

Client: **COOK ISLAND GOVERNMENT (MOIP / NZAP)**
 Project: **NORTHERN GROUP WATER HARVESTING PROJECT**
 Date: 31st October – 25th November 2011

To:			
Principal	Donye Numa	(DN)	Secretary / MOIP
NZ Aid Programme	Maureen Hilyard	(MH)	Development Programme Coordinator
CIG Aid Management	Jim Armistead	(JA)	Secretary/MFEM Aid Management AMD
Principal Rep	Ngateina Rani	(NR)	Infrastructure TA MOIP
CIG Health Services	Tata Vaeau	(TV)	Health Officer
CIG Internal Affairs	Bredina Drollet	(BD)	Secretary / MIA
Contractor	Keta Williams	(KW)	RVK Contractors (RVK) / Director
From:			
Project Manager	Romani Katoa	(RK)	ROMANISDESIGN (RD) / Director

1 Project Schedule

Contract Stage – Construction Works:

Start Date – 10th October 2011
 Contract Duration – 6 months
 Practical Completion – 10th April 2012

2 Project Matters & Update

Milestone

- a) **Mobilisation** – Voyage 2 of “SV Kusima” finally departed Rarotonga for Penryhn, Rakahanga, Nassau and Pukapuka on the 31st October .
- b) **Barge arrives Penryhn:** Friday 5th November
- c) **Barge arrives Rakahanga:** Monday 11th November
- d) **Barge arrives Nassau:** Monday 14th November
- e) **Barge arrives Pukapuka:** Tuesday 15th November
- f) **Construction Works Start** - Works commence on the 17th November for Penryhn and Rakahanga

3 Contract Processes

- a) **Contractor Advance Payments –**
 To date the three payments have been made to RVK Contractors. These are as follows:

Upon contract signing first advance payment	\$400,000
Paid to materials supplier (CI Building Supply)	\$572,750.59
Second advance payment (CI Steel)	\$341,009.29
Payments to date total	\$1,313,759.88
- b) **Extensions of time:** no extension of time has been requested at this stage.
- c) **Onsite Work Assessment** forms and Rotaform Warranty Forms have been filled out accordingly with serial numbers for each tank corresponding to Ref No. of household. All forms will be sent back to Rarotonga for final approvals and signatures.
- d) **Variations:** all variations shall be confirmed by the site supervisor and submitted as per Contract Instruction No.1 for final approval. No variations requested at this stage.

- e) **Progress Claims:** – No claims by RVK Contractor. All payments to be made upon invoice / claim against works completed. Further delays in processing claims/payments to RK has continued. NR paid only 75% of Claim 3.

4 Construction Matters

a) **Quality Assurance:**

Pukapuka & Nassau - all re-roofing works have been completed. There has been steady rainfall over the last 5 weeks and there have been no reports of any leaks. There are a few minor issues with installation of spouting, fascia boards, tank and tap connections, but these will be remedied prior to completion of project. It is also worth noting that the SV Kwai is due to arrive at the end of November to return RVK Contractors to Raro. This has contributed to the ‘rush affect” of finishing jobs quickly.

Penryhn – roofing works have been completed and no reports of any problems

Rakahanga – roofing has started and no issues to report.

- b) **Provision of materials, equipment and services by Contractor:** Contractor has delivered to all islands estimated total of materials and equipment required to measure and complete each household and undertake all works and materials inclusive. RK has full support of Island Council and Island Secretary on all islands for requests for sand, kirikiri and machinery and labour from all islands have been honoured as per the MOU. Although there was some misunderstanding in Penryhn, the issue was resolved as the works started.

RVK Contractors has employed 18 labourers in total on Pukapuka (6 members from each of the 3 villages on a rotational system set up by the Island Council) with 5 Island Admin workers support; 10 labourers from Nassau; 13 on Rakahanga including 5 Island Admin Support (Infra workers that work full days but are paid from 4pm til the days work ends); 11 labourers in Penryhn with no Island Admin support.

