

5 -3 Results of Geological Survey

In order to gauge the geological and strata conditions required to examine and confirm the types of bridge foundations and supporting layers, boring, standard penetration tests, soil sampling and indoor tests were implemented. As a result of these tests, ground cross-sections, column diagrams and indoor test results necessary for the basic design were collected. The boring results from each bridge site are shown on the next page.

Bakanovi		FIELD BORING LOG						BORING NO. BH-1							
								SHEET 1 OF 1							
PROJECT: Bridge Construction, Bougainville Trunk Road		Coordinates: N: 9325774.587 E: 765321.743				Water Level: 0.00 m									
LOCATION: Bakanovi River, Abutment at Arawa Side		Ground Elevation (m-MSL): -0.522 m				Starting Date: 23/3/2008									
CLIENT: Chodai Co., Ltd.		Max. Drilling Depth: 20.50 m				Finishing Date: 25/3/2008									
DEPTH (m.)	GRAPHIC LOG	SOIL DESCRIPTION	SAMPLING METHOD	SAMPLE NO.	RECOVERY (cm)	Total Unit Weight (Ton/m ³)			Plastic Limit Natural Water Content Liquid Limit (%)			Specific Gravity	SPT Blow Count (Blow/ft)		
						1.6	1.8	2.0	30	60	90			120	2.4
1	[Pattern]	0.0-4.0 m, SW, well-graded SAND with gravel, 40% fine angular gravel of gray volcanic rock with 3-4 cm max sized, 60% medium-coarse subangular sand, medium dense-dense, brown-brownish gray, <u>Former riverbed deposit</u>	WO												
			WO												
			SS 1		24										
2	[Pattern]		WO												
			SS 2		7										26
			WO												
3	[Pattern]		WO												
			SS 3		14										18
			WO												
4	[Pattern]	4.0-7.0 m, SW-SP, well-poorly graded SAND with gravel, 20% fine subangular gravel of gray volcanic rock with 2-3 cm max sized, 80% medium-coarse subangular sand, medium dense-dense, brownish-dark greenish gray, <u>Alluvial deposit</u>	WO												
			SS 4		12										16
			WO												
5	[Pattern]		WO												
			SS 5		18										27
			WO												
6	[Pattern]		WO												
			SS 6		13										27
			WO												
7	[Pattern]	7.0-8.0 m, MH, sandy SILT, 60% silt, 35% sand & 5% gravel, non plasticity, very stiff, greenish gray, <u>Volcanic ash deposit (?)</u>	SS 7		33		17		37		2.4			23	
			WO												
			SS 8		30										30
8	[Pattern]	8.0-11.0 m, SW-SP, well-poorly graded SAND with gravel, 10-20% very fine subround gravel of white volcanic rock with some random 2-3 cm max sized, 80-90% very fine-medium subangular sand, medium dense-dense & loose at end-formation, greenish-brownish gray, <u>Alluvial deposit</u>	WO												
			SS 9		20										21
			WO												
9	[Pattern]		SS 10		31									7	
			WO												
			SS 11		38										8
10	[Pattern]		WO												
			SS 12		35										19
			WO												
11	[Pattern]	11.0-12.0 m, MH, SILT, non plasticity, medium stiff, with <10% medium-coarse subangular sand, brownish gray, <u>Volcanic ash deposit (?)</u>	SS 13		35									10	
			WO												
			SS 14		40		1.9		32		2.6			7	
12	[Pattern]	12.0-13.0 m, SP, SAND with 10% volcanic gravel of 3.5 cm max sized, 90% medium-coarse sand, medium dense, brownish gray, <u>Alluvial deposit</u>	WO												
			SS 15		45		1.9		30		2.8		0		
			WO												
13	[Pattern]	13.0-16.0 m, SC-SM, clayey-silty SAND, 40% clay-silt, very low-medium plasticity, loose at upper-very loose at end formation, with some 5-20% random fine angular-subangular gravel of volcanic rock at 1.5-2.0 cm max sized, greenish brown-pale brown, <u>Alluvial/olcanic ash deposit (?)</u>	UD 1												
			SS 16		40										50/28
			WO												
14	[Pattern]		SS 17		39			21		2.5				50/27	
			WO												
			SS 18		23										50/20
15	[Pattern]		WO												
			SS 19		15										50/15
			WO												
16	[Pattern]		SS 20		10									50/15	
			WO												
			SS 20		10										50/15
End of Borehole @ 20.5 m															

SS - Split Spoon Sampling DC - Dry Coring
 WO - Wash Boring [Pattern] - Tested Samples

Bove		FIELD BORING LOG						BORING NO. BH-2			
								SHEET 1 OF 1			
PROJECT: Bridge Construction, Bougainville Trunk Road		Coordinates: N: 9328684.727 E: 766149.451				Water Level: -0.60 m					
LOCATION: Bove River, Abutment at Buka Side		Ground Elevation (m-MSL): -0.174 m				Starting Date: 26/3/2008					
CLIENT: Chodai Co., Ltd.		Max. Drilling Depth: 33.50 m				Finishing Date: 30/3/2008					
DEPTH (m.)	GRAPHIC LOG	SOIL DESCRIPTION	SAMPLING METHOD	SAMPLE NO.	RECOVERY (cm)	Total Unit Weight (Ton/m ³)			Plastic Limit Natural Water Content (%) Liquid Limit	Specific Gravity	SPT Blow Count (Blow/ft)
						1.6	1.8	2.0			
1		0.0-3.0 m, SW, well-graded SAND with gravel, 30% fine subangular gravel of brown volcanic rock with 2.5-3 cm max sized, 70% medium-coarse subangular sand, medium dense, gray-brown, <i>Backfill (?)</i>	WO								
			WO								
			SS	1	17						14
2			WO								
			SS	2	20						23
			WO								
3		3.0-20.0 m, SM-SW-SP, silty to well-poorly graded SAND with gravel, 5-25% fine subangular gravel of white volcanic rock with 1-3 cm max sized with 5-25% silt, 75-95% fine-coarse subangular sand, medium-very dense, brownish-greenish gray, <i>Alluvial deposit</i>	SS	3	13						10
			WO								
			SS	4	10						15
			WO								
5			SS	5	21						37
			WO								
6			SS	6	18						28
			WO								
7			SS	7	15						50/18
			WO								
8			SS	8	17						25
			WO								
9			SS	9	22						23
			WO								
10			SS	10	28						36
			WO								
11			SS	11	34		2.5	17		2.6	50/30
			WO								
12			SS	12	22						27
			WO								
13			SS	13	20						29
			WO								
14			SS	14	22						25
			WO								
15			SS	15	30						18
			WO								
16			SS	16	16						17
			WO								
17			SS	17	22		16			2.6	32
			WO								
18			SS	18	29						36
			WO								
19			SS	19	30						42
			WO								
20		20.0-22.0 m, SW-SP, well-poorly graded SAND, fine-coarse subangular sand, medium-dense, brownish gray-gray, <i>Alluvial deposit</i>	SS	20	10						30
			WO								
21			SS	21	20						23
			WO								
22		22.0-23.5 m, MH, SILT, non plasticity, stiff-very stiff, grayish brown, with wood remnant, <i>Volcanic ash deposit (?)</i>	SS	22	45						12
			WO								
23			SS	23	29						22
			WO								
24		23.5-25.0 m, SW, well graded SAND with gravel, 10% fine subangular gravel of white volcanic rock with 2.5 cm max sized, 90% silt-medium subangular sand, medium dense, brownish gray, <i>Alluvial with volcanic ash deposit (?)</i>	WO								
			SS	24	34						29
			WO								
25		25.0-33.5 m, MH, SILT, non plasticity, very soft-stiff, grayish brown-greenish gray, <i>Volcanic ash deposit (?)</i>	SS	25	45						1

Bove		BORING LOG					BORING NO. BH-2		
							SHEET 2 OF 2		
PROJECT: Bridge Construction, Bougainville Trunk Road		Coordinates: N: 9328684.73 E: 766149.45					Water Depth: -0.60 m		
LOCATION: Bove River, Abutment at Buka Side		Ground Elevation (m-MSL): -0.17 m					Starting Date: 26/3/2008		
CLIENT: Chodai Co., Ltd.		Max. Drilling Depth: 33.50 m					Finishing Date: 30/3/2008		
DEPTH (m.)	GRAPHIC LOG	SOIL DESCRIPTION	SAMPLING METHOD	SAMPLE NO.	RECOVERY (cm)	Total Unit Weight (Ton/m ³)	Plastic Limit Natural Water Content (%) Liquid Limit	Specific Gravity	SPT Blow Count (Blow/ft)
25.0-33.5 m		MH, SILT, non plasticity, very soft-stiff, grayish brown-greenish gray, <i>Volcanic ash deposit (?)</i>	SS	25	45				
			WO						
26			SS	26	45				8
			WO						
27			SS	27	45				26
			WO						
28			SS	28	45	1.7	46	2.5	5
			WO						
29			SS	29	45				5
			WO						
30			SS	30	45				6
			WO						
31			SS	31	45				8
			WO						
32			SS	32	45				8
			WO						
33			SS	33	45				11
		End of Borehole @ 33.5 m							

SS - Split Spoon Sampling DC - Dry Coring
 WO - Wash Boring - Tested Samples

Pukarobi 1		FIELD BORING LOG						BORING NO. BH-3							
								SHEET 1 OF 1							
PROJECT: Bridge Construction, Bougainville Trunk Road		Coordinates: N: 9335883.390 E: 762058.845				Water Level: -0.85 m									
LOCATION: Pukarobi1 River, Abutment at Buka Side		Ground Elevation (m-MSL): 2.241 m				Starting Date: 31/3/2008									
CLIENT: Chodai Co., Ltd.		Max. Drilling Depth: 23.50 m				Finishing Date: 2/4/2008									
DEPTH (m.)	GRAPHIC LOG	SOIL DESCRIPTION	SAMPLING METHOD	SAMPLE NO.	RECOVERY (cm)	Total Unit Weight (Ton/m ³)			Plastic Limit Natural Water Content Liquid Limit (%)			Specific Gravity	SPT Blow Count (Blow/ft)		
						1.6	1.8	2.0	30	60	90			120	
1		0.0-2.0 m, MH-SP, SILT-poorly graded SAND, 30% silt, with some random fine subangular gravel of white volcanic rock, 70% medium subangular sand, very loose, greenish-brownish gray, <i>Alluvial deposit</i>	WO												
			SS	1	20								1		
2		2.0-8.0 m, SM, silty SAND, well-poorly graded SAND with some gravel, very random subangular gravel of white & gray volcanic rock with 1-3 cm max sized with 15% silt, 85% fine-coarse subangular sand, loose-medium dense, brownish gray-dark gray, <i>Alluvial deposit</i>	WO												
			SS	2	13								1		
3			WO												
			SS	3	15								11		
4			WO												
			SS	4	24				18			2.6	9		
5			WO												
			SS	5	Loss										
6			WO												
			SS	6	22								12		
7			WO												
			SS	7	18								9		
8		8.0-14.0 m, SW, well graded SAND with gravel, 10-30% fine subangular gravel of white, gray, brown volcanic rock with 3 cm max sized, 70-90% fine-coarse subangular sand, loose-medium dense, whitish-greenish-brownish gray, <i>Alluvial deposit</i>	WO												
			SS	8	20								8		
9			WO												
			SS	9	13										
10			WO												
			SS	10	27									30	
11			WO												
			SS	11	14									27	
12			WO												
			SS	12	Wood									15	
13			WO												
			SS	13	Wood									3	
14		14.0-17.0 m, SC, clayey SAND, 50-50%:fine-sand, low plasticity, medium stiff, pale greenish-brownish gray, mixed with more fine-medium sand at end layer, <i>Alluvial/Volcanic ash deposit (2)</i>	WO												
			SS	14	45									5	
15			WO												
			SS	15	45			2.0		27		2.7		7	
16			UD	1											
			SS	16	45									5	
17		17.0-23.5 m, SM, silty SAND, well graded SAND with some gravel, 10% fine subangular gravel of white volcanic rock with 1-2.5 cm max sized with 30% silt, 60% fine-coarse subangular sand, medium-very dense, brownish-greenish gray, <i>Alluvial deposit</i>	WO												
			SS	17	28									22	
18			WO												
			SS	18	28									28	
19			WO												
			SS	19	26									50/28	
20			WO												
			SS	20	18									50/30	
21			WO												
			SS	21	25			19				2.6		50/29	
22			WO												
			SS	22	24									50/19	
23			WO												
			SS	23	19									50/18	
		End of Borehole @ 23.5 m													
		SS - Split Spoon Sampling DC - Dry Coring WO - Wash Boring ▨ - Tested Samples													

Pukarobi 2		FIELD BORING LOG						BORING NO. BH-4			
		SHEET 1 OF 1									
PROJECT: Bridge Construction, Bougainville Trunk Road		Coordinates: N: 9336730.758 E: 761266.438				Water Level: -0.95 m					
LOCATION: Pukarobi2 River, Abutment at Buka Side		Ground Elevation (m-MSL): -6.141 m				Starting Date: 3/4/2008					
CLIENT: Chodai Co., Ltd.		Max. Drilling Depth: 12.50 m				Finishing Date: 4/4/2008					
DEPTH (m.)	GRAPHIC LOG	SOIL DESCRIPTION	SAMPLING METHOD	SAMPLE NO.	RECOVERY (cm)	Total Unit Weight (Ton/m ³)			Plastic Limit Natural Water Content (%) Liquid Limit	Specific Gravity	SPT Blow Count (Blow/ft)
						1.6	1.8	2.0			
1		0.0-2.0 m, GW, well graded GRAVEL with some sand, 15% medium-coarse subangular sand, 85% fine subangular gravel of white & brown volcanic rock with 3 cm max sized, dense, grayish brown, <i>Backfill (?)</i>	WO								
		WO									
		SS	1	22							36
2			2.0-12.5 m, SM-SP-SW, silty to poorly-well graded SAND with some gravel, 0-40% fine subangular gravel of white, gray, brown volcanic rock with 1-3 cm max sized with 10-40% silt, 50-60% fine-coarse subangular sand, medium-very dense, grayish brow-brownish gray, <i>Alluvial deposit</i>	WO							
		SS	2	18							26
3				WO							
		SS	3	16			16		2.6		13
4				WO							
		SS	4	24							5
5				WO							
		SS	5	27							36
6				WO							
	SS	6	26			12		2.6		50/27	
7			WO								
	SS	7	7							15	
8			WO								
	SS	8	Loss							50/10	
9			DC	1							
	SS	9	15							50/16	
10			WO								
	SS	10	17			10		2.6		50/30	
11			WO								
	SS	11	13							50/15	
12			WO								
	SS	12	9							50/13	
End of Borehole @ 12.5 m											

SS - Split Spoon Sampling DC - Dry Coring
 WO - Wash Boring - Tested Samples

Creepers		FIELD BORING LOG						BORING NO. BH-5										
		SHEET 1 OF 1																
PROJECT: Bridge Construction, Bougainville Trunk Road		Coordinates: N: 9337230.663 E: 761124.941				Water Level: -0.75 m												
LOCATION: Creepers River, Abutment at Buka Side		Ground Elevation (m-MSL): -4.585 m				Starting Date: 5/4/2008												
CLIENT: Chodai Co., Ltd.		Max. Drilling Depth: 25.50 m				Finishing Date: 7/4/2008												
DEPTH (m.)	GRAPHIC LOG	SOIL DESCRIPTION		SAMPLING METHOD	SAMPLE NO.	RECOVERY (cm)	Total Unit Weight (Ton/m ³)			Plastic Limit Natural Water Content Liquid Limit (%)			Specific Gravity			SPT Blow Count (Blow/ft)		
		SS - Split Spoon Sampling	DC - Dry Coring				1.6	1.8	2.0	30	60	90	120	2.4	2.6	2.8	10	20
		WO - Wash Boring - Tested Samples																
0.0-12.0 m		SM, silty SAND, poorly-graded, fine-coarse grained, subangular, with 10% fine subangular gray gravel of volcanic rock with 1-3 cm max sized with 25% silt, loose-medium dense, gray, <i>Alluvial deposit</i>		WO														
1				WO														
2				SS 1	5													
3				WO														
4				SS 2	Loss													
5				WO														
6				SS 3	24													
7				WO														
8				SS 4	Loss													
9				WO														
10				SS 5	27													
11				WO														
12				SS 6	29													
13				WO														
14				SS 7	28													
15				WO														
16				SS 8	27				16			2.5						
17				DC 1														
18				SS 9	29													
19				WO														
20				SS 10	20													
21				WO														
22				SS 11	22													
23				WO														
24				SS 12	16													
25				WO														
26				SS 13	22			1.9		30		2.4						
27				WO														
28				SS 14	Loss													
29				WO														
30				SS 15	20													
31				WO														
32				SS 16	21													
33				WO														
34				SS 17	25													
35				WO														
36				SS 18	22													
37				WO														
38				SS 19	18													
39				WO														
40				SS 20	14													
41				WO														
42				SS 21	8													
43				WO														
44				SS 22	13													
45				WO														
46				SS 23	40													
47				WO														
48				SS 24	29			1.8		38		2.6						
49				WO														
50				SS 25	23													

End of Borehole @ 25.5 m

Ratavi		FIELD BORING LOG					BORING NO. BH-6			
							SHEET 1 OF 1			
PROJECT: Bridge Construction, Bougainville Trunk Road		Coordinates: N: 9337611.811 E: 760974.024			Water Level: -0.80 m					
LOCATION: Ratavi River, Abutment at Buka Side		Ground Elevation (m-MSL): -5.395 m			Starting Date: 9/4/2008					
CLIENT: Chodai Co., Ltd.		Max. Drilling Depth: 25.50 m			Finishing Date: 11/4/2008					
DEPTH (m.)	GRAPHIC LOG	SOIL DESCRIPTION		SAMPLING METHOD	SAMPLE NO.	RECOVERY (cm)	Total Unit Weight (Ton/m ³)	Plastic Limit Natural Water Content Liquid Limit (%)	Specific Gravity	SPT Blow Count (Blow/ft)
		SS - Split Spoon Sampling	DC - Dry Coring							
		WO - Wash Boring	▨ - Tested Samples				1.6 1.8 2.0	30 60 90 120	2.4 2.6 2.8	10 20 30 40
0.0-25.5 m		SM-SW-SP, silty SAND with gravel, well-poorly graded SAND, 20-30% fine subangular gravel of gray/green volcanic rock with 1-3 cm max sized with 15-20% silt, 55-60% fine-coarse subangular sand with partially coarse grained, medium dense-dense, gray, <i>Alluvial deposit</i>		WO						
1				WO						
				SS	1	32				15
2				WO						
				SS	2	19				16
3				WO						
				SS	3	26				29
4				WO						
				SS	4	22				32
5				WO						
				SS	5	18				24
6				WO						
				SS	6	28		11	2.7	50
7				WO						
				SS	7	20				20
8				WO						
				SS	8	17				28
9				DC	1					
				SS	9	23				43
10				WO						
				SS	10	20				29
11				WO						
				SS	11	15				24
12				WO						
				SS	12	15				27
13				WO						
				SS	13	19		12	2.7	25
14				WO						
				SS	14	11				13
15				WO						
				SS	15	13				19
16				WO						
				SS	16	Loss				14
17				WO						
				SS	17	10				20
18				WO						
				SS	18	6				12
19				WO						
				SS	19	14				14
20				WO						
				SS	20	20				21
21				WO						
				SS	21	19		13	2.6	23
22				WO						
				SS	22	10				20
23				WO						
				SS	23	16				21
24				WO						
				SS	24	13				26
25				WO						
				SS	25	6				30
End of Borehole @ 25.5 m										

