



EXXONMOBIL PNG LIMITED



PNG LNG Project

KUTUBU TO HIDES (KP0-80) RAP ADDENDUM No.3

Earthquake Associated River Crossing Reinstatement Areas: KP61.8 and KP65.9

PGHU-EH-SPZZZ-490029-003

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ACRONYMS

ACRONYM	Definition
CAA	Clan Agency Agreement
CA	Community Affairs
CAPR	Compensation Agreement Payment Receipt
CCA	Clan Caretaking Agreement
CPI	Consumer Price Index
EMPNG	ExxonMobil PNG Ltd
EWS	Extra Work-Space
FRV	Full Replacement Value
HGCP	Hides Gas Conditioning Plant
IPCA	In Principle Clan Agreements
KP	Kilometer Point
L&CA	Lands & Community Affairs
LNG	Liquefied Natural Gas
MEZ	Mainline Exclusion Zone
PCS	Pre-Construction Survey
PNG	Papua New Guinea
RAP	Resettlement Action Plan
RoW	Right of Way
RVX	River Crossing
VLO	Village Liaison Officer

1.0 Introduction

On February 26th 2018 a magnitude 7.5 earthquake struck the Southern Highlands region with the epicenter located approximately 10-12 kms from the Hides plant-site. This was followed by several weeks of aftershocks. Damage from the earthquake was extensive and impacted pipeline integrity, necessitating repair and ongoing maintenance works along sections of the pipeline. Some of these works require repairs and maintenance of pipelines at river crossings. In order to access the pipeline at river crossings, road access will have to be constructed and work areas demarcated which will lead to economic and potentially physical displacement in order to mitigate on-going safety risks to communities.

EMPNG has developed a repair and maintenance program for 2022, following series of ground and technical assessments, for sections of the pipeline at 2 river crossings, KP61.8 Mandali and KP65.9 Ayu rivers. The assessments concluded that scouring at and near the river crossings has the potential to expose the pipelines, thereby compromising the Pipeline integrity, and creating an environmental and community health and safety risk.

Proposed river crossing (RVX) remedial works will require the following actions:

- Collection of large boulders with diameters ranging from 1.2m - 1.8m from 3km upstream and downstream of KP61.8 and 3km upstream of KP65.9, a total of 9km riverine corridor. An additional 450m section of Biame Creek near KP65.9 RVX will also be a source of boulders for repairs and maintenance work for KP65.9 RVX (from Biame culvert to confluence).
- Temporary relocation of communities from access roads, laydown areas, access ramps and emergency flood pad sites required to perform the remedial works; communities will be compensated for damage and deprivation in accordance with established practices and will be allowed to return at the conclusion of these works which are expected to last for up to 9 months.

This document has been prepared as Addendum 3 to Kutubu to Hides (KP0-KP80) RAP, document No. PGHU-EH-SPZZZ-490029-003, approved by the IESC, and describes the characteristics of the proposed impact areas and how physical and economic displacement of the occupants and users of these areas will be managed. The scope and format of the Addendum is consistent with previous Addendums, and conforms with the requirements of the Land Access, Resettlement and Livelihood Management Plan - Production, document number PGGP-EH-OPZZZ-000004-006, as approved by the IESC. Details of the legal framework and the social/cultural/economic context of the area are given in the Kutubu to Hides (KP0-KP80) RAP which is available on the project website (www.pnglng.com). Another document also available in the project website that has been used as a reference material is the 'Omati River Right-of-Way Communal Resource Plan, document number PGHU-EH-SPZZZ-700002.

2.0 Proposed Activities

The main activities required under the proposals are to:

- Clearly demarcate land and river incursion to be utilized during RVX reinstatement which include;
 - Access road off the main public road
 - Fenced staging and storage area,
 - Ramps and fords for machinery access into rivers
 - River incursions required by machinery to collect stones/boulders
 - Flood emergency pads (Laydown) that will be required in the event there is flooding during 'stone/boulder' collection
- Identify land-owning clans and respective clan leaders for land along the banks of the rivers and at each area required for repair and maintenance work and Flood emergency pads
- Identify with the landowning clans in the areas that will be disturbed.
- Engagement with relevant clans and clan leaders and map clan boundaries
- Compensate and facilitate the relocation of impacted households
- Monitor and ensure structures and gardens occurring in the proposed impact areas have been relocated prior to Project access of the area
- Review existing In-Principle Compensation Agreements (IPCAs) and update as necessary
- Review existing Clan Agency Agreements (CAAs) and update as necessary
- Develop new CAAs as necessary
- Formalize the signing of new and revised CAAs to signify the beginning of the new terms of Land lease agreement between the landowners and EMPNG.

Reinstatement activities will only take place at the earthquake impacted RVX at KP61.8 Mandali River and KP65.9, Ayu River. At the completion of the reinstatement activities, the access roads will be scarified, the fences, ramps and fords removed, and disturbed areas will be reinstated.

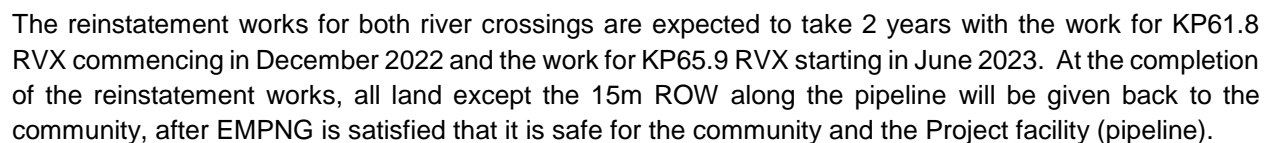
Table 1: List of relevant locations, proposed activities and size of area impacted

Pipeline RVX / Work Area	Activity type	Location	Description	Area (ha) / Distance (m)
KP61.8 Mandali River	Reinstatement Area	KP61.8 RVX – Mandali Bridge	Clearing and ground disturbance	1.64 ha
	Flood Emergency Pads	Upstream	Ground disturbance	0.03 ha
	Flood Emergency Pads	Downstream	Ground disturbance	0.38 ha
	Stone/Boulder Collection	6km Waterway	Disturbance of river/water way	8.08 ha
KP65.9 River	Reinstatement Area	KP65.9 RVX	Clearing and ground disturbance	1.85 ha
	Flood Emergency Pads	Upstream	Clearing and ground disturbance	0.03 ha
	Stone/Boulder collection	Upstream	Clearing and ground disturbance	3.36 ha
	Access Road	Main Moro-Homa Road to KP65.9 RVX	Clearing and ground disturbance	270m
Biame Creek	Stone/Boulder collection	Biame Culvert, Moro-Homa Road to Biame and confluence	Disturbance of river/water way	0.015 ha

All of the activities listed in Table 1 fall within IPCA Area 9 – Tubage to Homa, IPCA #: PGHU-EH-SAZZZ-000905, signed in August 2009.

Figure 1 shows all the locations identified for earthquake recovery works. The areas covered by this Addendum have been highlighted in red font.

