18 March 2016

Namosi Joint Venture
Waisoi Project

UPDATED PROJECT DESCRIPTION

Submitted to:

EIA Administrator

Environmental Impact Assessment Unit

Department of Environment Fiji

NAMOSI JOINT VENTURE

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Table of Acronyms

Acronym	Meaning
AMD	Acid and Metalliferous Drainage
BHF	Bulk Handling Facility
CDSF	Co-Disposal Storage Facility
CO_2	Carbon Dioxide
CO_{2e}	Carbon Dioxide – Equivalent
DoE	Department of Environment
DTCP	Department of Town and Country Planning
DWT	Dry Weight Tonnes
EIA	Environmental Impact Assessment
EM Act	Environment Management Act 2005
GHGs	Greenhouse Gasses
HFO	Heavy Fuel Oil
HV	Heavy Vehicle
km	Kilometre
LV	Light Vehicle
MW	Mega Watt
Mt/y	Million tonnes per year
Mtpa	Million tonnes per annum
NJV	Namosi Joint Venture
NO_2	Nitrogen Dioxide
NO_x	Oxides of Nitrogen
PM_{10}	Particulate Matter
SO_2	Sulphur Dioxide
SLGOS	Southern Low-Grade Ore Stockpile
SPL1420	Special Prospecting Licence 1420
t/y	Tonnes per year
ToR	Terms of Reference
WHO	World Health Organisation

NOTE: The original Project Description submitted to the DoE in 2011 has been updated following further project studies and the results of the initial community consultation to:

1. Provide for a Co-Disposal Storage Facility.
2. Change the proposed location of the site camp.
3. Provide for haulage via Namosi Road instead of Waidina Road.
4. Provide for a Bulk Handling Facility on the coast (rather than use Port of Suva for such purposes).

1. INTRODUCTION

1.1 Background

Exploration for gold and other minerals in the Namosi area of Fiji has taken place since the early 1970s. Since that time, multiple companies have been involved in drilling over 316 exploration holes, primarily in the Wainavadu and Waisoi valleys.

The Namosi Joint Venture (NJV) was established in January 2008 for the exploration and, if warranted, development of mineral resources in the Namosi area, the subject of Special Prospecting Licence 1420 (SPL 1420) (Figure 1). In particular, in regards to this document, focus will be given to two ore bodies at Waisoi containing copper, gold, and molybdenum, which are located about 35 km north-west of Suva, on the island of Viti Levu (Figure 2 and Figure 3). The NJV is studying whether it is viable to develop and mine these ore bodies. For the purpose of this document, the proposed development is, hereafter, referred to as the Project.

The key features of the Project, if developed, would include open pit mining and ore processing to produce a copper concentrate and potentially molybdenum concentrate with both products containing gold as a byproduct. The Project would also include ancillary infrastructure (for example, power station, workshops, offices, fuel storage); water infrastructure (dams, diversions and pipelines); mine access roads; a Southern Low-Grade Stockpile (SLGOS); co-disposal Storage Facility (CDSF) for storage of mine waste rock and tailings; a Bulk Handling Facility (BHF) for concentrate export and fuel import at Mahaffy; and transport of equipment and consumables to and from the mine site from the Port of Suva.

1.2 The Proponent

The NJV participants are Newcrest (Fiji) Limited (Newcrest) (70.67%), Materials Investments (Fiji) Limited (Mitsubishi) (27.33%) and Nittetsu Mining Co., Ltd (Nittetsu) (2%). Newcrest is the operator and manager of the NJV.

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1.3 Purpose and Scope

This project description has been prepared to provide details of the Project, the existing environment in which it is located, and the potential impacts and benefits that are likely to result from its development under section 27 of the *Environment Management Act 2005* (EM Act). The approving authority, in this case the relevant Fijian Rural Local Authority and the Department of Town and Country Planning (DTCP), must review and assess the submitted development application. The scale of the proposed development, and that it would be a mine, means it will be a Part 1 development as defined under the EM Act. Consequently, the Project will require an Environmental Impact Assessment (EIA) that would be administered by the EIA Administrator of the Department of Environment (DoE).

Therefore, the purpose of this project description is to provide the Director for Environment, as the EIA Administrator, with sufficient information on:

a) The nature and scope of work.

b) The potential significance of environmental or resource management impact.

c) Existence of technically or economically feasible mitigation measures that can be developed by the Project to address these impacts.

d) Public comments relating to the activity/undertaking.

Figure 1: Regional Context

Figure 2: Mine Site

Figure 3: Mine Site to Bulk Handling Facility

2. THE PROPOSAL

2.1 Location

The Project is located in SPL1420 on the island of Viti Levu (Figure 1), approximately 35 km north-west of Suva (Figure 2).

Access to the Project is from Queens Highway north along the Namosi Road (Figure 2).

The two mine pits, temporary SLGOS, processing plant, power plant, administration and camp, maintenance sheds, reagent storage, water ponds and diversion of the Waisoi Creek, are planned to be located in the Waisoi River valley. A co-disposal storage facility (CDSF) for waste rock and tailings is planned for the upper Wainavadu River valley (Figure 2).

The broad project area can generally be described as bounded by the Wainavadu River valley on the northern end, by the Waidina River on the eastern and southern edges, and by the Korobasabasaga Range on the western edge (Figure 3).

The region is characterised by high rainfall, mountainous and rugged terrain, with rivers and tributaries creating deep valleys. The upper region of the Waisoi River valley is dominated by the steep Korobasabasaga Range. The entire region is densely vegetated with extensive forests. The proposed mining and CDSF areas are not populated and the local communities are mainly located in the valley along the nearby Waidina River (Figure 2).

2.2 Project Details

Based on studies to date, and subject to future modification, the proposed Project consists of the following components:

- Mining – the Project would develop two mine pits in the Waisoi Valley, referred to as the east and west pits. The mineralised ore would be processed through purpose-built ore processing infrastructure. The nominal mining rate is 50Mt/y average over the life of mine for a nominal mine life of 48 years, with this subject to change as the design of the project develops.

  Initially, the mining will involve salvaging economic timber resources, and progressive clearing of vegetation from areas such as the pits, the SLGOS, CDSF, haul road and processing plant. In these areas topsoil would be removed, stored temporarily and utilised for progressive rehabilitation. Following the clearing of vegetation there would be development of haul roads, surface water drainage channels around the open pits, river diversions and crossing works to the south side of the Waisoi River, and coffer dams for the water storage and CDSF.