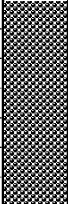
Iraka		FIELD BORING LOG					BORING NO. BH-7				
PROJECT: Bridge Construction, Bougainville Trunk Road		Coordinates: N: 9341618.996 E: 757658.186			Water Level: -0.97 m						
LOCATION: Iraka River, Abutment at Buka Side		Ground Elevation (m-MSL): -0.193 m			Starting Date: 12/4/2008						
CLIENT: Chodai Co., Ltd.		Max. Drilling Depth: 25.50 m			Finishing Date: 15/4/2008						
DEPTH (m.)	GRAPHIC LOG	SOIL DESCRIPTION			SAMPLING METHOD	SAMPLE NO.	RECOVERY (cm)	Total Unit Weight (Ton/m ³)	Plastic Limit Natural Water Content Liquid Limit (%)	Specific Gravity	SPT Blow Count (Blow/ft)
		SS - Split Spoon Sampling	DC - Dry Coring	WO - Wash Boring							
0.0-4.0 m	SW, well graded SAND with gravel, 30-50% fine subangular gravel of gray volcanic rock with 4 cm max sized and also random cobble-boulder, 50-70% fine-coarse subangular sand, medium dense-very dense, brownish gray, <i>Backfill (?)</i>	WO									
1		WO									
		SS	1	17							50/11
2		WO									
		SS	2	19							27
3		WO									
		DC									
		DC									
4		SS	4	16							7
5	4.0-14.5 m, SM-SW-SP, silty SAND, <10% fine subangular gravel of white volcanic rock of 2 cm max sized with 15% silt, 80% fine-medium subangular sand with little coarse, loose-very dense, gray with partial pale greenish gray, <i>Alluvial deposit</i>	WO									
		SS	5	20							13
6		WO									
		SS	6	8							12
7		WO									
		SS	7	17							17
8		WO									
		SS	8	10							35
9		DC	1								
		SS	9	Loss							27
10		WO									
		SS	10	22							36
11		WO									
		SS	11	20			15		2.7		50/23
12		WO									
		SS	12	Loss							50/30
13		WO									
		SS	13	16							32
14		WO									
		SS	14	26							24
15	14.5-17.0 m, SM, silty SAND, with <5% random fine subround gravel of black volcanic rock, mostly 0.3 cm sized with 2.5 cm max, 20% silt, 80% fine sand, non plasticity, medium-very dense, black, <i>Volcanic ash deposit (?)</i>	WO									
		SS	15	37			1	20		2.6	50/30
16		WO									
		SS	16	22							25
17		WO									
		SS	17	Loss							18
18	17.0-18.0 m, GW, well-graded subround GRAVEL of black volcanic rock, mostly <0.5 cm with 2.5 cm max, medium dense, gray, <i>Alluvial deposit</i>	WO									
		SS	18	18							8
19	18.0-19.0 m, SP, SAND with <5% subround black volcanic gravel with 2.5 cm max sized, fine-medium, subangular, loose, gray, <i>Alluvial deposit</i>	WO									
		SS	19	45			2.0	24		2.7	15
20	19.0-22.0 m, SC, clayey SAND, 50-50%:fine-sand, with very random fine subangular-subround gravel of black & white volcanic rock with 2.5 cm max sized, low-medium plasticity, medium dense-dense, pale yellowish-greenish brown, <i>Alluvial/volcanic ash deposit (?)</i>	WO									
		SS	20	45							9
21		WO									
		SS	21	17							15
22		WO									
		SS	22	37							14
23	22.0-22.5 m, SC, clayey SAND, 10% clay, fine sand with <10% coarse, subangular, medium dense, pale greenish brown, <i>Alluvial deposit</i>	WO									
		SS	23	27							11
24	22.5-25.5 m, SC, sandy CLAY, 25% fine sand with 75% silt-clay, medium-high plasticity, stiff-very stiff, pale brown-brown, <i>Alluvial with partial volcanic ash deposit (?)</i>	WO									
		SS	24	30							12
25		WO									
		SS	25	18			1.6	30		2.4	19
End of Borehole @ 25.5 m											


Korova		FIELD BORING LOG					BORING NO. BH-8					
							SHEET 1 OF 1					
PROJECT: Bridge Construction, Bougainville Trunk Road		Coordinates: N: 9341677.267 E: 756744.593			Water Level: -1.50 m							
LOCATION: Korova River, Abutment at Buka Side		Ground Elevation (m-MSL): -2.067 m			Starting Date: 16/4/2008							
CLIENT: Chodai Co., Ltd.		Max. Drilling Depth: 25.50 m			Finishing Date: 30/4/2008							
DEPTH (m.)	GRAPHIC LOG	SOIL DESCRIPTION			SAMPLING METHOD	SAMPLE NO.	RECOVERY (cm)	Total Unit Weight (Ton/m ³)	Plastic Limit Natural Water Content (%)	Liquid Limit	Specific Gravity	SPT Blow Count (Blow/ft)
		REMARKS: 17-28/4/08 - Shortage of drill powder with 2 days flood at Malas & Korova on 19-21 & 25/4/08 SS - Split Spoon Sampling DC - Dry Coring WO - Wash Boring [hatched] - Tested Samples										
0.0-15.0 m		0.0-15.0 m, SW-SP, well-poorly graded SAND with silt & gravel, with 15% fine subangular gravel of gray volcanic rock with 1-3.5 cm max sized & 10% silt, 75% fine-medium subangular sand with some coarse, loose-medium dense, gray, <i>Alluvial deposit</i>			WO							
1					WO							
					SS	1	26					7
2					WO							
					SS	2	16					6
3					WO							
					DC		22					21
4					DC							
					SS	4	14					22
5					WO							
					SS	5	Loss					26
6					WO							
					SS	6	10					14
7					WO							
					SS	7	27					17
8					WO							
					SS	8	Loss					13
9					DC	1						
					SS	9	27					24
10					WO							
					SS	10	24					21
11					WO							
					SS	11	23					16
12					WO							
					SS	12	17					13
13					WO							
					SS	13	26		15		2.7	16
14					WO							
					SS	14	27					28
15					WO							
					SS	15	23					31
16					WO							
					SS	16	20					50/25
17					DC	1						
					SS	17	18		13		2.7	50/16
18					WO							
					SS	18	10					50/30
19					WO							
					SS	19	23					10
20					WO							
					SS	20	12					31
21					WO							
					SS	21	20					11
22					WO							
					SS	22	14					25
23					WO							
					SS	23	25		2.0		2.7	8
24					WO							
					SS	24	40		2.0		2.7	20
25					WO							
					SS	25	28					45
		End of Borehole @ 25.5 m										

Malas		FIELD BORING LOG					BORING NO. BH-9			
							SHEET 1 OF 1			
PROJECT: Bridge Construction, Bougainville Trunk Road		Coordinates: N: 9346239.523 E: 752447.828			Water Level: -1.00 m					
LOCATION: Malas River, Abutment at Buka Side		Ground Elevation (m-MSL): -0.557 m			Starting Date: 1/5/2008					
CLIENT: Chodai Co., Ltd.		Max. Drilling Depth: 25.50 m			Finishing Date: 3/5/2008					
DEPTH (m.)	GRAPHIC LOG	SOIL DESCRIPTION		SAMPLING METHOD	SAMPLE NO.	RECOVERY (cm)	Total Unit Weight (Ton/m ³)	Plastic Limit Natural Water Content (%) Liquid Limit	Specific Gravity	SPT Blow Count (Blow/ft)
		SS - Split Spoon Sampling	DC - Dry Coring							
		WO - Wash Boring DC - Dry Coring - Tested Samples								
0.0-7.0 m		SP, well-poorly SAND with some gravel, 5-30% of fine subangular-subround gravel of gray volcanic rock with 3 cm max sized, 70-95% fine-medium subangular sand, medium dense-dense, grayish brown-dark gray, cobble/boulder concentrate at 3-6 m, <u>AI</u>		WO						
1				WO						
2				SS	1	16				36
3				WO						
4				SS	2	10				15
5				WO						
6				DC		Loss				
7				DC		Loss				
8				SS	4	Loss				21
9				WO						
10				SS	5	22				22
11				WO						
12				SS	6	29				27
13				WO						
14				SS	7	45				29
15				WO						
16				SS	8	25	2.0	2.5	2.8	17
17				DC	1					
18				SS	9	11				8
19				WO						
20				SS	10	27				9
21				WO						
22				SS	11	23				8
23				WO						
24				SS	12	30				7
25				WO						
26				SS	13	8				8
27				WO						
28				SS	14	22				11
29				WO						
30				SS	15	18				14
31				WO						
32				SS	16	45				20
33				DC	1					
34				SS	17	45				10
35				WO						
36				SS	18	45				14
37				WO						
38				SS	19	45				19
39				WO						
40				SS	20	37	2.1	2.2	2.8	30
41				WO						
42				SS	21	30				33
43				WO						
44				SS	22	45	1.8	4.4	2.7	8
45				WO						
46				SS	23	45				7
47				WO						
48				SS	24	Loss				9
49				WO						
50				SS	25	28				12
End of Borehole @ 25.5 m										

Ururva			FIELD BORING LOG					BORING NO. BH-10								
			Coordinates: N: 9351914.572 E: 742019.908					SHEET 1 OF 1								
PROJECT: Bridge Construction, Bougainville Trunk Road			Ground Elevation (m-MSL): 0.170 m					Water Level: -1.30 m								
LOCATION: Ururva River, Abutment at Arawa Side			Max. Drilling Depth: 13.50 m					Starting Date: 4/5/2008								
CLIENT: Chodai Co., Ltd.								Finishing Date: 5/5/2008								
DEPTH (m.)	GRAPHIC LOG	SOIL DESCRIPTION	SAMPLING METHOD	SAMPLE NO.	RECOVERY (cm)	Total Unit Weight (Ton/m ³)			Plastic Limit Natural Water Content Liquid Limit (%)			Specific Gravity	SPT Blow Count (Blow/ft)			
						1.6	1.8	2.0	30	60	90			120	2.4	2.6
0.0-2.5		0.0-2.5 m, SM, silty SAND, 40% silt-clay, 60% fine-medium subangular sand, loose, non-very low plasticity, dark brown, <u>Residual soil or completely weathered agglomerate and/or tuffaceous rock</u>	WO													
1			WO													
			SS 1	45												
			WO													
2			SS 2	45												
			WO													
			SS 3	26												
3			WO													
2.5-8.5		2.5-8.5 m, CL, silty CLAY with sand, non-medium plasticity, medium stiff-hard, with 25% fine tuffaceous rock chip (sand), light-yellowish brown, <u>Residual soil or completely weathered agglomerate and/or tuffaceous rock</u>	WO													
4			SS 4	21												
			WO													
5			SS 5	Loss												
			WO													
6			SS 6	45												
			WO													
7			SS 7	45												
8	WO															
	SS 8	45														
8.5-13.5		8.5-13.5 m, highly weathered AGGLOMERATE and/or TUFFACEOUS ROCK, light-pale brown, when crushed by SPT presented as clay, non-very low plasticity, very stiff-hard, with >80% tuffaceous rock chip, <u>Highly weathered agglomerate and/or tuffaceous rock</u>	DC 1													
9			SS 9	45												
			DC 2													
10			SS 10	45												
			WO													
11	SS 11	32														
	DC 3															
12	SS 12	30														
	DC 4															
13	SS 13	28														
End of Borehole @13.5 m																

SS - Split Spoon Sampling DC - Dry Coring
 WO - Wash Boring - Tested Samples

Kaskrus		FIELD BORING LOG						BORING NO. BH-11												
								SHEET 1 OF 1												
PROJECT: Bridge Construction, Bougainville Trunk Road		Coordinates: N: 9373983.478 E: 732176.200				Water Level: -1.00 m														
LOCATION: Kaskrus River, Abutment at Buka Side		Ground Elevation (m-MSL): -1.551 m				Starting Date: 9/5/2008														
CLIENT: Chodai Co., Ltd.		Max. Drilling Depth: 4.00 m				Finishing Date: 11/5/2008														
DEPTH (m.)	GRAPHIC LOG	SOIL DESCRIPTION	SAMPLING METHOD	SAMPLE NO.	RECOVERY (cm)	Total Unit Weight (Ton/m ³)				Plastic Limit Natural Water Content Liquid Limit (%)			Specific Gravity				SPT Blow Count (Blow/ft)			
						1.6	1.8	2.0	30	60	90	120	2.4	2.6	2.8	10	20	30	40	
0.0-0.5		MH, SILT, brown, top soil. <u>Ash deposit?</u>	WO																	
0.5-4.0		moderately-slightly weathered AGGLOMERATE, comprises various sources of volcanic cobble/boulder ie dark gray basalt, light gray, gray, reddish brown tuffaceous rock etc with unknown size, no matrix or cementing material could be retrieved and/or identified, <u>Agglomerate basement</u>	WO																	
1			SS	1	22														50/23	
2			DC	1																
3																				
4		End of Borehole @ 4.0 m	DC	2																

SS - Split Spoon Sampling DC - Dry Coring
 WO - Wash Boring  - Tested Samples

Rotaovei			FIELD BORING LOG					BORING NO. BH-12						
								SHEET 1 OF 1						
PROJECT: Bridge Construction, Bougainville Trunk Road			Coordinates: N: 9378717.072 E: 730467.765					Water Level: -0.90 m						
LOCATION: Rataovei River, Abutment at Arawa Side			Ground Elevation (m-MSL): 0.420 m					Starting Date: 13/5/2008						
CLIENT: Chodai Co., Ltd.			Max. Drilling Depth: 6.00 m					Finishing Date: 14/5/2008						
DEPTH (m.)	GRAPHIC LOG	SOIL DESCRIPTION	SAMPLING METHOD	SAMPLE NO.	RECOVERY (cm)	Total Unit Weight (Ton/m ³)				Plastic Limit (%)	Natural Water Content (%)	Liquid Limit (%)	Specific Gravity	SPT Blow Count (Blow/ft)
						1.6	1.8	2.0						
1		0.0-1.0 m, SM, silty SAND, non-plasticity, loose, brown, <i>Alluvial/volcanic ash deposit (?)</i>	WO											
1		1.0-6.0 m, moderately-slightly weathered AGGLOMERATE, comprises various sources of volcanic cobble/boulder with generally gray and partial reddish brown tuffaceous rock with unknown size, no matrix or cementing material could be retrieved and/or identified	SS	1	15		2.0		18		2.7		50/30	
2			DC	1										
3			DC	2										
4			DC	3										
5			DC	4										
6		End of Borehole @ 6.0 m												

SS - Split Spoon Sampling DC - Dry Coring
 WO - Wash Boring - Tested Samples

Warakapis			FIELD BORING LOG					BORING NO. BH-13								
			Coordinates: N: 9384368.681 E: 723917.887					Water Level: -1.80 m								
PROJECT: Bridge Construction, Bougainville Trunk Road			Ground Elevation (m-MSL): -0.055 m					Starting Date: 15/5/2008								
LOCATION: Warakapis River, Abutment at Arawa Side			Max. Drilling Depth: 4.00 m					Finishing Date: 16/5/2008								
CLIENT: Chodai Co., Ltd.																
DEPTH (m.)	GRAPHIC LOG	SOIL DESCRIPTION	SAMPLING METHOD	SAMPLE NO.	RECOVERY (cm)	Total Unit Weight (Ton/m ³)			Plastic Limit Natural Water Content (%) Liquid Limit			Specific Gravity	SPT Blow Count (Blow/ft)			
						1.6	1.8	2.0	30	60	90			120	2.4	2.6
		0.0-0.5 m, MH, SILT, brown, top soil. <u>Ash deposit?</u>	WO													
		0.5-1.0 m, SP, SAND, loose, gray. <u>Alluvial deposit</u>	WO													
1		1.0-4.0 m, moderately-slightly weathered AGGLOMERATE, comprises various sources of volcanic cobble/boulder with generally gray tuffaceous rock with unknown size, no matrix or cementing material could be retrieved and/or identified. <u>Agglomerate basement</u>	SS	1	18											
2			DC	1												
2			SS	2	Loss											
3			DC	2												
4		DC	3													
4		End of Borehole @ 4.0 m														

SS - Split Spoon Sampling DC - Dry Coring
 WO - Wash Boring - Tested Samples

Irung		FIELD BORING LOG					BORING NO. BH-14											
							SHEET 1 OF 1											
PROJECT: Bridge Construction, Bougainville Trunk Road		Coordinates: N: 9384946.767 E: 722540.992			Water Level: -0.80 m													
LOCATION: Irung River, Abutment at Arawa Side		Ground Elevation (m-MSL): -1.587 m			Starting Date: 17/5/2008													
CLIENT: Chodai Co., Ltd.		Max. Drilling Depth: 3.00 m			Finishing Date: 18/5/2008													
DEPTH (m.)	GRAPHIC LOG	SOIL DESCRIPTION	SAMPLING METHOD	SAMPLE NO.	RECOVERY (cm)	Total Unit Weight (Ton/m ³)			Plastic Limit Natural Water Content Liquid Limit (%)			Specific Gravity			SPT Blow Count (Blow/ft)			
						1.6	1.8	2.0	30	60	90	120	2.4	2.6	2.8	10	20	30
1		0.0-1.0 m, MH, SILT, non-plasticity, soft-stiff, brown, <u>Volcanic ash deposit (?)</u>	WO															
		1.0-1.5 m, SM, SAND, dense, gray, <u>Alluvial deposit</u>	SS	1	25					● 13			● 2.8					
2		1.5-3.0 m, mod-slight weathered AGGLOMERATE, comprises various sources of volcanic cobble & boulder with unknown size ie very hard andesite, <u>Agglomerate basement</u>	WO															
3			DC	1														
		End of Borehole @ 3.0 m																