Figure 1: Earthquake Recovery Sites for PNG LNG



There is only one IPCA for all land-take listed in Table 2 and all clans except the Paua clan, are listed in this IPCA. The Paua clan was not listed in the IPCA that was signed in 2009 as none of their land fell within

the pipeline impact area. The Paua clan was identified at Upstream Ayu River which now means the IPCA signed during the Construction phase will have to be reviewed and amended to include the Paua clan and a CAPR¹ agreement signed with the clans as all land-take will be temporary, for the duration of the reinstatement works. Additional information to note is that land demarcation boundaries continue to the banks of the rivers. A clan can only have access to the side of the river adjacent to their clan boundaries for access to livelihood activities such as fishing.

Table 2 shows the land-owning clans and user clans identified for each area during the PCS. No absentee landowners were identified as being associated with the area.

Table 2: Key landowner, User and Occupancy/Use status of the proposed new land-take

Main Work Area	Impacted Location	Land-owning clans	Land-user clan ²	Occupancy / Use status
KP61.8 RVX	Reinstatement Area	Yandabe, Gambolo, Feli	Feli, Toyu, Yatama, Yandabe	Legitimate occupancy and user rights
	Upstream - Waterway	Yatama, Ali, Keya, Nali, Hepo, Toyu	Nali	Legitimate occupancy and user rights
	Flood Emergency Pad 1	Keya	Keya	Legitimate occupancy and user rights
	Flood Emergency Pad 2	Nali	Nil	Legitimate occupancy and user rights
	Flood Emergency Pad 3	Nali	Nali	Legitimate occupancy and user rights
	Downstream - Waterway	Gambolo, Hugu Ango, Toma, Feli	Gambolo	Legitimate occupancy and user rights
	Flood Emergency Pad 2	Gambolo, Tomu, Feli	Gambolo	Legitimate occupancy and user rights
	Flood Emergency Pad 3	Gambolo, Tomu, Feli	Gambolo	Legitimate occupancy and user rights
KP65.9 RVX	Reinstatement Area	Paru, Honge	Paru, Honge	Legitimate occupancy and user rights
	Access Road	Paru	Paru	Legitimate occupancy and user rights
	Upstream Waterway	Paru, Honge, Paua	Paru, Paua	Legitimate occupancy and user rights
	Flood Emergency Pad 1	Paua	Paua	Legitimate occupancy and user rights
	Flood Emergency Pad 2	Paua	Paua	Legitimate occupancy and user rights
Biame Creek	Waterway	Paru	Paru, SDA Church	Legitimate occupancy and user rights

¹ Compensation Agreement Payment Receipt – An Agreement signed between Project and the clans for temporary land access

² Based on clans of current land users recorded at time of PCS for the new land-take program

Pre-Disturbance Survey conducted on the 24th to the 30th of September 2022 identified 23 cultural heritage sites; 16 sites were identified in Mandali (KP61.8 RVX) and 7 identified in the Ayu (KP65.9 RVX) impact areas. 12 of the 23 sites are within the proposed construction footprint and will be impacted. 6 of these CH sites are medium to high significance and 6 are low significance. Recommended mitigations are listed in the River Crossings report; KP61.8 and KP65.9 Aquatic Pre-Disturbance Survey Report No. 01443A and Attachment 3 and Attachment 4 in this report.

4.0 Impacts

Impacts will be on both households and communal resources. The impacts on the households will be mainly at the reinstatement areas, access roads and flood emergency pads while communal impacts will be in the water way (course)³. Environment impacts, and mitigations are recorded in the PCS document River Crossings; KP61.8 and KP65.9 Aquatic Pre-Disturbance Survey Report. No 01443A.

There are fourteen (14) households identified to be displaced, of which thirteen (13) households will be physically and economically displaced. One (1) household will experience economic displacement only. This household coincides with KP61.8 RVX impact area Flood Emergency Pad 3. All these households were identified at both KP61.8 and KP65.9 RVX impact areas. All households will be provided with resettlement assistance (Section 5).

For physical displacements, 3 households, all at KP65.9 are permanently occupied residential structures and will receive full resettlement packages. The remaining 10 structures, 2 at KP65.9 and 8 at KP61.8 RVX impact areas that require physical displacement are non-standard⁴ structures that are either non-residential⁵ or auxiliary⁶ structures.

Table 3 summarizes land use, the occupancy and use status of the assets and whether resettlement assistance is required for each area. Table 4 highlights the predicted impacts and mitigation measures for communal resources.

³ Adjoining customary owners (where they exist) may have rights and interests such as the right to access, gather and fish, but they do not have a possessory right (see ENE Land Group v Fonsen Logging (10 February 1998))

⁴ Non-standard structures are non-residential structures

⁵ Non-residential structures can be residential structures constructed for compensation purposes - commonly termed speculative structures or properly constructed cook houses and House man, trade stores or structures built for the purpose of cash earning opportunists and auxiliary structures.

⁶ Auxiliary structures in this report refer to supporting structures to the main household residential structure such as garden houses, livestock pan, open cook houses, house wind, pit latrines, sheds etc.

Table 3: Land use aspects of proposed impact areas

Section of Pipeline & Associated Facilities	Number of Households Impacted	Land use	Background Information	Resettlement assistance	Status of Consultation, Cut-off dates, Assessments, Payments & Relocation
KP61.8	9	<ul style="list-style-type: none"> Active and fallow gardens, House gardens, fruit and nut trees, Non-residential structures, mainly trade stores 	<ul style="list-style-type: none"> All active and fallow gardens observed either upstream or downstream within Flood emergency pads Minor gardens mainly house gardens around structures built for the purpose of trade stores Owners of most non-residential structures mainly trade stores and some house cooks only had user rights Some trade stores non-operational at time of survey 	<ul style="list-style-type: none"> Compensation for gardens, trees Compensation for operational and non-operational trade stores at nominal rates Land deprivation 	<ul style="list-style-type: none"> Consultation, cut-off dates and assessments completed Payments and relocation yet to start
KP65.9 & Biame Creek	5	<ul style="list-style-type: none"> 3 residential structures, 2 non-residential structures, Active and fallow gardens, fruit and nut trees 	<ul style="list-style-type: none"> Permanent occupancy: 1/3 residential structure owner only has land user rights Gardens split between immediate and extended families for the purpose of compensation payments Non-residential structures were a Video house and a houseman⁷ owned by two separate households 	<ul style="list-style-type: none"> Resettlement package for displaced household Compensation for Video house and House man at nominal rate Compensation for gardens and trees Land deprivation 	<ul style="list-style-type: none"> Consultation, cut-off dates and assessments completed Payments and relocation yet to start

⁷A houseman is a structure constructed and used as dwellings for men folks of a clan or of a household. Important clan or household decisions are made here.