  It is proposed that the Project would use conventional mining techniques that have been proven throughout the metalliferous mining industry for many years. This will involve a conventional open pit drill-blast-load-haul operation. The proposed mining fleet would comprise large face-shovels, large wheel-loaders, haul trucks, smaller excavators, drills, dozers and other support machinery.

  The SLGOS will comprise a mix of early pre strip material and low grade ore with an overall capacity of 90Mt. The low grade ore would be processed prior to closure. Waste rock and overburden would be deposited in the CDSF (Figure 2). Competent non-acid forming rock will be used as fill for construction. The resource is relatively shallow with a low strip ratio of 0.61:1 (waste to ore).

- Ore processing – the ore would be extracted from the pits and trucked to a primary crushing plant to be located between the pits. Following crushing, the ore would be transported via conveyor to a stockpile at the processing plant, which is located on the ridge between the Waisoi and Wainavadu valleys (Figure 3).

  Ore processing will include a grinding and flotation plant to produce an intermediate copper concentrate product using technology that has been utilised successfully by

Newcrest and other miners world-wide. Known technology, embodied in commercially-available production equipment, would be used. The plant design would comply with recognised international practice for environmental protection, safety and industrial hygiene. There would be no use of cyanide during the processing of ore.

The purpose built ore processing facility would process ore at a rate of 18 Mtpa initially, increasing to 32 million tonnes per year (Mt/y) after year three. The facility would produce in the order of 250,000 to 800,000 tonnes per year (t/y) of concentrate, with a concentrate grade of 25-30% copper and gold in concentrate of 6-8g/t, for export to international markets.

- Utilities – the project is proposed to be self-sufficient in providing water (drinking and other), compressed air, fuel and nitrogen systems to the various locations on site. Several sewage and waste disposal systems will be installed across site to support operational and accommodation needs.

- Buildings – a number of site buildings and infrastructure would be constructed at the site. These include:

  - Mine operations support (Heavy Vehicle workshop, wash-down bay, stores).
  - Processing Plant support (Laboratory, offices, stores, maintenance).
  - Light Industrial Area (Light Vehicle workshop, maintenance, power station, concentrate load out).
  - Mine Administration Area (Primary office location, security, emergency services).
  - Accommodation and Services to support a small onsite population.

- Power supply – a new heavy fuel oil (HFO) power generation plant is anticipated, with an initial installed capacity of 60MW, with a further 40MW added as part of the planned processing plant expansion in Year 3 of operations. This may be supplemented through hydro-electric generation. Fuel will be unloaded and stored in a fuel farm at the BHF and backhauled on the concentrate haulage trucks.

- Tailings, waste rock and water management – tailings and waste rock disposal will be managed through the design and construction of the CDSF, which will host all potentially reactive waste rock and tailings in a single footprint and structure. Working with the natural climate of positive water balance (i.e. where rainfall greatly exceeds evaporation), the facility is designed to maintain a permanent water cover across the facility and allow deposition of waste rock and tailings into a submerged environment – emplacing a primary control on potential for AMD processes to occur by greatly slowing the rate of oxygen ingress into stored material, and providing a final landform solution. The CDSF will also function as a water storage dam which discharges water via a spillway as a 'flow-through' type system. As a result, no further water reduction infrastructure such as diversion drains or catchment dams are proposed in the Wainavadu valley.

  Waste rock will be trucked from the pits to the CDSF and co-disposed with processing plant tailings. Tailings will be pumped through a pipeline to the CDSF and discharged into the facility with a nominal slurry density of 50-65%. A return water line will recycle water from the CDSF back to the processing plant to minimise water take from nearby watercourses and maximise the reuse of process reagents.

  The Waisoi River will be diverted to bypass the mining operations, with the design of the diversion infrastructure consisting of constructed channels and retention dam(s) for storm surge capacity, developed in a staged manner over the life of the mine. The water management system is designed to manage a 1:1000 year storm event.

During the mining phases, water within the open pits will need to be managed to create dry mining conditions and to maintain the geotechnical stability (and therefore safety to workers) of the pit walls. This involves managing groundwater inflow, localised runoff and rainfall within the pits, and active dewatering of the pit floor through a sump and pump system.

A diagram of waste, tailings and water management can be seen in Figure 3.

- Mine access and site roads – the existing Namosi Road would be upgraded in two stages to accommodate the heavy loads for construction and operation. The initial upgrade will be sufficient to service the project construction needs and early production years, with a more significant upgrade planned after operations have commenced and haulage needs are optimised. In addition, a new bridge would be constructed across the Waidina River to provide reliable access to the Project site. The Namosi Access Road would be approximately 26 km long (Namosi Road from Queens Highway Nabukevesi Junction to Waidina Road junction is 20 km and thence from there to new bridge location is about 6 km).

  Site Roads – Mine haul roads would be constructed on the Project site that would also serve as the access routes to the CDSF. Camp access roads and other minor roads would also be constructed as needed to support the mine operation.

- Concentrate Export – concentrate would be trucked to the purpose built BHF for export from Mahaffy south-west of the intersection of Queens Road and Namosi Road. It is approximately 6 km west from the intersection along the Queens Road to the turnoff to the BHF. The BHF will stockpile, rehandle and load 30,000 DWT bulk carrier vessels through a single berth pier.

  The processing reagents and other supplies will be imported through the main port at Suva (Kings Wharf), with a dedicated storage facility in the Port area to manage this.

The main infrastructure elements are illustrated in Figure 2.

2.3 Alternatives

At the time of writing, the proposed approach is considered the most environmentally, socially, technically, and financially appropriate.

A number of options have been considered when designing the Project, including:

a) The Port of Suva was considered as the site for a concentrate Storage Facility prior to export. However, due to capacity restrictions this was not considered viable, and the proposed BHF location avoids the need to transport concentrate and bulk fuel through the streets of Suva.

b) Multiple sites were considered for the BHF resulting in a shortlist of locations which were further investigated, with the preferred location at Mahaffy selected to minimise the environmental impact of the facility.

c) Deep sea tailings placement (DSTP) was reviewed but does not form a part of the proposed Waisoi Project.

d) Multiple tailings storage and waste rock management options and locations were considered, with the single co-disposal facility in the Wainavadu Valley (i.e. the CDSF) proposed due to its ability to manage the potentially acid-forming material and improve downstream water quality outcomes.

e) The previous Project Description had proposed two access routes (Northern and Southern routes) for the construction and operations traffic, including the trucking of concentrate, on Waidina Road. Initial consultation results showed that villages were not happy with this idea owing to safety, noise, dust, proximity to houses and schools and other factors. NJV took this into consideration and decided to re-route transport to the Namosi Road with upgrades in certain sections. Waidina Road will not be used for operations or concentrate transport. It will only typically be used for light vehicle transport.

f) Onsite accommodation was considered for long term employees; however it is important that employees maintain a daily connection to their family and participate in their own traditional, cultural and social events. Therefore, a drive-in drive-out system would be used for most employees.

g) Secondary power supply sources that are currently being considered include hydropower, biofuel and biomass. None of these alternatives have been rejected or accepted as they are still under study, but a base load of conventional power generation will be required regardless.