In total, 52 labourers were hired during project plus the support from local Island Administration

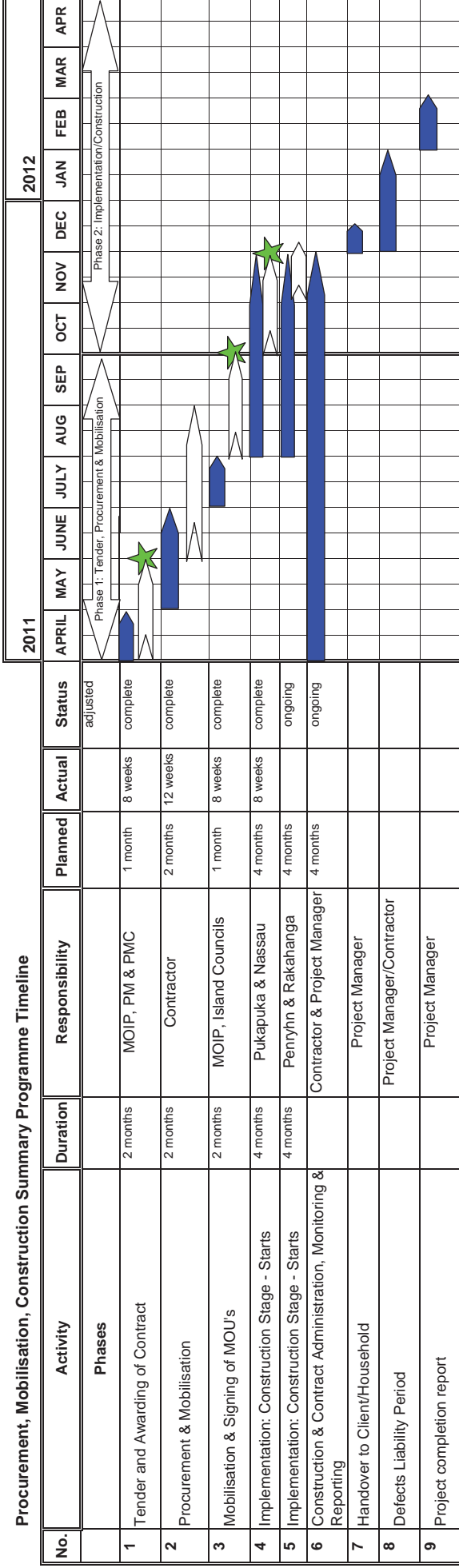
- c) **Liaison with local authorities:** no issues to report
- d) **Community Water tanks:** Final measurements of community tanks have been completed and estimates provided in August. Have had advised Island Councils that submission is yet to be made by MOIP to Cabinet for endorsement and approval of fund.
- e) **Construction Programme:** Households identified on all islands during the re-roofing and water tank surveys helped prioritize household families that had children, the elderly, and mainly women (some households had no male members). Special consideration was also given to households that have a disabled family member.

5 Site Supervision / Contract Administration

- a) **Inspections:** RK has carried out inspections on each household on Pukapuka. Willie Katoa is supervising on Rakahanga, Poilla Poila on Nassau and Rio Taika/Andrew Vaeau on Penryhn. Few minor installation issues.
- b) **Materials:** all materials as specified in contract has been confirmed. Contractor shall not deviate from specified materials unless prior written approval.
- c) **Sub-Contractors:** All sub-contractors must be approved by the supervisor. Raro Plumbing is the approved sub-contractor to RVK Contractors.
- d) **Conduct and problems onsite:** No issues to report on all islands.
- e) **Water Safety Workshop:** Pukapuka: An onsite Water Safety Workshop was conducted in conjunction with the local Health Dept and RD on the 14th to the 16th November with individual households in the 3 villages. The workshop covered basic health and sanitary issues, workings of the new first flush diverters, maintenance of spouting, materials and the water tanks and tap fittings. As each household is set-up differently to the next. Several houses immediately around “onsite workshop area” were used as

COOK ISLANDS GOVERNMENT (MOIP/NZAP)
NORTHERN WATER HARVESTING PROJECT 2011

Procurement, Mobilisation, Construction Summary Programme Timeline



Key

 Planned Milestones
 Actual


examples. The Health Dept suggest that the tank outflows should have a mesh/screen of some kind to prevent insect intrusion and debris entering the tank. The workshops were attended by many people from that village as well as the Aronga Mana, Island Council village. Other workshops are yet to be conducted on other islands.