Table 4: Predicted residual impacts on Communal Resources

Impact Area	Resource Use	Post-mitigation (Residual Impact)	Mitigation Measures
Rivers	Alternate source of water required for household water uses including drinking	<p>Disruption to community's access to and enjoyment of the river</p> <p>Discoloration of water source</p> <p>Discoloration⁸ of water source for more than 24 hours to the extent that community cannot use the water for customary purposes</p>	<p>Provide time schedule to communities as to when machinery is expected to move up and down the river collecting boulders. Place Safety monitors to advise and or caution communities from accessing the rivers when machines are at work.</p> <p>Place temporary standalone water tanks at various strategic locations for community to access water for drinking and cooking purposes during the period of work that may cause discoloration along any given section of river. The water tanks will be filled as necessary by water trucks. During the times when not at the site, the water will remain undisturbed so they can still have access.</p> <p>Post repairs and maintenance, Project will remove tanks from the site but if requested by community, will follow Company process for handover of goods and materials with the assistance of CA, Areas where tanks will have been installed will be rehabilitated to their original state prior to water tank installation.</p> <p>Company will pay community single lumpsum amount (<i>as per Valuer General</i>) for that calendar month in compliance with Section 87 (2) (d) of the Environment Act and as per the IPCA PGHU-EH-SAZZZ-000905 signed with the clans</p>

⁸ For the purpose of this report, discoloration of the river is the state of the river that the community claims it cannot use for its customary purposes. In this case, Project through the CA Officers and VLO will monitor the river on a daily basis and if situation meets the condition described here, mitigation will be to compensate in compliance with the Environment Act 87 (2) (d) and in conformance with IPCA IPCA PGHU-EH-SAZZZ-000905.

Moro-Paua-Homa Road	<p>Movement of the public using the road to travel to and from Moro which is the main center where essential services such as health, banking facilities and other services such as Police assistance and shops are located.</p> <p>Movement between households and gardens where people either cross the roads or walk along the roads to get to their destination.</p>	No Significant Impact	<p>Community engagement where awareness will be conducted before actual work starts so community anticipates Project presence in the area.</p> <p>Employment of Community Traffic Monitors who will help in controlling the traffic along the entire road including in villages throughout the duration of the repairs and maintenance period.</p> <p>Project adherence to 40kph speed limit with reduced speed in villages. The speed limits and traffic safety programs will be shared with the community right before the start of the repairs and maintenance activities, as part of the Community Awareness program.</p>
New access roads constructed to gain access to work sites	Movement to and from gardens following bush tracks that will now either cross over or will be located alongside the newly constructed access roads	Minimal disruption of movement	<p>Establishment of crossing points for people and livestock where access road impedes movement.</p> <p>Consultation with communities (especially women and children) to inform them of Health & Safety issues associated with access road and associated traffic.</p> <p>Land deprivation and environmental damages payment.</p>
Fenced Storage, and laydown areas, Ramps and Fords for machinery access into rivers and repairs and maintenance work area at KP61.8 RVX	Local economic hub which includes up to 9 trade stores, a fresh food market and a Volleyball Court	Disruption of normal trade and enjoyment of sporting facility	<p>Compensation payments for trade stores at nominal rates⁹</p> <p>Land deprivation and environmental damages payment.</p> <p>Establishment of Volleyball Court and provision of balls and net at a location appointed by the community through the Project's CDS program</p>

⁹ Valuation method used to arrive at the nominal rates was 'Market Comparison' of all the trade store structures displaced in previous resettlement activities within the geographic location that included the trade store structures that will be displaced at a defensible value.

5.0 Eligibility and Entitlements

All compensation rates households are eligible for and entitled to, are rates that have been used during PNG LNG construction period and that have been subjected to CPI increases every year since 2015. Except for the compensation rates for trees, plants and land deprivation which were all gazetted by the government of PNG or written in statute, compensation rates for structures were set by the Project, especially a residential structure that was based on a 20m² timber kit home and used with annual CPI rates added since 2015. Additionally, except for a Type 1 structure that is legally occupied as a residential structure, compensation payments for all other types of structures are made as a 'one-off' payment.

All the households that will be relocated temporarily all have other residential structures and land elsewhere outside the proposed impact area where they can move to but will be eligible for full resettlement packages. Tables 5 and 6 summarize the eligibility and entitlements that will apply to the affected households.

Table 5: Physical displacement

Eligibility	Affected Category	Agreement	Assistance / Compensation	Considerations for Implementation
Recognized owner(s) of the assets and structures (as identified in the pre-construction surveys undertaken with structure owner in respective locations)	Type 1 structures (legally occupied residential structures at time of survey)	Resettlement Agreement between EMPNG and the owner of the asset – Standard Structure Agreement.	<p>Between PGK 50828 - 58255 paid in parts</p> <p>Part A – Cash Compensation linked to signing agreement, dismantling and garden establishment.</p> <p>Part B - Deferred Payment deposit into a Interest Bearing Deposit or deferred payment for 6 months</p> <p>Part C - Materials in kind payment which includes materials</p>	<p>Clearly communicate potential safety risk and that displacement is part of a Community Safety Mitigation program designed to ensure the safety of households during proposed remedial works.</p> <p>Clearly explain these structures are categorized as residential structures where the household occupies it legitimately and that EMPNG has an obligation to assist the family to self-relocate to an area of their selection.</p>

			(.e.g. water tank, solar panel and accessories) plus bank deposit of the remaining amount in household accounts	
Recognized owner(s) of the assets and structures (as identified in the pre-construction surveys undertaken with structure) owner in respective locations)	Type X structures (non-standard structures)	Resettlement Agreement between EMPNG and the owner of the asset (non-standard or non-residential structure)	Between PGK 2500 - 15000	Clearly communicate potential safety risk and that displacement is part of a Community Safety Mitigation program Clearly explain these structures are categorized as auxiliary structures and items like chicken houses, cooking structures, partially constructed structures, toilets, Haus wins (meeting structures) and garden houses fall into this category. One-off payments are made for these structures. Emphasize that the structures must be dismantled as they are within construction area which is considered as not safe.
Recognized owner(s) of the assets and structures (as identified in the pre-construction surveys undertaken with structure owner in respective locations)	Type Z structures (garden houses, chicken houses; cook houses, incomplete structures)	Resettlement Agreement between EMPNG and the owner of the asset (non-standard or auxiliary structure)	Between PGK 500 - 698	
Recognized owner(s) of the assets and structures (as identified in the pre-construction surveys undertaken with structure owner in respective locations)	Type Y structures (pit latrines, sheds)	Resettlement Agreement between EMPNG and the owner of the asset (non-standard or auxiliary structure)	PGK 50	

Table 6: Economic displacement

Eligibility	Agreement	Assistance / Compensation	Considerations for Implementation
Recognized owner(s) of the assets/gardens (as identified in the pre-construction surveys undertaken with asset/garden owner in respective locations)	Economic Displacement Agreement between EMPNG and the owner of the economic asset. Compensation will be based on the 2014 Valuer General Rates with CPI increases for 2015 through to 2022	Full Replacement Value (FRV) for crops and trees planted by individuals which are within the impact areas.	One off cash compensation at FRV to individuals or household owners directly Due to safety risks during construction, EMPNG will temporarily lease these areas during the duration of repairs and maintenance and compensate clans through the normal IPCA and CAPR agreements. In return communities will not access these areas for any purpose whilst the repairs and maintenance activities are going on.

All compensation payments under the displacement agreements will be executed in the field or at a location which best suits the landowner, provided it can be safely accessed by EMPNG. There are banking facilities near these areas so EMPNG will provide the opportunity for payments to be made through bank accounts.

