntary resettlement is to be avoided or minimized. Affected People (APs) should be better off or at least as well off as before the project. All persons affected by the Project are to be consulted throughout the Project, have the opportunity to participate in planning, and to share in project benefits. The project should contribute to sustainable development.

These principles involve a process of early identification of stakeholders and, in particular of Aps, frank and effective public disclosure of any known impacts; consultation and participation to avoid or mitigate negative impacts identified, and to ensure that no person or impact is overlooked; fair, transparent and timely intervention to support APs during implementation, land acquisition and restoration of livelihoods; and commitment, where possible, to improve upon the status quo, particularly for those who may be vulnerable by reason of poverty, ethnicity, gender, age, disability, or social status.

The over-riding objective is to avoid any resettlement impacts via subproject identification, and effective infrastructure design. To ensure that the projects contribute to the objective of sustainable development, Solomon Power will adopt a comprehensive disclosure and consultation process that includes all stakeholders. The consultation process with APs will reveal all foreseeable impacts, and will elicit AP concepts of how mitigation options and resettlement planning can contribute to their aspirations for sustainable restoration or improvement of their livelihoods. In the unlikely event of loss of land, and/or land-based assets, the aim will be to replace like for like. If this is not possible, compensation will be provided for lost land, assets and income, and the costs of relocation and restoration of livelihoods will be met. Restoration includes not only physical assets, but also social and cultural assets. If there is a risk of disruption of these values, which are often disproportionally encountered by women, the APs will contribute to selection of mitigation and resettlement options to ensure policy objectives are met.

F. Legal and Regulatory Framework

Overview

The legislation governing the acquisition of land in the Solomon Islands is contained in the *Lands and Titles Act* 1970 (LTA). The LTA defines ownership arrangements, governs the management of land, and sets out procedures for the acquisition and lease of land.

Land in the Solomon Islands is either customary land or registered land (also referred to as alienated land, since it has been alienated from customary ownership). Approximately 87% of land in the country is still held as customary land and most natural resources (with some exceptions) belong to the landowners under custom. The LTA defines customary land as " *any land (not being registered land, other than land registered as customary land, or land in respect of which any person becomes or is entitled to be registered as the owner of an estate pursuant to the provisions of Part III) lawfully owned, used or occupied by a person or community in accordance with current customary usage, and shall include any land deemed to be customary land by paragraph 23 of the Second Schedule to the repealed Act*".

Land includes "*land covered by water, all things growing on land and buildings and other things permanently fixed to land but does not include any minerals (including oils and gases) or any substances in or under land which are of a kind ordinarily worked for removal by underground or surface working*".

Dealings in land are governed by legislation, primarily the LTA. The LTA regulates the process of acquiring customary land and converting it into registered land as well as the transfer and lease of registered land.

Two predominant types of estate are provided for under the LTA: perpetual estates (commonly referred to as PE), and fixed term estates (commonly referred to as FTEs). The "perpetual estate" is akin to a free-hold estate and gives the right to occupy, use and enjoy the land in perpetuity, subject to the performance of any obligations, and subject to any restrictions that may be imposed under law. The Solomon Islands Constitution establishes that only a Solomon Islander, or other person as may be prescribed by Parliament, has the right to hold or acquire a perpetual interest in land. A "fixed term estate" provides for the right to occupy, use and enjoy the land and its produce for a fixed period of time (usually 75 years), subject to payment of any rent and the performance of any obligations and subject to restrictions that may be imposed.

Lease estates in land, including long-term leases, are also increasingly common.

Customary land

There are a number of characteristics of land under customary tenure that influence the resettlement process associated with involuntary land acquisition. In much of Solomon Islands there is no systematic authoritative record of customary ownership or tribal land boundaries. Land use, settlement, and community composition are dynamic in response to a number of social and physical influences. In many areas, including the Project site, broad clans have in recent times divided into smaller sub-clan groups or lineages made up of family units.

Land ownership claims are made through reference to custom, particularly special knowledge of oral histories, custom stories, legends, etc., ancestors and lineages, the whereabouts of boundary markers (such as special landscape features, rocks, special trees, etc.), and the whereabouts of sacred (tambu) places, for example, places with special spiritual significance, ancestors' settlement sites, grave sites, and knowledge of their 'stories".

Scope of the power of eminent domain

The Solomon Islands Government's powers of involuntary land acquisition are set out in Division 2 of Part V of the *Land and Titles Act*. Division 2 gives the Minister of Lands the power to compulsorily

acquire any customary or registered land where it is 'required for any public purpose'.[10]

However, this broad power is circumscribed by protections provided in the Constitution: Section 8(1) of the Constitution only allows an involuntary land acquisition to occur where:

- the acquisition is "necessary or expedient in the interests of defence, public safety, public order, public morality, public health, town or country planning or the development or utilisation of any property in such a manner as to promote the public benefit";
- there is reasonable justification for causing any hardship to the interest holders;
- the acquisition is done under a law which provides for reasonable compensation (including lump sum or instalments, and by cash or other form) in a reasonable time; and
- the acquisition is done under a law which provides interest holders with the option of appealing to the High Court with respect to their ownership, the legality of the acquisition, or the compensation payable.

The Constitution also requires Parliament to provide the following additional safeguards where customary land is compulsorily acquired (section 112):

- prior negotiations must take place with the owners;
- the owners shall have a right to access independent legal advice; and
- as far as practicable, the interest acquired shall be limited to a fixed term interest.

Although Parliament has not provided for these safeguards in the LTA, the Minister of Lands and the Commissioner of Lands can take these into account in conducting the acquisition. These safeguards are discussed in more detail below.

Legal and administrative procedures for involuntary land acquisition

1. The involuntary land acquisition process is set out in Division 2 of Part V of the LTA, taking into account the additional protections afforded in the Constitution. The legal process therefore becomes as follows:

2. Landowner identification – While not a legal step, landowner identification is necessary to identify the owners of any customary land in order to conduct the prior negotiations required in the Constitution. As discussed above, there is no recognised record or register of customary landowners or land boundaries in Guadalcanal.

3. Prior Negotiation – Negotiations must be conducted with the owners of customary land before the land is acquired[11]

4. Declaration – the Minister of Lands declares that land is required for a public purpose. The declaration specifies the boundaries and extent of land required and the nature of the purpose for which the land is required;[12]

5. Publication – The declaration must be published in such manner as the Minister thinks fit. It is common practice to publish the declaration in the Government Gazette. It is upon

[10] Section 71(1) of the LTA.

[11] Section 112(a) of the Solomon Islands Constitution

[12] Section 71 of the LTA

publication that the land is legally acquired.[13] At this point owners have six months to appeal to the High Court to have the declaration quashed;[14]

6. Public Notification – following the declaration the Commissioner of Lands (COL) posts notices describing the declaration, its effect and the right to compensation;

7. Notification of owners – the COL serves written notice of the declaration to each owner or landowning group, or each person who appears to own, or to claim to own, the land. The identification of landowners above will also assist in this step.

8. Assistance to prepare claims – the Provincial Secretary for each Province assists claimants to prepare claims.[15]

9. Access to legal advice – the timing of access to the independent legal advice that must be provided to customary landowners is not specified in the Constitution but would be relevant to the preparation of compensation claims.[16]

10. Submission of claims – by persons or groups wishing to claim compensation for their rights and interests taken in the acquisition of the land. Claims must be submitted within 3 months of the acquisition (date of publication in gazette). For customary land these claims in effect should include some evidence of customary ownership as well as any evidence as to value[17];

11. Valuation and payment of compensation – The COL considers the claims, accepts or rejects them, and makes an offer of compensation. Offers and rejections are to be issued within 3 months of receipt of the claim. While not a specified legal step, it is at this stage that the COL may seek advice from the Valuer General, or other valuer, to inform the amounts of compensation payable.

12. Compensation by land – Where the land that is acquired is customary land, the COL may make an offer of land in lieu of cash, with the approval of the Land Board and the endorsement of Cabinet. Landowners may choose to accept either the land or the cash equivalent.[18]

13. Acceptance or appeal – Claimants have 3 months from the COL's decision to appeal any rejection, or the amount of compensation offered, to the High Court. Where no appeal is lodged landowners are taken to have accepted an offer.