A typical 2 x 3000L tank system with first flush system and downpipe dropper from spouting into water tank – Don Obeta House



Health Dept. using plastic mesh to fix to outside of water-tank overflow. This will prevent insects and debris from entering the tanks



Local Health Dept explaining system to villages in Yato. Note blue drum to be placed under first flush pipe fixed to house



Mesh covering tank outflow above.

Aronga Mana and local Health Dept. to right.



- e) **Practical Completion:** RVK Contractors achieved Practical Completion on the 24th October 2011 for Nassau and 25th November for Pukapuka **Milestone**

6 Contractors comments

- a) **Shipping constraints:** Due to the lack of available ships and schedules, RVK Contractor has queried whether community water tanks will be approved in order to schedule barge for next voyage to the North.

7 Other Matters

- a) 9 Nov 2011 – meeting with Pukapuka Island Council and Island Admin.
Discussed all issues related to water project:
- Update on water project and programme
 - Confirmation of Nassau works completed
 - Minor issues reported with spouting installations and tank installations and connections
 - Issue raised about waiver of boat and reefing – explained as outlined in MOU.
 - Request list for existing plastic water tanks that are in need of repair
 - An important issue was raised regarding the previous Cyclone Recovery Project in 2007 (affected by Cyclone Percy in 2005) where several houses were not repaired and re-roofed therefore, many of the original homeowners had to move into other family homes and over the years, their original homes have deteriorated severely and are in urgent need of restoration. There is a strong

request from the Island Council that the PMC considers these homes to be part of the project.

- As there are a number of experienced and qualified carpenters/trades people on the island. It was also strongly suggested that they would like to see more projects delivered utilizing only the local labour and bringing in the necessary skills and experienced foreman/supervisors/project managers to oversee the project
- A request from RVK Contractor offering carpentry labour for any community works or projects

Principles of the Northern Water Project

Appendix 1 (Contract Documents) – Project Milestones, Outputs and cost Allocations

Act Now. Prioritise most vulnerable, delegate where local capacity is available to action.

Build partnerships to scale up action by engaging groups at village, island (e.g. Island Councils) and national levels (e.g. INTAFF/MoH)

Foster local decision making. E.g. Place decisions about allocation between roof repairs and water tanks with Island Councils.

Foster climate adaptation. E.g. Good roofs are essential for drinking water collection and to reduce cyclone damage. Position tanks away from storm surges.

Provide opportunities for inclusion and ownership. Ensure residents can contribute to improvements. Ensure non-resident owners are aware of project and option to pay contractor directly for water tank/roof repairs.

Build local capacity for improved water management. Training must target key people including household elders, women, Island Councillors, water managers and village elders.

8 Summary of Works

PUKAPUKA

Pukapuka: re-roofing

There is a total now of 31 houses with new roofing. 16 were complete re-roofs, 10 houses had one side only fixed, 5 houses replaced roofing iron sheets only. One house provided own timber and roofing iron.

- Yato village – 9 houses have been fixed with new roofing iron: 3 houses complete re-roof, 3 x half re-roof, 3 houses replaced roofing iron sheet
- Roto village – 15 houses have been fixed with new roofing iron: 8 houses complete re-roof, 5 x half re-roof, 2 houses replaced roofing iron sheet
- Ngake village – 7 houses have been fixed with new roofing iron: 5 houses complete re-roof, 2 x half re-roof.

Pukapuka: water tank, spouting, fascia board and first flush

Another 103 houses have new water tanks, first flush system, fascia boards and spouting installed. 36 – Ngake, 30 – Roto, and 37 Yato. This brings the combined total to 119.

A total of 24 Households with 7 or more people benefited with an extra 3000L water tank: Ngake – 7, Roto – 7, Yato – 6.

A total of 19 x 6000L tanks were leftover and in accordance with one of the Project Principles, “Fostering local decision making. E.g. Place decisions about allocation between roof repairs and water tanks with Island Councils” - the remaining 6000L tanks were distributed according A meeting with the Island Council and Island Admin was held to establish where the remaining tanks should go and the list is shown in the Tables B, D and F below.