6.0 Livelihood Restoration

All gardens that were surveyed were either fallow gardens, kitchen gardens (house gardens) or active gardens. The house gardens and active gardens surveyed only provide surplus produce for the households connected to these gardens, with gardens located in clan areas outside the proclaimed impact areas providing sufficient quantities of food to meet the household needs. Therefore, no specific Livelihood Restoration program is to be offered.

7.0 Entitlement Cut Off Date

EMPNG undertook video and photo documentation of the impact areas being included in the new land-take program and complemented this with pre-construction surveys. The completion date of the pre-construction survey represented the cut-off date for physical assets and improvements that will be compensated under the Resettlement Program and was communicated accordingly within the affected communities, as described below.

8.0 Consultation & Disclosure

In all impact areas, households identified as being located within the new land-take areas, land owning clan members and the communities at large were advised that the areas both in and around the sections of pipelines at respective river crossings including riverbanks required repairs and maintenance. The communities were advised that during the Project's post 2018 earthquake impact assessment of the pipeline, it was discovered that there is potential for exposure of the pipes from the effect of continuous scouring if the designed depth of cover of the pipes both in the river and on the riverbanks are not repaired.

Four major consultations were undertaken with the communities, the first being on 21st September 2022 with the KP61.8 RVX communities who were advised that the Project required areas at the pipeline RVX and surrounding areas for the purpose of repairs and maintenance of the pipeline, laydowns for equipment and Ramps for the movement of machinery into and out of the rivers. The Project also required 3kms upstream and 3km downstream of the river to collect large boulders ranging from 1.2 to 1.8m diameter. The boulders would be used to create stone walls (riprap) on the upstream side of the river, firstly, to divert the water flow so repairs and maintenance can take place on the dry side of the river beds each time. After the repairs and maintenance of the pipeline section in the river is completed, the large boulders would then be placed across the river, to slow down the flow of the river at the pipeline RVX and stabilize and protect the riverbed against scouring. Communities were also advised that laydowns would be identified at various locations both upstream and downstream to serve as emergency flood pads for safe keeping of the machinery in the event of flooding. The second consultation was with the KP65.9 RVX communities where similar messaging was delivered on 26th September 2022. The other 2 public consultations were with the land-owning clans of KP65.9 Upstream communities and Biame Creek riverine communities on 28th September 2022 and 21st October 2022 respectively.

The communities were advised that, for the new land-take, gardens and structures would be identified, recorded, and compensated through EMPNG's Resettlement Compensation process.

Following these initial announcements, preconstruction surveys (PCS) were conducted in the main areas designated as repairs and maintenance worksites and all associated areas required by the project where declarations were made for use of the land. Gardens and structures, both standard bush structures and non-standard structures identified in the proposed impact area were recorded. Counts of economic assets were made and approved by household representatives.

With regards to resettlement and displacement of gardens, it was disclosed to the communities that for the safety of the households and the community at large, households will be relocated, and communities must remain outside the impact areas that will be identified and declared. After the repairs and maintenance works at the RVX, all land except the 15m wide pipeline ROW would be given back to the communities.

Public disclosures were presented to all affected communities and reinforced during the course of the pre-construction surveys. Messages delivered to each group are presented in Table 7 and the breakdown of the consultation activities is given in Table 8.

Table 7: Key Messages for affected communities

Key Messages for Affected Community Groups
<p>River Crossing Reinstatement</p> <ul style="list-style-type: none"> • PNG LNG Project has concerns for the safety and integrity of the pipelines at the RVX and the safety and wellbeing of the public and members of the community who are living and or gardening near the banks where the pipes cross the rivers. • Project engineers have identified scouring of the riverbeds and the riverbanks where the pipeline is laid and causing exposure to the pipeline that imposes safety and integrity issues, and if not repaired, will result in more exposure to the pipelines and moreover the safety of the community. • The February 2018 earthquake was the main cause of the issues here. You will note that the Project has been doing earthquake recovery work at KP64 and various other locations along the pipeline and the RVX are no exception. • A large area will be required for the reinstatement works. The area covers both land and water (river), where work will take place. <ul style="list-style-type: none"> ○ Most of the land required will be near the RVX where an access road will be constructed for access of machineries to the river. ○ For areas in the river, besides the actual reinstatement work, Company officers will be monitoring the safety status of water before, during and after the reinstatement work to determine the safety status of the water for community use ○ The reinstatement work will involve civil equipment (yellow iron / excavators / articulated dump trucks) working in and around the river for ~9 months for each RVX • Materials such as concrete blocks will be placed in the river and over the Pipeline RVX in order to add additional layers of protection for the pipeline under the riverbed. Concrete blocks (materials) will be secured between the micropiles (like the work you've seen /heard of at KP64 node). Whilst river boulders (materials) will be placed in front of the micropiles upstream and downstream to protect against scouring. • The boulders with diameter measuring between 1.2-1.8m will be collected within the river by machinery and transported to the repairs and maintenance location. Laydowns will be identified both upstream and downstream, declared and used as flood emergency pads in the event there is flooding during the collection of boulders. Any improvements identified within the laydowns will be counted and the rightful owner compensated following the resettlement process. • Deprivation payments will be paid for the impacted land, required for reinstatement of the RVX and the riverbanks, for a period of 9 months during the work duration. If it is going to take longer and or, if the reinstatement work is completed before this time, you will be informed. • PNG LNG Project is committed to the safety of its facilities that will ensure the safety pf the public - its employees, contractors and you, the community. • We will conduct various free, prior disclosures and cut-off with respective clans/landowners for the areas identified. This consultation involves environmental and social surveys.

The public disclosure engagements resulted in lengthy discussions. The list of questions and concerns raised were numerous however, they generally concerned employment, duration of land deprivation, and access to and enjoyment of the rivers. Community also wanted to know how they would be compensated

as the river, a community resource, would be impacted during the reinstatement activities. Table 7 summarizes common topics and Company responses.

Table 8: Common issues raised at public disclosures and Company responses

Topic	Issue	Company response
Employment	<ul style="list-style-type: none"> - The KP61.8 RVX community do not want labour to be brought in from KP64 - And that there must be equal distribution of labor for all clans 	<ul style="list-style-type: none"> - We will follow the normal Casual labor recruitment process - CA will disclose to your VLOs the expected number for recruitment, but your LANCO will collect the names of the potential casual employees - CA and Project Security will do final vetting and a list is sent to Kutmor, your LANCO, to begin the onboarding process. - CA vetting ensures fair distribution of casuats from clans within the impact area are listed. The final list is sent to the LANCO who does the recruitment
Water Use	<ul style="list-style-type: none"> - Mandali river is our main drinking water source as most small streams are polluted by pigs and communities using for other household chores We will not be able to have access to the river like we normally do 	<ul style="list-style-type: none"> - Company will provide water tanks at various locations. These water tanks will be filled with water-by-water trucks (as necessary) during the 9 months the Project will be in the area. After the 9 months and after all repairs and maintenance works have been completed, the water tanks will be removed and the sites where the water tanks were installed will be scarified and returned to its original state. If the community requests for the tanks, Company CA Officers will follow the company's material handover process to hand the tanks over to the communities. - Company has a monitoring program in place where it will conduct water sampling and testing prior to the start of, during and after the repairs and maintenance work and advise the community of the safety status of the water for household use - Deprivation payments will also be made for depriving your access to the river during the period of maintenance. Payments will be made to clans who will distribute with the clansmen/women
Aquatic habitats	<ul style="list-style-type: none"> - The rocks that you will be removing is the home to all the fish and eel fish that we catch. If you remove them, all the fish 	<ul style="list-style-type: none"> - We are not collecting all the rocks. Only selecting certain rocks of certain sizes for use. These rocks have been identified and are not in one location. Project will collect them from various locations within length