14. Provided there are no appeals in respect of the compensation amount and the offer is accepted, the COL shall cause payment to be made within 3 months of acceptance;[19] and

15. Notice to vacate – persons with an interest in the acquired land may continue to use and occupy the land until the COL gives them a notice in writing requiring them to vacate, but cannot develop the land without the COL's consent[20];

---

13 Section 75 of the LTA
14 Section 76 of the LTA
15 Section 74 of the LTA
16 Section 112(b) of the Solomon Islands Constitution
17 Section 79(1) of the LTA
18 Section 84 of the LTA (as amended in 2014)
19 Section 79(2) of the LTA
20 Section 78 of the LTA

16. Alteration of the Land Register – provided that there are no appeals and the declaration has not been quashed, the land may be registered to the COL on behalf of the Government.

Judicial Remedies

The LTA provides two broad types of judicial remedy to those with an interest in the acquired land. The first is the option to appeal the validity of the acquisition. An appeal against the validity of the acquisition must be made to the High Court within 6 months of the acquisition of the land (the publication of the Minister's notice in the Gazette).[21] The primary ground for such an appeal is that the acquisition was not made for a public purpose. Only persons with an interest in the land have standing to appear under the LTA. The timeframe to hear such an appeal will vary. The two previous public purposes appeals suggest that a judgment at first instance will take between 8 -12 months from the date the appeal is lodged. Any appeal to the Court of Appeal can take a further 12 months.

The second judicial remedy is an appeal to the High Court against the COL's offer of compensation. This can be an appeal as to ownership or the COL's valuation. Any person who has submitted a claim for compensation will have standing to bring an appeal. The appeal must be lodged within 3 months of the COL's offer or rejection of their claim. It is open to the COL and Attorney General Chambers to settle a Court case out of Court and alternate dispute resolution procedures may be used to agree a disputed compensation amount.

Law governing valuation

The Constitution allows for Parliament to provide for the "*criteria to be adopted in regard to the assessment and payment of compensation for … compulsory acquisition (which may take account of, but need not be limited to, the following factors: the purchase price, the value of improvements made between the date of purchase and the date of acquisition, the current use value of the land, and the fact of its abandonment or dereliction)*."

Notwithstanding this power, Parliament has not provided express criteria. The LTA provides that the COL may offer such "*amount of compensation as he may think proper*".[22] Where an offer of compensation is appealed, the High Court may award such compensation as *"in its absolute discretion thinks just*" with regard to the condition of the land on the date of acquisition and such other matters and circumstances the Court may consider relevant.[23]

Under the Constitution, the Acts of the United Kingdom Parliament of general application and in force on 1 January 1961 continue to apply in Solomon Islands where not inconsistent with national laws.[24]. The relevant UK laws include the *Land Clauses Consolidation Act* and *The Acquisition of Land (Assessment of Compensation) Act 1919.* Basic valuation principles stemming from these Acts include:

- "Equivalence" – an owner should be paid no more or less than he suffers as a consequence of the forced sale. The principle of equivalence can include an amount for disturbance or other incidental loss;
- Compensation to have regard for the development potential of the land, where land is undeveloped or under developed;

---

21 Section 76 of the LTA

22 Section 79(2) of the LTA

23 Section 83 of the LTA

24 Section 76, Sch 3, Para 1 of the Constitution

- Compensation cannot be based on the value of the land to the acquiring body;
- Any increase in value due to the underlying scheme for which the land is acquired must be disregarded (often referred to as the Pointe Guarde Principle).

To date, there have been no cases considering the applicability of these laws in the Solomon Islands.[25]

In addition to these broad principles, laws governing natural resource usage rights will also be relevant to the valuation of compensation. As discussed above, customary land rights include rights to some natural resources in accordance with customary law unless inconsistent with national legislation.

The value of profits from commercial timber should be taken into account in the valuation of land as trees are broadly considered 'owned' under custom. When determining the value of such resources to landowners reference must be had to the *Forest Resources and Timber Utilization Act* which regulates the forestry industry and the sale of customary timber rights.

World Bank Policy

World Bank resettlement policy starts from the principle of restoration or improvement of livelihoods at replacement cost, rather than current value, recognizing not only financial and physical assets, but also the environmental, social, and cultural assets of an individual, irrespective of gender, ethnic or social status, in the resettlement context. The Involuntary Resettlement policy (OP 4.12) enjoins avoidance and minimization of adverse impacts not only because it is less costly, but also because it avoids damage to the less tangible and hard-to-value aspects of livelihoods and cultures. World Bank resettlement policy has a positive objective of sustainable development, with particular regard for the vulnerable.

Legal Gap Analysis

The gaps between the Solomon Islands laws and OP 4.12 requirements on land acquisition and resettlement have been identified and necessary gap-filling measures developed to meet the requirements of OP 4.12 as summarized below in **Table 1**.

Table 1 – Legal Gap Analysis

Solomon Islands Laws	World Bank Safeguard Policies	Gap-Filling Measures
There are no provisions to prepare Resettlement Plans based on meaningful consultations with APs, including the poor, the landless, elderly, women, and other vulnerable groups.	OP 4.12 requires that Resettlement Plans must be prepared based on consultations with APs, and that poorer and vulnerable people are also consulted and informed of their entitlements and resettlement options.	Abbreviated Resettlement Action Plans (ARAPs) will be prepared in consultation with APs, including vulnerable groups, and disclosed by Solomon Power; translated or summary versions will be available at the provincial, district and local level. Local clan leaders whose members are affected will also receive a copy of the ARAP.

[25] It is a question to be determined by the High Court as to whether the wide discretionary provisions of the LTA would be inconsistent with the application of English law in this regard.

Solomon Islands Laws	World Bank Safeguard Policies	Gap-Filling Measures
There are limited provisions to improve or at least restore the livelihoods of all APs.	It is necessary to improve or at least restore livelihoods of APs by a range of strategies targeted at APs. Nobody is to be worse off as a result of the development project.	Where such impacts will be experienced, ARAPs will include measures for improvement or at least restoration in living standards of APs to pre-project levels.
Limited provisions to provide assistance/compensation to APs who lose access to non-land assets	Requires that APs are compensated for all losses, including non-land assets, at full replacement cost.	The project will follow the principle of replacement cost for compensation of affected assets.
There is no requirement for the monitoring and assessment of resettlement outcomes.	OP 4.12 requires that resettlement outcomes be monitored and assessed.	ARAPs will include indicators and baseline data to monitor impacts on living standards of APs. The monitoring reports will also be disclosed including to APs.

G. Approach to land acquisition

The RPF applies to the Project, including any activities that may be considered "linked". Consultation and Grievance Redress Mechanism (GRM) requirements apply irrespective of land acquisition method applied. In most cases it is anticipated that the land required for project delivery will be obtained via VLD or negotiated arrangements – generally "willing buyer-willing seller" or long term leases; in which case specific requirements will apply. An ARAP will only be needed in the unlikely event of involuntary land acquisition being required for activities funded by the project.

Involuntary land acquisition may be required if additional land is required during project implementation and the landowner is not a beneficiary of the project and the pre-requisites for negotiated settlement/VLD are not satisfied, or where land acquisition is for some reason restricted and involuntary land acquisition processes need to be applied. As noted previously, this scenario is considered very unlikely as projects will be scoped and designed by Solomon Power in close collaboration with the community.

The "linked" activities (such as low voltage distribution, etc.) which may be constructed at the same time as (or immediately prior to) the project funded activities will be subject to due diligence as outlined in **Table 2**. Where (such as in the Honiara grid densification activities), the generation and HV already exists, there will be no requirement for due diligence for these elements

These approaches and their key characteristics are shown in **Table 2** below.

Table 2 – Land access arrangements and key characteristics

Land access arrangement	Key characteristics and documentation requirements
Voluntary Land Donation (VLD)	• Minor impacts <10% impact on any individual household or land user • Documents to demonstrate compliance with VLD protocol (see Appendix 1 of this RPF): o Establish informed consent of the person(s) donating the land. Power of choice is a fundamental foundation of VLD o Land owner(s) donate the land for the purposes of the project which would benefit the community o Determine and document the appropriateness of VLD in the context of Project.