The EIA would include more information on the alternatives considered during the development of the Project and the rationale for the proposed Project description.

2.4 Timeframe

Based on current estimates, the EIA process is proposed to be completed in 2016. The Project would require approvals from both the Fijian Government and NJV before construction could commence. The first concentrate production is envisaged to begin in 2022.

2.5 Workforce

Studies indicate that the construction workforce will peak at approximately 2,000 persons. At the commencement of pre-commissioning and ramp-up to ore commissioning, the workforce will approach 1200 people, including Suva-based personnel.

By the time the Project reaches full production capacity, the overall number of direct employees is expected to average about 1,200 persons.

The construction workforce will be accommodated in a temporary, purpose-built camp on or near the site. It is anticipated that this accommodation will be upgraded to accommodate some of the permanent workforce, with the remainder living locally in their own homes or being accommodated in established residential areas. Approximately 200 people will be accommodated at the mine site for short-term maintenance purposes. A bus service would transport workers to site on a daily basis.

Local employment and business development opportunities to support construction and operation of the mine will be maximised.

2.6 Tenements and Tenure

The Project, including the ore deposits and proposed facilities, are located within SPL 1420, held by the NJV, the current term of which expires on 31 March 2020. SPL 1420 straddles the Namosi, Naitasiri and part of Serua provinces.

Land within the project area is primarily under native title. The proposed BHF site and associated access road is a combination of native title and freehold.

2.7 Local Government Areas

The Project lies within the Namosi, Naitasiri and Serua provinces. Therefore, the NJV would apply to the Navua Rural Local Authority, Nausori Rural Local Authority and Suva City Council for approval of the development of the Project. Any surveys carried out, and plans for construction, for the Project would be submitted with the required application forms for approval.

After assessment by the relevant Rural Local Authority, the reports of the Rural Local Authorities, along with plans and surveys, would be forwarded to the DTCP for assessment and consultation with relevant government agencies.

Formal notification of the intention to commence mining would also be sent to the Namosi and Naitasiri Provincial Councils.

2.8 Regulatory Requirements

The Project will require a number of licences, permits and approvals for various components of the development. A preliminary list of these is presented in Table 1. There are also other

requirements such as a surface lease that will be required. The list of regulatory requirements presented in Table 1 will be further refined during the EIA process.

Table 1: Relevant statutory requirements and approvals

Licence/Permit /Approval	Applicable Act	Authority	Comments
Mining Lease	Mining Act	Mineral Resources Department	■ Application and grant of new Mining Act titles. ■ Every mining tenement has implied covenants to: (1) pay rents when required; (2) use the land continuously and bona fide for the purposes for which the mining tenement was granted; and (3) to pay compensation to entitled persons for damage done to the land surface and any improvements by prospecting, mining or other operations undertaken by the tenement holder on such land. ■ Formal notification of the intention to commence mining in the area should be sent to the Namosi Provincial Council and the Navua Rural Local Authority.
Bond			■ The Director of Mines may, upon application for, or at any time during the term of a mining tenement, require deposit of a sum of money as a guarantee for due performance of the obligations of the holder under the Mining Act. ■ If the deposit is not made within 30 days, the application may be refused or the tenement suspended or cancelled. ■ An owner or occupier of relevant land can request the Director to seek an increased deposit.
Environmental Impact Assessment	Environmental Management Act	Department of Environment	■ Subject to the Director of Environment's declaration, required for projects that have the potential for significant environmental or resource impact, or human health impact. ■ Part 3 includes provisions to address heritage and native title issues. ■ Part 5 sets out the framework for waste management and pollution control (including permitting).
Discharge Permit			■ Discharge any waste or pollutant into the environment.
Storage Permit			■ Handle, store, process or control any hazardous substance.
Air Pollution Permit			■ Air discharges that cannot meet national air quality standards

Licence/Permit /Approval	Applicable Act	Authority	Comments
Waste Disposal Permit			■ Produce or generate any waste, pollutant or hazardous substance.
Landfill Permit			■ A permit is required to construct and operate a landfill.
Health and Safety Management Plan	Health and Safety at Work Act	Ministry for Employment, Productivity and Industrial Relations	■ Although, by virtue of section 3, this Act does not apply to workplaces or operations connected with the Mining Act, the storage and handling of concentrate at the BHF, and of supplies at the port may be covered because it is not on the mine site.
iTaukei Village Administration	Fijian Affairs Act	iTaukei Affairs Ministry	■ Provincial Office involvement
iTaukei Land Trust Board Consent/Land Use Bank	Native Land Trust Act/Land Use Decree	iTaukei Affairs Ministry and Department of Lands and Survey	■ Addresses land surface lease arising in relation to land owned by indigenous Fijians. ■ Review of existing land tenure holdings in relevant areas. ■ Assessment of future land tenures required by NJV. ■ Negotiations with Government and stakeholders regarding future land tenures and negotiating and procuring the grant of new tenures.
Registration of landowners and verification of boundaries of iTaukei land	Native Lands Act		■ Where land on which a venture is expected to operate is native owned, the boundaries and owners must be clearly defined.
Reporting of any discovery	Preservation of Objects of Archaeological and Paleontological Interest Act	Department of Culture and Heritage	■ Regulates permitting of movement and storage of objects of archaeological or paleontological interest. ■ Reporting of the discovery of such objects is required under the Act.
Lease agreement for port storage facility Foreshore Lease and water lease for BHF	Property Law Act/Land Transfer Act/State Lands Act	Department of Lands and Survey	■ Terms of lease considerations may be applicable, including that corporations may hold as joint tenants and regarding licence to assign.
Licence	Rivers and Streams Act		■ Where any planned wharf, pier, landing-place or building would interfere with the public right to access a river or stream, an application for a licence must be submitted to the director.