	will go away, and we will have no fish to catch	of the river, access has been requested for; there will be temporary impact or disturbance during the course of the river works but with the work duration being 9 months, all aquatic life should return to normal
Alternate food source	<ul style="list-style-type: none">- We cannot fish in the rivers. Fish is our alternate protein.	<p>Deprivation payments will also be made for depriving your access to the river during the period of maintenance to do the things you normally do. Payments will be made to clans who will distribute with the clansmen/women.</p> <ul style="list-style-type: none">-- Project activities are temporary. It will be for 9 months after which the community can resume normal activities involving the river. Additionally, initial studies by the Company show that flooding / high waters are common for these rivers which means rocks/boulders and waterbeds should naturally return

Table 9: Community Consultation Summary

Location	Date	Engagement Topic	Awareness Team	Land owning clans in Attendance	Number of Attendees			
					Male	Female	Children	Total
KP61.8 RVX – Mandali Bridge	21 Sept 2022	River Crossing Reinstatement	<ul style="list-style-type: none"> Land Access & Resettlement Community Affairs Third Party Surveyors 	<ul style="list-style-type: none"> Yandabe, Feli, Yatama, Gambolo, Hugu, Toyu, Mabilia, Ali Auki, Nali, Keya 	72	10	12	94
KP61.8 RVX – Upstream	23 Sept 2022	Stone/Boulder Collection	<ul style="list-style-type: none"> Land Access & Resettlement Community Affairs Third party Surveyors 	<ul style="list-style-type: none"> Toyu, Nali, Keya, Ali, Yatama 	24	8	5	37
KP65.9 RVX – Naro Village	26 Sept 2022	River Crossing Reinstatement	<ul style="list-style-type: none"> Land Access & Resettlement Community Affairs Lands Environment, Biodiversity & Cultural Heritage Third Party Surveyors 	<ul style="list-style-type: none"> Paru, Honge 	37	14	15	66
KP65.9 RVX – Upstream	28 Sept 2022	Stone/Boulder Collection	<ul style="list-style-type: none"> Land Access & Resettlement Community Affairs Lands Environment, Biodiversity & Cultural Heritage Third Party Surveyors 	<ul style="list-style-type: none"> Paru, Honge 	31	10	9	50
KP61.8 RVX – Downstream	29 Sept 2022	Stone/Boulder Collection	<ul style="list-style-type: none"> Land Access & Resettlement Community Affairs Third Party Surveyors 	<ul style="list-style-type: none"> Gambolo, Toma, Hugu Ango 	14	0	0	14
Biame Creek – Naro Village	21 Oct 2022	Stone/Boulder Collection	<ul style="list-style-type: none"> Land Access & Resettlement Community Affairs Lands 	<ul style="list-style-type: none"> Paru 	16	5	6	27

9.0 Organizational Roles and Responsibilities

Overall responsibility for the planning, implementation, and monitoring of physical and economic displacement rests with EMPNG. EMPNG's Lands & Community Affairs group (formerly Public & Government Affairs) has been and will continue to be responsible for these activities.

EMPNG provides impacted households access to an Independent Advocate who acts as an advisor to the households with respect to their rights, responsibilities, and options concerning resettlement, including trespass, in the context of both national PNG legislation and EMPNG plans and provisions. Further details of this role are provided in the Land Access, Resettlement and Livelihood Restoration Management Plan (2016), under section 4.2.3 Compensation and Assistance Advocacy.

10.0 Monitoring and Evaluation

As detailed in the PNG LNG Environment and Social Management Plan - Land Access, Resettlement and Livelihood Restoration (LR) Management Plan - outcome evaluations and monitoring will be undertaken to enable improvement or at least restoration of the livelihoods and standards of living of impacted households and the improvement of the living conditions among physically displaced persons through the provision of adequate housing with security of tenure at resettlement sites.

Standard of Living (SOL) evaluation and LR monitoring and initial evaluation will be undertaken by EMPNG. The company Resettlement Leads will ensure those who lose housing are able to acquire temporary living conditions similar to their current conditions and have sufficient land to sustain their livelihood. An evaluation of their SOL and LR will be conducted once the displaced households have returned to their original locations to determine if the conditions of their LR is sustained and SOL improved. A final outcome evaluation report will be provided on the longevity of the resettled households.

Ongoing community engagement will continue via VLOs, supported by the grievance management process. These processes will enable the management of any emerging issues. L&CA will monitor payments of any compensation or other agreed assistance to enable conclusion in a timely manner.

11.0 Implementation Schedule

A schedule of tasks has been developed to plan and implement the major components of resettlement implementation from November 2022 to June 2023 (Table 10). All compensation is scheduled for payment by the second week of December 2022, with displacements especially in KP65.9 RVX to be completed by the end of December 2022. Post displacement evaluation program is required for the households that will be physically displaced. If EMPNG becomes aware of any post-displacement issues, for example via the grievance management process, follow-up activities, where applicable, will be addressed, with the expectation that all grievances related to the new land-take will be resolved by May 2023