	○ Due diligence on owners and users of land donated. ○ Full consultation and disclosure. ○ Document the legal transfer of land donated. ○ Grievance Redress Procedure and Mechanism. ○ Any differential impacts (where negative impacts are unequally shared) would not exist, or would be very minor and compensated
Negotiated arrangements – generally "willing buyer-willing seller" or long term leases	• No significant impacts • Documentation to demonstrate: ○ Establish informed consent of the person(s) donating the land. Power of choice is important ○ Land owner(s) provide a legally binding agreement such as a lease or right of way over the land for the purposes of the project. ○ May be accompanied by one-off or ongoing payment or other compensation for the provision ○ Due diligence on owners and users of land to ensure correct parties are a part of the negotiated agreement ○ Full consultation and disclosure (possibly without financial terms) ○ Documentation of negotiated arrangement required. ○ Grievance Redress Procedure and Mechanism.
Involuntary Land Acquisition	• No projects supported by the Bank project will create significant resettlement (or environmental impacts) • Detailed ARAP to be prepared which documents: ○ Description of the project activity causing involuntary resettlement and explanation of efforts to avoid or minimize involuntary resettlement associated with the project (alternative project designs considered). ○ Range and scope of potential adverse resettlement impacts. ○ Socioeconomic survey and baseline census survey information. ○ Review of relevant laws and regulations relating to land acquisition and involuntary resettlement (see section above on legal and regulatory framework for more details). ○ Description of asset valuation procedures and specific compensation rates (or alternative measures) for all categories of affected assets. ○ Other assistance measures, if any, necessary to provide opportunities for livelihood restoration for affected persons. ○ Assistance to affected commercial enterprises. ○ Eligibility criteria for compensation and all other forms of assistance. ○ Relocation arrangements, if necessary, including transitional support. ○ Resettlement site selection, site preparation, and measures to mitigate impacts on host communities, if necessary. ○ Restoration or replacement of community infrastructure and other services. ○ Land donation arrangements and documentation requirements, if relevant. ○ Organizational arrangements for implementation. ○ Consultation and disclosure requirements and arrangements. ○ Resettlement implementation schedule. ○ Costs and budget. ○ Monitoring arrangements. ○ Grievance procedures. ○ Summary entitlements matrix.

H. Preparing ARAP

If involuntary land acquisition is required for the project, an ARAP will be prepared to document the matters identified in **Table 2** above.

- The ARAP(s) will be prepared having regard to the following: Responsibility for preparation, implementation and monitoring of ARAPs (including responsibility for meeting all associated costs with their implementation), in accordance with this RPF, rests with Solomon Power.
- As necessary, Solomon Power will coordinate actions with any other agencies involved to ensure timely and effective ARAP implementation.
- Preparation of the ARAP begins as soon as it is determined that involuntary land acquisition is essential to complete any of the project activities and shall be finalized prior to the commencement of any works to carry out said project activities. Solomon Power will carry out, or cause to be carried out, a census survey to identify and enumerate Affected Persons and to identify and inventory land and other assets to be required. The census survey must cover 100% of the APs. The census survey also establishes whether any affected persons are significantly affected by loss of productive land, whether any commercial enterprises are affected, or whether any households will be required to physically relocate.
- The ARAP will be prepared in accordance with the policy, principles and planning and implementation arrangements set forth in this RPF. The ARAP is to be based on accurate baseline census and socioeconomic survey information, and establishes appropriate mitigation measures (e.g., compensation at full replacement cost for loss assets, transitional assistance for relocation, and transitional assistance for livelihood restoration, and transitional assistance for commercial enterprises) for all relevant categories of adverse impacts.

I. Communal Land Acquisition – Guiding Principles

Given the prevalence of customary (communal land) in the Solomon Islands, the following guidance is provided for the preparation of ARAPs for this project:

1. The World Bank's Voluntary Land Donation protocol (see Appendix 1) is to be applied in full where land donation is anticipated to allow project delivery.

2. Alternatives to land acquisition are considered. Especially where replacement land is scarce or non-existent, or where customary land tenure is deemed inalienable, negotiated agreements for long-term lease, even for alternative infrastructure siting, should be considered.

3. Where communal land must be acquired, collective compensation may be appropriate. Under such conditions, compensation is used solely for appropriate community purposes, or is distributed equitably among community members. The ARAP describes arrangements for usage of collective compensation.

4. Individual users and occupants of acquired communal land are identified in the census prepared for the ARAP and the ARAP describes mitigation measures or negotiated agreements providing for restoration of their livelihoods or living standards.

5. Where replacement land does not exist, it will be impossible to establish a technical valuation for replacement cost. The ARAP will describe alternative means used for valuation. This may include negotiated agreement with affected communities.

6. If relevant, the ARAP describes any changes that may occur regarding land use and tenurial arrangements for remaining communal land in project-affected areas.

7. The ARAP describes a process by which conflicting claims to ownership or use rights will be addressed.

J. Entitlements

Criteria Defining Affected Persons

Eligibility of an individual entitlements under this RPF will relate to their:

- Loss of land, whether an owner, lessee or informal occupant.
- Loss of trees or other plants, whether on owned, leased or informally accessed land.
- Loss of land-based improvements – houses, shelters, business buildings, also irrespective of the ownership status of the land.
- Loss of access to commons and reserves, e.g., road reserves, whether or not legally encroached, and restricted areas.

Eligibility for loss of non-land assets, whether temporary or permanent, will be recognized for project-induced impacts on:

- An individual's business or income.
- Soil or water quality changes that impact the individual's livelihood activities in the direct or indirect impact area.
- Air, light or noise pollution, or restrictions on access to social or economic resources that impact property values and amenity.
- Access to resources due to quarrying operations.
- Any other assets or elements of livelihoods recognized in the Solomon Islands law and in WB World Bank Operational Policy that may be discovered during disclosure and consultation.

Persons demonstrating that they will suffer losses from any of these causes as at the cut-off date for entitlements will be regarded as eligible for resettlement assistance. Losses from encroachments or activities commenced after the cut-off date for the respective projects will not be eligible.

Table 3 summarizes eligibility and entitlements for AAPs.

Table 3 – Entitlement Matrix

Type of Impact	Entitled Person(s)	Entitlements
Temporary use of land.	Legal/ customary landowners/land users	Will only occur with agreement with landowners/APs. Affected landowners/APs will be paid rent on terms negotiated and agreed with them. The land will be returned to respective landowners/APs after its restoration.
	Legal owner(s)/customary landowners	Landowners will be provided equivalent size and quality of land, or cash compensation at replacement cost.

Type of Impact	Entitled Person(s)	Entitlements
Permanent acquisition of land	Informal settlers (e.g., on land acquired for ROW) with no rights that can be legalized	APs will be provided compensation for their damaged non-land assets (e.g., crops, trees, and structures) on project-affected land.
Loss of crops and trees	All APs irrespective of their legal status	APs will be given notice to harvest crops and trees before site clearance or removal from required land. If APs are not able to harvest, they will be paid cash compensation at replacement cost. In case of perennial crops and trees, the compensation will also include loss of income for a period until new crops or trees produce an equivalent income
Loss of structures (e.g., roadside markets)	All APs (whether having legal title to land or not)	APs will be provided compensation at replacement cost without deductions for depreciation or salvaged materials and assistance in finding an alternative site. It will be ensured that replacement structures are ready to move before relocation of existing structures. In case business activities are disrupted, the business owners will be provided disruption allowance for the duration of business being disrupted.
Displacement of community structure (if any)	Community representatives as identified by the social impact assessment	Affected structures will be restored in consultation with community or the affected community will be provided with cash compensation at replacement value without deductions for any materials salvaged. Community will be assisted in dismantling and relocating structure/property.
Impacts on vulnerable APs	Vulnerable AP households identified by social assessment.	Vulnerable households will receive (i) priority employment in project construction and maintenance works; and (ii) additional cash allowance to purchase foodstuffs during the period of income disruption. Amount to be confirmed in the RP for each road/bridge.
Unforeseen impacts	Concerned affected persons	These will be determined as per the principles of the RF

K. Implementation Arrangements

Implementation arrangements such as a time-bound implementation schedule of all activities relating to all land acquisition shall be included at the development of an ARAP. Finalization of land and asset transfer (as relevant) as well as any associated payments (such as where there is a "willing buyer-willing seller" arrangement and/or for fixed assets etc.) should be completed at least one month prior to land acquisition. If there is a delay of one year or more between land or asset valuation and payment of compensation, compensation rates will be adjusted for inflation purposes.