SS - Split Spoon Sampling DC - Dry Coring
 WO - Wash Boring - Tested Samples

Rawa 1		FIELD BORING LOG						BORING NO. BH-15						
								SHEET 1 OF 1						
PROJECT: Bridge Construction, Bougainville Trunk Road		Coordinates: N: 9386949.868 E: 711994.451				Water Level: -2.95 m								
LOCATION: Rawa1 River, Abutment at Arawa Side		Ground Elevation (m-MSL): 0.457 m				Starting Date: 19/5/2008								
CLIENT: Chodai Co., Ltd.		Max. Drilling Depth: 6.00 m				Finishing Date: 20/5/2008								
DEPTH (m.)	GRAPHIC LOG	SOIL DESCRIPTION	SAMPLING METHOD	SAMPLE NO.	RECOVERY (cm)	Total Unit Weight (Ton/m ³)			Plastic Limit Natural Water Content (%) Liquid Limit			Specific Gravity	SPT Blow Count (Blow/ft)	
						1.6	1.8	2.0	30	60	90			120
1		0.0-2.7 m, MH, sandy SILT, 40% fine sand, 60% silt, non-plasticity, soft, pale brown-brown, with some little very fine-fine subangular sand, <u>Volcanic ash deposit (?)</u>	WO											
			WO											
			SS 1	42		1.9	27			2.6	9		7	
2			WO											
			SS 2	37								5		
3		2.7-6.0 m, moderately-slightly weathered AGGLOMERATE, comprises various sources of volcanic cobble/boulder with generally gray tuffaceous rock with unknown size, no matrix or cementing material could be retrieved and/or identified, <u>Agglomerate basement</u>	DC 1											
			DC 2											
4			DC 3											
5			DC 4											
6		End of Borehole @ 6.0 m												

SS - Split Spoon Sampling DC - Dry Coring
 WO - Wash Boring - Tested Samples



THE INDEPENDENT STATE OF PAPUA NEW GUINEA

Environment Act 2000

*Act, Section.65 & 66
Reg., Se. 16(1)*

ENVIRONMENT PERMIT

An Environment Permit is hereby issued under *Section 65* of the *Environment Act 2000*

TO: Department of Works

OF: P. O. Box 1108, Boroko, National Capital District, Port Moresby

- (a) to carry out works associated with construction or refurbishment of bridges at Bakanovi, Bove, Pukarobi 1, Pukarobi 2, Creepers, Ratavi, Iraka, Korova, Malas, Ururua, Kaskrus, Rotaovei, Warakapis, Irung, and Rawal ("premises") along the Bougainville Coastal Trunk Road in the Autonomous Region of Bougainville.
- (b) to discharge waste into the environment from the premises while carrying out a **Level 2 (Category A) activity** associated with construction or refurbishment of bridges which would result in discharge of waste into water or onto land in such a way that it results in the waste entering water.

The activities shall be carried out in accordance with the terms conditions of this permit.

Permit Number:	WD-L2A (171)
Date of Issue:	7 th May 2008
Date of Commencement:	3 rd June 2008
Term of Permit:	Five (5) years
Date of Expiry:	2 nd June 2013

KELLY GAWI
Director of Environment

INTERPRETATIONS

DEC: mean the Department of Environment and Conservation

Director/ Director of Environment: means the Secretary or the Head of the Department of Environment and Conservation. The term is used to ensure consistency with the designation provided in s. 15 of the Environment Act 2000 and its roles and functions under s. 16 of the Act.

Domestic Wastewater: means grey water and sewage.

Environment Act/ the Act: means the *Environment Act 2000* (as amended) and any Environmental Policies and Regulations made thereunder.

Permit: means the Environment Permit issued under *Section 65* of the *Environment Act 2000*. The permit authorizes the commencement of works and the discharges of wastes from the premises whilst carrying out works associated with construction or refurbishment of bridges.

Permit Holder: refers to the Department of Works

Premises: refers to the area within the locality of the bridges at Bakanovi, Bove, Pukarobi 1, Pukarobi 2, Creepers, Ratavi, Iraka, Korova, Malas, Ururua, Kaskrus, Rotaovei, Warakapis, Irung, and Rawal ("premises") along the Bougainville Coastal Trunk Road in the Autonomous Region of Bougainville that are defined by the following grid reference - **Location (1)**: refers to Bakanovi bridge located within 155°23'47.070"E and 6°05'38.142"S; **Location (2)**: refers to Bove bridge located within 155°24'15.720"E and 6°04'05.616"S; **Location (3)**: refers to Pukarobi 1 bridge located within 155°22'03.150"E and 6°00'12.348"S; **Location (4)**: refers to Pukarobi 2 bridge located within 155°21'36.852"E and 5°59'44.832"S; **Location (5)**: refers to Creepers bridge located within 155°21'31.488"E and 5°59'28.536"S; **Location (6)**: refers to Ratavi bridge located within 155°21'27.918"E and 5°59'16.644"S; **Location (7)**: refers to Iraka bridge located within 155°19'42.678"E and 5°57'05.958"S; **Location (8)**: refers to Korova bridge located within 155°19'09.918"E and 5°57'02.916"S; **Location (9)**: refers to Malas bridge located within 155°16'50.004"E and 5°54'35.784"S; **Location (10)**: refers to Ururua bridge located within 155°11'09.150"E and 5°51'33.180"S; **Location (11)**: refers to Kaskrus bridge located within 155°05'46.968"E and 5°39'36.360"S; **Location (12)**: refers to Rotaovei bridge located within 155°04'51.240"E and 5°37'00.252"S; **Location (13)**: refers to Warakapis bridge located within 155°01'15.960"E and 5°33'57.660"S; **Location (14)**: refers to Irung bridge located within 155°00'30.006"E and 5°33'38.124"S and **Location (15)**: refers to Bakanovi bridge located within 154°54'46.992"E and 5°32'35.532"S

Works: means vegetation clearance, earth works, removal of old culvert debris and carrying out works associated with the refurbishment and construction of bridges within the premises.

TERMS AND CONDITIONS OF ENVIRONMENT PERMIT

Annual Charge

The annual charge under this Permit is = K1,020.00

This charge is based on the following fees –

- a) *Rainfall Runoff:* runoff containing sediments construction phase = K1,000.00
- b) *Annual Fee:* annual (administration) fee for Level 2A activity = K20.00

Conditions

General

1. The Permit Holder shall carry out works associated with the refurbishment and construction of bridges in accordance with the plans and specifications in the environment permit application unless otherwise specified through a condition of this permit
2. In the event of an inconsistency between the permit application and a condition of this permit, the condition of this permit will apply.

Works

Bridge Construction

3. The Permit Holder shall carry out works associated with the refurbishment and construction of 15 bridges along the Bougainville Coastal Trunk Road between Kokopau and Arawa in the Bougainville Autonomous Region.

Waste Treatment Facilities

Septic Tank

4. The Permit Holder shall construct a septic tank with a soak-away trench not less than 100m from the nearest surface water for treatment of domestic wastewater.

Landfill

5. The Permit Holder shall construct a landfill not less than 100m from the nearest watercourse for disposal of solid wastes.

Operation

Erosion Control

6. The Permit Holder shall design and apply appropriate measures to prevent soil erosions and minimize sediment runoff into watercourses at the premises. The measures shall include but not limited to use of cut-off drains, velocity control techniques, sediments traps, ground cover (natural, e.g. grass growing or artificial, e.g. plastic sheets), sedimentation traps and limited vegetation clearing.

Waste Management

Wastewater

7. The Permit Holder shall ensure that all domestic wastewater from the premises are directed to the septic tank referred to in Condition 4 for treatment prior to disposal.
8. The Permit Holder shall employ waste minimization strategy (avoid, reduce, recycle, treatment, disposal) in managing the waste streams from the quarry.

Solid Waste

9. The Permit Holder shall ensure that all solid wastes are collected and disposed at the designated landfills.

Air Emission

10. The Permit Holder shall employ appropriate control measures to minimize aerial emissions produced by the machineries and equipment used for the bridge construction from the premises. Dust should be controlled using dust suppressants including water sprays.
11. The Permit Holder shall not generate offensive odour from the premises.

Noise

12. The Permit Holder shall ensure that noise levels from the premises are minimized through the use of appropriate noise control measures. These abatement measures may include noise barriers, attenuation of sound from vehicles and equipment, etc.

Rainfall Runoff

13. The Permit Holder shall segregate rainfall runoff from the fuel and chemical storage areas used during the bridge construction by diverting clean runoff from these areas in order to avoid cross-contamination

Waste Fuel Oil

14. The Permit Holder shall ensure that waste oil from the machinery and fuel storage facilities are reused and/or disposed by incineration and/or removed for reprocessing where appropriate.

Monitoring

15. The Permit Holder shall carry out regular checks on machinery and equipment used for quarrying to ensure that they are in good working condition so as to minimize noise and air emissions.
16. The Permit Holder shall carry out routine monitoring of air, noise and waste generation to detect non-compliance at early stages and apply corrective measures to minimize impacts.
17. The Permit Holder shall carry out regular checks on measures taken to minimize soil erosion and discharge of sediments (Condition 12) to ensure their treatment efficiency.

Rehabilitation

18. The Permit Holder shall perform land forming and re-vegetation activities at the end of the bridge refurbishment and construction operation. All stockpile areas shall be rehabilitated and re-vegetated.

Reporting

19. The Permit Holder shall submit summary monitoring reports every three months and an Environmental Performance Report to the Director at the end of each calendar year or other reports as directed by the Director for evaluation and compliance. The reports may include but not limited to –
 - a) Raw data (analysis by certified laboratories) from monitoring programs
 - b) Interpretation of raw data
 - c) incidence of non-compliance and reasons, and
 - d) status of compliance with the other conditions of this permit.
20. The Permit Holder shall notify the Director on any significant environmental incident that occurs in relation to the discharge of waste from the constructions of the fifteen (15) bridges.



AUTONOMOUS BOUGAINVILLE GOVERNMENT DIVISION OF TECHNICAL SERVICES

THE PROJECT FOR CONSTRUCTION OF BRIDGES OF ON BOUGAINVILLE COASTAL TRUNK ROAD (RAWA -1 Bridge)

MEMORANDUM OF AGREEMENT

Objectives

This Memorandum Of Agreement (hereinafter referred to as **MOA**) has been signed between the Autonomous Bougainville Government (hereinafter referred to as **ABG**), the Division of Lands and Physical Planning of ABG (hereinafter referred to as **DLPP(ABG)**), the Division of Technical Services of ABG (hereinafter referred to as **DTS(ABG)**), the Division of Law of ABG (hereinafter referred to as **DOL(ABG)**), the Department of Lands and Physical Planning of PNG (hereinafter referred to as **DLPP**), the Department of Works of PNG (hereinafter referred to as **DOW**) all representing the State or National Government and villagers and relevant Local Clans comprising Community Coordination Committee (hereinafter referred to as **CCC**) for the smooth implementation of the following project inclusive of RAWA-1 Bridge Construction.

Outline of the Project

Reconstruction of 15 bridges/ culvert including RAWA-1 Bridge planned at the same location of the original bridges. The Project is expected to be implemented by the Grant Aid from Japanese Government. This MOA is prerequisite condition to get commitment from Japanese Government for the implementation of the Project. The Project will be started in accordance with the tentative schedule after the agreement between Papua New Guinea and Japanese Government.

Objectives of the 2nd Stakeholder Meetings

Following explanation and discussion will be carried out in the 2nd stakeholder meetings.

- Explanation of the Project Outlines and Expected Schedule in the Future
- Explanation of Predicted Positive and Negative Impacts
- Explanation of Construction Area and Right of way for National Road (on-site)
- Exchange Opinions
- Signing of **MOA** (Memorandum Of Agreement)

Agreement

We (whose name appear on the next page and the attendance list), understand above description and agree that this project will be implemented without any unnecessary interruptions to the contractor due to such factors as land disputes, crop compensation, gravel royalties, employment, provision of social services, or similar. We agree that if any such issue arises, those issues shall be immediately brought to the attention of relevant agencies or Government Department such as **DTS(ABG)**, **DLPP(ABG)**, Police, etc, to resolve. We further agreed that the **CCC** will ensure that members of our respective clans & settlement are made aware of this **MOA** and that any breach of this **MOA** will be referred to appropriate Law Enforcement Agencies.

We acknowledge that we represent our respective clans and communities and hereby agree and undertake to abide by the above Agreement. And as a sign of our agreement and consent have caused our signature to be signed below on the date shown.

Date: 20th / June / 2008



Raymond MASONO
Acting Chief Administrator
Autonomous Bougainville Government

Andrew DOVARO
Chief Executive Officer
Division of Lands and Physical Planning
Autonomous Bougainville Government

John KOLAN
Administration Chief Executive Officer
Division of Technical Services
Autonomous Bougainville Government

CHRIS SIRTOSI
Chief Executive Officer
Division of Law
Autonomous Bougainville Government

Jacob WAFFINDUO
Manager Customary Land
Department of Lands and Physical Planning
PNG

Eric SIKAM
First Assistant Secretary (Technical Services)
Department of Works
PNG



The Second Stakeholder Meeting Attendance List
For
The Basic Design Study on the Project for Construction of Bridges on Bougainville Coastal Trunk Road

Name of Community Coordination Committee: RAWA-1 C.C.C.

Bridge Name: RAWA-1

Date: JUNE 20th 2008

Time: 10:30 - 11:00 AM

Venue: RAWA

(1) ABG

	Name	Post	Signature
1	Mr. Simeon ITAMAI	DTS(ABG), Engineer	<i>[Signature]</i>
2	Mr. Raphael WANE	DOW	<i>[Signature]</i>
3			

(2) C.C.C.

	Name	Clan/Group/Community	Signature
1	MATHEW BORATS	NABOIN (CHIEF)	<i>[Signature]</i>
2	HENRY TOAGITZ	NAKES (CHIEF)	<i>[Signature]</i>
3	MORRIS POTSI	NODWIN (CHIEF)	<i>[Signature]</i>
4	GABRIEL BUTSIA	NATSI (CHIEF)	<i>[Signature]</i>
5	JUSTIN WAKEN	NABOIN (YOUTH)	<i>[Signature]</i>
6	CLEMENT KADUIN	NATSI	<i>[Signature]</i>
7	PHOYUS RIRIDI	NATSI	<i>[Signature]</i>
8	BENJAMIN ATOEN	NABOIN	<i>[Signature]</i>
9	EDDIE TOROZ	NAKARIP (CHIEF)	<i>[Signature]</i>
10			
11			
12			
13			
14			
15			

JICA Study Team

Hironori KUROKI

Environmentalist 1

[Signature]

Ryoichi KAWABE

Environmentalist 2
A5-4-7

11/30



Summary of Explanation regarding Environmental and Social Impacts

I Roles and Responsibility

1. All participants of this meeting should try to let all other local people understand the importance of the bridge construction and cooperate with consultants and contractors.
2. When a problem causes between consultant/contractor and local people, CCC members should hold meeting(s) and find out an effective solution in continuous communication with ABG and DOW.

II Predicted Impacts

3. Some portions of customary land will need to be acquired as a part of access road for the bridge although the portions are limited to some of surrounding area of the bridge. Additionally some of areas on customary lands will need to be used temporarily as construction yards.
4. Access to the river water at the bridge site will be limited during a bridge construction. Additionally it is predicted that water usage for drinking, cooking, bathing, washing clothes & plates and fishing may be limited at the down stream of the construction site due to a turbidity caused by earth works. Hence users who are using river water may have to shift to the upstream.



AUTONOMOUS BOUGAINVILLE GOVERNMENT DIVISION OF TECHNICAL SERVICES

THE PROJECT FOR CONSTRUCTION OF BRIDGES OF ON BOUGAINVILLE COASTAL TRUNK ROAD

(Bakanovi Bridge)

MEMORANDUM OF AGREEMENT

Objectives

This Memorandum Of Agreement (hereinafter referred to as **MOA**) has been signed between the Autonomous Bougainville Government (hereinafter referred to as **ABG**), the Division of Lands and Physical Planning of ABG (hereinafter referred to as **DLPP(ABG)**), the Division of Technical Services of ABG (hereinafter referred to as **DTS(ABG)**), the Division of Law of ABG (hereinafter referred to as **DOL(ABG)**), the Department of Lands and Physical Planning of PNG (hereinafter referred to as **DLPP**), the Department of Works of PNG (hereinafter referred to as **DOW**) all representing the State or National Government and villagers and relevant Local Clans comprising Community Coordination Committee (hereinafter referred to as **CCC**) for the smooth implementation of the following project inclusive of Bakanovi Bridge Construction.

Outline of the Project

Reconstruction of 15 bridges/ culvert including Bakanovi Bridge planned at the same location of the original bridges. The Project is expected to be implemented by the Grant Aid from Japanese Government. This MOA is prerequisite condition to get commitment from Japanese Government for the implementation of the Project. The Project will be started in accordance with the tentative schedule after the agreement between Papua New Guinea and Japanese Government.

Objectives of the 2nd Stakeholder Meetings

Following explanation and discussion will be carried out in the 2nd stakeholder meetings.

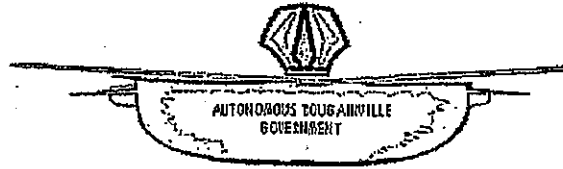
- Explanation of the Project Outlines and Expected Schedule in the Future
- Explanation of Predicted Positive and Negative Impacts
- Explanation of Construction Area and Right of way for National Road (on-site)
- Exchange Opinions
- Signing of **MOA** (Memorandum Of Agreement)

Agreement

We (whose name appear on the next page and the attendance list), understand above description and agree that this project will be implemented without any unnecessary interruptions to the contractor due to such factors as land disputes, crop compensation, gravel royalties, employment, provision of social services, or similar. We agree that if any such issue arises, those issues shall be immediately brought to the attention of relevant agencies or Government Department such as **DTS(ABG)**, **DLPP(ABG)**, Police, etc, to resolve. We further agreed that the **CCC** will ensure that members of our respective clans & settlement are made aware of this **MOA** and that any breach of this **MOA** will be referred to appropriate Law Enforcement Agencies.