Licence/Permit /Approval	Applicable Act	Authority	Comments
Oversight role	State (Crown) Lands Act		■ Administration and oversight of all development on State Land in Fiji.
Permit	Quarries Act	Mineral Resources Department	■ Permit may be required if rock and soil is to be extracted by means of explosives for road upgrades and other infrastructure works.
Approval	Marine Act	Ministry of Fisheries and Forestry	■ The BHF is subject to this Act as it is for export, import and will involve large ship transportation (safety of shipping in Fiji)
Road Planning Approval	Road Act	Ministry of Infrastructure , Fiji Roads Authority	■ Construction of access roads and upgrade of existing roads will require approval
Permit	Town Planning Act	Department of Town and County Planning and Navua Rural Authority	■ Building work, road formation and use of the rural agricultural zoned site for the BHF will require a development and building permit
Employee Relations Management Plan	Employment Relations Act	Ministry for Employment, Productivity and Industrial Relations	■ NJV must comply with the Act's requirements.
Minimum Wage			■ All workers engaged in mining operations for the NJV would be covered by the general WO, which sets out the minimum wage in Fiji.
Planning Approval		Navua Rural Local Authority and Department of Town and Country Planning	■ Approval of development carried out in Namosi ('development' includes construction of any building, erection of structures or mining activity). ■ Any surveys carried out and plans for construction of any buildings/structures must be submitted with required application forms for approval.

Protection of the environment would comply with the relevant Fijian laws and standards. Where no Fijian standards exist, Australian standards or other appropriate standards will be used as a reference. Fiji has signed and ratified a number of international conventions and treaties addressing environmental issues, for example, the South Pacific Regional Environment Programme, the Convention on Biological Diversity, Cartagena Protocol on Biosafety, Kyoto Protocol, amongst others. Many of these conventions and treaties place a legal requirement on Fiji to adhere to the articles of the treaty at both national and international levels. The full implications of these treaties would be addressed as part of the EIA.

3 EXISTING ENVIRONMENT AND POTENTIAL IMPACTS

3.1 Introduction

The key geographical features of the Project area are shown in Figure 3.

3.2 Climate

The climate in the region of the Project is classified as tropical, with clearly defined wet and dry seasons. Meteorological data have been collected at the Project site to directly measure parameters such as rainfall, temperature, humidity and wind speed and direction.

NJV has installed an automatic weather station near the proposed BHF site to supplement data from the Navua rainfall record.

Average daily maximum temperatures range from 22.4°C during the winter months to 26.6°C during the summer months.

The region can also be affected by tropical cyclones from October through to April that can cause wind damage, storm surge and flooding.

3.3 Land Use

3.3.1 Existing Land Use

Land within the proposed mining area is primarily under native title and is, therefore, owned by iTaukei mataqalis. Such native title land is primarily used for subsistence activities and is heavily forested.

Exploration activities, including drilling and associated road development, have taken place within the Project area over a period of 45 years. On-going activities such as drilling, ore sampling, creation of associated road access, and other exploration activities are continuing. NJV has recently completed a major rehabilitation program in response to stakeholder concerns about environmental management of exploration activity.

Various other land uses such as forest areas exist within the wider area. The effects of the Project on these areas would be studied further during the EIA.

The proposed BHF is located on alluvium near the Navua River and is generally undeveloped Pandana lowlands with occasional forested rocky outcrops, and fringing mangroves near the shoreline. This land is used for limited agriculture.

3.3.2 Potential Land Use Impacts

The development of the Project would result in vegetation removal and land degradation in areas currently used for subsistence activities such as agriculture and hunting. Only a small percentage of Project area land would be degraded and this would not restrict future subsistence use of undisturbed land within the Project area. Rehabilitation of areas disturbed by the project would be required upon Project closure and compensation may be required during Project construction and operation. Rehabilitation of disturbed areas would be covered in the Conceptual Closure Plan.

3.4 Geology

Fiji is situated on the tectonically active margin of the Indo-Australia plate in a complex, transient setting. As a result, the geology comprises a Tertiary sequence of volcanic and volcanoclastic rocks, which are intruded by dioritic and quartz porphyries, and overlain by later Tertiary and Quaternary cover.

Within the Project mine area, there are six major rock types as outlined below. The mineralisation is associated with several porphyry intrusions into a sequence of basic volcanic agglomerate and flow rock. The major rock types are:

- Wainimala Group – this comprises the basement of the Waisoi area, and consists of basalt to basaltic-andesite lavas and breccias.

- Basal Namosi Conglomerate – this unit overlies the Wainimala Group, and is comprised of a series of conglomerates, sandstones, tuffs, and lavas. Regionally, it forms the base of the Namosi Andesite.

- Namosi Andesite – this overlies the Basal Namosi Conglomerate. It contains fine-grained, intermediate to felsic lava lacking in mafic phenocrysts with subordinate units of siltstone, sandstone and conglomerate.

- Korobasabasaga Volcanoclastic – these overlie the Namosi Andesite. This unit forms the upper ridges of the Waisoi River valley and is in excess of 1000 m thick. It consists of coarse, angular, granular sandstone near the base, to coarse, well-cemented Volcanoclastic, with some minor basaltic andesite flows in the upper portions.

- Porphyry – several porphyries have intruded the basal units. In the Project area, most of the porphyry intrusions tend to be quartz-dioritic in composition. These porphyry units are massive bodies with barren siliceous cores.

- Surficial Deposits – these deposits are limited in the Project area. Alluvium and colluvium are present in the east of the Project area, while boulder terraces and alluvium are present in the west. The boulder terraces and colluvium are clay rich, whereas the alluvium consists of cobble and boulders of fresh and/or altered or weathered volcanics and sediments.

The proposed BHF is located on accretional quaternary deposits of alluvium from the Navua River. The main structural form of the coastline is the barrier coral reef system, with large lagoon areas inside the broad barrier reef.

3.5 Soils

3.5.1 Existing Soil Landscape

Six major soil types occur in the Project mine area:

- Soils developed from young volcanic materials, which are fertile and excellent for cropping.

- Soil developed from volcanic ash over reef limestone, which are thin and subject to drought.

- Soils developed on calcareous tuffs and marls, which are nutrient rich and are mainly used for pasture.

- Soils developed from old weathered volcanic rocks, which are fertile.

- Soils developed from basic and intermediate rocks, which are rather acidic and low in nutrients.

- Soils developed from acid rocks, which are very strongly weathered and usually strongly leached.

Soil thickness is highly variable, depending on topographic position and parent rock type. In general, soil thickness is greater on gentle slopes than on steeper slopes, where it has been weathered and eroded downslope. Soil organic matter status is closely related to the density and type of the vegetation cover.