Process for negotiation of Voluntary Land Donations (VLD) and Long Term Leases

Clear parameters are defined in the VLD protocol in **Appendix 1**. Solomon Power will ensure that the requirements of the protocol are met for land is acquired via VLD. Where land is leased via negotiation, Solomon Power will need to ensure the following matters are considered and documented:

- Establish informed consent of the person(s) donating the land. Power of choice is important;

- Land owner(s) provide a legally binding agreement such as a lease or right of way over the land for the purposes of the project (see **Appendix 3** for land donation commitment letter template);
- May be accompanied by one-off or ongoing payment or other compensation for the provision;
- Due diligence on owners and users of land to ensure correct parties are a part of the negotiated agreement;
- Full consultation and disclosure (possibly without financial terms);
- Documentation of negotiated arrangement required; and
- Grievance Redress Procedure and Mechanism.

Budget and Costs

Solomon Power bears responsibility for meeting all costs associated with involuntary land acquisition. Any ARAPs require a budget with estimated costs for all aspects of their implementation. All APs are entitled to compensation or other appropriate assistance and mitigation measures, regardless of whether these persons have been identified at the time of resettlement planning, and regardless of whether sufficient mitigation funds have been allocated. For this reason, and to meet any other unanticipated costs that may arise, the ARAP budget shall include contingency funds, i.e., at least 10% of estimated total costs. Compensation must be paid promptly and in full to the APs. No deductions from compensation will occur for any reason. The ARAP is to describe the procedures by which compensation funds will flow from Solomon Power to the APs.

Approval of ARAP(s) by the World Bank

All ARAPs will need to be submitted to the World Bank for its clearance and review – and full entitlements delivered - prior to any project works commencing on the land (or affecting any other aspect such as livelihoods) to which the ARAP applies

Disclosure and consultation on the RPF

Consultation will need to be carried out during the preparation of the Project as a follow-up to the ESMF and RPF, including discussion with key stakeholders including Solomon Power, other government ministries, local administrators, and members of potential subproject communities. The various issues associated with accessing land for the purposes of project delivery – especially the focus on identification and design of projects so that any land impacts would be avoided - discussed. The ESMF including land aspects will be formally submitted to and disclosed on the World Bank's InfoShop and on Solomon Power's website, and hard copies will be available at Solomon Power (or other appropriate) offices in project areas.

Disclosure and consultation on the ARAP

To ensure that the projects contribute to the objective of sustainable development, Solomon Power will adopt a comprehensive disclosure and consultation process that includes all stakeholders during project implementation. The consultation process with APs will reveal all foreseeable impacts, and will elicit AP concepts of how mitigation options and resettlement planning can contribute to their aspirations for sustainable restoration or improvement of their livelihoods. In the unlikely event of loss of land, and land-based assets, the aim will be to replace like for like, and if this is not possible, to compensate for lost land, assets and income, and meet the costs of relocation and restoration of livelihoods. Restoration includes not only physical assets, but also social and cultural assets. If there is a risk of disruption of these values, which are often disproportionally encountered by women, the APs will contribute to selection of mitigation and resettlement options to ensure policy objectives are met.

The ARAP must describe measures taken to consult with affected persons regarding proposed land acquisition, transitional assistance, relocation arrangements, and other arrangements, and summarizes results of those consultations. Solomon Power will also be required to disclose the ARAP-both the draft and final versions – to the affected persons and the general public in the project area, in a language and location accessible to them. Disclosure of the draft ARAP should occur at least one month prior to World Bank review. Disclosure of the final ARAP occurs following World Bank acceptance.

L. Monitoring Arrangements

Monitoring arrangements will be established in the ARAP to assess the effectiveness of ARAP implementation in a timely manner. Monitoring includes review of progress in land acquisition, payment of compensation, provision of transitional assistance, and functioning of project grievance procedures. The ARAP should establish the frequency of monitoring activities. Monitoring should be conducted by an individual, firm, or community organization that is not directly affiliated with Solomon Power. Any issues or problems associated with ARAP implementation that are observed in the monitoring process will be reported to Solomon Power and the World Bank project team.

Prior to project completion, the monitoring process will assess whether livelihoods and living standards of affected persons have been improved, or at least restored. If these objectives have not been achieved, Solomon Power identifies plans and implements supplemental measures necessary to achieve satisfactory outcomes.

M. Grievance Procedures

During the course of the project it is possible that affected persons or communities may have concerns with the project's social or environmental implementation occurring during construction and possibly during operation.

Any ARAP or other documentation prepared to meet the requirements of this RPF will include details of the specific GRM process applying to that activity. This GRM process will need to ensure that any concerns are addressed quickly and transparently, and without retribution to the affected parties.

World Bank funded projects are required to implement a GRM to receive and facilitate resolution of affected peoples' concerns, complaints, and grievances about the project's performance, including concerning environmental and social impacts and issues. The mechanism ensures that: (i) the basic rights and interests of every affected person by poor environmental performance or social management of the project are protected; and (ii) their concerns arising from the poor performance of the project during the phases of design, construction and operation activities are effectively and timely addressed.

In the early stages of engagement, project stakeholders and affected communities must be made aware of:

- how they can access the GRM;
- who to lodge a formal complaint too;
- timeframes for response;
- that the process must be confidential, responsive and transparent; and
- alternative avenues where conflicts of interest occur.

The grievance process is based upon the premise that it imposes no cost to those raising the grievances; that concerns arising from project implementation are adequately addressed in a timely manner; and that participation in the grievance process does not preclude pursuit of legal remedies

under national law. Local communities and other interested stakeholders may raise a grievance at any time to SP or the World Bank's Inspection Panel.

Communities and individuals who believe that they are adversely affected by a World Bank supported project may submit complaints to existing project-level grievance redress mechanisms or the World Bank'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 World Bank's independent Inspection Panel, which determines whether harm occurred, or could occur, as a result of World Bank non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. Information on how to submit complaints to the World Bank's corporate GRS is available at http://www.worldbank.org/GRS. Information on how to submit complaints to the World Bank Inspection Panel is available at www.inspectionpanel.org.

APPENDIX 1 – VOLUNTARY LAND PROTOCOL

Voluntary Land Donation Protocol

1. Background

This Voluntary Land Donation Protocol (VLDP) has been prepared by the World Bank for the purpose of due diligence. For cases where communities and/or individual landholders have offered to donate their land for the project because it is of benefit to the broader community, the World Bank's Voluntary Land Donation Protocol (VLDP) should be followed. The project team is to exercise their best judgment where voluntary land is offered and conduct due diligence to avoid adverse impacts and reputational risks. Donations are based on the premise that the project benefit will offset or outweigh the loss of the land donated.

VLD is only suitable for projects where the landowner and/or community wish to 'gift' land parcels or small areas for small-scale community infrastructure that will be of direct benefit to the donor's community.

2. When VLD is Applicable

Voluntary donation of land by beneficiary households is acceptable where:

- It has been verified the donation did not result from any form of coercion or manipulation and is offered in good faith;
- The donation does not severely affect the living standards of the community and/or individual landholder responsible for the donation (i.e. impacts are marginal based on percentage of loss and minimum size of remaining assets);
- Alternatives and the viability of other locations or sites have been considered;
- The donation does not result in the displacement of households or cause loss of income or livelihood;
- The landholder/s making the donation will directly benefit from the project;
- Consultation has been conducted in an open and transparent manner and to a degree that the landholder/s can make an informed choice;
- The land is free from disputes regarding ownership or tenure;
- Land transactions are supported through the transfer of titles;
- Full and proper documentation of all consultations, meetings, grievances and actions taken to address grievances has been reviewed and made available;
- Where impacts are minor and other alternative sites are not viable.