We acknowledge that we represent our respective clans and communities and hereby agree and undertake to abide by the above Agreement. And as a sign of our agreement and consent have caused our signature to be signed below on the date shown.

Date: 10 / 07 / 2008



Raymond MASONO
Acting Chief Administrator
Autonomous Bougainville Government

Andrew DOVARO
Chief Executive Officer
Division of Lands and Physical Planning
Autonomous Bougainville Government

John KOLAN
Administration Chief Executive Officer
Division of Technical Services
Autonomous Bougainville Government

Chris SIRIOSI
Chief Executive Officer
Division of Law
Autonomous Bougainville Government

Jacob WAFFINDUO
Manager Customary Land
Department of Lands and Physical Planning
PNG

Eric SIKAM
First Assistant Secretary (Technical Services)
Department of Works
PNG



**The Second Stakeholder Meeting Attendance List
For**

**The Basic Design Study on the Project for Construction of Bridges on Bougainville
Coastal Trunk Road**

Name of Community Coordination Committee: Bakanovi C.C.C

Bridge Name: Bakanovi

Date: 10/7/08

Time: 11.30 - 12.00

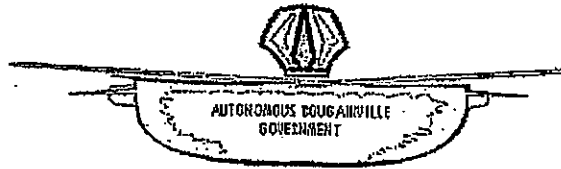
Venue: BAKANNOVI BRIDGE

(1) ABG

	Name	Post	Signature
1	Mr. Simeon ITAMAI	DTS(ABG), Engineer	<i>[Signature]</i>
2	Mr. Raphael WANE	DOW	<i>[Signature]</i>
3			

(2) C.C.C.

	Name	Clan/Group/Community	Signature
1	JACOB BETOPA	DAVINIQA CLAN (KOPANI)	<i>[Signature]</i>
2	PATRICIA KIVA	DAVINIQA WOMENS REP	<i>[Signature]</i>
3	PETER SIMARE	MAKIARA CLAN (KOPANI)	<i>[Signature]</i>
4	PATRICK FRITAM	C.O.F. CHAIRMAN (MANETA)	<i>[Signature]</i>
5	JACOB TOKIPA	SENIOR TEACHER (MANETA)	<i>[Signature]</i>
6	DONALD - EVERET	AUXILIARY POLICE	<i>[Signature]</i>
7	CHRISTOPHER FROSI	VILLAGE COURT MAGISTRATE	<i>[Signature]</i>
8	AGATHA FRITAM	VILLAGE COURT CLERK	<i>[Signature]</i>
9	PETER KALOSOI	C.O.F. CHAIRMAN TORPA	<i>[Signature]</i>
10	JACK SOKA	EXECUTIVE OFFICE (ENO COE)	<i>[Signature]</i>
11	CLARA KIB	WOMENS PRESIDENT	<i>[Signature]</i>
12	THOMAS KEREPA	VITO PARAMOUNT CHIEF	<i>[Signature]</i>
13	MICHAEL SARIAS	PARAMOUNT CHIEF (MANETA)	<i>[Signature]</i>
14	PETER NOMKI	BAKORIN CLAN (VITO)	<i>[Signature]</i>
15	MARK KEREPA	AKWIRO CLAN CHIEF (BOVE)	<i>[Signature]</i>



Summary of Explanation regarding Environmental and Social Impacts

I Roles and Responsibility

1. All participants of this meeting should try to let all other local people understand the importance of the bridge construction and cooperate with consultants and contractors.
2. When a problem causes between consultant/contractor and local people, CCC members should hold meeting(s) and find out an effective solution in continuous communication with ABG and DOW.

II Predicted Impacts

3. Some portions of customary land will need to be acquired as a part of access road for the bridge although the portions are limited to some of surrounding area of the bridge. Additionally some of areas on customary lands will need to be used temporarily as construction yards.
4. Access to the river water at the bridge site will be limited during a bridge construction. Additionally it is predicted that water usage for drinking, cooking, bathing, washing clothes & plates and fishing may be limited at the down stream of the construction site due to a turbidity caused by earth works. Hence users who are using river water may have to shift to the upstream.



AUTONOMOUS BOUGAINVILLE GOVERNMENT DIVISION OF TECHNICAL SERVICES

THE PROJECT FOR CONSTRUCTION OF BRIDGES OF ON BOUGAINVILLE COASTAL TRUNK ROAD (Bove Bridge)

MEMORANDUM OF AGREEMENT

Objectives

This Memorandum Of Agreement (hereinafter referred to as **MOA**) has been signed between the Autonomous Bougainville Government (hereinafter referred to as **ABG**), the Division of Lands and Physical Planning of ABG (hereinafter referred to as **DLPP(ABG)**), the Division of Technical Services of ABG (hereinafter referred to as **DTS(ABG)**), the Division of Law of ABG (hereinafter referred to as **DOL(ABG)**), the Department of Lands and Physical Planning of PNG (hereinafter referred to as **DLPP**), the Department of Works of PNG (hereinafter referred to as **DOW**) all representing the State or National Government and villagers and relevant Local Clans comprising Community Coordination Committee (hereinafter referred to as **CCC**) for the smooth implementation of the following project inclusive of Bove Bridge Construction.

Outline of the Project

Reconstruction of 15 bridges/ culvert including Bove Bridge planned at the same location of the original bridges. The Project is expected to be implemented by the Grant Aid from Japanese Government. This MOA is prerequisite condition to get commitment from Japanese Government for the implementation of the Project. The Project will be started in accordance with the tentative schedule after the agreement between Papua New Guinea and Japanese Government.

Objectives of the 2nd Stakeholder Meetings

Following explanation and discussion will be carried out in the 2nd stakeholder meetings.

- Explanation of the Project Outlines and Expected Schedule in the Future
- Explanation of Predicted Positive and Negative Impacts
- Explanation of Construction Area and Right of way for National Road (on-site)
- Exchange Opinions
- Signing of **MOA** (Memorandum Of Agreement)

Agreement

We (whose name appear on the next page and the attendance list), understand above description and agree that this project will be implemented without any unnecessary interruptions to the contractor due to such factors as land disputes, crop compensation, gravel royalties, employment, provision of social services, or similar. We agree that if any such issue arises, those issues shall be immediately brought to the attention of relevant agencies or Government Department such as **DTS(ABG)**, **DLPP(ABG)**, Police, etc, to resolve. We further agreed that the **CCC** will ensure that members of our respective clans & settlement are made aware of this **MOA** and that any breach of this **MOA** will be referred to appropriate Law Enforcement Agencies.

We acknowledge that we represent our respective clans and communities and hereby agree and undertake to abide by the above Agreement. And as a sign of our agreement and consent have caused our signature to be signed below on the date shown.

Date: 10 / 07 / 2008



Raymond MASONO
Acting Chief Administrator
Autonomous Bougainville Government

Andrew DOVARO
Chief Executive Officer
Division of Lands and Physical Planning
Autonomous Bougainville Government

John KOLAN
Administration Chief Executive Officer
Division of Technical Services
Autonomous Bougainville Government

Chris SIRIOSI
Chief Executive Officer
Division of Law
Autonomous Bougainville Government

Jacob WAFFINDUO
Manager Customary Land
Department of Lands and Physical Planning
PNG

Eric SIKAM
First Assistant Secretary (Technical Services)
Department of Works
PNG



**The Second Stakeholder Meeting Attendance List
For**

**The Basic Design Study on the Project for Construction of Bridges on Bougainville
Coastal Trunk Road**

Name of Community Coordination Committee: Bove C.C.C

Bridge Name: Bove

Date: 10/7/08

Time: 12.00 - 13.30

Venue: BOVE BRIDGE

(1) ABG

	Name	Post	Signature
1	Mr. Simeon ITAMAI	DTS(ABG), Engineer	<i>[Signature]</i>
2	Mr. Raphael WANE	DOW	
3			

(2) C.C.C.

	Name	Clan/Group/Community	Signature
1	JAMES SIOWAI	BOVE PARAMOUNT CHIEF	<i>[Signature]</i>
2	DAVID DAPANUA	AKIYAKO COE MABUKANE	<i>[Signature]</i>
3	PATRICK KOKORA	KUIRO CHIEF REP	<i>[Signature]</i>
4	DANIEL GEGANG	BO-LOM COMMUNITY	<i>[Signature]</i>
5	ANGELA DEKO	KENTARA CLAN	<i>[Signature]</i>
6	CONCULAKATIA	AUBRA CLAN	<i>[Signature]</i>
7	RITA ENDE	WISOMANI REP VICE	<i>[Signature]</i>
8	KANGELA PIRIWA	KUIRO CHIEF CHIEF	<i>[Signature]</i>
9	MARIA TAMUSI	AUBRA CHIEF CHIEF	<i>[Signature]</i>
10	MARK HELPAS	BOVE VICE CHIEF	<i>[Signature]</i>
11	PZEROKA KATRIA	COMM PEACE OFFICER	<i>[Signature]</i>
12	MUKHAI PETANAI	BOVE VICE YOUTH REP	<i>[Signature]</i>
13			
14			
15			



Summary of Explanation regarding Environmental and Social Impacts

I Roles and Responsibility

1. All participants of this meeting should try to let all other local people understand the importance of the bridge construction and cooperate with consultants and contractors.
2. When a problem causes between consultant/contractor and local people, CCC members should hold meeting(s) and find out an effective solution in continuous communication with ABG and DOW.

II Predicted Impacts

3. Some portions of customary land will need to be acquired as a part of access road for the bridge although the portions are limited to some of surrounding area of the bridge. Additionally some of areas on customary lands will need to be used temporarily as construction yards.
4. Access to the river water at the bridge site will be limited during a bridge construction. Additionally it is predicted that water usage for drinking, cooking, bathing, washing clothes & plates and fishing may be limited at the down stream of the construction site due to a turbidity caused by earth works. Hence users who are using river water may have to shift to the upstream.



AUTONOMOUS BOUGAINVILLE GOVERNMENT DIVISION OF TECHNICAL SERVICES

THE PROJECT FOR CONSTRUCTION OF BRIDGES OF ON BOUGAINVILLE COASTAL TRUNK ROAD (Pukarobi-2 Bridge)

MEMORANDUM OF AGREEMENT

Objectives

This Memorandum Of Agreement (hereinafter referred to as **MOA**) has been signed between the Autonomous Bougainville Government (hereinafter referred to as **ABG**), the Division of Lands and Physical Planning of ABG (hereinafter referred to as **DLPP(ABG)**), the Division of Technical Services of ABG (hereinafter referred to as **DTS(ABG)**), the Division of Law of ABG (hereinafter referred to as **DOL(ABG)**), the Department of Lands and Physical Planning of PNG (hereinafter referred to as **DLPP**), the Department of Works of PNG (hereinafter referred to as **DOW**) all representing the State or National Government and villagers and relevant Local Clans comprising Community Coordination Committee (hereinafter referred to as **CCC**) for the smooth implementation of the following project inclusive of Pukarobi-2 Bridge Construction.

Outline of the Project

Reconstruction of 15 bridges/ culvert including Pukarobi-2 Bridge planned at the same location of the original bridges. The Project is expected to be implemented by the Grant Aid from Japanese Government. This MOA is prerequisite condition to get commitment from Japanese Government for the implementation of the Project. The Project will be started in accordance with the tentative schedule after the agreement between Papua New Guinea and Japanese Government.

Objectives of the 2nd Stakeholder Meetings

Following explanation and discussion will be carried out in the 2nd stakeholder meetings.

- Explanation of the Project Outlines and Expected Schedule in the Future
- Explanation of Predicted Positive and Negative Impacts
- Explanation of Construction Area and Right of way for National Road (on-site)
- Exchange Opinions
- Signing of **MOA** (Memorandum Of Agreement)

Agreement

We (whose name appear on the next page and the attendance list), understand above description and agree that this project will be implemented without any unnecessary interruptions to the contractor due to such factors as land disputes, crop compensation, gravel royalties, employment, provision of social services, or similar. We agree that if any such issue arises, those issues shall be immediately brought to the attention of relevant agencies or Government Department such as **DTS(ABG)**, **DLPP(ABG)**, Police, etc, to resolve. We further agreed that the **CCC** will ensure that members of our respective clans & settlement are made aware of this **MOA** and that any breach of this **MOA** will be referred to appropriate Law Enforcement Agencies.

We acknowledge that we represent our respective clans and communities and hereby agree and undertake to abide by the above Agreement. And as a sign of our agreement and consent have caused our signature to be signed below on the date shown.

Date: 10 / 07 / 2008



Raymond MASONO
Acting Chief Administrator
Autonomous Bougainville Government

Andrew DOVARO
Chief Executive Officer
Division of Lands and Physical Planning
Autonomous Bougainville Government

John KOLAN
Administration Chief Executive Officer
Division of Technical Services
Autonomous Bougainville Government

Chris SIRIOSI
Chief Executive Officer
Division of Law
Autonomous Bougainville Government

for **Jacob WAFFINDUO**
Manager Customary Land
Department of Lands and Physical Planning
PNG

Eric SIKAM
First Assistant Secretary (Technical Services)
Department of Works
PNG



**The Second Stakeholder Meeting Attendance List
For**

**The Basic Design Study on the Project for Construction of Bridges on Bougainville
Coastal Trunk Road**

Name of Community Coordination Committee: Pukarobi-2 C.C.C

Bridge Name: Pukarobi-2

Date: 10/7/08

Time: 15.20 - 15.45

Venue: PUKAROBI 2 BRIDGE

(1) ABG

	Name	Post	Signature
1	Mr. Simeon ITAMAI	DTS(ABG), Engineer	<i>[Signature]</i>
2	Mr. Raphael WANE	DOW	<i>[Signature]</i>
3			

(2) C.C.C.

	Name	Clan/Group/Community	Signature
1	JOHN RIRIAU	BATOVA Clean	<i>[Signature]</i>
2	BRI JOHN MARAMO	MABIRI High Skul	<i>[Signature]</i>
3	GREGORY AKUPA	SISIO Clean	<i>[Signature]</i>
4	FR. MICHAEL BORA	MABIRI Ministry Skul	<i>[Signature]</i>
5	SAM KOPA	C.O.E CHAIRMAN	<i>[Signature]</i>
6	SINIA SAM	Police WAKUMM	<i>[Signature]</i>
7	MARTHA ARITE	WOMENS Rep	MARTA ARITE
8	LUKE KIPA	Youth Rep	<i>[Signature]</i>
9	John KONOU	TAGONI Clean	<i>[Signature]</i>
10	RAPHAEL GERETO	OVOKE Clean	<i>[Signature]</i>
11	John BAVE	ORORO Clean	<i>[Signature]</i>
12	PEKA GAGMNA	LAND Mediator	<i>[Signature]</i>
13	John ALE	MAGISTRET	<i>[Signature]</i>
14	John KAPPI	VILES Police	John K
15	TIMOTY SAVIRI	SIOS Kida	<i>[Signature]</i>
16	VIVIANA KOVO	WOMENS Rep	<i>[Signature]</i>
17	John MAIRI	TARA RA VILES	<i>[Signature]</i>



Annex

Summary of Explanation regarding Environmental and Social Impacts

I Roles and Responsibility

1. All participants of this meeting should try to let all other local people understand the importance of the bridge construction and cooperate with consultants and contractors.
2. When a problem causes between consultant/contractor and local people, CCC members should hold meeting(s) and find out an effective solution in continuous communication with ABG and DOW.

II Predicted Impacts

3. Some portions of customary land will need to be acquired as a part of access road for the bridge although the portions are limited to some of surrounding area of the bridge. Additionally some of areas on customary lands will need to be used temporarily as construction yards.
4. Access to the river water at the bridge site will be limited during a bridge construction. Additionally it is predicted that water usage for drinking, cooking, bathing, washing clothes & plates and fishing may be limited at the down stream of the construction site due to a turbidity caused by earth works. Hence users who are using river water may have to shift to the upstream.



AUTONOMOUS BOUGAINVILLE GOVERNMENT DIVISION OF TECHNICAL SERVICES

THE PROJECT FOR CONSTRUCTION OF BRIDGES OF ON BOUGAINVILLE COASTAL TRUNK ROAD (Pukarobi-1 Bridge)

MEMORANDUM OF AGREEMENT

Objectives

This Memorandum Of Agreement (hereinafter referred to as **MOA**) has been signed between the Autonomous Bougainville Government (hereinafter referred to as **ABG**), the Division of Lands and Physical Planning of ABG (hereinafter referred to as **DLPP(ABG)**), the Division of Technical Services of ABG (hereinafter referred to as **DTS(ABG)**), the Division of Law of ABG (hereinafter referred to as **DOL(ABG)**), the Department of Lands and Physical Planning of PNG (hereinafter referred to as **DLPP**), the Department of Works of PNG (hereinafter referred to as **DOW**) all representing the State or National Government and villagers and relevant Local Clans comprising Community Coordination Committee (hereinafter referred to as **CCC**) for the smooth implementation of the following project inclusive of Pukarobi-1 Bridge Construction.

Outline of the Project

Reconstruction of 15 bridges/ culvert including Pukarobi-1 Bridge planned at the same location of the original bridges. The Project is expected to be implemented by the Grant Aid from Japanese Government. This MOA is prerequisite condition to get commitment from Japanese Government for the implementation of the Project. The Project will be started in accordance with the tentative schedule after the agreement between Papua New Guinea and Japanese Government.

Objectives of the 2nd Stakeholder Meetings

Following explanation and discussion will be carried out in the 2nd stakeholder meetings.

- Explanation of the Project Outlines and Expected Schedule in the Future
- Explanation of Predicted Positive and Negative Impacts
- Explanation of Construction Area and Right of way for National Road (on-site)
- Exchange Opinions
- Signing of **MOA** (Memorandum Of Agreement)

Agreement

We (whose name appear on the next page and the attendance list), understand above description and agree that this project will be implemented without any unnecessary interruptions to the contractor due to such factors as land disputes, crop compensation, gravel royalties, employment, provision of social services, or similar. We agree that if any such issue arises, those issues shall be immediately brought to the attention of relevant agencies or Government Department such as **DTS(ABG)**, **DLPP(ABG)**, Police, etc, to resolve. We further agreed that the **CCC** will ensure that members of our respective clans & settlement are made aware of this **MOA** and that any breach of this **MOA** will be referred to appropriate Law Enforcement Agencies.