The soil and weathered materials in the vicinity of the proposed east and west pits occur to a depth of two metres. They are potentially suitable for being stockpiled and used as raw capping materials for rehabilitation. Field observations indicate the soil organic matter is not high. This can be caused by rapid decomposition of organic matter and leaching of organic acids from the soil under humid tropical climatic conditions.

No soil investigations have been carried out on the BHF site to date. Appropriate investigations would be carried out as part of the EIA.

3.5.2 Potential Impacts to Soils

The current design for the Project includes removal of some hill crests and associated soils to allow the construction of the processing plant and other associated mine infrastructure. The Project bulk earthworks involving constructing site roads, embankments, spillways and channels and platforms and stockpile area have an estimated cut volume of 22.91 million cubic metres and a fill volume of 17.07 million cubic metres (i.e. 25% of cut material would be excess to fill needs and would require disposal). Where practicable, stripped topsoil would be set aside and used for later rehabilitation of disturbed areas. The EIA would investigate the depth and suitability of topsoil as a rehabilitation growth-medium and the manner in which the soils may be managed.

The Project site is subject to high erosion potential. An Erosion and Sediment Control Plan would be developed to document measures to manage the amount of fugitive sediment contained in surface-runoff transported to downstream aquatic and terrestrial environments.

Soil contamination may occur during project activities from potentially acid-forming soil and substrate, chemical/fuel spills, product spills and dust emissions. Soil contamination may inhibit revegetation and limit suitable future land uses and would be managed under the Project Environmental and Social Management Plan (ESMP).

The proposed bulk handling facility has not yet been assessed for baseline or impacts for soils, with this study to occur during the EIA.

3.6 Terrestrial Biodiversity

3.6.1 Existing Terrestrial Biodiversity

The terrestrial habitat in the Project area can be roughly divided into lowland tropical rainforest, upland rainforest and tropical montane cloud forest. The lowland tropical rainforest is characterised by a multi-layered canopy, with complex features such as buttress-rooted trees, large vines and an abundance of palms. This forest type is found below an elevation of 400-600 m, above which the forest transitions into upland rainforest. The upland rainforest does not reach the same tree height as the lowland rainforest and it has two main tree layers. The complexity of the upland rainforest is not as high as found at lower altitudes, showing a lower abundance of buttress-rooted trees but epiphytes such as ferns and orchids are more abundant.

Above 900 m, the habitat transitions into montane cloud forests, which have a shorter canopy than both lowland and upland rainforests. A greater abundance of mossy epiphytes and vascular epiphytes such as orchids and ferns can be found in these montane habitats in combination with vascular plants with mostly microphyll leaves. Palms and strangler figs, which are a sign of complexity, are rare or absent and have been replaced by tree ferns and filmy ferns.

Fauna habitats encountered within the Project area generally correspond to the major vegetation communities mentioned above. However, other important habitats include riparian habitat along watercourses, caves, exposed rocky ledges and rock platforms, cliffs and high rock outcrops.

The EIA will include an evaluation of the Project area for the presence of species of conservation significance.

3.6.2 Potential Impacts on Terrestrial Biodiversity

Flora

The development of the Project will require the removal of large areas of vegetation and forest, which will remove individual plants from the broader regional population. This has the potential to impact on the distribution, dispersal and genetic diversity of populations of species in the region. Project-related vehicles and equipment may result in the further spread of invasive weeds currently occurring in the area, or, potentially, introduce new weed species. A Weed and Pest Management Plan would be developed as part of the EIA.

Vegetation clearing, vehicle movements and day-to-day mining construction and operation activities has the potential to generate dust which may reduce the conditions favourable for plant growth (e.g., reduction of photosynthesis and respiration due to an accumulation of dust on plant surfaces or damage to plants from reactive dust particles,) with subsequent reduced plant health. Ground compaction, soil or water contamination and physical damage to vegetation in the project area may also reduce the ability of plants to become established, and limit the potential for regeneration and revegetation of disturbed areas.

Mine infrastructure may alter the runoff and drainage characteristics of the project area and have adverse effects on downstream vegetation. This may promote weed invasion, reduce plant health and degrade habitat for existing vegetation.

Fauna

Vegetation clearing will potentially fragment habitat in the Project area, with possible consequences including increased inter- and intra-specific competition for resources due to reduced foraging areas and the isolation of breeding populations. There is also the potential for loss of individual animals during the clearing of vegetation. Increase in weed density and distribution has the potential to further reduce the available local habitat for fauna species that are dependent on specific vegetation communities.

Species abundance can be measured by the density and diversity of species present (i.e., the number of individual animals in an area and the total number of species present in that area). There is potential for species abundance to be reduced within the Project area as a result of noise and vibration. Project construction and operations will create noise and vibration emissions from project construction and operation including vehicle traffic, excavations, blasting and ore processing, which may lead to fauna relocating to other areas.

The potential impacts of the Project to endemic fauna will be a particular focus of the EIA.

3.7 Freshwater Biodiversity

3.7.1 Existing Freshwater Biodiversity

The Project area contains diverse freshwater habitats including headwater pools, riffles, and runs; steep cascade waterfalls; mid-reach pools, riffles and runs; low-reach pools, riffles and runs; and riparian forest. These habitats are populated by a range of freshwater fauna, many of which are endemic to Fiji.

Many species of fish also have important traditional uses, including as common food, and as totemic value.

A freshwater biodiversity survey would be undertaken as part of the biophysical environment impact assessment in the EIA.

3.7.2 Potential Impacts on Freshwater Biodiversity

Only 27% of the freshwater fauna in Fiji (including all introduced species and all insect larvae or nymphs) are known to be strictly confined to freshwater. The other 73% of the species need to interact with marine or estuarine habitats to complete their life cycle. Therefore, around three-quarters of the aquatic fauna species likely to be found in the Project area may need clear passage to and from the marine habitats in order to maintain their populations.

Potential impacts on freshwater biodiversity may result from Project construction and operations including sediment and chemical loading of downstream watercourses, drawdown

of aquifers reducing supply for groundwater-dependent ecosystems such as springs, and altered surface water flow patterns due to surface water management on site. These potential impacts would be investigated during the EIA.

3.8 Marine Biodiversity

3.8.1 Existing Marine Biodiversity

Aspects of marine biodiversity that may be directly impacted by Project activities are restricted to the Port of Suva and BHF.

The existing marine biodiversity near the BHF is characteristic of fringing reef and lagoon systems along the south coast of Viti Levu. The marine environment in the Port of Suva has been heavily impacted by commercial, industrial and urban development activity in the Suva Harbour catchments.