3. When VLD is NOT Applicable

VLD is not applicable under the following scenarios:

- Medium/large-scale infrastructure particularly in cases where a government agency or entity that has a statutory obligation to provide the infrastructure and/or services for which the land is required
- Where inadequate consultation with donors results in lack of understanding about the terms and conditions of the donation;
- In lieu of formal procedures for land acquisition where these do not exist;
- Where donor property owners, landowners or customary rights holders do not support, or will not directly benefit from, the Project;
- Where conflicts over land exist, including customary collective ownership;

- Conflicting land titling that make it difficult to establish with certainty who has a right to own, donate and use a specific parcel of land;
- Where donors did not provide their informed consent and were subject to political or social pressure and coerced into making the donation.

4. Process for Voluntary Land Donation

This section provides guidance on the process for VLD, namely on how to:

- Determine and document the appropriateness of VLD in the project context;
- Verify the requirements of the donation and the formalization of the donation;
- Carry out due diligence on the owners and users of land donated;
- Ensure appropriate consultation and disclosure;
- Establish informed consent of the person donating the land; and
- Establish grievance redress mechanism.

This section outlines the process that should be followed once the threshold considerations set out in Section 1 have been considered, and it has been determined that it is appropriate for the land to be provided to the project by voluntary donation.

It is necessary to follow a clear process for the donation, and to prepare and maintain documents that demonstrate such process. Each step set out below should be addressed in the context of the specific project, and fully documented.

(i) Determine and document that VLD is appropriate in the circumstances of the project.

The team should record the reasons why it thinks that the donation of land is appropriate for the project. In certain cases, only some of the land the project requires will be donated or alternatives to land donation exist. The project team should identify (in as much detail as possible):

- What the land will be used for;
- How much land the project will require on both a permanent and temporary basis;
- How much of the land will be donated;
- What alternatives to donation exist (e.g., right of use, right of way);
- The terms of the donation;
- The identities of the parties who intend to donate;
- The beneficiary of the donation; and
- Any details that are relevant to why donation may be appropriate.

(ii) Verify the requirements to transfer, and formalize the transfer of, the land

It is important to understand the process that should be followed to transfer the land, and appropriate ways to formalize the transfer so as to achieve certainty for both the transferee of the land and the project. In many countries this will require consideration of the legal and administrative requirements but also, particularly in the case of customary land, local and community processes. In some cases these will constitute two different but parallel (and overlapping) systems and a process will have to be established to ensure that the requirements of each system are satisfied. An important consideration will be how transparent the process and the decision making process actually is, and what can be done to enhance the process.

(iii) Conduct due diligence on who owns and uses the land

Given the specific issues surrounding land ownership and use in the PICs, it is important that the project team carries out careful due diligence to understand the type of land rights that exist in the project area, and to identify any particular issues relating to land ownership and use. Thereafter, a more specific due diligence must be conducted on each parcel of land proposed for donation to identify:

- The owner or owners of the land;
- The users of the land, or any parties that occupy the land (either physically or through ownership of an asset or conduct of livelihood or business activities on the land);
- Any competing claims of ownership or use;
- Structures and assets on the land;
- Any encumbrances on the land.

It is important to: (a) identify the right that is being transferred (an ownership right, a use right, a right of way, etc.); and (ii) check whether the transferee actually has the right s/he claims to have. In many circumstances where careful due diligence has not been carried out, significant conflict has arisen at a later stage when another party claims that they have the same or a competing right. In some circumstances – but not all – the transferee will have documentary evidence of such right. Where no such evidence exists, the due diligence can establish rights by speaking with local community officials and neighbours.

(iv) Disclosure and Consultation

The decision to donate must be taken on the basis of a full understanding of the project and the consequences of agreeing to donate the land. Accordingly, the parties that will be affected by the donation (the owners and users of the land) must be provided with accurate and accessible information regarding what the land will be used for, for how long, and the impact the donation will have on them and their families. It is important that prior written notification indicating the location and amount of land that is sought be provided and that its intended use for the project is disclosed.

Where the intention is to deprive the parties affected by the donation of the land permanently, or for a significant length of time, this must be made clear. It should be noted that in many communities the concept of alienation of land is uncommon and difficult to understand, and care needs to be taken to ensure that the implications of this are fully understood. It is also important to decide who else should be consulted about the proposed donation; for example, spouses and older children.

There should be a clear agreement as to which party will pay the costs associated with the donated land. This could include measurement costs, documentation and notarial fees, transfer taxes, registration fees. It should also include the costs of re-measuring/re-titling the transferee's remaining land and any new documentation relating to it.

(v) Establishing Informed Consent

It is crucial that the project team is confident that the decision to donate was taken in circumstances of *informed consent or power of choice.* As discussed earlier, this means being confident that the owner(s) or user(s) of the land understand:

- What the land is going to be used for, by whom and for how long;
- That they will be deprived of the ownership or right to use the land, and what this really means;
- That they have a right to refuse to donate the land;

- Whether there are alternatives to using this land;
- What they will need to do to donate the land (e.g., execute documents, get spousal consents, pay taxes);
- The effect of the donation on their family, and what they can do if they (or their family or heirs) want the land back.
- The exact demarcation of land boundary for the project's use;
- Whether there are proposals which would allow other land to be used;
- What they will need to do to donate the land;
- The intergenerational effect of the donation on their family, what they can do if they (or their family or heirs) want the land back.

The terms and conditions of the land donation must be mutually agreed upon and detailing in a written agreement.

(vi) Documentation

It is necessary to distinguish between: (a) the agreement to donate the land; and (b) the document that carries out and evidences the legal transfer of the land. While it is important to have evidence of an intention and agreement to donate the land, it is equally important to ensure, where required and appropriate, that the land is legally transferred. While the process relating to the legal transfer of the land is frequently complicated and time consuming, it must be addressed. [In specific circumstances, for example where the land is being transferred to the community, it may not be necessary to legally transfer the land. However, experience indicates that lack of formal transfer can create significant uncertainty in the future, which impacts on the sustainability of the infrastructure and services, and can have a negative effect on community relations.]

To ensure that any land provided for the siting of subprojects is contributed voluntarily, in accordance with the requirements of the ESMF, two representatives of the landowners (family or clan) are asked to sign a Land Commitment Letter (see below). This certifies that the land is voluntarily donated for the purposes of the subproject and for the benefit of the community. The signature of the Letter is witnessed (as attested by their signature) by a suitable project representative.

The project team should:

- Identify the appropriate documentation, including the agreement to make the transfer and any legal documentation that may be required;
- Ensure that the agreement:
    - Refers to the consultation has taken place;
    - Sets out the terms of the transfer;
    - Confirms that the decision to transfer was freely made, and was not subject to coercion, manipulation, or any form of pressure;
    - Attaches an accurate map of the land being transferred (boundaries, coordinates);
    - Sets out who will bear the costs of the transfer (e.g., notarial fees, taxes, title issues) and documenting the residual land rights.
- Ensure that all necessary parties sign the documents, including obtaining consent from spouses and children over a certain age;
- Ensure that the transfer and title is registered or recorded; and
- Ensure that the land remaining after the donated land is excised is properly titled, registered or recorded.

It is also important to maintain a record of the process that has been followed. Such documents could include the following:

- The notification indicating the location and amount of land that is sought and its intended use for the project, with a record of when and where this was made public;
- Records of the consultations that were held and what was discussed;
- A copy of the due diligence that was conducted;
- Copies of each of the formal statements of donation, establishing informed consent as described above, and signed by each owner or user involved;
- Copies of all documents, registrations or records evidencing the legal transfer of the land; and
- A map, showing each parcel of land.

The Project implementing agency should maintain a record with documentation for each parcel of land donated. Such documentation must be available for World Bank review, and for review in relation to any grievances that may arise.

(vii) Grievance Arrangements

Grievances may be referred to customary conflict mediation arrangements where they are not directly affiliated with traditional leaders who are a party to the donation process.