We acknowledge that we represent our respective clans and communities and hereby agree and undertake to abide by the above Agreement. And as a sign of our agreement and consent have caused our signature to be signed below on the date shown.

Date: 10 / 07 / 2008



Raymond MASONO
Acting Chief Administrator
Autonomous Bougainville Government

Andrew DOVARO
Chief Executive Officer
Division of Lands and Physical Planning
Autonomous Bougainville Government

John KOLAN
Administration Chief Executive Officer
Division of Technical Services
Autonomous Bougainville Government

Chris SIRIOSI
Chief Executive Officer
Division of Law
Autonomous Bougainville Government

Jacob WAFFINDUO
Manager Customary Land
Department of Lands and Physical Planning
PNG

Eric SIKAM
First Assistant Secretary (Technical Services)
Department of Works
PNG



**The Second Stakeholder Meeting Attendance List
For**

**The Basic Design Study on the Project for Construction of Bridges on Bougainville
Coastal Trunk Road**

Name of Community Coordination Committee: Pukarobi-1 C.C.C

Bridge Name: Pukarobi-1

Date: 10/7/08

Time: 14.15 - 14.15

Venue: PUKAROB1 1 BRIDGE

(1) ABG

	Name	Post	Signature
1	Mr. Simeon ITAMAI	DTS(ABG), Engineer	<i>[Signature]</i>
2	Mr. Raphael WANE	DOW	<i>[Signature]</i>
3			

(2) C.C.C.

	Name	Clan/Group/Community	Signature
1	JOHN ROVE	KOVIA BRIDGE CHAIR	<i>[Signature]</i>
2	BR JOHN MARAMA	MABULI HIGH SCHOOL	<i>[Signature]</i>
3	FR MICKEL BOVA	MINDORU SCHOOL	<i>[Signature]</i>
4	JOHN MARIU	TAMARA VILLAGE	<i>[Signature]</i>
5	EMANO CRU	YOSAK REP	<i>[Signature]</i>
6	PER SITAKA	CELE CHAIR	<i>[Signature]</i>
7	VINIKAS KERO	WOMAN REP	<i>[Signature]</i>
8	MATA KIRAU	UNIDENTIFIED REP	<i>[Signature]</i>
9	PAUL PAKOPE	LIVAKO CHAIR	<i>[Signature]</i>
10	PIO MESA	KASIA CHAIR	<i>[Signature]</i>
11	JOHN KAMAU	TAMARA CHAIR	<i>[Signature]</i>
12	MAROUS FILIP	ODORO CHAIR	<i>[Signature]</i>
13	JOHN KIRAU	POPONDO CHAIR	<i>[Signature]</i>
14	ALONS UAKU	TAMARA VILLAGE	<i>[Signature]</i>
15	SUNIA SAM	POLICE REP	<i>[Signature]</i>



Summary of Explanation regarding Environmental and Social Impacts

I Roles and Responsibility

1. All participants of this meeting should try to let all other local people understand the importance of the bridge construction and cooperate with consultants and contractors.
2. When a problem causes between consultant/contractor and local people, CCC members should hold meeting(s) and find out an effective solution in continuous communication with ABG and DOW.

II Predicted Impacts

3. Some portions of customary land will need to be acquired as a part of access road for the bridge although the portions are limited to some of surrounding area of the bridge. Additionally some of areas on customary lands will need to be used temporarily as construction yards.
4. Access to the river water at the bridge site will be limited during a bridge construction. Additionally it is predicted that water usage for drinking, cooking, bathing, washing clothes & plates and fishing may be limited at the down stream of the construction site due to a turbidity caused by earth works. Hence users who are using river water may have to shift to the upstream.



AUTONOMOUS BOUGAINVILLE GOVERNMENT DIVISION OF TECHNICAL SERVICES

THE PROJECT FOR CONSTRUCTION OF BRIDGES OF ON BOUGAINVILLE COASTAL TRUNK ROAD (Creepers Bridge)

MEMORANDUM OF AGREEMENT

Objectives

This Memorandum Of Agreement (hereinafter referred to as **MOA**) has been signed between the Autonomous Bougainville Government (hereinafter referred to as **ABG**), the Division of Lands and Physical Planning of ABG (hereinafter referred to as **DLPP(ABG)**), the Division of Technical Services of ABG (hereinafter referred to as **DTS(ABG)**), the Division of Law of ABG (hereinafter referred to as **DOL(ABG)**), the Department of Lands and Physical Planning of PNG (hereinafter referred to as **DLPP**), the Department of Works of PNG (hereinafter referred to as **DOW**) all representing the State or National Government and villagers and relevant Local Clans comprising Community Coordination Committee (hereinafter referred to as **CCC**) for the smooth implementation of the following project inclusive of Creepers Bridge Construction.

Outline of the Project

Reconstruction of 15 bridges/ culvert including Creepers Bridge planned at the same location of the original bridges. The Project is expected to be implemented by the Grant Aid from Japanese Government. This MOA is prerequisite condition to get commitment from Japanese Government for the implementation of the Project. The Project will be started in accordance with the tentative schedule after the agreement between Papua New Guinea and Japanese Government.

Objectives of the 2nd Stakeholder Meetings

Following explanation and discussion will be carried out in the 2nd stakeholder meetings.

- Explanation of the Project Outlines and Expected Schedule in the Future
- Explanation of Predicted Positive and Negative Impacts
- Explanation of Construction Area and Right of way for National Road (on-site)
- Exchange Opinions
- Signing of **MOA** (Memorandum Of Agreement)

Agreement

We (whose name appear on the next page and the attendance list), understand above description and agree that this project will be implemented without any unnecessary interruptions to the contractor due to such factors as land disputes, crop compensation, gravel royalties, employment, provision of social services, or similar. We agree that if any such issue arises, those issues shall be immediately brought to the attention of relevant agencies or Government Department such as **DTS(ABG)**, **DLPP(ABG)**, Police, etc, to resolve. We further agreed that the **CCC** will ensure that members of our respective clans & settlement are made aware of this **MOA** and that any breach of this **MOA** will be referred to appropriate Law Enforcement Agencies.

We acknowledge that we represent our respective clans and communities and hereby agree and undertake to abide by the above Agreement. And as a sign of our agreement and consent have caused our signature to be signed below on the date shown.

Date: 11 / 07 / 2008



Raymond MASONO
Acting Chief Administrator
Autonomous Bougainville Government

Andrew DOVARO
Chief Executive Officer
Division of Lands and Physical Planning
Autonomous Bougainville Government

John KOLAN
Administration Chief Executive Officer
Division of Technical Services
Autonomous Bougainville Government

Chris SIRIOSI
Chief Executive Officer
Division of Law
Autonomous Bougainville Government

Jacob WAFFINDUO
Manager Customary Land
Department of Lands and Physical Planning
PNG

Eric SIKAM
First Assistant Secretary (Technical Services)
Department of Works
PNG



**The Second Stakeholder Meeting Attendance List
For
The Basic Design Study on the Project for Construction of Bridges on Bougainville
Coastal Trunk Road**

Name of Community Coordination Committee: Creepers C.C.C

Bridge Name: Creepers

Date: 11/7/08

Time: 8.00 - 8.20

Venue: Creepers Bridge

(1) ABG

	Name	Post	Signature
1	Mr. Simeon ITAMAI	DTS(ABG), Engineer	<i>[Signature]</i>
2	Mr. Raphael WANE	DOW	
3			

(2) C.C.C.

	Name	Clan/Group/Community	Signature
1	JOHN AIVE	KAVIA BOTOVA CLAN	<i>[Signature]</i>
2	BR JOHN MABAMO	MARAI HIGH SCHOOL	<i>[Signature]</i>
3	FR MICHAEL BORA	MINISTRY SIKI	<i>[Signature]</i>
4	ONAS CRIS	YOUTH REP	<i>[Signature]</i>
5	JEHAL MARI	TADARA VILLAGES	<i>[Signature]</i>
6	PIKA SUTAKA	ENDIRE CLAN	<i>[Signature]</i>
7	VIVIKWAISOND	WOMEN REP	<i>[Signature]</i>
8	MATA KILIAN	WOMEN REP	<i>[Signature]</i>
9	JOHN KONDI	TABOU CLAN	<i>[Signature]</i>
10	LUKO KUPA	YOUTH REP	<i>[Signature]</i>
11	PLO ANISKO	KAVIA CLAN	<i>[Signature]</i>
12	MATA ARIZE	WOMEN REP	<i>[Signature]</i>
13			
14			
15			



Annex

Summary of Explanation regarding Environmental and Social Impacts

I Roles and Responsibility

1. All participants of this meeting should try to let all other local people understand the importance of the bridge construction and cooperate with consultants and contractors.
2. When a problem causes between consultant/contractor and local people, CCC members should hold meeting(s) and find out an effective solution in continuous communication with ABG and DOW.

II Predicted Impacts

3. Some portions of customary land will need to be acquired as a part of access road for the bridge although the portions are limited to some of surrounding area of the bridge. Additionally some of areas on customary lands will need to be used temporarily as construction yards.
4. Access to the river water at the bridge site will be limited during a bridge construction. Additionally it is predicted that water usage for drinking, cooking, bathing, washing clothes & plates and fishing may be limited at the down stream of the construction site due to a turbidity caused by earth works. Hence users who are using river water may have to shift to the upstream.



AUTONOMOUS BOUGAINVILLE GOVERNMENT DIVISION OF TECHNICAL SERVICES

THE PROJECT FOR CONSTRUCTION OF BRIDGES OF ON BOUGAINVILLE COASTAL TRUNK ROAD

(Ratavi Bridge)

MEMORANDUM OF AGREEMENT

Objectives

This Memorandum Of Agreement (hereinafter referred to as **MOA**) has been signed between the Autonomous Bougainville Government (hereinafter referred to as **ABG**), the Division of Lands and Physical Planning of ABG (hereinafter referred to as **DLPP(ABG)**), the Division of Technical Services of ABG (hereinafter referred to as **DTS(ABG)**), the Division of Law of ABG (hereinafter referred to as **DOL(ABG)**), the Department of Lands and Physical Planning of PNG (hereinafter referred to as **DLPP**), the Department of Works of PNG (hereinafter referred to as **DOW**) all representing the State or National Government and villagers and relevant Local Clans comprising Community Coordination Committee (hereinafter referred to as **CCC**) for the smooth implementation of the following project inclusive of Ratavi Bridge Construction.

Outline of the Project

Reconstruction of 15 bridges/ culvert including Ratavi Bridge planned at the same location of the original bridges. The Project is expected to be implemented by the Grant Aid from Japanese Government. This MOA is prerequisite condition to get commitment from Japanese Government for the implementation of the Project. The Project will be started in accordance with the tentative schedule after the agreement between Papua New Guinea and Japanese Government.

Objectives of the 2nd Stakeholder Meetings

Following explanation and discussion will be carried out in the 2nd stakeholder meetings.

- Explanation of the Project Outlines and Expected Schedule in the Future
- Explanation of Predicted Positive and Negative Impacts
- Explanation of Construction Area and Right of way for National Road (on-site)
- Exchange Opinions
- Signing of **MOA** (Memorandum Of Agreement)

Agreement

We (whose name appear on the next page and the attendance list), understand above description and agree that this project will be implemented without any unnecessary interruptions to the contractor due to such factors as land disputes, crop compensation, gravel royalties, employment, provision of social services, or similar. We agree that if any such issue arises, those issues shall be immediately brought to the attention of relevant agencies or Government Department such as **DTS(ABG)**, **DLPP(ABG)**, Police, etc, to resolve. We further agreed that the **CCC** will ensure that members of our respective clans & settlement are made aware of this **MOA** and that any breach of this **MOA** will be referred to appropriate Law Enforcement Agencies.

We acknowledge that we represent our respective clans and communities and hereby agree and undertake to abide by the above Agreement. And as a sign of our agreement and consent have caused our signature to be signed below on the date shown.

Date: 11 / 02 / 2008



Raymond MASONO
Acting Chief Administrator
Autonomous Bougainville Government

Andrew DOVARO
Chief Executive Officer
Division of Lands and Physical Planning
Autonomous Bougainville Government

John KOLAN
Administration Chief Executive Officer
Division of Technical Services
Autonomous Bougainville Government

Chris SIRIOSI
Chief Executive Officer
Division of Law
Autonomous Bougainville Government

Jacob WAFFINDUO
Manager Customary Land
Department of Lands and Physical Planning
PNG

Eric SIKAM
First Assistant Secretary (Technical Services)
Department of Works
PNG



**The Second Stakeholder Meeting Attendance List
For
The Basic Design Study on the Project for Construction of Bridges on Bougainville
Coastal Trunk Road**

Name of Community Coordination Committee: Ratavi C.C.C

Bridge Name: Ratavi

Date: 11/7/08

Time: 9.00 - 9.15

Venue: RATAVI BRIDGE

(1) ABG

	Name	Post	Signature
1	Mr. Simeon ITAMAI	DTS(ABG), Engineer	<i>[Signature]</i>
2	Mr. Raphael WANE	DOW	<i>[Signature]</i>
3			

(2) C.C.C.

	Name	Clan/Group/Community	Signature
1	JOHN ARE	KAVIA BATOVA Clean	<i>[Signature]</i>
2	Br- John MARANO	MABARI High School	<i>[Signature]</i>
3	Fr Michael BOLA	MUNICIPALITY School	<i>[Signature]</i>
4	SAM KAPA	C.OE TERA	<i>[Signature]</i>
5	OROLO CRIS	Youth Rep	<i>[Signature]</i>
6	John MARI	TARA VILES	<i>[Signature]</i>
7	PEKA SIUTAKA	OVOKE Clean	<i>[Signature]</i>
8	VIVIANA KOVO	WOMANS Rep	<i>[Signature]</i>
9	TIMOTHY SAVIRA	SIOS WOKER	<i>[Signature]</i>
10	John BIURA	Community youth	<i>[Signature]</i>
11	John KAPAI	VILES police	<i>[Signature]</i>
12	RAPHAEL GERETO	OVOKE Clean	<i>[Signature]</i>
13	LUKE KIPA	Youth Rep	<i>[Signature]</i>
14	SINIA SAM	Police Rep	<i>[Signature]</i>
15	DOROTHY L.	SISIO Clean	<i>[Signature]</i>

PHILIP TORUPA

KAVIA Clean

P-TI

LUTAI THOMAS

OVOKE Clean

THOMAS



Summary of Explanation regarding Environmental and Social Impacts

I Roles and Responsibility

1. All participants of this meeting should try to let all other local people understand the importance of the bridge construction and cooperate with consultants and contractors.
2. When a problem causes between consultant/contractor and local people, CCC members should hold meeting(s) and find out an effective solution in continuous communication with ABG and DOW.

II Predicted Impacts

3. Some portions of customary land will need to be acquired as a part of access road for the bridge although the portions are limited to some of surrounding area of the bridge. Additionally some of areas on customary lands will need to be used temporarily as construction yards.
4. Access to the river water at the bridge site will be limited during a bridge construction. Additionally it is predicted that water usage for drinking, cooking, bathing, washing clothes & plates and fishing may be limited at the down stream of the construction site due to a turbidity caused by earth works. Hence users who are using river water may have to shift to the upstream.



AUTONOMOUS BOUGAINVILLE GOVERNMENT DIVISION OF TECHNICAL SERVICES

THE PROJECT FOR CONSTRUCTION OF BRIDGES OF ON BOUGAINVILLE COASTAL TRUNK ROAD (Iraka Bridge)

MEMORANDUM OF AGREEMENT

Objectives

This Memorandum Of Agreement (hereinafter referred to as **MOA**) has been signed between the Autonomous Bougainville Government (hereinafter referred to as **ABG**), the Division of Lands and Physical Planning of ABG (hereinafter referred to as **DLPP(ABG)**), the Division of Technical Services of ABG (hereinafter referred to as **DTS(ABG)**), the Division of Law of ABG (hereinafter referred to as **DOL(ABG)**), the Department of Lands and Physical Planning of PNG (hereinafter referred to as **DLPP**), the Department of Works of PNG (hereinafter referred to as **DOW**) all representing the State or National Government and villagers and relevant Local Clans comprising Community Coordination Committee (hereinafter referred to as **CCC**) for the smooth implementation of the following project inclusive of Iraka Bridge Construction.

Outline of the Project

Reconstruction of 15 bridges/ culvert including Iraka Bridge planned at the same location of the original bridges. The Project is expected to be implemented by the Grant Aid from Japanese Government. This MOA is prerequisite condition to get commitment from Japanese Government for the implementation of the Project. The Project will be started in accordance with the tentative schedule after the agreement between Papua New Guinea and Japanese Government.

Objectives of the 2nd Stakeholder Meetings

Following explanation and discussion will be carried out in the 2nd stakeholder meetings.

- Explanation of the Project Outlines and Expected Schedule in the Future
- Explanation of Predicted Positive and Negative Impacts
- Explanation of Construction Area and Right of way for National Road (on-site)
- Exchange Opinions
- Signing of **MOA** (Memorandum Of Agreement)

Agreement

We (whose name appear on the next page and the attendance list), understand above description and agree that this project will be implemented without any unnecessary interruptions to the contractor due to such factors as land disputes, crop compensation, gravel royalties, employment, provision of social services, or similar. We agree that if any such issue arises, those issues shall be immediately brought to the attention of relevant agencies or Government Department such as **DTS(ABG)**, **DLPP(ABG)**, Police, etc, to resolve. We further agreed that the **CCC** will ensure that members of our respective clans & settlement are made aware of this **MOA** and that any breach of this **MOA** will be referred to appropriate Law Enforcement Agencies.

We acknowledge that we represent our respective clans and communities and hereby agree and undertake to abide by the above Agreement. And as a sign of our agreement and consent have caused our signature to be signed below on the date shown.