DETAIL OF WORKS COMPLETED

1. Approved households for re-roofing

Monday 31st October through to Friday 11th November

Ref No.	Name	Works
	Roto Village	
PUK 78	Mataa Aumatangi Owner provided own timber and roofing iron and some ridging – Project provided labour	complete re-roof needs extra 15 sheets @ 3700 + ridging/valleys to complete roof
PUK 54	Mangere Malo	one-side re-roof



Mataa Aumatangi House
PUK 78

Provided their own timber and roofing iron and ridges but did not have enough to complete.

Needs an extra 10 sheets plus ridging to complete



Mataa Aumatangi
House
PUK 78

Existing Roof



Mataa Aumatangi House
PUK 78

With owners new roof and new fascia board
(toilet block with old roof in foreground)



Mangere Maro
PUK 54

Existing roof



Mangere Maro
PUK 54

New Roof &
Spouting
Note existing
roofing on side
belongs owner

2. Installed water tank, fascia board, spouting, first flush system and outlet tap

Monday 31 October through to Friday 25th November

This list is shown in the following tables below.

Yato Table A.

YATO VILLAGE			Tanks	Fascia	Spouting	Water	Extra
	Ref No.	Name	6kL or 2x3kL	m length	m length	Tank #	Tank
@	PUK 1	Apitai Teinaki	1 x 6kL	13.2	13.2	1098	
	PUK 2	Aretio Pira	1 x 6kL	2.5	4.5		
	PUK 3	Puiki Paniani	2 x 3kL	9.9	9.9		
	PUK 5	Katia Utarenga	2 x 3kL	9	9		
O	PUK 8	Makonia Boaza	1 x 6kL	11.8	11.8	1100	
	PUK 9	Manila Maika Akariri	1 x 6kL	11.7	11.7	1081	
%	PUK 10	Manila Matenga	1 x 6kL	-	-	1090	1 x 3kL
	PUK 11	Mare Daniel	1 x 6kL	11	11	1199	
	PUK 12	Ngarupe Mataito	1 x 6kL	10.2	10.2	1070	
	PUK 13	Ngatokorua Purotu	1 x 6kL	2.5	5.5		
	PUK 14	Ngutu Ngutu	1 x 6kL	NR	4.5		
+ =						1151	
@	PUK 15	Patuki Tengere	1 x 6kL	-	-		
	PUK 16	Punga Punga	1 x 6kL	17.7	17.7	1221	
%**	PUK 17	Rito Tinokura	2 x 3kL	11.5	11.5		1 x 3kL
	PUK 18	Rotoika Tengere	1 x 6kL	11.5	11.5	1202	
	PUK 19	Ruarau Iakopo	1 x 6kL	9.8	9.8	1067	
# %	PUK 20	Rukuaro Marukore	2 x 3kL	13.6	13.6		1 x 3kL
	PUK 21	Tapa Mataora	2 x 3kL	13.3	13.3		
	PUK 22	Tarapu William	2 x 3kL	9.9	9.9		
	PUK 23	Teau Panaliliuyi Pana	2 x 3kL	6.3	6.3		
	PUK 24	Tekere Pereti	2 x 3kL	9.5	9.5		
	PUK 26	Tupea Mataora	1 x 6kL	2	4		
	PUK 27	Tutai Ravarua	1x 6kL	10	10	1063	
	PUK 28	Tutau Punga	1x 6kL	9.7	9.7	1102	
	PUK 30	Utarenga Taumaina	2 x 6kL	8.1	8.1		
O	PUK 32	Woetai Okotai	1 x 6kL	26.4	26.4	1084	
	PUK 33	Yingonge Purotu	1 x 6kL	11.3	11.35	1082	
	PUK 34	Yitiri Yitiri	2 x 3kL	10.7	10.7		
#	PUK 35	Joe Angaino	2 x 3kL	9.9	9.9		
O	PUK 36	Boaza Boaza	2x 3kL	12.6	12.6		
O	PUK 37	Rangiura Walemaki	1 x 6kL	8	8	1134	
O	PUK 38	Rautana Robati	1 x 6kL				
O	PUK 39	Tamangaro Timoti	2 x 3kL	13	13		
O %	PUK 40	Tinokura Utarenga	2 x 3kL	10.1	10.1		1 x 3kL
O	PUK 41	Vave Arie	2 x 3kL	6.5	6.5		
O	PUK 42	Yeutu Katia	2 x 3kL	9.9	9.9		