Table 10: RAP Implementation schedule

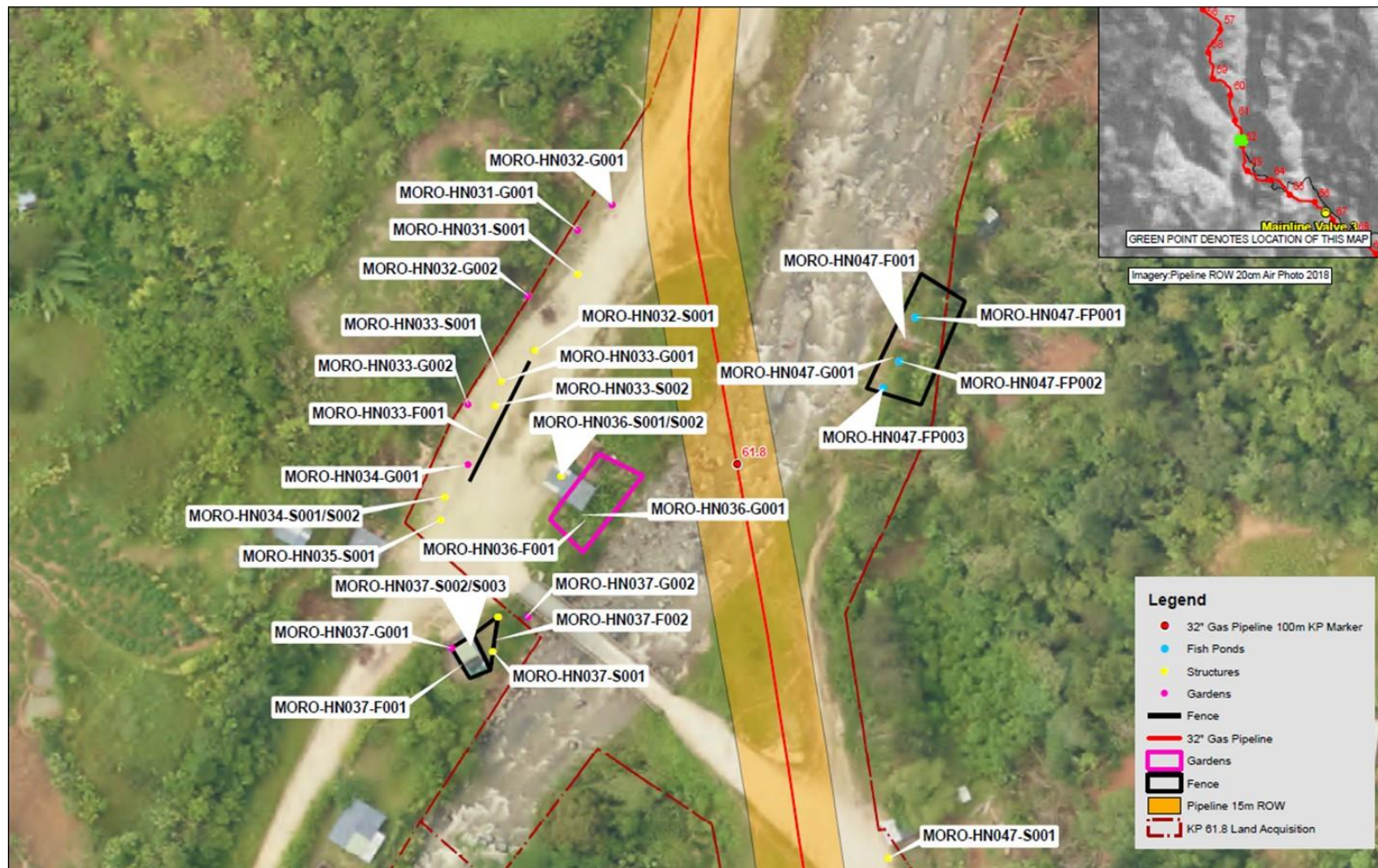
Activity or Task	Actions	2022		2023						Status of Completion
		N	D	J	F	M	A	M	J	
Planning	Completion of RAP Addendum									In progress
Approvals	Internal EMPNG Approvals									In progress
	RAP submission to IESC									Not yet started
Land issues	Confirm relocation sites and any affected water sources									In Progress
Confirm and finalize compensation agreements	Verify inventories of affected land and assets									In progress
	Finalize entitlement contracts									In Progress
Compensation payments and relocations	Electronic payment to individual and relocation									Not yet started
	Monitor payments and household dependent garden displacement									Not yet started
Verification, Monitoring and Evaluation	Standard of living evaluation									Not yet started
	Conduct outcome evaluation and submit report to IESC									Not yet started
	Annual Monitoring report for review and close-up									Not yet started

12.0 Resettlement Budget

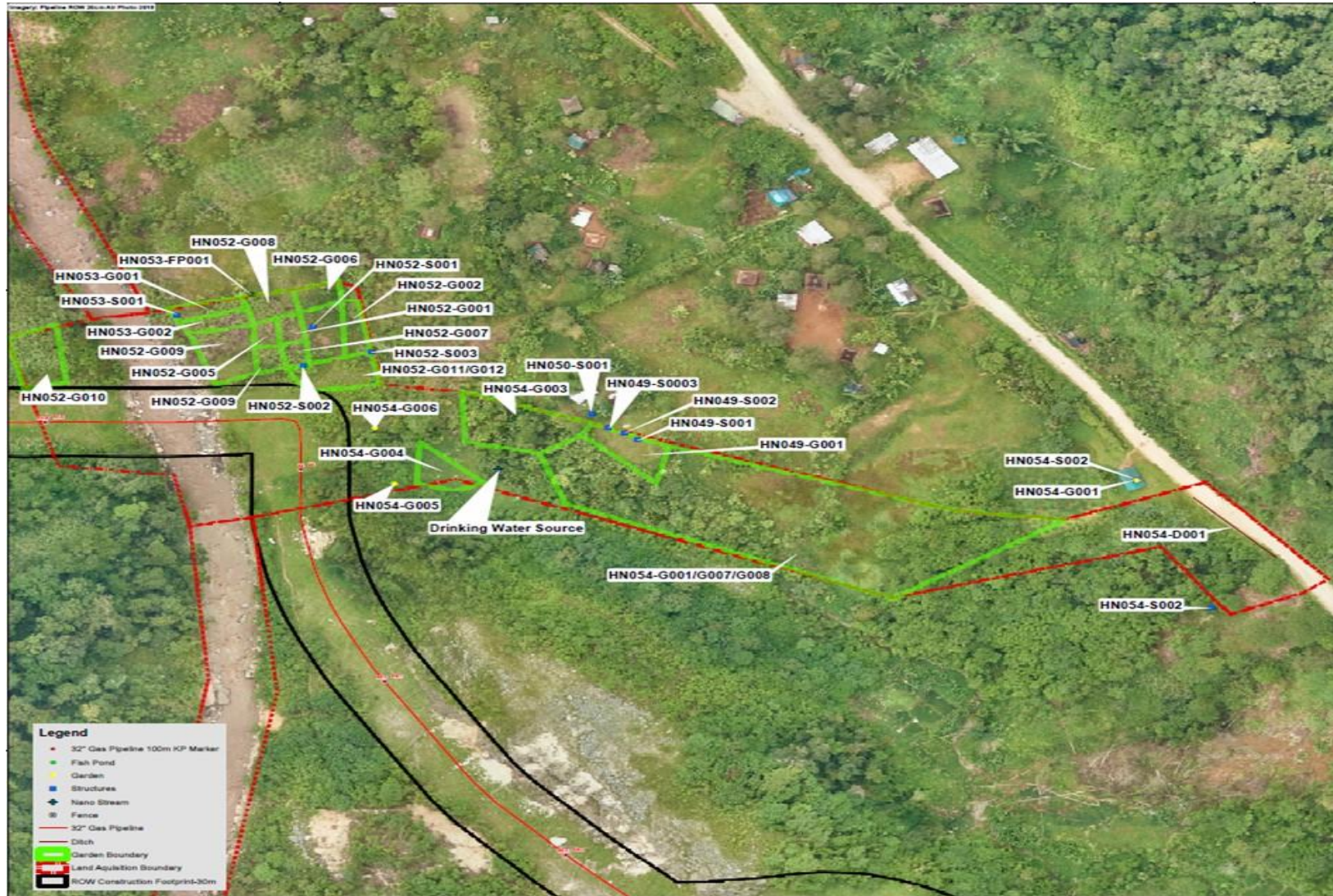
Costs for implementing the resettlement program are estimated at approximately US\$110k, including all resettlement-related costs such as ongoing evaluation and stakeholder engagements associated with the activities. Manpower costs are already incorporated into Production budgets.