The Project area ultimately drains into the Rewa River. The Project is being designed to minimise the potential for any impact to the Rewa River delta system and potential impacts to the Rewa River delta would be assessed in the EIA.

All of the rare and threatened marine species found in the wider area have relatively wide ecological distributions. Furthermore, all of the species have been recorded in conservation areas away from the port area, and further studies may be undertaken to understand distribution of species around the proposed BHF site.

3.8.2 Potential Impacts on Marine Ecology

Potential Project impacts on marine ecology include:

- Direct loss or degradation of fauna habitat used for breeding nesting or foraging (e.g. coral reefs).
- Direct loss of marine flora and fauna through land reclamation for port infrastructure and boat strikes.
- Spills of hydrocarbons and other potential contaminants from operation of vehicles and vessels.
- Introduced marine pests.
- Increased fishing pressure due to the influx of workers required to construct the BHF infrastructure, which may boost the demand for local fish and other marine food resources.

The Project is being designed and would be operated to minimise the likelihood of the above potential impacts. The EIA would include the development of a comprehensive marine ecology management and monitoring program.

3.9 Water and Sediment

3.9.1 Existing Surface Water

Rainfall across the project area occurs frequently and via storm burst style events. Cyclone systems visit the region regularly and are capable of depositing significant depths of water in single events (>100mm). The site has a significant excess of rainfall compared to evaporation, at 4700mm/y and 800mm/y, respectively.

Two sub-catchments of the Waidina River will drain the mine site: the sub-parallel valleys of the south western Waisoi River which hosts the East and West Pit deposits; and the Wainavadu Creek, which hosts the CDSF. Each discharges into the Waidina River in sequence, which represents the primary receiving environment for the project. The Sovi River discharges to the Waidina River downstream of its junction with the Wainavadu River and the Sovi River Basin will not be directly impacted by the project. The Waisoi and Wainavadu rivers are short fall catchments, with the project area situated within several kilometers of the watershed boundary.

Flow is perennial, with a groundwater base flow and rapid response to rainfall as a draining system.

Groundwater is hosted by three main styles of aquifer: weathered (oxide) aquifer, fracture/fault hosted (fresh and oxide material) and shallow alluvial (highly localised). Fracture and fault hosted groundwater is expected to be the most significant for the project as faults are likely to act as either a flow barrier or conduit. Preliminary testing of rock mass suggests low conductivity material which will vary when faulted or fractured. Groundwater is found at depths of near surface to 20m in river valleys and 40 to 100m along ridges. Springs and artesian flow occur downslope in valleys driven by topography, indicating the groundwater surface likely rises and falls in a similar style to topography, but at more subdued gradients. As a system, water of the Waisoi project area is highly interconnected and driven by rainfall.

Water quality data have been collected in the Project area since 1977 and is ongoing. Overall, the water quality of the Waidina River and its tributaries is very good by world standards (such as the World Health Organisation) for the majority of parameters analysed, apart from microbiological concentrations.

Estuarine and marine sedimentation data are available for the mouth of the Rewa River. Those data suggest that there is a strong seasonal trend in nearshore sedimentation rates. High sedimentation rates are typically observed from November to June, correlating with the high rates of run-off during the wet season associated with the higher rainfall.

The EIA would update existing data, where available, including those data relating to marine and estuarine water and sediment quality. It would also collect additional information about this for the BHF site.

3.9.2 Potential Impacts on Water and Sediment

The Project has the potential to impact the quality and quantity of surface water discharging to waterways downstream of the mine site. This will result from changes to land use from mining activities, dissolution of metals from excavated and exposed rock, the diversion of waterways within the area, and the collection of surface water in retention dams, open pits and the CDSF.

Fugitive sediment reporting to the downstream environment has the potential for bed aggradation and bank overtopping, with consequent changes to flood characteristics. A sediment characterisation and transport assessment would address this during the EIA.

Geochemical assessment of the possible seepage from the CDSF and SLGOS would also be undertaken as part of the EIA.

3.10 Noise and Vibration

3.10.1 Existing Noise and Vibration Levels

The Project is located in a largely rural region that supports a number of villages, most of which contain churches and schools. The BHF is located in a semi-rural area with a few villages in close proximity. The most densely populated area is Navua Township approximately 6km from the facility.

Ambient noise levels in the Project area are typically in the range of 35 to 40 dB during the day for quiet areas, increasing to more than 60 dB depending on weather conditions and passing traffic, as well as local village activity. The EIA would include further detail on existing noise levels.

3.10.2 Potential Impacts from Noise and Vibration

Based on the current likely equipment lists, published data and previous experience of noise and vibration emissions from similar projects located in tropical environments, an initial noise and vibration source inventory has been developed for the project site. The estimated noise and vibration levels from this inventory would be confirmed and adjusted as necessary during the EIA.

Potential impacts associated with Project noise and vibration levels during Project construction and operation include loss of amenity for villages located in proximity to project components, and impacts to fauna that are sensitive to noise due to:

- Mine activities including vehicle traffic, blasting, drills, loaders, haul trucks, excavators, primary crusher, run of mine pad and other ancillary equipment.
- Power station activities.
- Mine site infrastructure and roads.
- The processing plant.
- The BHF.

Detailed assessment and modelling of noise and vibration would be conducted as part of the EIA.

3.11 Air Quality

3.11.1 Existing Air Quality

The air quality of the Project area is very good with a limited number of significant emission sources. The measured NO_2 and SO_2 were very low and represent rural background concentrations. The PM_{10} concentrations are also typical of rural regions. On occasion there can be elevated dust (recorded as PM_{10}) due to fugitive sources from local open areas and villages.

Air quality at the Project site would be assessed against Fijian Air Quality Standards, which are provided in the Environment Management Regulations under the EM Act. These standards are consistent with World Health Organisation (WHO) air quality guidelines.

3.11.2 Potential Impacts to Air Quality

Based on the current concept design for the Project, the potential principal contaminants that are expected to be released are listed below. These contaminants are considered due to their potential to affect human health or their potential to cause nuisance and amenity effects.

- Particulate matter (PM_{10}) – discharged from combustion processes and dust.
- Sulphur dioxide (SO_2) – a combustion contaminant derived from the use of fuels containing sulphur.
- Oxides of nitrogen (NO_X) – formed during combustion processes, particularly nitrogen dioxide (NO_2).
- Dust – particulate matter which is present in the atmosphere but too large (that is, greater than 10 µm in diameter) to penetrate the human respiratory system and result in potential effects on human health.
- Carbon dioxide (CO_2) and other greenhouse gases (GHGs), which are expressed as CO_2-equivalents (CO_2-e).