Yato Table B - Extra tanks

YATO VILLAGE			Tanks	Fascia	Spouting	Water	Extra
Ref No.	Name	6kL or 2x3kL	m length	m length	Tank #	Tank	
	Toru Taunga	1 x 6kL					
	Mairaro	1 x 6kL					
	Tutu	1x 6kL					
	Akatu	1 x 6kL					
	Kupa	1 x 6kL					
	Ritawa	1 x 6kL					
	Akaruru	1 x 6kL					
	Maina	1 x 6kL					
	Kare	1 x 6kL					

** Partially complete – needs connecting water pipes and/or hole for tank; needs levelling or lid

Needs to be connected + Needs roofing iron sheets

= Needs first flush system @ Needs fascia board & spouting

O Completed partial re-roof or complete re-roof % household qualifies for 1 x 3kL extra tank

Roto Table C

ROTO VILLAGE			Tanks	Fascia	Spouting	Water	Extra
* Ref No.	Name	6kL or 2x3kL	m length	m length	Tank #	Tank	
	PUK 42	Apitai Teinaki	2 x 3kL	12.5	12.5		
	PUK 43	Aporo Mataora	1 x 6kL	11.2	11.2	1128	
	PUK 44	Arona Tariu	1 x 6kL	13.9	13.9	1175	
	PUK 45	Aruia Lolani	1 x 6kL	11.8	11.8	1185	
	PUK 46	Ataera Ataera	1 x 6kL	8.1	8.1	1110	
	PUK 47	Atiau Tutai	1 x 6kL	8.8	8.8	1105	
	PUK 48	Eraitu Teinaki	2 x 3kL	12	12		
	PUK 49	Ieremia Pori	1 x 6kL	13	13	1147	
	PUK 50	Isaac Elisa	1x 6kL	12.2	12.2	1153	
	PUK 51	James Auwola	1 x 6kL	13.1	13.1	1187	
	PUK 52	Maia Rangi	1 x 6kL	9	9	1137	
	PUK 53	Manea Opo	1 x 6kL	9.6	9.6	1135	
O %	PUK 54	Mangere Maro	1 x 6kL	12.8	12.8	1188	1 x 3kL
	PUK 55	Manongi Tiro	1 x 6kL	12.6	12.6	1179	
+	PUK 56	Manurere Opo	1 x 6kL	8.3	8.3	1190	
**	PUK 57	Marurai Marurai	1 x 6kL	8	8	1056	
	PUK 58	Mose Manutai	1 x 6kL	9.6	9.6	1135	
	PUK 59	Ngarui Taunga	1 x 6kL	10.8	10.8	1175	
&	PUK 60	Nereteina Opo	1 x 6kL	10.4	10.4	1180	1 x 3kL
	PUK 61	Paulo Pakitonga	1 x 6kL	12.4	12.4	1105	
#	PUK 62	Peua Taingauru	1 x 6kL	11.4	11.4	1155	
	PUK 63	Potokotai Kairua	2x 3kL	12.4	12.4		
# %		Tavero Robati -					1 x 3kL
+		Needs 6 x 4500 sheets	2 x 3kL	11.1	11.1		
	PUK 64						
	PUK 65	Teopenga Nio	2 x 3kL	14.3	14.3		
%	PUK 66	Tere William	1 x 6kL	10.1	10.1	??	1 x 3kL