ATTACHMENTS:

Attachment 1: KP61.8 River Crossing Reinstatement Area - Distribution of Gardens and Structures



Attachment 2: KP65.9 River Crossing Reinstatement Area - Distribution of Structures and Gardens



Attachment 3: KP61.8 – RVX and Associated Facilities' Cultural Heritage

Site ID	Easting	Northing	Site Type	Clan	Description	Site Significance	Mitigation
MAND001	735366.5547	9319302.011	Spiritual/Ritual	Jameni	<p>The significance of the site is based upon past religious activity, including killing pigs as sacrifice to make peace with humans and the spirit (Masalai). This is not practiced today. The clan name, Jameni is derived from a Masalai named Toou.</p> <p>Site is large area although the reference marker point is 20m outside the project footprint.</p>	Low	<ul style="list-style-type: none"> Pursuant to M237 consult with clan/community representatives prior to disturbance of site and/or confirm mitigation measure as agreed upon during the CH interview/survey. The clan representative(s) recommended that a spirit moving ceremony is performed prior to site disturbance.
MAND002	735395.83	9318737.399	Economic	Nali	<p>This site is considered a fishing area, claimed by the Nali clan members.</p> <p>Site is an area that is within the disturbance footprint.</p>	Low	<ul style="list-style-type: none"> Pursuant to M237, consult with clan/community representatives prior to disturbance of site and/or confirm mitigation measure as agreed upon during the CH interview/ survey.
MAND003	735397.9058	9318758.188	Economic	Nali	<p>Where the Mandali river splits, the locals divide themselves into two fishing groups, one controlling the Northern and the other the Southern. The space between the two groups is seven metres and is situated ten meters away from site MAND002.</p> <p>Site is an area that is within the disturbance footprint.</p>	Low	<ul style="list-style-type: none"> Pursuant to M237, consult with clan/community representative prior to disturbance of site.
MAND004	735284.4616	9318266.046	Spiritual/Ritual	Keya	<p>A Nali clan's burial is located at the centre of two cordyline plants along the access track, less than four metres from the Mandali River.</p> <p>Outside footprint by 55m.</p>	High	<ul style="list-style-type: none"> Pursuant to M230, M227 and M241, site is recommended for avoidance. If site is unavoidable M237 consult with appropriate clan/community representatives and conduct site relocation/spirit moving ceremony of the site prior to construction works

Site ID	Easting	Northing	Site Type	Clan	Description	Site Significance	Mitigation
MAND005	735261.2088	9317762.812	Sacred	Nali	<p>Pig rearing occurred on this ritual site, which were offered to the spirits. The greasy part of the pork is dipped/dropped into the water to indicate that it is given to the spirit for consumption.</p> <p>Site is situated on creek line approximately 6m from the river and therefore adjacent to construction activities.</p>	Low	<ul style="list-style-type: none"> Pursuant to M230, M227 and M241, site is recommended for avoidance. If site is unavoidable M237 consult with appropriate clan/community representatives and conduct site relocation/spirit moving ceremony of the site prior to construction works
MAND006	735324.7523	9318484.575	Sacred	Nali	<p>The site is located along an access track used by the locals, 10-15 meters away from the Northern side of Mandali River. The current use of the site is predicted to be suitable for pig rearing. The site consists of grass land sections as well as sections with a mixture of Pandanus trees, banana trees, and other edible and non-edible plants. The locals said the site was used for special events such as ceremonial dancing, singing and other related activities. Such activities draws people from nearby villages attracting both young men and women to showcase their talents.</p>	Low	<ul style="list-style-type: none"> Pursuant to M230, M227 and M241, site is recommended for avoidance. If site is unavoidable M237 consult with appropriate clan/community representatives and conduct site relocation/spirit moving ceremony of the site prior to construction works
MAND007	735308.396	9317712.188	Burial	Nali	<p>Four people belonging to the Nali Clan, including three children are buried at this site. Despite this location being a burial site of 4 deceased persons from the Nali clan, the site was partially disturbed by the locals themselves as stated during the interview that there are houses built on top of two of the graves. It was observed that the site is now a settlement site including a garden and a family house.</p> <p>Site is 10m from the river and therefore adjacent to construction activity. Avoid impacting site.</p>	High	<ul style="list-style-type: none"> Pursuant to M230, M227 and M241, site is recommended for avoidance. If site is unavoidable M237 consult with appropriate clan/community representatives and conduct site relocation/spirit moving ceremony of the site prior to construction works

Site ID	Easting	Northing	Site Type	Clan	Description	Site Significance	Mitigation
MAND008	735303.7654	9317690.413	Burial	Nali	A male child belonging to the Nali Clan is buried in a garden at this site. Site is 30m from the river construction area.	High	<ul style="list-style-type: none"> Pursuant to M230, M227 and M241, site is recommended for avoidance. If site is unavoidable M237 consult with appropriate clan/community representatives and conduct site relocation/spirit moving ceremony of the site prior to construction works
MAND009	735321.8023	9317636.022	Burial	Nali	Jose Lepei's wife, who died in 2011, is buried at this site. Site is 62m from river construction area.	High	<ul style="list-style-type: none"> Pursuant to M230, M227 and M241, site is recommended for avoidance. If site is unavoidable M237 consult with appropriate clan/community representatives and conduct site relocation/spirit moving ceremony of the site prior to construction works
MAND010	735340.257	9317626.321	Burial	Nali	A mother and daughter belonging to the Nali Clan, who were killed in an Earthquake in 2018 are buried at this site. Site is 40m from river construction area.	High	<ul style="list-style-type: none"> Pursuant to M230, M227 and M241, site is recommended for avoidance. If site is unavoidable M237 consult with appropriate clan/community representatives and conduct site relocation/spirit moving ceremony of the site prior to construction works
MAND011	735307.5363	9317497.025	Burial	Keye and Nali clan	Three Keye Clan members (Tatape, Polcape and Pulume) and one Nali Clan member (Hayu) are buried at this site. This site was disturbed predominantly by pigs, with the possibility of bone fragments being eaten or washed away. Site is 7m from river construction area.	Medium	<ul style="list-style-type: none"> Pursuant to M230, M227 and M241, site is recommended for avoidance. If site is unavoidable M237 consult with appropriate clan/community representatives and conduct site relocation/spirit moving ceremony of the site prior to construction works

Site ID	Easting	Northing	Site Type	Clan	Description	Site Significance	Mitigation
MAND012	734944.2568	9313585.511	Burial	Kabolo	As a result of overgrown vegetation such as wild fern leaves, the burial and house concerning the significance of the site was not visible. The only indicative sites are the pandanus trees, which may show human occupation. Despite limited evidence, locals were certain of the burial, and this cannot be ignored. Site is 20m from river construction area.	High	<ul style="list-style-type: none"> Pursuant to M230, M227 and M241, site is recommended for avoidance. If site is unavoidable M237 consult with appropriate clan/community representatives and conduct site relocation/spirit moving ceremony of the site prior to construction works
MAND013	734855.6741	9315050.476	Ossuary	Kabolo	Human bones fragments, including femur, jaw fracture, rib bones, and hip bones were exposed to the surface by pigs and later collected and caged on a branch of a tree located at the edge of the Mandali riverbank. Site is 4m from river construction area.	Medium	<ul style="list-style-type: none"> Pursuant to M237 consult with clan/community representatives prior to disturbance of site and/or confirm mitigation measure as agreed upon during the CH interview/survey. The clan representative(s) recommended that a spirit moving ceremony/relocation of skeletal remains is performed prior to site disturbance.
MAND014	734858.5569	9315053.79	Ossuary/burial	Kabolo	According to the locals on the site, a woman was buried at this site. It was evident that pigs dug up the ground where the burial was located. The remaining bone fragments were housed to a tree at the edge of the Mandali river. Site is 7m from river construction area.	High	<ul style="list-style-type: none"> Pursuant to M237 consult with clan/community representatives prior to disturbance of site and/or confirm mitigation measure as agreed upon during the CH interview/survey. The clan representative(s) recommended that a spirit moving ceremony/relocation of skeletal remains is performed prior to site disturbance.