APPENDIX 2 – CHECKLIST FOR ABBREVIATED RESETTLEMENT ACTION PLAN

A complete ARAP will have the following minimum contents:

Contents of the ARAP	Yes	No	Remarks
Introduction - Rationale of Bank support to the project described (country/sector context) - Amount of Bank financing and co-financing described - Bank-supported activities described			
Project Description and Components - Project development objective, components, geographic coverage and typology of subprojects described - Project location, including related activities well described - Map/maps of project area/area of coverage, components, etc., presented			
Objectives, definitions and key principles of the ARAP provided			
Legal, Policy and Regulatory Frameworks - OP 4.12 presented and with rationale for triggering fully explained/described - Country policies, laws, rules and regulations applicable to land and involuntary resettlement presented and fully explained - Relevant international agreements host country entered into that are applicable to the project presented and fully explained - Gap analyses between host country laws and regulations vis-à-vis the Bank policies and gap filling measures fully described in the ARAP			
Census survey and asset inventory - Detailed presentation of the findings of the socio-economic studies conducted (e.g., current occupants of the affected area)			
Institutional and implementation arrangements - Implementation clearly spelled out - Delineation of responsibilities for implementing resettlement clearly described - Capacity building measures explained in detail			
Monitoring and evaluation arrangements - Explained in a clear manner			
Resettlement packages and eligibility criteria - Presented in detail (including valuation methodology)			
Grievance Redress Mechanism - Mechanism/s to receive complaints, grievances and facilitate resolution in a fully transparent way clearly described			
Public Consultation and Disclosure - Consultation processes and disclosure of information, instruments, etc. clearly presented and details provided			

Contents of the ARAP	Yes	No	Remarks
Budget and costs - Estimate of budget and costs clearly detailed - Authorities responsible for providing the budget clearly identified			

APPENDIX 3 - LAND DONATION COMMITMENT LETTER TEMPLATE

Date: …….

Village, Province: ……..

I/We …….. [name(s)] acknowledge, I am/we are the rightful representative (s) of the land located at
…….

I/we confirm, I/we have the right under custom law, with agreement of community leaders, to gift this land for the purpose of ……. and sign this letter as a commitment of our voluntary donation that will benefit our whole community.

I/we declare that:

I/we have the right to transfer rights to use or access this land;

I/we understand that all residents will have access to this site and in order to maintain the asset/infrastructure;

I/we commit ourselves in upholding the contents and spirits of this agreement for so long as it remains in force;

I/we understand this donation is a gift that will benefit our whole community and understand no compensation payments will be made now or in the future;

I/we understand that dishonoring this agreement could result in project termination.

Details of the land (size in sqm, location of village, structure, type –unused, bush, garden)

……
……

For the purpose of: (specify activity)

……..

……..

For the duration of: (specify commencement date and duration)

……..

…….

*Natural Resources Donation (optional) [*This may require a separate agreement form depending on the context, quantity being donated, and number of resource owners]*

I/We ……are the rightful resource owner(s) (e.g. sand, gravel, rocks, timber) located at ……that area also being donated to the project.

I/We commit to donating ……..as a contribution for the project.

Signed:

Position	Signature	Name
Male Household Head		
Female Household Head		
Landowner^		
Clan or landowner representative (if applicable)		
Resource Owner (1)*		
Resource Owner(2)*		
Village Chief		
Govt/Project Representative		
Witness		

(Append list of all customary owners if relevant)

ANNEX H - LAND USE AGREEMENT

A Land Use Agreement (LUA) may be required where (i) activities require access on a permanent or temporary basis to certain sites on customary land; (ii) no suitable alternative sites exist; (iii) customary land owners have agreed for the land to be used for a specific purpose for the benefit of the whole community; and (iv) any other situation where it may be deemed the most appropriate instrument for the local context.

It is important that absentee landowners are engaged, and that a suitable witness (non-clan member) signs the agreement.

The process used to enter into the LUA is as follows:

- Share the rationale for the Project and its proposed siting, and seek the granting of access of the necessary land by landowning clan or household;
- Village representatives of the community, organize a meeting with the representatives of the specific clan/s who have customary ownership of the proposed land or access-way;
- Any person with fixed physical assets on the land/proposed site, but not considered a landowner, is involved in the meetings and their rights are taken into consideration;
- The meeting would discuss the proposed project with the landowning clan or household to reach an understanding that the Project is for the benefit of the whole community and access of land (either permanent or temporary) is required;
- The payment of access fees should be discussed and agreed in writing (if applicable);
- The landowners would be clearly notified that the agreement to allow land access should be completely voluntary and the specific timeframe of access should be mutually agreed;
- If agreement to proceed is reached, then a LUA will be entered into between the clan, the other clans and the leader of the community;
- The LUA should be endorsed by the Village Chief or equivalent;
- The signed LUA will be submitted as part of the project proposal;
- The LUA is submitted to the local magistrate or equivalent for certification.

If all landowner parties are in disagreement about the land or condition of LUA, or if landowners are excluded from the initial discussion then the Project will not proceed and the grievance process must be followed where relevant.

The following is an example of a LUA form that may be suitable to use for the Project.

LAND USE AGREEMENT TEMPLATE

Project: ……. Province: …….

Location: ……

Land Parcel: ……

Land Title Reference: …….

Dear Sir/Madam,

1) We, the undersigned being the representatives of the …… hereby acknowledge that ……have the right under the customary law to make decisions on the land known as ……..for the purpose of ……with the rights to the receive the proceeds of any development or other conducted on the said land. We certify that all members of the village agree to the truth of this certificate and that we are the persons authorized to sign it.
2) We, the undersigned being the representatives of ……clan of ……Village, ……Province, ……hereby declare that:
    a) We have the right under customary law to allow access or use of the land ……for the purpose of ……..(project name) and agree to allow access to …….. to support the project (entity).
    b) That we undertake not to interfere in any manner on any activities or developments undertaken by our ……on the said parcel of land;
    c) We commit ourselves in upholding the contents and the spirit of this agreement for so long as it remains in force;
    d) We will undertake efforts to convey the contents of this agreement to members of the ……..village/s or clan/s and to ensure that they so honor it.

Infrastructure

Details of infrastructure funded by Govt:

……

……

Ongoing Maintenance

Responsibility of landowner (detail of specific infrastructure)

……..

……..

Time frame/scheduling arrangements

……..

……..

3) SIGNATORIES

I/We hereby sign confirming that the above is true and correct:

Party	Name	Signature	Date
Landowner			
Village Representative			
Project Representative			

4) WITNESSES

We, the undersigned being representatives of ……..clan (who share the land boundary with ……..clan) hereby declare that the Customary Law, we are rightful owners of the land known as ……located at ……Village ……Province and that it has the right by customary law to transfer/lease the said parcel of land.

Project Partner	Name	Organization
Solomon Power Representative		
Province Officer		
Local Representative		

Made under our hands these agreements:

This……day of ……20…..at …….

Village ……..Province……in ……

Submitted to:……

On this ……day of ……20…at……..

ANNEX I - PROCEDURE FOR HANDLING UNEXPLODED ORDNANCE (UXO)

1.0 Introduction

Solomon Islands was the site of severe battles between the Japanese Army and the American Allied Forces during WWII. The war resulted in hundreds of thousands of firearms and UXO items left behind.

WWII ordnance found in Solomon Islands can be defined as either unexploded ordnance (UXO) or abandoned explosive ordnance (AXO). UXO consists of explosive ordnance that has been primed, fused, armed or prepared for use in armed conflict, but has failed to explode, while AXO consists of explosive ordnance that went unused during the war and was, subsequently left behind.

For the purpose of this guide, UXO is used as the general term to describe both unexploded or abandoned ordnance, munitions and explosive devices left behind during WWII, which represents a hazard to people and to any future development of the land on which these ordnance were abandoned.

Although UXO is not captured in the Environmental Act 1998 and Environmental Regulation 2008, UXO clearance activities have become an integral part of any development activity in the Solomon Islands. As the agency responsible for infrastructure development in Solomon Islands, the Ministry of Infrastructure and Development (MID) developed a draft UXO procedure as a means of rendering lands safe for development and taking responsibility for UXO related hazards related to any development activity occurring on Solomon Islands crown land.