Date: 11 / 02 / 2008



Raymond MASONO
Acting Chief Administrator
Autonomous Bougainville Government

Andrew DOVARO
Chief Executive Officer
Division of Lands and Physical Planning
Autonomous Bougainville Government

John KOLAN
Administration Chief Executive Officer
Division of Technical Services
Autonomous Bougainville Government

Chris SRIOSI
Chief Executive Officer
Division of Law
Autonomous Bougainville Government

for

Jacob WAFFINDUO
Manager Customary Land
Department of Lands and Physical Planning
PNG

Eric SIKAM
First Assistant Secretary (Technical Services)
Department of Works
PNG



**The Second Stakeholder Meeting Attendance List
For
The Basic Design Study on the Project for Construction of Bridges on Bougainville
Coastal Trunk Road**

Name of Community Coordination Committee: Iraka C.C.C

Bridge Name: Iraka

Date: 11/7/08

Time: 9.30 - 9.50

Venue: IRAKA BRIDGES

(1) ABG

	Name	Post	Signature
1	Mr. Simeon ITAMAI	DTS(ABG), Engineer	<i>[Signature]</i>
2	Mr. Raphael WANE	DOW	
3			

(2) C.C.C.

	Name	Clan/Group/Community	Signature
1	RAPHAEL GERATO	Community rep	<i>[Signature]</i>
2	PAUL REVIRE	UVBIO Clean	<i>[Signature]</i>
3	TIMOTHY TORUATA	OROLO Clean	<i>[Signature]</i>
4	ANTON BOKERA	falamont Chief	<i>[Signature]</i>
5	DORETY LALANI	SISIO Clean Rep	<i>[Signature]</i>
6	MARIA MOIRU	WOMENS rep	<i>[Signature]</i>
7	John RIRAU	VATOVA Clean	<i>[Signature]</i>
8	PHILIP KURUA	KAVIA Clean	<i>[Signature]</i>
9	TIMOTHY SAVIZI	CHURCH rep	<i>[Signature]</i>
10	AS MICHAEL NAMBO	A.O.G. Church rep	<i>[Signature]</i>
11	John BURKA	CHAMMON	<i>[Signature]</i>
12	DAVID KONE	TEANA Sub & P.N.G	<i>[Signature]</i>
13	LUKE KIPA	I.P.P.N.G CHAMMON	<i>[Signature]</i>
14	POL RIRETA	OVOKI Clean rep	<i>[Signature]</i>
15	MARTIN K-	RAKAI Sub P.F.C	<i>[Signature]</i>



Annex

Summary of Explanation regarding Environmental and Social Impacts

I Roles and Responsibility

1. All participants of this meeting should try to let all other local people understand the importance of the bridge construction and cooperate with consultants and contractors.
2. When a problem causes between consultant/contractor and local people, CCC members should hold meeting(s) and find out an effective solution in continuous communication with ABG and DOW.

II Predicted Impacts

3. Some portions of customary land will need to be acquired as a part of access road for the bridge although the portions are limited to some of surrounding area of the bridge. Additionally some of areas on customary lands will need to be used temporarily as construction yards.
4. Access to the river water at the bridge site will be limited during a bridge construction. Additionally it is predicted that water usage for drinking, cooking, bathing, washing clothes & plates and fishing may be limited at the down stream of the construction site due to a turbidity caused by earth works. Hence users who are using river water may have to shift to the upstream.



AUTONOMOUS BOUGAINVILLE GOVERNMENT DIVISION OF TECHNICAL SERVICES

THE PROJECT FOR CONSTRUCTION OF BRIDGES OF ON BOUGAINVILLE COASTAL TRUNK ROAD (Korova Bridge)

MEMORANDUM OF AGREEMENT

Objectives

This Memorandum Of Agreement (hereinafter referred to as **MOA**) has been signed between the Autonomous Bougainville Government (hereinafter referred to as **ABG**), the Division of Lands and Physical Planning of ABG (hereinafter referred to as **DLPP(ABG)**), the Division of Technical Services of ABG (hereinafter referred to as **DTS(ABG)**), the Division of Law of ABG (hereinafter referred to as **DOL(ABG)**), the Department of Lands and Physical Planning of PNG (hereinafter referred to as **DLPP**), the Department of Works of PNG (hereinafter referred to as **DOW**) all representing the State or National Government and villagers and relevant Local Clans comprising Community Coordination Committee (hereinafter referred to as **CCC**) for the smooth implementation of the following project inclusive of Korova Bridge Construction.

Outline of the Project

Reconstruction of 15 bridges/ culvert including Korova Bridge planned at the same location of the original bridges. The Project is expected to be implemented by the Grant Aid from Japanese Government. This MOA is prerequisite condition to get commitment from Japanese Government for the implementation of the Project. The Project will be started in accordance with the tentative schedule after the agreement between Papua New Guinea and Japanese Government.

Objectives of the 2nd Stakeholder Meetings

Following explanation and discussion will be carried out in the 2nd stakeholder meetings.

- Explanation of the Project Outlines and Expected Schedule in the Future
- Explanation of Predicted Positive and Negative Impacts
- Explanation of Construction Area and Right of way for National Road (on-site)
- Exchange Opinions
- Signing of **MOA** (Memorandum Of Agreement)

Agreement

We (whose name appear on the next page and the attendance list), understand above description and agree that this project will be implemented without any unnecessary interruptions to the contractor due to such factors as land disputes, crop compensation, gravel royalties, employment, provision of social services, or similar. We agree that if any such issue arises, those issues shall be immediately brought to the attention of relevant agencies or Government Department such as **DTS(ABG)**, **DLPP(ABG)**, Police, etc, to resolve. We further agreed that the **CCC** will ensure that members of our respective clans & settlement are made aware of this **MOA** and that any breach of this **MOA** will be referred to appropriate Law Enforcement Agencies.

We acknowledge that we represent our respective clans and communities and hereby agree and undertake to abide by the above Agreement. And as a sign of our agreement and consent have caused our signature to be signed below on the date shown.

Date: 11 / 07 / 2008



Raymond MASONO
Acting Chief Administrator
Autonomous Bougainville Government

Andrew DOVARO
Chief Executive Officer
Division of Lands and Physical Planning
Autonomous Bougainville Government

John KOLAN
Administration Chief Executive Officer
Division of Technical Services
Autonomous Bougainville Government

Chris SIRIOSI
Chief Executive Officer
Division of Law
Autonomous Bougainville Government

Jacob WAFFINDUO
Manager Customary Land
Department of Lands and Physical Planning
PNG

Eric SIKAM
First Assistant Secretary (Technical Services)
Department of Works
PNG



**The Second Stakeholder Meeting Attendance List
For
The Basic Design Study on the Project for Construction of Bridges on Bougainville
Coastal Trunk Road**

Name of Community Coordination Committee: Koreva C.C.C (Koreva)

Bridge Name: Koreva (Koreva)

Date: 11/7/08

Time: 10.25 - 10.45

Venue: KOREVA BRIDGE

(1) ABG

	Name	Post	Signature
1	Mr. Simeon ITAMAI	DTS(ABG), Engineer	<i>[Signature]</i>
2	Mr. Raphael WANE	DOW	
3			

(2) C.C.C.

	Name	Clan/Group/Community	Signature
1	RAPHAEL GERATO	COMMUNITY REP	<i>[Signature]</i>
2	PAUL REVIRE	UVAIO CLAN	<i>[Signature]</i>
3	ANTON BOKIRA	PARAMOUNT CHIEF	<i>[Signature]</i>
4	JOHN BIURA	SISIO CLAN	<i>[Signature]</i>
5	PAULA SAMARIO	BUKE CLAN	<i>[Signature]</i>
6	LUKE KIPPA	BOM CHAIRMAN	<i>[Signature]</i>
7	VIARIA MOIRU	WOMENS REP	<i>[Signature]</i>
8	TIMOTHY GOROVATO	YOUTH REP	<i>[Signature]</i>
9	TIMOTHY TORUETA	BURO CLAN	<i>[Signature]</i>
10	JOHN RIRAU	LEMA MILICIA	<i>[Signature]</i>
11	ANNA POLA SAMARIO	OLUKE CLAN	<i>[Signature]</i>
12	PHILIP KERATA	VAVA CLAN	<i>[Signature]</i>
13			
14			
15			



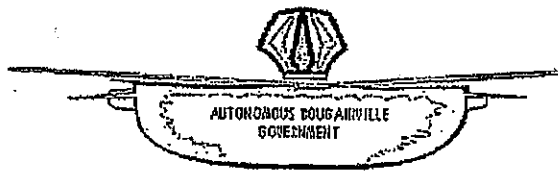
Summary of Explanation regarding Environmental and Social Impacts

I Roles and Responsibility

1. All participants of this meeting should try to let all other local people understand the importance of the bridge construction and cooperate with consultants and contractors.
2. When a problem causes between consultant/contractor and local people, CCC members should hold meeting(s) and find out an effective solution in continuous communication with ABG and DOW.

II Predicted Impacts

3. Some portions of customary land will need to be acquired as a part of access road for the bridge although the portions are limited to some of surrounding area of the bridge. Additionally some of areas on customary lands will need to be used temporarily as construction yards.
4. Access to the river water at the bridge site will be limited during a bridge construction. Additionally it is predicted that water usage for drinking, cooking, bathing, washing clothes & plates and fishing may be limited at the down stream of the construction site due to a turbidity caused by earth works. Hence users who are using river water may have to shift to the upstream.



AUTONOMOUS BOUGAINVILLE GOVERNMENT DIVISION OF TECHNICAL SERVICES

THE PROJECT FOR CONSTRUCTION OF BRIDGES OF ON BOUGAINVILLE COASTAL TRUNK ROAD (Malas Bridge)

MEMORANDUM OF AGREEMENT

Objectives

This Memorandum Of Agreement (hereinafter referred to as **MOA**) has been signed between the Autonomous Bougainville Government (hereinafter referred to as **ABG**), the Division of Lands and Physical Planning of ABG (hereinafter referred to as **DLPP(ABG)**), the Division of Technical Services of ABG (hereinafter referred to as **DTS(ABG)**), the Division of Law of ABG (hereinafter referred to as **DOL(ABG)**), the Department of Lands and Physical Planning of PNG (hereinafter referred to as **DLPP**), the Department of Works of PNG (hereinafter referred to as **DOW**) all representing the State or National Government and villagers and relevant Local Clans comprising Community Coordination Committee (hereinafter referred to as **CCC**) for the smooth implementation of the following project inclusive of Malas Bridge Construction.

Outline of the Project

Reconstruction of 15 bridges/ culvert including Malas Bridge planned at the same location of the original bridges. The Project is expected to be implemented by the Grant Aid from Japanese Government. This MOA is prerequisite condition to get commitment from Japanese Government for the implementation of the Project. The Project will be started in accordance with the tentative schedule after the agreement between Papua New Guinea and Japanese Government.

Objectives of the 2nd Stakeholder Meetings

Following explanation and discussion will be carried out in the 2nd stakeholder meetings.

- Explanation of the Project Outlines and Expected Schedule in the Future
- Explanation of Predicted Positive and Negative Impacts
- Explanation of Construction Area and Right of way for National Road (on-site)
- Exchange Opinions
- Signing of **MOA** (Memorandum Of Agreement)

Agreement

We (whose name appear on the next page and the attendance list), understand above description and agree that this project will be implemented without any unnecessary interruptions to the contractor due to such factors as land disputes, crop compensation, gravel royalties, employment, provision of social services, or similar. We agree that if any such issue arises, those issues shall be immediately brought to the attention of relevant agencies or Government Department such as **DTS(ABG)**, **DLPP(ABG)**, Police, etc, to resolve. We further agreed that the **CCC** will ensure that members of our respective clans & settlement are made aware of this **MOA** and that any breach of this **MOA** will be referred to appropriate Law Enforcement Agencies.

We acknowledge that we represent our respective clans and communities and hereby agree and undertake to abide by the above Agreement. And as a sign of our agreement and consent have caused our signature to be signed below on the date shown.

Date: 11 / 07 / 2008



Raymond MASONO
Acting Chief Administrator
Autonomous Bougainville Government

Andrew DOVARO
Chief Executive Officer
Division of Lands and Physical Planning
Autonomous Bougainville Government

John KOLAN
Administration Chief Executive Officer
Division of Technical Services
Autonomous Bougainville Government

Chris SIRIOSI
Chief Executive Officer
Division of Law
Autonomous Bougainville Government

for

Jacob WAFFINDUO
Manager Customary Land
Department of Lands and Physical Planning
PNG

Eric SIKAM
First Assistant Secretary (Technical Services)
Department of Works
PNG



The Second Stakeholder Meeting Attendance List
For
The Basic Design Study on the Project for Construction of Bridges on Bougainville Coastal Trunk Road

Name of Community Coordination Committee: Malas C.C.C

Bridge Name: Malas

Date: 11/7/08

Time: 12.50 - 12.30

Venue: Malas Bridge

(1) ABG

	Name	Post	Signature
1	Mr. Simeon ITAMAI	DTS(ABG), Engineer	<i>[Signature]</i>
2	Mr. Raphael WANE	DOW	<i>[Signature]</i>
3			

(2) C.C.C.

	Name	Clan/Group/Community	Signature
1	ANDREW ABEA	C.O.E member	<i>[Signature]</i>
2	STEVEN KORUS	COMMUNITY POLICE	<i>[Signature]</i>
3	DANIEL KEAVIRI	CLAN CHIEF	<i>[Signature]</i>
4	STANLEY DEKU	YOUTH RLP	<i>[Signature]</i>
5	LEO GEARE	CHURCH REP	<i>[Signature]</i>
6	ANNIE KAPEMATE	WOMEN'S REP	<i>[Signature]</i>
7	HELMAN TAUKORO	YOUTH REP	<i>[Signature]</i>
8	KEVIN MOKO	CLAN CHIEF	<i>[Signature]</i>
9	LENNI WALE	PLACEMENT CHIEF	<i>[Signature]</i>
10	THOMAS HONE	CLAN CHIEF	<i>[Signature]</i>
11	EXSAVIER EPA	CHIEF	<i>[Signature]</i>
12	ROBERT KAMUMIO	CHIEF	<i>[Signature]</i>
13	PAULINE EMUVA	CHIEF	<i>[Signature]</i>
14	FRANCIS WABO	CHIEF	<i>[Signature]</i>
15	CLEMENT UMETMOKI	CHIEF	<i>[Signature]</i>



Summary of Explanation regarding Environmental and Social Impacts

I Roles and Responsibility

1. All participants of this meeting should try to let all other local people understand the importance of the bridge construction and cooperate with consultants and contractors.
2. When a problem causes between consultant/contractor and local people, CCC members should hold meeting(s) and find out an effective solution in continuous communication with ABG and DOW.

II Predicted Impacts

3. Some portions of customary land will need to be acquired as a part of access road for the bridge although the portions are limited to some of surrounding area of the bridge. Additionally some of areas on customary lands will need to be used temporarily as construction yards.
4. Access to the river water at the bridge site will be limited during a bridge construction. Additionally it is predicted that water usage for drinking, cooking, bathing, washing clothes & plates and fishing may be limited at the down stream of the construction site due to a turbidity caused by earth works. Hence users who are using river water may have to shift to the upstream.



AUTONOMOUS BOUGAINVILLE GOVERNMENT DIVISION OF TECHNICAL SERVICES

THE PROJECT FOR CONSTRUCTION OF BRIDGES OF ON BOUGAINVILLE COASTAL TRUNK ROAD (Ururva Bridge)

MEMORANDUM OF AGREEMENT

Objectives

This Memorandum Of Agreement (hereinafter referred to as **MOA**) has been signed between the Autonomous Bougainville Government (hereinafter referred to as **ABG**), the Division of Lands and Physical Planning of ABG (hereinafter referred to as **DLPP(ABG)**), the Division of Technical Services of ABG (hereinafter referred to as **DTS(ABG)**), the Division of Law of ABG (hereinafter referred to as **DOL(ABG)**), the Department of Lands and Physical Planning of PNG (hereinafter referred to as **DLPP**), the Department of Works of PNG (hereinafter referred to as **DOW**) all representing the State or National Government and villagers and relevant Local Clans comprising Community Coordination Committee (hereinafter referred to as **CCC**) for the smooth implementation of the following project inclusive of Ururva Bridge Construction.

Outline of the Project

Reconstruction of 15 bridges/ culvert including Ururva Bridge planned at the same location of the original bridges. The Project is expected to be implemented by the Grant Aid from Japanese Government. This MOA is prerequisite condition to get commitment from Japanese Government for the implementation of the Project. The Project will be started in accordance with the tentative schedule after the agreement between Papua New Guinea and Japanese Government.

Objectives of the 2nd Stakeholder Meetings

Following explanation and discussion will be carried out in the 2nd stakeholder meetings.

- Explanation of the Project Outlines and Expected Schedule in the Future
- Explanation of Predicted Positive and Negative Impacts
- Explanation of Construction Area and Right of way for National Road (on-site)
- Exchange Opinions
- Signing of **MOA** (Memorandum Of Agreement)

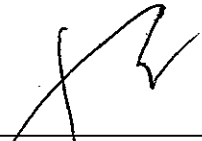
Agreement

We (whose name appear on the next page and the attendance list), understand above description and agree that this project will be implemented without any unnecessary interruptions to the contractor due to such factors as land disputes, crop compensation, gravel royalties, employment, provision of social services, or similar. We agree that if any such issue arises, those issues shall be immediately brought to the attention of relevant agencies or Government Department such as **DTS(ABG)**, **DLPP(ABG)**, Police, etc, to resolve. We further agreed that the **CCC** will ensure that members of our respective clans & settlement are made aware of this **MOA** and that any breach of this **MOA** will be referred to appropriate Law Enforcement Agencies.


We acknowledge that we represent our respective clans and communities and hereby agree and undertake to abide by the above Agreement. And as a sign of our agreement and consent have caused our signature to be signed below on the date shown.

Date: 23rd / June / 2008







Raymond MASONO
Acting Chief Administrator
Autonomous Bougainville Government



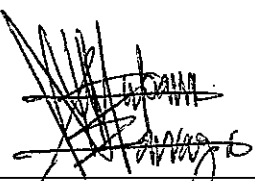
Andrew DOVARO
Chief Executive Officer
Division of Lands and Physical Planning
Autonomous Bougainville Government




John KOLAN
Administration Chief Executive Officer
Division of Technical Services
Autonomous Bougainville Government



Chris SIRIOSI
Chief Executive Officer
Division of Law
Autonomous Bougainville Government



Jacob WAFFINDUO
Manager Customary Land
Department of Lands and Physical Planning
PNG



Eric SIKAM
First Assistant Secretary (Technical Services)
Department of Works
PNG



**The Second Stakeholder Meeting Attendance List
For
The Basic Design Study on the Project for Construction of Bridges on Bougainville
Coastal Trunk Road**

Name of Community Coordination Committee: Ururua C.C.C

Bridge Name: Ururua

Date: 23rd June 2008

Time: 10:10 - 10:40

Venue: Ururua Bridge

(1) ABG

	Name	Post	Signature
1	Mr. Simeon ITAMAI	DTS(ABG), Engineer	<i>[Signature]</i>
2	Mr. Raphael WANE	DOW	<i>[Signature]</i>
3	Mr. Will. an Aigin	DOW	<i>[Signature]</i>

(2) C.C.C.