	PUK 67	Tiaki Wuatai	1 x 6kL	6	6	1200	
**	PUK 68	Tinirau Kavana	1 x 6kL				
	PUK 69	Titonga Henry	1 x 6kL	12	12		
	PUK 70	Tukia Mataora	1 x 6kL	7.8	7.8	1112	
	PUK 71	Vakaula Opo	1 x 3kL	8.7	8.7		
	PUK 72	Vavia Mataora	1 x 6kL	10.5	10.5	1213	
#	PUK 73	William William	1 x 6kL	8	8	1217	
O	PUK 74	Rakera Aumatangi	1 x 6kL	7.1	7.1	1174	
O	PUK 75	Maoake Purotu	2 x 3kL	8.3	8.3		
O	PUK 76	Tuiva Karowia	2 x 3kL	10.8	10.8		
O =	PUK 77	Tawaia Temoana	1 x 6kL	11.4	11.4	1130	1 x 3kL
+	PUK 78	Mataa Aumatangi – refer to above	1 x 6kL	11.8	11.8	1106	
O	PUK 79	Jnr Penga Tautani	1 x 6kL	9.1	9.1	1171	
O %	PUK 80	Wuatai Wuatai	1 x 6kL	13.4	13.4	1178	1 x 3kL
O	PUK 81	Don Obeta	2 3 kL	8.5	8.5		
O		Tupea Mataora – provided own timber. Project provided roofing, timber and labour				1173	
O %	PUK 82		1 x 6kL	10	10		
O	PUK 83	Tai Ravarua	1 x 6kL	31.8	31.8	1172	1 x 3kL
O	PUK 84	Vai Peua	1 x 6kL	9.8	9.8	1214	
O	PUK 85	John Hagai	1 x 6kL	12.4	12.4	1162	
O	PUK 86	Taki te Ngutu	1 x 6kL	9.5	9.5	1142	
O	PUK 87	Vaotiare	1 x 6kL	8.8	8.8	1215	

** Partially complete – needs connecting water pipes and/or hole for tank needs levelling

Needs to be connected + Needs roofing iron sheets

= Needs first flush system @ Needs fascia board & spouting

o Completed partial re-roof or complete re-roof % household qualifies for 1 x 3kL extra tank

Roto Table D - Extra tanks

ROTO VILLAGE			Tanks	Fascia	Spouting	Water	Extra
Ref No.	Name	6kL or 2x3kL	m length	m length	Tank #	Tank	
-	Toa	1 x 6kL					
-	Beni	1 x 6kL					
-	Mama Koyi	1 x 6kL					

Ngake Table E

NGAKE VILLAGE			Tanks	Fascia	Spouting	Water	Extra
Ref No.	Name	6kL or 2x3kL	m length	m length	Tank #	Tank	
PUK 90	Amosa Puluata	2 x 3kL	13.8	13.8	1176		
PUK 91	Akima Taikakara	1 x 6kL	10.3	10.3	1186		
PUK 92	Aneterea Petero	1 x 6kL	13.2	13.2	1117		
PUK 93	Auwia Tapuni	1x 6kL	9.8	9.8	1210		
PUK 94	Casey Poila	1 x 6kL	10	10	??		
PUK 95	Charlie Frisbie	2 x 3kL	12	12			

	PUK 96	Chief Walemaki Inapa Auwia–same	1 x 6kL	14.7	14.7	1220	
	PUK 97	as	PUK 93				
	PUK 98	Kalito Tauia	1 x 6kL	15.2	15.2	1189	
	PUK 99	Kainga Malo	1 x 6kL	10	10	1109	
	PUK 100	Ketula Vila	1 x 6kL	11.4	11.4	1209	
	PUK 101	Levi Walewaoa	2 x 3kL	9.8	9.8		
	PUK 102	Maru Marukore	1 x 6kL	14.2	14.2	1212	
	PUK 103	Matatia Taikakara	1 x 6kL	17.2	17.2	1166	
	PUK 104	Ngarima Nooroto	1 x 6kL	13.4	13.4	1083	
	PUK 105	Pareura Katoa	1x 6kL	14.6	14.6	1211	
	PUK 106	Penese Poila	1 x 6kL	9.9	9.9		
	PUK 107	Pereo Nemeti	1 x 6kL	9.9	9.9	1107	
	PUK 108	Poila Arie	2 x 3kL	9.6	9.6		
	PUK 109	Pone Apiuta	1 x 3kL	11	11	1108	
	PUK 110	Puapii Ravarua	1 x 6kL	15.6	15.6	1222	
	PUK 111	Rimapeni Paani	1x 6kL	9.8	9.8	1191	
%	PUK 112	Rubena Ruarau	1x 6kL	11.7	11.7	1192	1 x 3kL
	PUK 113	Tearo Tinomana	1 x 6kL	6	6	1051	
	PUK 114	Tekie Tauia	1 x 6kL	9.4	9.4	1086	
	PUK 115	Terepai Topetai	1 x 6kL	12.3	12.3	1216	
	PUK 117	Tinima Teingoa	1 x 6kL	11	11	1055	
	PUK 118	Toni Pira – Riata	1 x 6kL	11.3	11.3	-	
	PUK 119	Walewaoa Teingoa	2 x 3kL	14.2	14.2	-	
O	PUK 120	Timata Amosa					
O	PUK 121	Nooroto Teapa					
O	PUK 122	Kililua Tapa	1 x 6kL	9.7	9.7	1177	
O%	PUK 123	lotama Ravarua	1 x 6kL	23.7	23.7	1219	1 x 3kL
O	PUK 124	Rupena Rupena					
O	PUK 125	Vairoa Vairoa	1 x 6kL	10	10	1104	
O	PUK 126	Kautoki Katoa	1 x 6kL	9.4	9.4	1064	