It should be noted that this document only provides guidance for the management of UXO threats. It does not give detailed guidance on explosive ordnance disposal (EOD) contracting practices. The safety of Solomon Power employees, its clients and customers, developers and partners, consultants and contractors is not guaranteed.

More guidance on international standards on unexploded ordnance for the construction industry can be obtained from **CIRIA C681: Unexploded Ordnance (UXO)**.

2.0 Objective of the Guide

The overall purpose of this guide is to provide a policy and framework governing responsibility and procedures to assess, mitigate and eliminate any UXO related hazard from any Solomon Power project site before any construction work commences. It provides guidance on the management of UXO hazards associated with any development activity carried out by the Solomon Power.

This guide also helps the Solomon Power to conduct appropriate UXO risk management procedures at the design phase, develop budgets for, and seek appropriate advice and guidance on, UXO contamination and disposal.

It provides the steps to follow to allow EOD contractors to sweep and clear contaminated project sites before commencing any building, engineering, geotechnical investigations, and maintenance work of a construction nature.

3.0 Target Audience

This guide is targeted for staff of Solomon Power, its clients and customers, developers and partners, consultants and contractors. It should be applicable to health authorities, the Environment and

Conservation Division (ECD), landowners and other relevant local agencies and stakeholders involved in developing a project.

Solomon Power's contractors and engineers are equally responsible for the wellbeing of their on-site personnel. At initial contract meetings, these contractors and engineers should be advised of their responsibilities, the process to manage UXO risks, and who to contact at Solomon Power regarding UXO sightings and threats during project construction.

4.0 Responsibility and Risk Mitigation Measures

Risk mitigation measures are implemented to ensure so far as is reasonably practical the health and safety of Solomon Power employees and of any other persons affected by the development activity.

4.1 Authority

Solomon Power and all its employees have a responsibility under the Solomon Power's Health and Safety to ensure the safety of its staff and every other person involved or affected by its normal day-to-day operation or any development activity.

The responsibility to report a sighting of a UXO or any suspicious article found at project sites or any Solomon Power location in the country resides with Solomon Power and all its employees.

In the event of a suspicious UXO find, the following risk mitigation measures should immediately be followed.

- Cordon off the area using appropriate means;
- Use physical measures to prevent unauthorized tampering of the UXO find;
- Employ highly visible markings at the HIGH RISK area to warn of the UXO find; and
- Communicate the UXO risk to surrounding communities.

The UXO find is to be reported to the General Manager of Solomon Power's Capital Works Department (or in his designate in his absence), and the Royal Solomon Island Police Force's (RSIPF) Explosive Ordnance Unit (EOU). Solomon Power's GM of Capital Works will be responsible for the assessment, mitigation or elimination of any UXO related hazard with input from the responsible authorities and EOD clearance contractors. Solomon Power will keep data and records of UXO information from UXO studies done on its sites, and provide this information to public upon request, as follows:

- A reporting system will be established, communicated to all parties and managed for UXO clearance activities;
- Solomon Power will be responsible for public awareness and consultation and building employee and stakeholder capacity to respond to UXO threats at Solomon Power locations; and
- UXO clearance will be considered and integrated into capital development activities and budgeting.

4.2 General Public

The general public must be consulted and encouraged to provide feedback and comment on their general short and long-term safety from the planning and design stage through the operational life of the project. These public consultations are carried out as part of required activities at the initial project initiation, planning and design stage.

Public comments and concerns must be properly documented and timely feedback provided. The mechanism to address public concerns will follow the existing Solomon Power mechanism for handling customer complaints, through the Customer Service Department and the Public Relations Officer.

4.3 EOD Contractors

EOD contractors are required to be competent and registered to carry out this type of service. They are required to have the necessary expertise and equipment to identify, isolate, remove and safely dispose of all UXO threats, with assistance provided by the RSIPF-EOU.

The EOD contractor is responsible for site safety procedures, and is required to have in place appropriate strategies to manage risks and environmental impacts, and have appropriate insurance coverage.

The EOD contractor will provide the following to Solomon Power before any clearance work begins:

- Supporting documentation on competency (experience and references), insurance coverage and legal registration where necessary;
- Proposed suitably qualified and experienced staff resources to carry out the service;
- Proposed procedures complying with international standard UXO clearance practices;
- Proposed UXO identification and clearance methodology and timing; and
- Contract amount for the service.

The typical activities to be carried out by EOD contractors are summarized below.[26]

- Carry out and complete UXO survey of the project site, including affected areas outside of the project site but related to the project;
- Cordon off areas and prevent unauthorized tampering where suspected UXO threats are determined;
- Arrange for, and carry out, safe removal of all UXO from the project site;
- Responsibly dispose of UXO in accordance with relevant local laws, with particular care exercised to:
    - Ensure strategies and resources are in place to manage unintended accidents and explosions;
    - Provide a report confirming completion of the UXO survey, detection, removal and disposal.
    - Provide the necessary documentation to RSIPF EOD and other relevant Solomon Islands Government agencies for the issuing of a Certificate of Clearance; and
    - Continuously monitor, document and report to Solomon Power and RSIPF any residual UXO threats arising during project implementation.

The contractor will confirm and certify in accordance with **CIRIA C681: Unexploded Ordnance (UXO**) or an alternate internationally accepted standard.

[26] The procedures are summarized from the MID's s.9.0 Unexploded Ordnance Procedure'

4.4 Royal Solomon Islands Police Force (RSIPF) Explosives and Ordnance Unit (EOU)

The RSIPF EOU is the body responsible for clearance and disposal of UXO finds in the Solomon Islands. The RSIPF EOU also responds to public reports of UXO and undertakes clearance activities. Where there are no nearby police stations in the outer islands, reports are to be directed to relevant government district agencies, which then notify police at the provincial headquarters.

The RSIPF EOU will provide a Certificate of Clearance after suspected UXO ordnance has been removed by them, or by EOD clearance contractors, prior to any construction work commencing.

5.0 Risk Assessment and Management

5.1 Preliminary Risk Assessment

Preliminary risk assessment is required to be carried out to enable Solomon Power to identify any potential UXO risk or threat and to decide whether a detailed risk assessment is required.

Preliminary risk assessment includes:

- Examination of existing historical data;
- Talking with local surrounding communities about any past UXO occurrences;
- Determining the probability of potential UXO threat; and
- Recommending further required steps.

The risk assessment is to be documented, filed and communicated to the GM Capital Works or the Project Engineer. A Preliminary risk assessment form is attached as **Appendix 1**.

If potential risks are identified, a detailed risk assessment leading to detection and identification, recovery and disposal will be initiated.

5.2 Detailed Risk Assessment

In the Detailed Risk Assessment stage, project planning will take into consideration UXO activities in the preparation of project design and budget.

Risk mitigation measures will be implemented and the public made aware of the UXO risk.

6.0 Contact Details

All Solomon Island staff, clients and customers, developers and partners, consultants and contractors are to contact the Solomon Power and RSIPF personnel identified in **Table 1**, regarding UXO issues on Solomon Power land.