	Name	Clan/Group/Community	Signature
1	ALEX. PEOAPE	OVUVEO / Chife	<i>[Signature]</i>
2	ROBERTH. SIRAOKETA	UNAYO	<i>[Signature]</i>
3	PUKUTO. TOVIS	BUIRAO	<i>[Signature]</i>
4	ABLE. REREVAIRI	APERERAVA	<i>[Signature]</i>
5	BIANIEL. SIVETUO	Chife	<i>[Signature]</i>
6	KENY. THOMAS	YOUTH LEADER	<i>[Signature]</i>
7	ROBIN. REREVAIRI	Comm. Leader	<i>[Signature]</i>
8	SOUL. REREVAIRI	Clear chife	<i>[Signature]</i>
9	TEBEO. ELIAPA	Clear chife	<i>[Signature]</i>
10	THOMAS. RAY	GROUP LEADER	<i>[Signature]</i>
11	GONNIE. NASEW	YOUTH LEADER	<i>[Signature]</i>
12			
13			
14			
15			

JICA study Team.

Hiroaki KUROK

Ryoichi Kawabe

[Handwritten signature]
11/12/08



Summary of Explanation regarding Environmental and Social Impacts

I Roles and Responsibility

1. All participants of this meeting should try to let all other local people understand the importance of the bridge construction and cooperate with consultants and contractors.
2. When a problem causes between consultant/contractor and local people, CCC members should hold meeting(s) and find out an effective solution in continuous communication with ABG and DOW.

II Predicted Impacts

3. Some portions of customary land will need to be acquired as a part of access road for the bridge although the portions are limited to some of surrounding area of the bridge. Additionally some of areas on customary lands will need to be used temporarily as construction yards.
4. Access to the river water at the bridge site will be limited during a bridge construction. Additionally it is predicted that water usage for drinking, cooking, bathing, washing clothes & plates and fishing may be limited at the down stream of the construction site due to a turbidity caused by earth works. Hence users who are using river water may have to shift to the upstream.



AUTONOMOUS BOUGAINVILLE GOVERNMENT DIVISION OF TECHNICAL SERVICES

THE PROJECT FOR CONSTRUCTION OF BRIDGES OF ON BOUGAINVILLE COASTAL TRUNK ROAD (Kaskrus Bridge)

MEMORANDUM OF AGREEMENT

Objectives

This Memorandum Of Agreement (hereinafter referred to as **MOA**) has been signed between the Autonomous Bougainville Government (hereinafter referred to as **ABG**), the Division of Lands and Physical Planning of ABG (hereinafter referred to as **DLPP(ABG)**), the Division of Technical Services of ABG (hereinafter referred to as **DTS(ABG)**), the Division of Law of ABG (hereinafter referred to as **DOL(ABG)**), the Department of Lands and Physical Planning of PNG (hereinafter referred to as **DLPP**), the Department of Works of PNG (hereinafter referred to as **DOW**) all representing the State or National Government and villagers and relevant Local Clans comprising Community Coordination Committee (hereinafter referred to as **CCC**) for the smooth implementation of the following project inclusive of Kaskrus Bridge Construction.

Outline of the Project

Reconstruction of 15 bridges/ culvert including Kaskrus Bridge planned at the same location of the original bridges. The Project is expected to be implemented by the Grant Aid from Japanese Government. This MOA is prerequisite condition to get commitment from Japanese Government for the implementation of the Project. The Project will be started in accordance with the tentative schedule after the agreement between Papua New Guinea and Japanese Government.

Objectives of the 2nd Stakeholder Meetings

Following explanation and discussion will be carried out in the 2nd stakeholder meetings.

- Explanation of the Project Outlines and Expected Schedule in the Future
- Explanation of Predicted Positive and Negative Impacts
- Explanation of Construction Area and Right of way for National Road (on-site)
- Exchange Opinions
- Signing of **MOA** (Memorandum Of Agreement)

Agreement

We (whose name appear on the next page and the attendance list), understand above description and agree that this project will be implemented without any unnecessary interruptions to the contractor due to such factors as land disputes, crop compensation, gravel royalties, employment, provision of social services, or similar. We agree that if any such issue arises, those issues shall be immediately brought to the attention of relevant agencies or Government Department such as **DTS(ABG)**, **DLPP(ABG)**, Police, etc, to resolve. We further agreed that the **CCC** will ensure that members of our respective clans & settlement are made aware of this **MOA** and that any breach of this **MOA** will be referred to appropriate Law Enforcement Agencies.

We acknowledge that we represent our respective clans and communities and hereby agree and undertake to abide by the above Agreement. And as a sign of our agreement and consent have caused our signature to be signed below on the date shown.

Date: 26 / 07 / 2008



Raymond MASONO
Acting Chief Administrator
Autonomous Bougainville Government

Andrew DOVARO
Chief Executive Officer
Division of Lands and Physical Planning
Autonomous Bougainville Government

John KOLAN
Administration Chief Executive Officer
Division of Technical Services
Autonomous Bougainville Government

Chris SIRIOSI
Chief Executive Officer
Division of Law
Autonomous Bougainville Government

fr

Jacob WAFFINDUO
Manager Customary Land
Department of Lands and Physical Planning
PNG

Eric SIKAM
First Assistant Secretary (Technical Services)
Department of Works
PNG



**The Second Stakeholder Meeting Attendance List
For
The Basic Design Study on the Project for Construction of Bridges on Bougainville
Coastal Trunk Road**

Name of Community Coordination Committee: Kaskrus C.C.C

Bridge Name: Kaskrus

Date: 26/7/08

Time: 10.30 - 10.50

Venue: Kaskrus Bridge

(1) ABG

	Name	Post	Signature
1	Mr. Simeon ITAMAI	DTS(ABG), Engineer	<i>[Signature]</i>
2	Mr. Raphael WANE	DOW	
3			

(2) C.C.C.

	Name	Clan/Group/Community	Signature
1	NORMAN PAPERS	STABUN CHAN	<i>[Signature]</i>
2	LAVINIA TOMORU	ISAPORU CHAN	<i>[Signature]</i>
3	JOHN MIKUAN	NORUO CHAN	<i>[Signature]</i>
4	VARBA CHILLEN	STABUN CHAN	<i>[Signature]</i>
5	ROPIN SIMIKA	KESBE WIFE	<i>[Signature]</i>
6	THOMAS T MICHA	KESBE WIFE	<i>[Signature]</i>
7	PATRICIA REVISH	NAKU CHAN	<i>[Signature]</i>
8	MASIK MASOU	FRONER	<i>[Signature]</i>
9	ANDREW MICHA	KEBATAU CHAN	<i>[Signature]</i>
10	JOE GORONATAPU	PASTOR	<i>[Signature]</i>
11	MICHA ROBORU	STABUN CHAN	<i>[Signature]</i>
12	ELIZABETH VIREO	SEORON CHAN	<i>[Signature]</i>
13	LOT KAKOBA	CHAN CHIEF	<i>[Signature]</i>
14	KORU KIKI	PASTOR	<i>[Signature]</i>
15	MICHA VIREO	SEORON CHAN	<i>[Signature]</i>



Summary of Explanation regarding Environmental and Social Impacts

I Roles and Responsibility

1. All participants of this meeting should try to let all other local people understand the importance of the bridge construction and cooperate with consultants and contractors.
2. When a problem causes between consultant/contractor and local people, CCC members should hold meeting(s) and find out an effective solution in continuous communication with ABG and DOW.

II Predicted Impacts

3. Some portions of customary land will need to be acquired as a part of access road for the bridge although the portions are limited to some of surrounding area of the bridge. Additionally some of areas on customary lands will need to be used temporarily as construction yards.
4. Access to the river water at the bridge site will be limited during a bridge construction. Additionally it is predicted that water usage for drinking, cooking, bathing, washing clothes & plates and fishing may be limited at the down stream of the construction site due to a turbidity caused by earth works. Hence users who are using river water may have to shift to the upstream.



AUTONOMOUS BOUGAINVILLE GOVERNMENT DIVISION OF TECHNICAL SERVICES

THE PROJECT FOR CONSTRUCTION OF BRIDGES OF ON BOUGAINVILLE COASTAL TRUNK ROAD (Rotaovei Bridge)

MEMORANDUM OF AGREEMENT

Objectives

This Memorandum Of Agreement (hereinafter referred to as **MOA**) has been signed between the Autonomous Bougainville Government (hereinafter referred to as **ABG**), the Division of Lands and Physical Planning of ABG (hereinafter referred to as **DLPP(ABG)**), the Division of Technical Services of ABG (hereinafter referred to as **DTS(ABG)**), the Division of Law of ABG (hereinafter referred to as **DOL(ABG)**), the Department of Lands and Physical Planning of PNG (hereinafter referred to as **DLPP**), the Department of Works of PNG (hereinafter referred to as **DOW**) all representing the State or National Government and villagers and relevant Local Clans comprising Community Coordination Committee (hereinafter referred to as **CCC**) for the smooth implementation of the following project inclusive of Rotaovei Bridge Construction.

Outline of the Project

Reconstruction of 15 bridges/ culvert including Rotaovei Bridge planned at the same location of the original bridges. The Project is expected to be implemented by the Grant Aid from Japanese Government. This MOA is prerequisite condition to get commitment from Japanese Government for the implementation of the Project. The Project will be started in accordance with the tentative schedule after the agreement between Papua New Guinea and Japanese Government.

Objectives of the 2nd Stakeholder Meetings

Following explanation and discussion will be carried out in the 2nd stakeholder meetings.

- Explanation of the Project Outlines and Expected Schedule in the Future
- Explanation of Predicted Positive and Negative Impacts
- Explanation of Construction Area and Right of way for National Road (on-site)
- Exchange Opinions
- Signing of **MOA** (Memorandum Of Agreement)

Agreement

We (whose name appear on the next page and the attendance list), understand above description and agree that this project will be implemented without any unnecessary interruptions to the contractor due to such factors as land disputes, crop compensation, gravel royalties, employment, provision of social services, or similar. We agree that if any such issue arises, those issues shall be immediately brought to the attention of relevant agencies or Government Department such as **DTS(ABG)**, **DLPP(ABG)**, Police, etc, to resolve. We further agreed that the **CCC** will ensure that members of our respective clans & settlement are made aware of this **MOA** and that any breach of this **MOA** will be referred to appropriate Law Enforcement Agencies.

We acknowledge that we represent our respective clans and communities and hereby agree and undertake to abide by the above Agreement. And as a sign of our agreement and consent have caused our signature to be signed below on the date shown.

Date: 26 / 09 / 2008



Raymond MASONO
Acting Chief Administrator
Autonomous Bougainville Government

Andrew DOVARO
Chief Executive Officer
Division of Lands and Physical Planning
Autonomous Bougainville Government

John KOLAN
Administration Chief Executive Officer
Division of Technical Services
Autonomous Bougainville Government

Chris STRIOSI
Chief Executive Officer
Division of Law
Autonomous Bougainville Government

fr

Jacob WAFFINDUO
Manager Customary Land
Department of Lands and Physical Planning
PNG

Eric SIKAM
First Assistant Secretary (Technical Services)
Department of Works
PNG



**The Second Stakeholder Meeting Attendance List
For
The Basic Design Study on the Project for Construction of Bridges on Bougainville
Coastal Trunk Road**

Name of Community Coordination Committee: Rotaovei C.C.C

Bridge Name: Rotaovei

Date: 26/7/08

Time: 11.25 - 11.45

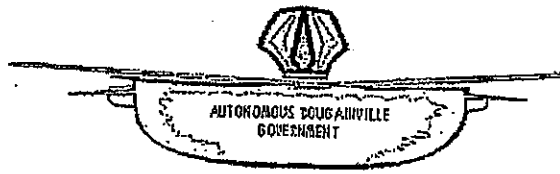
Venue: ROTAOVEI BOUNDE

(1) ABG

	Name	Post	Signature
1	Mr. Simeon ITAMAI	DTS(ABG), Engineer	<i>[Signature]</i>
2	Mr. Raphael WANE	DOW	
3			

(2) C.C.C.

	Name	Clan/Group/Community	Signature
1	RONSEY SINIA	MATAKIA CHIEF	<i>[Signature]</i>
2	JOHN T. OPOI	SEC TRIP LEADER	<i>[Signature]</i>
3	NICK BETHO	STARBU CHIEF	<i>[Signature]</i>
4	JACKY KAE	BEKON UKI CHIEF	<i>[Signature]</i>
5	MARTINA BUNDE	NORTALE	<i>[Signature]</i>
6	SIMEON JISA BIA	VILLAGE CHIEF	<i>[Signature]</i>
7	WILLIAM APUNIA	STARBU CHIEF	<i>[Signature]</i>
8	CONYIE AKINA	AKINA CHIEF	<i>[Signature]</i>
9	LYAN KITA	UCLIF SEC	<i>[Signature]</i>
10	NAUCH NIBO	UCLIF SEC	<i>[Signature]</i>
11	LAWRENCE BOWNE	COM/ELDER	<i>[Signature]</i>
12	STEPHAN VEREKS	TRAVEL CHIEF	<i>[Signature]</i>
13	SOLOMON JIBANI	VIA CHIEF	<i>[Signature]</i>
14	TALM EBEN	PARAKI CHIEF	<i>[Signature]</i>
15	REN TIMOTHY NIVEN	CHIEF REP	<i>[Signature]</i>



Summary of Explanation regarding Environmental and Social Impacts

I Roles and Responsibility

1. All participants of this meeting should try to let all other local people understand the importance of the bridge construction and cooperate with consultants and contractors.
2. When a problem causes between consultant/contractor and local people, CCC members should hold meeting(s) and find out an effective solution in continuous communication with ABG and DOW.

II Predicted Impacts

3. Some portions of customary land will need to be acquired as a part of access road for the bridge although the portions are limited to some of surrounding area of the bridge. Additionally some of areas on customary lands will need to be used temporarily as construction yards.
4. Access to the river water at the bridge site will be limited during a bridge construction. Additionally it is predicted that water usage for drinking, cooking, bathing, washing clothes & plates and fishing may be limited at the down stream of the construction site due to a turbidity caused by earth works. Hence users who are using river water may have to shift to the upstream.



AUTONOMOUS BOUGAINVILLE GOVERNMENT DIVISION OF TECHNICAL SERVICES

THE PROJECT FOR CONSTRUCTION OF BRIDGES OF ON BOUGAINVILLE COASTAL TRUNK ROAD (Warakapis Bridge)

MEMORANDUM OF AGREEMENT

Objectives

This Memorandum Of Agreement (hereinafter referred to as **MOA**) has been signed between the Autonomous Bougainville Government (hereinafter referred to as **ABG**), the Division of Lands and Physical Planning of ABG (hereinafter referred to as **DLPP(ABG)**), the Division of Technical Services of ABG (hereinafter referred to as **DTS(ABG)**), the Division of Law of ABG (hereinafter referred to as **DOL(ABG)**), the Department of Lands and Physical Planning of PNG (hereinafter referred to as **DLPP**), the Department of Works of PNG (hereinafter referred to as **DOW**) all representing the State or National Government and villagers and relevant Local Clans comprising Community Coordination Committee (hereinafter referred to as **CCC**) for the smooth implementation of the following project inclusive of Warakapis Bridge Construction.

Outline of the Project

Reconstruction of 15 bridges/ culvert including Warakapis Bridge planned at the same location of the original bridges. The Project is expected to be implemented by the Grant Aid from Japanese Government. This MOA is prerequisite condition to get commitment from Japanese Government for the implementation of the Project. The Project will be started in accordance with the tentative schedule after the agreement between Papua New Guinea and Japanese Government.

Objectives of the 2nd Stakeholder Meetings

Following explanation and discussion will be carried out in the 2nd stakeholder meetings.

- Explanation of the Project Outlines and Expected Schedule in the Future
- Explanation of Predicted Positive and Negative Impacts
- Explanation of Construction Area and Right of way for National Road (on-site)
- Exchange Opinions
- Signing of **MOA** (Memorandum Of Agreement)

Agreement

We (whose name appear on the next page and the attendance list), understand above description and agree that this project will be implemented without any unnecessary interruptions to the contractor due to such factors as land disputes, crop compensation, gravel royalties, employment, provision of social services, or similar. We agree that if any such issue arises, those issues shall be immediately brought to the attention of relevant agencies or Government Department such as **DTS(ABG)**, **DLPP(ABG)**, Police, etc, to resolve. We further agreed that the **CCC** will ensure that members of our respective clans & settlement are made aware of this **MOA** and that any breach of this **MOA** will be referred to appropriate Law Enforcement Agencies.

We acknowledge that we represent our respective clans and communities and hereby agree and undertake to abide by the above Agreement. And as a sign of our agreement and consent have caused our signature to be signed below on the date shown.

Date: 26 / 07 / 2008



Raymond MASONO
Acting Chief Administrator
Autonomous Bougainville Government

Andrew DOVARO
Chief Executive Officer
Division of Lands and Physical Planning
Autonomous Bougainville Government

John KOLAN
Administration Chief Executive Officer
Division of Technical Services
Autonomous Bougainville Government

Chris SIRIOSI
Chief Executive Officer
Division of Law
Autonomous Bougainville Government

for

Jacob WAFFINDUO
Manager Customary Land
Department of Lands and Physical Planning
PNG

Eric SIKAM
First Assistant Secretary (Technical Services)
Department of Works
PNG



**The Second Stakeholder Meeting Attendance List
For
The Basic Design Study on the Project for Construction of Bridges on Bougainville
Coastal Trunk Road**

Name of Community Coordination Committee: Warakapis C.C.C

Bridge Name: Warakapis

Date: 26/7/08

Time: 12.30 - 13.00

Venue: WARAKAPIS BRIDGE

(1) ABG

	Name	Post	Signature
1	Mr. Simeon ITAMAI	DTS(ABG), Engineer	<i>[Signature]</i>
2	Mr. Raphael WANE	DOW	
3			

(2) C.C.C.