Site ID	Easting	Northing	Site Type	Clan	Description	Site Significance	Mitigation
MAND015	734853.4919	9315033.013	Ossuary	Kabolo	<p>The site is located at the top of two stones along the Mandali riverbank. The bones of a male were placed on top of one of the stones, whilst the bones of a female were placed upon the other stone.</p> <p>Site is 2m from river construction.</p>	Medium	<ul style="list-style-type: none"> Pursuant to M237 consult with clan/community representatives prior to disturbance of site and/or confirm mitigation measure as agreed upon during the CH interview/survey. The clan representative(s) recommended that a spirit moving ceremony/relocation of skeletal remains is performed prior to site disturbance.
MAND016	735033.8075	9316071.788	Spiritual/Ritual	Mopu	<p>The site is located at the Mandali bridge, where Waikata creek passes through it. A flower garden comprised of cordyline plants and stones was made less than one meter away to show that an enemy of the Mopu Clan was murdered there.</p> <p>Site is an area centred on a point located 14m from the Mandali construction access track and so it is impacted by the track.</p>	Low	<ul style="list-style-type: none"> Pursuant to M237 consult with clan/community representatives prior to disturbance of site and/or confirm mitigation measure as agreed upon during the CH interview/survey. The clan representative(s) recommended that a spirit moving ceremony/relocation of skeletal remains is performed prior to site disturbance.

Attachment 4: KP65.9 – RVX and Associated Facilities’ Cultural Heritage

Site ID	Easting	Northing	Site Type	Clan	Description	Site Significance	Mitigation
PAU001	737941.4417	9313851.398	Old settlement	Paua	This site is remnants of an old settlement, including ethnobotanic plants such as taro, bananas and red pandanus. The site is located eight meters from Naro creek. Site record is 28m from the Ayu access track. Site covers an area of an old settlement.	Low	<ul style="list-style-type: none"> Pursuant to M237 consult with clan/community representatives prior to disturbance of site and/or confirm mitigation measure as agreed upon during the CH interview/survey. The clan representative(s) recommended that a spirit moving ceremony/relocation of skeletal remains is performed prior to site disturbance.
PAU002	737862.0917	9313880.931	Archaeological/burial	Paua	Old man, Eipe is buried at this site, located close to an abandoned old settlement and Naro Creek. Site is within the Ayu access track footprint.	High	<ul style="list-style-type: none"> Pursuant to M230, M227 and M241, site is recommended for avoidance. If site is unavoidable M237 consult with appropriate clan/community representatives and conduct site relocation/spirit moving ceremony of the site prior to construction works
PAU003	737723.3609	9313930.716	Boundary marker	Paua	The site is marked by a stone named as Hauleru- known to be a land marker/boundary which is regarded significant for local people. The stone is located right between Ayu River and Naro Creek. Site is within the Ayu access track footprint.	Medium	<ul style="list-style-type: none"> Pursuant to M237 consult with clan/community representatives prior to disturbance of site and/or confirm mitigation measure as agreed upon during the CH interview/survey. The clan representative(s) recommended that a spirit moving ceremony is performed prior to site disturbance.

Site ID	Easting	Northing	Site Type	Clan	Description	Site Significance	Mitigation
PAU004	737711.5182	9313909.638	Ossuary	Paru	<p>The site is described as a secondary burial place (Ossuary) for the locals. It is a limestone region towing over Aiur River, which is less than 10 meters away from the site. Naro Creek passes through the foot of the limestone. Locals informed that human were there, however, most of them were displaced/ perhaps buried underneath and damaged during the earthquake in 2018.</p> <p>Site is within the Aiur access track footprint by 3m.</p>	Medium	<ul style="list-style-type: none"> Pursuant to M237 consult with clan/community representatives prior to disturbance of site and/or confirm mitigation measure as agreed upon during the CH interview/survey. The clan representative(s) recommended that a spirit moving ceremony/relocation of skeletal remains is performed prior to site disturbance.
PAU005	737834.8103	9313895.418	Spiritual/Ritual	Paua	<p>This site is regarded as the spirit site, surrounded by red pandanus and cordyline plants at the edges of the site before reaching Naro creek at the foot hill of Naro mountain.</p> <p>The site is known to be a ritual site where pigs were killed and offered to a spirit that demands flesh. If pigs were not killed, the spirit is angered and causes illness, death and even misfortune in the community. In fear of bad luck, religious specialists had to perform required rituals at the right time following due processes. One mistake might cause unwarranted fatality. The is marked with Cordyline plants, pandanus trees and other plants. This site is not disturbed.</p> <p>Site is traversed by the Ayu access track footprint.</p>	Low	<ul style="list-style-type: none"> Pursuant to M237 consult with clan/community representatives prior to disturbance of site and/or confirm mitigation measure as agreed upon during the CH interview/survey. The clan representative(s) recommended that a spirit moving ceremony is performed prior to site disturbance.

Site ID	Easting	Northing	Site Type	Clan	Description	Site Significance	Mitigation
PAU006	737303.8972	9316316.87	Ossuary	Paua	<p>A fractured human skeleton is located at this site, less than three metres from the Aiur River. The site when assessed appeared that human bones were recently placed along the access track, less than 8 metres from the Aiur River. The bones could have been removed from elsewhere and placed there. White iron roofing was placed on top of where bones were located. The vegetation was cleared to show clear ground visibility. The bones were placed on plywood and was covered by iron roofing.</p> <p>Site is located 12m outside the river construction footprint.</p>	Medium	<ul style="list-style-type: none"> Pursuant to M237 consult with clan/community representatives prior to disturbance of site and/or confirm mitigation measure as agreed upon during the CH interview/survey. The clan representative(s) recommended that a spirit moving ceremony is performed prior to site disturbance.
PAU007	737300.6137	9316322.966	Spirit/Ritual Site	Paua	<p>This site comprises of a stone where locals offer sacrificed pigs. This is not currently practiced. This site is restricted from women and children, located less than two meters from the Ayu River.</p> <p>Site is located 8m from river construction footprint.</p>	Low	<ul style="list-style-type: none"> Pursuant to M237 consult with clan/community representatives prior to disturbance of site and/or confirm mitigation measure as agreed upon during the CH interview/survey. The clan representative(s) recommended that a spirit moving ceremony is performed prior to site disturbance.