Activities with the potential to generate significant dust emissions from the Project include the haul route, mine pits, blasting, and crushing and milling activities. There are a number of sensitive receptors (that is, houses, schools, churches and medical facilities) within 3 km of the mine area; within this distance there is the potential for dust and PM_{10} effects at these locations. Emissions from the proposed power station will contain CO, SO_2 and NO_X.

More detailed assessment and dispersion modelling of air quality and GHGs would be conducted as part of the EIA.

3.12 Traffic and Transport

3.12.1 Road Transport

The current plan for the Project is to upgrade the existing Namosi Road, where required, to accommodate construction and operational traffic from site to the BHF. Transport of supplies between the Port of Suva and Namosi Road would be via the existing Queens Highway which is suitable for heavy transport and does not require upgrade.

It is no longer proposed to use the Waidina Road as a main traffic and transport route for the Project.

During construction, it is anticipated that loads may be limited to 4.5 m × 4.5 m and weigh in the order of 45t, although some items, such as generators for the power station, may weigh as much as 85t each. These oversized loads would be managed on a case by case basis. There may also be requirements for a proportion of the construction workforce to be transported to and from the site on a daily basis.

During operation, the intent is to transport concentrate in containers by trucks to the BHF. The same trucks that transport the concentrate will be back-loaded, when required, with fuel. Reagents and other supplies (e.g. replacement parts for the mine and plant) would be transported from the Port of Suva to site via Queens Highway and Namosi Road. There will also be requirements for a proportion of the operational workforce to be transported to and from the site on a daily basis from accommodation on the coast.

Indicative vehicle movements during construction are 10 large trucks, 12 bus trips and 12 light trucks increasing during operation to 32 large truck, 32 light truck and 20 bus trips per day.

A traffic/transport impact assessment was undertaken as part of the 2011-2012 baseline assessment work and a specific assessment relevant to the BHF was completed in 2014. The assessment work would be updated as part of the EIA and will include a review of the proposed Project during both construction and operational stages for external impacts on the existing road network.

3.12.2 Port Facilities

The current concept for the Project would see port operations and associated logistics comprise goods inwards unloading, handling and dispatch. Studies undertaken to date indicate that the Port of Suva has sufficient space and facilities to allow for import of required construction equipment and materials to support the ongoing operations.

3.12.3 Bulk Handling Facility

The BHF will comprise concentrate storage, re-handling and export capability via a steel and concrete wharf structure and single berth. The BHF will also be capable of unloading and storing bulk fuels (Diesel and HFO) for back-loading on trucks returning to the project site.

Further work would be undertaken as part of the EIA to establish baseline conditions and assess the environmental and social impacts of the BHF.

3.12.4 Potential Impacts on Traffic and Transport

Potential Project impacts on traffic and transport include:

- Changes to local traffic volumes and the resulting safety and amenity issues.
- Increased volume of road and port traffic resulting in traffic congestion and infrastructure degradation.
- Oversize loads being transported on roads causing traffic delays.

The EIA would include the development of a comprehensive traffic and transport management plan.

3.13 Waste

3.13.1 Mine Waste

The principal mine waste materials that would be produced by the Project are waste rock from mining and tailings and process water from the processing of the ore. These would be disposed of in the purpose-built CDSF.

Characterisation of tailings and waste rock material has been undertaken to identify the potential for the material to generate acid when exposed to air. Mine waste comprises both non-acid-forming and potentially acid-forming material, and the co-disposal of waste rock and tailings in the CDSF will minimise the potential for this material to acidify by permanently submerging it in water to significantly slow the rate of ingress of oxygen. The quality of the water covering the CDSF and being discharged over the spillway would be closely monitored to ensure downstream water criteria can be met.

Hydrogeochemical investigations would be undertaken during the EIA to predict the quality of water in the open pits and whether or not this water would require treatment prior to discharge.

3.13.2 Other Waste

Non-mineral wastes produced would include general wastes (for example, food waste, paper, glass, plastics, scrap-metal, and wood) and potentially regulated waste (for example, tyres, waste oil, and batteries). Recyclable wastes would be separated at their source. Salvageable timber would be recovered from areas to be cleared of vegetation. The cleared vegetation may be windrowed or chipped for use in biomass power generating plants within Fiji. It is proposed that sewage generated at the site would be treated using a biological, aerobic, modular sewage-treatment plant. The details of that plant would be defined in the EIA.

Options for waste storage, treatment and management would be defined and identified as part of the EIA. Waste disposal is unlikely to present a significant risk to the environment.

3.13.3 Potential Impacts from Waste

Potential Project impacts from mine and other waste include:

- The potential for acid and metalliferous drainage to contaminate land and water systems.
- Pollution of surrounding terrestrial and aquatic environment due to incorrect disposal of general wastes and sewage.

The EIA would include the development of a comprehensive waste management plan.

3.14 Rehabilitation and Decommissioning

The rehabilitation and decommissioning of the Project would form part of the overall project plan. Rehabilitation would, when and where possible, be undertaken progressively during the life of the mine. However, as an ongoing process, the final land use options and land forms would be developed and agreed with relevant stakeholders, particularly landowners.

The methods used for decommissioning and rehabilitation of disturbed areas would be discussed in the EIA, drawing on experience gained from existing and similar operations.

At final decommissioning, plant, equipment and buildings would be dismantled and removed, unless regulatory authorities and relevant community stakeholders agree otherwise.

Ongoing closure planning would occur during the life of the mine, involving consultation with the land owners, the communities and the relevant regulatory authorities.

3.15 Social and Cultural Heritage Baseline Data Collection

The first round of socioeconomic data collection to support assessment of the Project was undertaken during 2011-2012. Consultations were also undertaken with key local stakeholders (refer to Section 3.19) to develop the scope of works for the social baseline assessments as part of the EIA development process. These assessments included:

socioeconomics; demography; education; housing; community health; human health and ecological risk; income and expenditure; food and dietary habits; visual amenity; and traffic/transport. Baseline data collection in the BHF area was completed in 2014. The baseline assessments will be updated as part of the EIA process and will inform the socioeconomic impact assessment to be developed in the EIS.

3.16 Communication and Information

The Project will develop communication and information materials that will be provided to the communities and other stakeholders to inform their understanding of the EIA process and content. Sessions will be held in communities throughout the EIA process to achieve a full understanding of Project design.