Table 1: List of Contacts for UXO Related Issues

Organization	Contact Detail
SIEA	Hemant Kumar General Manager Capital Works P.O. Box 6 Honiara Email: hemant.kumar@solomonpower.com.sb Direct Line: (+677) 38801
	Robin Simpson Safety Officer P.O. Box 6 Honiara Email: robin.simpson@siea.com.sb Tel: 32944
	Rubina Tagana Public Relation Officer P.O. Box 6 Honiara Email: rubina.tagana@siea.com.sb Tel: 32944
RSIPF	Officer in Charge Explosive Ordnance Unit P.O. Box G1723 Honiara Tel: 20443
Ministry of Environment, Climate Change, Disaster Management and Meteorology.	Director Environmental Conservation Division P.O. Box 21 Honiara Tel: 23031
MID	Under Secretary (Technical) P.O. Box G8 Honiara Tel: 25783

Appendix 1 Preliminary risk assessment form

<table>
<tr><th>Item</th><th colspan="3">Details</th></tr>
<tr><td>Name of assessor</td><td colspan="3"></td></tr>
<tr><td>Date of assessment</td><td colspan="3"></td></tr>
<tr><td>Site Address</td><td colspan="3"></td></tr>
<tr><td>Development Proposed</td><td colspan="3"></td></tr>
<tr><td>Historical findings</td><td colspan="3"></td></tr>
<tr><td rowspan="3">Findings from Interviews</td><td>Name of interviewee</td><td colspan="2">Detail</td></tr>
<tr><td></td><td colspan="2"></td></tr>
<tr><td></td><td colspan="2"></td></tr>
<tr><td rowspan="2">Threat potential / Probability[27]</td><td colspan="2">Probability and risk of UXO encounter</td><td>Rating</td></tr>
<tr><td colspan="2">Rating 1 LOW
Rating 2
Rating 3
Rating 4
Rating 5 MODERATE
Rating 6
Rating 7
Rating 8
Rating 9 - 10 HIGH</td><td></td></tr>
<tr><td>Recommendation</td><td colspan="3"></td></tr>
<tr><td>Other Notes</td><td colspan="3"></td></tr>
</table>

Note: Attach site plan and map of area assessed.

[27] The threat probability rating is extracted from CIRIA C681: Unexploded Ordnance (UXO)

ANNEX J EXAMPLE ENVIRONMENTAL AND SOCIAL SCREENING MATRIX

SCREENING QUESTIONS	Yes	No	REMARKS
A. Subproject Siting Is the Subproject area adjacent to or within any of the following environmentally sensitive areas?			
• Cultural heritage site			
• Protected area			
• Wetland			
• Mangrove			
• Estuarine			
• Buffer zone of protected area			
• Special area for protecting biodiversity			
B. Potential Environmental and Social Impacts Will the Subproject cause . . .			
• encroachment on historical/cultural areas, disfiguration of landscape and increased waste generation?			
• **encroachment on precious ecosystems (e.g. sensitive or protected areas)?**			
• alteration of surface water hydrology of waterways crossed by roads and resulting in increased sediment in streams affected by increased soil erosion at the construction site?			
• damage to sensitive coastal/marine habitats by construction of submarine cables?			
• **deterioration of surface water quality due to silt runoff, sanitary wastes from worker-based camps, and chemicals used in construction?**			
• increased local air pollution due to rock crushing, cutting, and filling?			
• risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during subproject construction and operation?			
• chemical pollution resulting from chemical clearing of vegetation for construction site?			
• noise and vibration due to blasting and other civil works?			
• dislocation or involuntary resettlement of people?			
• disproportionate impacts on the poor, women and children, Indigenous Peoples, or other vulnerable groups?			

SCREENING QUESTIONS	Yes	No	REMARKS
• social conflicts relating to inconveniences in living conditions where construction interferes with pre-existing roads?			
• hazardous driving conditions where construction interferes with pre-existing roads?			
• creation of temporary breeding habitats for vectors of disease such as mosquitoes and rodents?			
• dislocation and compulsory resettlement of people living in right-of-way of the power transmission lines?			
• **environmental disturbances associated with the maintenance of lines (e.g. routine control of vegetative height under the lines)?**			
• facilitation of access to protected areas in case corridors traverse protected areas?			
• disturbances (e.g. noise and dust)			
• population influx during subproject construction and operation that cause increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
• social conflicts if workers from other regions or countries are hired?			
• poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases from workers to local populations?			
• risks to community safety associated with maintenance of lines and related facilities?			
• community health hazards due to electromagnetic fields, land subsidence, lowered groundwater table, and salinization?			
• risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel, and other chemicals during construction and operation?			
• community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the subproject (e.g., high voltage wires, and transmission towers and lines) are accessible to members of the affected community or where their failure could result in injury to the community throughout subproject construction, operation, and decommissioning?			
C. Land Acquisition and Access Issues Questions regarding land acquisition and access for the Subproject include:			
• will there be land acquisition?			

SCREENING QUESTIONS	Yes	No	REMARKS
• is the site for land acquisition known?			
• is the ownership status and current usage of land to be acquired known?			
• will existing rights-of-way (ROW) be used for transmission line or distribution line easements?			
• will there be loss of shelter and residential land due to land acquisition?			
• will there be loss of agricultural and other productive assets due to land acquisition?			
• will there be losses of crops, trees, and fixed assets due to land acquisition?			
• will there be loss of businesses or enterprises due to land acquisition?			
• will there be loss of income sources and means of livelihoods due to land acquisition?			
• will people lose access to natural resources, communal facilities and services?			
• if land use is changed, will it have an adverse impact on social and economic activities?			
• will access to land and resources owned communally or by the state be restricted?			
D. Indigenous Peoples Issues			
• are there socio-cultural groups present in or use the subproject area who may be considered as "tribes" (hill tribes, schedules tribes, tribal peoples), "minorities" (ethnic or national minorities), or "indigenous communities" in the subproject area?			
• are there national or local laws or policies as well as anthropological researches/studies that consider these groups present in or using the subproject area as belonging to "ethnic minorities", scheduled tribes, tribal peoples, national minorities, or cultural communities?			
• do such groups self-identify as being part of a distinct social and cultural group?			
• do such groups maintain collective attachments to distinct habitats or ancestral territories and/or to the natural resources in these habitats and territories?			

SCREENING QUESTIONS	Yes	No	REMARKS
• do such groups maintain cultural, economic, social, and political institutions distinct from the dominant society and culture?			
• do such groups speak a distinct language or dialect?			
• have such groups been historically, socially and economically marginalized, disempowered, excluded, and/or discriminated against?			
• are such groups represented as "Indigenous Peoples" or as "ethnic minorities" or "scheduled tribes" or "tribal populations" in any formal decision-making bodies at the national or local levels?			
• will the subproject directly or indirectly benefit or target Indigenous Peoples?			
• will the subproject directly or indirectly affect Indigenous Peoples' traditional socio-cultural and belief practices? (e.g. child-rearing, health, education, arts, and governance)?			
• will the subproject affect the livelihood systems of Indigenous Peoples? (e.g., food production system, natural resource management, crafts and trade, employment status)?			
• will the subproject be in an area (land or territory) occupied, owned, or used by Indigenous Peoples, and/or claimed as ancestral domain?			
• will the subproject activities include physical displacement from traditional or customary lands?			
• will the subproject activities include establishing legal recognition of rights to lands and territories that are traditionally owned or customarily used, occupied or claimed by Indigenous Peoples?			
• will the subproject activities include acquisition of lands that are traditionally owned or customarily used, occupied or claimed by Indigenous Peoples?			

Source: Adapted from ADB 2017

ANNEX K - TYPICAL ESMP TEMPLATE

A. Executive Summary
B. Policy, Legal and Administrative Framework
    1. Solomon Islands Environmental Law and Regulations
    2. Solomon Islands Environmental Assessment Process
    3. World Bank Safeguard Policy Requirements
    4. Institutions
    5. Extent of ESMP
C. Description of the project
    1. Project Background
    2. Project Component and Activities
    3. Implementation Arrangement and Schedule
    4. Project Benefit and Justification
D. Anticipated Environmental Impacts and Mitigation Measures
    1. Impacts and Mitigation Measures Due to Pre-construction Activities
    2. Impacts and Mitigation Measures Due to Construction Activities
    3. Impacts and Mitigation Measures from Operation
    4. Impacts and Mitigation due to Decommissioning
    5. Cumulative Impacts
E. Analysis of Alternatives
F. Consultation and Information Disclosure
    1. Stakeholders/Community Consultations
    2. Information Disclosure
G. Grievance Redress Mechanism
H. Environmental and Social Management Plan
    1. Environmental Management Plan
    2. Social Management Plan
    3. Implementation Arrangement
    4. Budget and Resources
I. Conclusions and Recommendations

Environment and Social Management Plan Summary Matrix

Project activity/ stage	Potential impact	Proposed mitigation measures	Mitigation Cost	Institutional Responsibility	Implementation Schedule

Environmental Monitoring Plan Summary Matrix

Environmental Features	Aspect to be monitored	Time and Frequency of Monitoring	Location	Monitoring Cost	Responsibility party for implementation