	Name	Clan/Group/Community	Signature
1	GREGORY MATEVIN	NAKOBAN CHAN	<i>[Signature]</i>
2	JOE RABOBA	SIKIL MANAKA	<i>[Signature]</i>
3	STAVEN TONASI	WAKAPFA CHAN	<i>[Signature]</i>
4	LEO KUSLO	WAKAPFA CHAN	<i>[Signature]</i>
5	ANDRE VASTARO	WAKAPFA CHAN	<i>[Signature]</i>
6	BLAZE VOSTAKI	TIPOTI 2 HANAKO	<i>[Signature]</i>
7	DANIL WETA	UIE PASTOR	<i>[Signature]</i>
8	STAVAN KUKIBU	POLES PEP	<i>[Signature]</i>
9	TITUS TAVIONI	PASTOR	<i>[Signature]</i>
10	VINCENT CUSISKI	WAKAPFA CHAN	<i>[Signature]</i>
11	JOHN KOSTANU	TAVANI COAST MARCHANTE	<i>[Signature]</i>
12	GEORGE KUKIBU	WAKAPFA CHAN	<i>[Signature]</i>
13			
14			
15			



Summary of Explanation regarding Environmental and Social Impacts

I Roles and Responsibility

1. All participants of this meeting should try to let all other local people understand the importance of the bridge construction and cooperate with consultants and contractors.
2. When a problem causes between consultant/contractor and local people, CCC members should hold meeting(s) and find out an effective solution in continuous communication with ABG and DOW.

II Predicted Impacts

3. Some portions of customary land will need to be acquired as a part of access road for the bridge although the portions are limited to some of surrounding area of the bridge. Additionally some of areas on customary lands will need to be used temporarily as construction yards.
4. Access to the river water at the bridge site will be limited during a bridge construction. Additionally it is predicted that water usage for drinking, cooking, bathing, washing clothes & plates and fishing may be limited at the down stream of the construction site due to a turbidity caused by earth works. Hence users who are using river water may have to shift to the upstream.



AUTONOMOUS BOUGAINVILLE GOVERNMENT DIVISION OF TECHNICAL SERVICES

THE PROJECT FOR CONSTRUCTION OF BRIDGES OF ON BOUGAINVILLE COASTAL TRUNK ROAD (Irung Bridge)

MEMORANDUM OF AGREEMENT

Objectives

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Outline of the Project

Reconstruction of 15 bridges/ culvert including Irung Bridge planned at the same location of the original bridges. The Project is expected to be implemented by the Grant Aid from Japanese Government. This MOA is prerequisite condition to get commitment from Japanese Government for the implementation of the Project. The Project will be started in accordance with the tentative schedule after the agreement between Papua New Guinea and Japanese Government.

Objectives of the 2nd Stakeholder Meetings

Following explanation and discussion will be carried out in the 2nd stakeholder meetings.

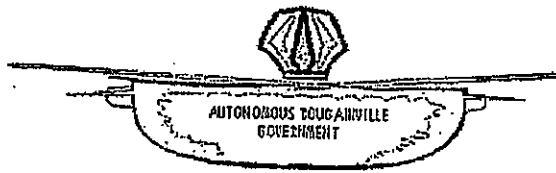
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- Explanation of Predicted Positive and Negative Impacts
- Explanation of Construction Area and Right of way for National Road (on-site)
- Exchange Opinions
- Signing of **MOA** (Memorandum Of Agreement)

Agreement

We (whose name appear on the next page and the attendance list), understand above description and agree that this project will be implemented without any unnecessary interruptions to the contractor due to such factors as land disputes, crop compensation, gravel royalties, employment, provision of social services, or similar. We agree that if any such issue arises, those issues shall be immediately brought to the attention of relevant agencies or Government Department such as **DTS(ABG)**, **DLPP(ABG)**, Police, etc, to resolve. We further agreed that the **CCC** will ensure that members of our respective clans & settlement are made aware of this **MOA** and that any breach of this **MOA** will be referred to appropriate Law Enforcement Agencies.

We acknowledge that we represent our respective clans and communities and hereby agree and undertake to abide by the above Agreement. And as a sign of our agreement and consent have caused our signature to be signed below on the date shown.

Date: 26 / 07 / 2008



Raymond MASONO
Acting Chief Administrator
Autonomous Bougainville Government

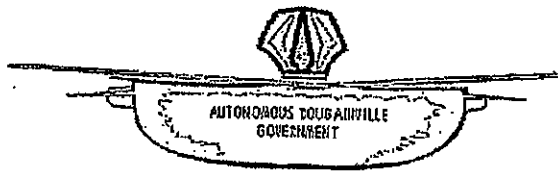
Andrew DOVARO
Chief Executive Officer
Division of Lands and Physical Planning
Autonomous Bougainville Government

John KOLAN
Administration Chief Executive Officer
Division of Technical Services
Autonomous Bougainville Government

Chris SIRIOSI
Chief Executive Officer
Division of Law
Autonomous Bougainville Government

for
Jacob WAFFINDUO
Manager Customary Land
Department of Lands and Physical Planning
PNG

Eric SIKAM
First Assistant Secretary (Technical Services)
Department of Works
PNG



**The Second Stakeholder Meeting Attendance List
For
The Basic Design Study on the Project for Construction of Bridges on Bougainville
Coastal Trunk Road**

Name of Community Coordination Committee: Irung C.C.C

Bridge Name: Irung

Date: 26/7/08

Time: 15.00 - 15.30

Venue: IRUNG BRIDGES

(1) ABG

	Name	Post	Signature
1	Mr. Simeon ITAMAI	DTS(ABG), Engineer	
2	Mr. Raphael WANE	DOW	
3			

(2) C.C.C.

	Name	Clan/Group/Community	Signature
1	CAROLINE KETSIMUR	TARUO CHOU CHOU	
2	BRUNDA WAMORU	TARUO CHOU CHOU	
3	DEWATA KATSI	NSABAN CHOU CHOU	
4	WILLIAM ROKO	NSABAN CHOU CHOU	
5	MARINA MUKANA	NSABAN CHOU CHOU	
6	CHRISTIAN MOTALI	NSABAN REP	
7	MICHAEL NIKOP	COM. LEADER	
8	CHARLES COZOU	COM. LEADER	
9	JOE RABABA	COM. LEADER	
10	LINDA SORAN	YOSKA REP	
11			
12			
13			
14			
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Summary of Explanation regarding Environmental and Social Impacts

I Roles and Responsibility

1. All participants of this meeting should try to let all other local people understand the importance of the bridge construction and cooperate with consultants and contractors.
2. When a problem causes between consultant/contractor and local people, CCC members should hold meeting(s) and find out an effective solution in continuous communication with ABG and DOW.

II Predicted Impacts

3. Some portions of customary land will need to be acquired as a part of access road for the bridge although the portions are limited to some of surrounding area of the bridge. Additionally some of areas on customary lands will need to be used temporarily as construction yards.
4. Access to the river water at the bridge site will be limited during a bridge construction. Additionally it is predicted that water usage for drinking, cooking, bathing, washing clothes & plates and fishing may be limited at the down stream of the construction site due to a turbidity caused by earth works. Hence users who are using river water may have to shift to the upstream.

cc Executive Manager, Implementation Manager
Department of Personnel Management

Director-General
Economic Development Cooperation Division
Department of Foreign Affairs

Technical Advisor
Staff Development & Training Unit
Department of Health

Dr. Alphonse Tay
Chief Executive Officer
Port Moresby General Hospital

Mr. Robin Calistus
District Administrator
Morobe Provincial Administrator

Ms. Regina Koi Kulunga
Director of Nursing Services
Mt Hagen General Hospital

Mr. Albert Bunat
Senior Health Advisor
East Sepik Provincial Administration

Mr. Takeshi Tanabe
Counselor/Chief of ODA Office
Embassy of Japan

BETWEEN:

KP TRUST COMPANY LIMITED
(the "*Landlord*")

AND:

KANICHIRO SOMA
(the "*Tenant*")

RESIDENTIAL LEASE

K.P. TRUST CO. LTD
Suite # 03
Pasuwe House Gordens Industrial Area
P.O.Box 6617 Boroko
National Capital District
Email: kp_trust@daltron.com.pg

24. **COSTS**

The tenant shall upon demand pay the costs of the Landlord's lawyers of and incidental to the preparation, and execution of the Lease, and stamping, obtaining statutory approval and attending to registration (if appropriate) of the Lease together with any reasonable out of pocket expenses in relation thereto.

25. **STATUS**

Each party shall observe all relevant statutes, statutory regulations and by-laws relating to the health, safety, noise and other housing standards with respect to the Premises.

26. **EARLY TERMINATION**

In the event that the tenant wishes to vacate the premises prior to the expiry date of this lease, the tenant an advance of two (2) month notices in writing of his intention to terminate the Lease, And the bond will be automatically forfeited.

THE SCHEDULE

ITEM 1: LAND

Allotment 75 Section 51, Port Road, Blight Street, Granville, (Reef Apartments Stage 1) City of Port Moresby, Papua New Guinea being the whole of land comprised in State Lease Volume 35 Folio 8686

ITEM 2: PRIOR ENCUMBRANCES

As stated in the State Lease otherwise Nil.

ITEM 3: PREMISES

Unit No. 18

ITEM 4: TERM

One (1) Year commencing on the 10th day of April 2008 and terminating on the 10th day of April 2009 with option to renew

ITEM 5: RENT OF TERM

One hundred four thousand KINA (K 104,000.00) including water (K100/per Month) plus GST during the term of this Lease

ITEM 6: RENT REVIEW

This agreement shall be reviewed within twelve (12) Months from April 10th 2008

ITEM 7: PAYMENT OF RENT

EIGHT THOUSAND SIX HUNDRED SIXTY SIX KINA SIXTY SIX TOEA (K 8,666.66) plus GST payable on a monthly basis during the Term of this Lease to be payable to "KP TRUST CO LTD"

ITEM 8: BOND

EIGHT THOUSAND SIX HUNDRED SIXTY SIX KINA SIXTY SIX TOEA (K 8,666.66)

IN WITNESS WHEREOF the parties have hereto set their hands and seals on the
10th day of April 2008

THE COMMON SEAL of KP TRUST
COMPANY LIMITED)
was hereunto affixed by authority of its)
Board of Directors in the presence of:)
)
)
)

.....
Director)
[Signature])
[Signature])
.....
Director / Secretary)



SIGNED by the said)
Kanichiro Soma)
in the presence of)
)

.....
[Signature])
.....
Kanichiro Soma

.....
Signature of Witness

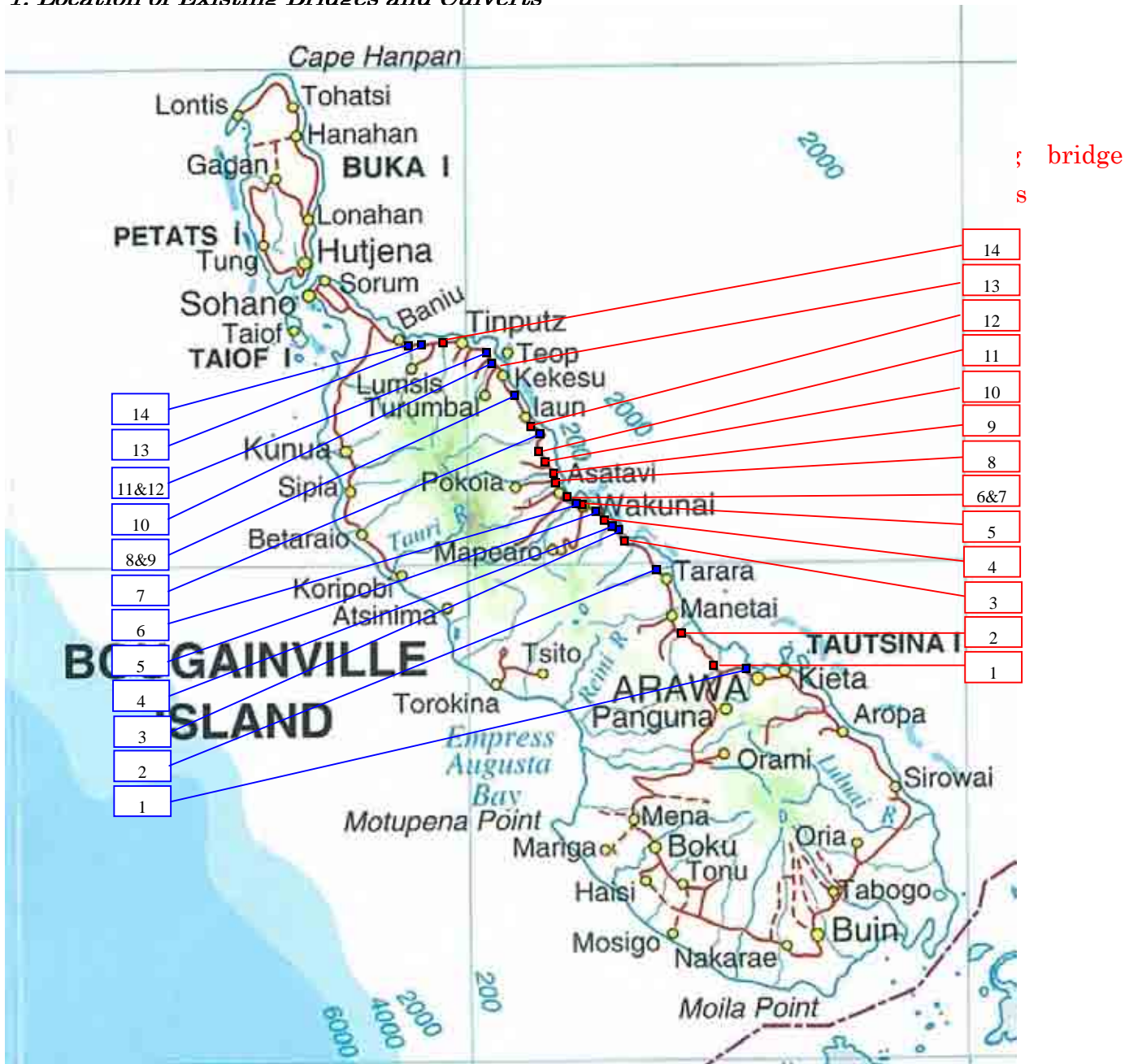
.....
Name of Witness

.....
Occupation & Address of Witness

5-5 Ledger of Existing Structures

During the Study, 14 bridges and 14 culverts were identified on the road between Kokopau and Arawa. These are summarized in the following pages.

1. Location of Existing Bridges and Culverts



	Bridge Name		Bridge Name
1	PENEI	8	RED RIVER
2	AWAKAWAU	9	AITA
3	TAKANU	10	SIVAVI
4	KOIKOI	11	URUAI
5	KOKOAVII	12	SAUMIZ
6	URUAVI 2	13	YODIDI/RATUWE
7	URUAVI 1	14	RAMAZON

	Culvert Name		Culvert Name
1	----	8	----
2	TEKANU	9	----
3	----	10	TEROKI
4	----	11	----
5	----	12	----
6	----	13	RAWA2
7	----	14	CHINPATZ

(1) Existent Bridge

No.1 Bridge Name: PENEI

Location: S : 6° 13' 2.6" E : 155° 29' 30.8"

Span: L=32.0+32.0

Chainage:



No.2 Bridge Name: ARAKAWAU

Location: S : 6° 7' 53.08" E : 155° 25' 24.28"

Span: L=33.0

Chainage:14.6km



No.3 Bridge Name: TEKANU

Location: S : 5° 56' 51.14" E : 155° 18' 36.54"

Span: L=36.0

Chainage:44.7km



No.4 Bridge Name: KOIKOI

Location: E : 5° 53' 18.31" S : 155° 15' 36.97"

Span: L=24.0

Chainage:54.7km



No.5 Bridge Name: KOKOAVII Location: S : 5° 52' 12.94" E : 155° 13' 44.83"
Span: L=18.0 Chainage: 59.0km



No.6 Bridge Name: URUAVI 2 Location: S : 5° 53' 34" E : 155° 12' 7.6"
Span: L=32.0+32.0 Chainage:



No.7 Bridge Name: URUAVI 1 Location: S : 5° 52' 32.3" E : 155° 12' 3.0"
Span: L=36.0 Chainage:



No.8 Bridge Name: Red River Location: S : 5° 50' 28.68" E : 155° 10' 7.39"
Span: L=36.0 Chainage: 71.0km



No.9	Bridge Name: AITA	Location: S : 5° 49' 3.61" E : 155° 8' 51.47"
	Span: L=66.0+6.2	Chainage: 77.7km



No.10	Bridge Name: SIVAVI	Location: S : 5° 47' 12.37" E : 155° 9' 8.02"
	Span: L=44.0	Chainage:



No.11	Bridge Name: URUAI	Location: S : 5° 45' 25.02" E : 155° 7' 5.05"
	Span: L=36.0+36.0	Chainage:



No.12	Bridge Name: SAUMITZ	Location: S : 5° 42' 19.72" E : 155° 7' 28.63"
	Span: L=27.0	Chainage: 125.5km



No.13 Bridge Name: YODIDI/RATUWE

Location: S : 5° 35' 6.43" E : 155° 4' 23.52"

Span: L=6.0

Chainage: 112.0km



No.14 Bridge Name: RAMAZON

Location: S : 5° 32' 24.90" E : 154° 57' 8.93"

Span: L=36.0

Chainage: 128.6km



(2) Existent Box culvert

No.1 Name:
Location: S : 6°12' 36.7" E : 155°32' 48.3"



No.2 Name: Tekanu
Location: S : 6° 1' 3.1" E : 155° 24' 2.5"



No.3 Name:
Location: S : 5° 55' 43.8" E : 155° 18' 2.6"



No.4 Name:
Location: S : 5° 54' 52.7" E : 155° 17' 53.3"



No.5 Name:
Location: S : 5°52' 53.1" E : 155°15' 2.9"



No.6 Name:
Location: S : 5°52' 8.7" E : 155°13' 41.1"



No.7 Name:
Location: S : 5°43' 57.1" E : 155°7' 18.6"



No.8 Name:
Location: S : 5°37' 31.9" E : 155°4'54.9"



No.9 Name:
Location: S : 5°37' 4.9" E : 155°4' 50.2"



No.10 Name: Teroki
Location: S : 5°35' 7.7" E : 155°3' 25.8"



No.11 Name:
Location: S : 5°34' 36.4" E : 155°1' 46.9"



No.12 Name:
Location: S : 5°34' 2.5" E : 155°1' 22.4"



No.13 Name: Rawa2
Location: S : 5° 32' 35.5" E : 154° 54' 48.2"



No.14 Name: Chinpatz
Location: S : 5°33' 11.8" E : 155°52' 54.0"