3.17 Socioeconomic Impact Assessment

A socio-economic impact assessment would be undertaken as part of the EIA to examine potential opportunities and impacts of the Project locally and nationally. These opportunities and impacts would be assessed for both the construction and operational periods and would be separated into direct impacts, indirect impacts, and cumulative effects. This would include the positive and negative impacts of the proposed Project on affected persons; regional impacts and benefits; and mitigation and benefit-maximisation measures and strategies. Areas of assessment would include, but not be limited to: demography; educational opportunities; employment opportunities; business development; traffic and transport; noise and vibration; air quality; land and resource use; surface and groundwater use; health; housing; community infrastructure and assets; income and expenditure; and waste management.

Local data inputs for the Fiji/Suva economy may be utilised to identify potential local impacts associated with development of the Project. These would focus on the qualitative and (where possible) quantitative assessment of impact.

3.18 Human Health and Ecological Risk Assessment

A preliminary human health and ecological risk assessment has been undertaken to assess the potential impacts to human and ecological receptors such as local communities, soil, sediment, freshwater plants and animals.

A preliminary conceptual site model has been developed, to represent and understand how chemicals (for example, heavy metals) could impact receptors. For example, the preliminary study looked at particular metals and existing concentrations of these metals in soils, plants and fish. Exposure pathways will include how heavy metals are mobilised from a particular area and concentrate in various plants and animals/fish which are known to be consumed by people.

The conceptual site model would be refined to include the BHF. This refinement and study would be followed by a toxicity assessment, exposure assessment and risk characterisation. This work would integrate the exposure and toxicity assessments into an estimate of the potential impacts occurring as a result of the Project, and be reported in the EIA.

3.19 Community Consultation

Community consultation was undertaken during the first round of the EIA process carried out over 2011-2012. Further consultation will play a key role in the current EIA process. Programmes have been designed and undertaken to facilitate stakeholder participation in the EIA process, to the greatest extent possible. These programmes would be expanded during the EIA to specifically include the BHF. The overall approach has been and will continue to be based on: transparency and full presentation of information available; and communication of the overall Project activities, including EIA studies, development and outcomes, to Project stakeholders. The outcomes of the stakeholder engagement programmes would be incorporated in all technical areas of the EIA process.

Consultation would also continue to be undertaken with lead government agencies, such as the Mineral Resources Department and the DoE. Project information workshops may be held, and Project newsletters released periodically.

The Terms of Reference (ToR) and EIA would be available for public comment in accordance with the formal statutory EIA process.

3.20 Visual Amenity

Key visual features of the Project, if developed, would include: open pit mining, ancillary infrastructure (i.e. camp site, power station, crusher and process plant); water infrastructure (dams); a waste rock storage facilities; and one tailings storage facility.

The visual exposure of the proposed Project was assessed in 2011-2012 as part of the EIA and the BHF area was assessed separately in 2014. The Project area can be accessed from the east via the Waidina Road from Naqali to Namosi, or the south via Namosi Road. Delailasakau village and Nasevou District School represent areas close to the infrastructure that have a potential high visual impact. Other viewpoints such as along Namosi Road and at Namosi, Waivaka, and Nasirotu villages are unlikely to be able to see major Project components.

3.20.1 Potential Visual Amenity Impacts

Potential impacts to visual amenity may include:

- Permanent changes to landforms.
- Vegetation removal, altering existing landscape and allowing views of the project components.
- Presence of additional vehicles and project machinery, particularly haulage trucks along local roadways.

Following design mitigations, the CDSF, power station area, and small corner of the east pit would be the only visible features of the Project from the key observation viewpoints in the village of Delailasakau and Nasevou District School and potentially along parts of Delailasakau Road.

The change in Project design to the CDSF would result in a negligible visual impact from all seven viewpoints.

3.21 Cultural Heritage

3.21.1 Existing Cultural Heritage

A full cultural heritage assessment of the Project area (excluding the BHF) was carried out over the period 2011-2012 in partnership with the Fiji Museum. This assessment reviewed documentary and other evidence relevant to sites identified previously by the Museum, various government departments and others. This included five heritage sites identified by the Fiji Museum during previous mineral exploration works in 2001 and 2002. The 2011-2012 study findings include: housemounds; ring ditches; causeways; palisades; transverse ridge ditches; rock shelters and caves; burials and burial grounds; ridgeline trails; old villages; and lowland and highland defensive sites. Progressive studies, again in partnership with the Fiji Museum, were undertaken in 2013 and 2014 that identified further sites within the Project area. A separate study was also completed on the BHF area and reported in 2015. Additional studies would be undertaken to complete a full assessment of the Project area. This includes the proposed accommodation camp area and road alignment changes, in addition to confirming proposed plant location sites. Other sites that may be identified would be subject to verification, investigation works and impact mitigation, which would be undertaken as part of the EIA.

3.21.2 Potential Impacts to Cultural Heritage

Potential Project impacts on cultural heritage include:

- Damage to, or destruction of, cultural heritage sites from Project construction and/or operations (e.g. excavations).
- Disconnection of communities from cultural heritage sites and loss of sites from oral tradition.

Cultural heritage and archaeological sites exist in the Project area and their locations have been identified and mapped. This information has been utilised by engineers and other project

staff to minimise potential negative impacts to cultural heritage sites. The Project would carry out similar in-depth cultural heritage assessments in the areas noted above.

In conjunction with the field studies of tangible cultural heritage, an intangible cultural heritage study would also be conducted. The purpose of the intangible cultural heritage study would be to ensure that the Project is aware of any social, cultural or spiritual issues, which might be impacted by the Project, and become a potential source of conflict with the host communities. It may also provide information that would assist NJV in dealing with potential claims regarding impacts on intangible cultural heritage. As per direction by the Fiji Government, and the Fiji Museum, it is understood by the Project that this information would be provided to government and museum only and on a confidential basis.

The EIA would include the development of a comprehensive cultural heritage management plan.

4.0 MANAGEMENT PLANS

The EIA would include an Environmental Management Plan; Social Management Plan; Conceptual Closure Plan; and Cultural Heritage Management Plan and these plans would outline proposed management measures for these aspect.

These plans are likely to have sub-plans addressing aspects such as:

- Emergency response and fire management
- Hazardous materials management
- Traffic and transport management
- Waste management
- Air quality, noise and vibration management
- Surface- and groundwater management
- Sediment and erosion control
- Acid and metalliferous drainage management
- Ecology and biodiversity management
- Weed and pest management.

Report Signature Page

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