** Partially complete – needs connecting water pipes and/or hole for tank needs levelling

Needs to be connected + Needs roofing iron sheets

= Needs first flush system @ Needs fascia board & spouting

O Completed partial re-roof or complete re-roof % household qualifies for 1 x 3kL extra tank

Ngake Table F - Extra tanks

NGAKE VILLAGE			Tanks	Fascia	Spouting	Water	Extra
Ref No.	Name		6kL or 2x3kL	m length	m length	Tank #	Tank
	Opo Opo		1 x 6kL				
	Tiaki Jack		1 x 6kL				
PUK 116	Tinga Tapuni		1 x 6kL				
	Koree Tinga		1x 6kL				
	Poyila Poyila		1 x 6kL				
	Papino Akaruru		1 x 6kL				
	Katipare Viggo		1 x 6kL				
	Yipouri		1x 6kL				
	Makuare		1 x 6kL				
	Tengere Willaim		1 x 6kL				

		Piira Piira	1 x 6kL				
		Waleeu	1 x 6kL				

3. Existing Water Tank Repairs

Several existing water tanks were repaired – a total of 12 tanks were repaired with a heat-gun and similar plastic



Repairing existing tanks:
Using a heat gun to melt plastic sticks onto well-prepared tank surface



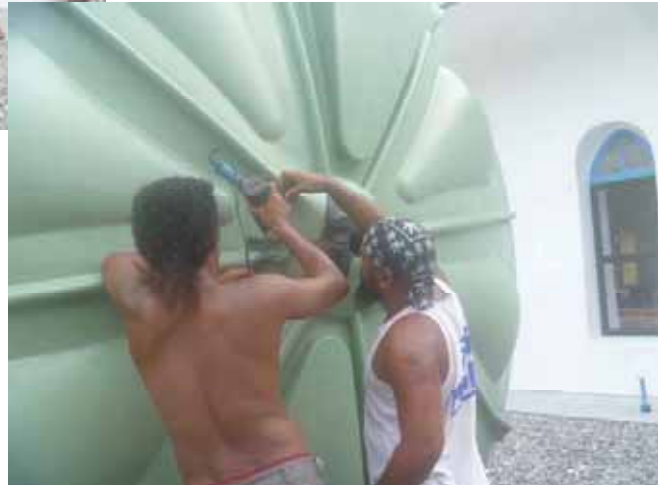
Existing 25,000L Aqua tanks that need repair



Existing Aqua tank with crack at the top of the tank.



Repairing the top of the tank
– using only available plastic
– material on the island



PUKAPUKA:

Project Milestone

Practical Completion achieved on Friday 25th November 2011

DETAIL OF WORKS COMPLETED

1. New Lean-to Roof Structure: 6m x 5m wide & water tank, fascia board, spouting & first flush system for traditional thatched houses

Monday 17 October through to Friday 21st October

Ref No.	Name	Roofing Works	Tanks	Fascia	Spouting	Water Tank #
			6kL	6m lgth	3m lgth	
NAS 14	Karangi Piripo	complete	1	1	2	1148
NAS 15	Ngaulu Topetai	complete	1	1	2	1193
NAS 16	Mati Wuatai	complete	1	1	2	1140
NAS 17	Lameka Tewola	complete	1	1	2	1103
NAS 18	Tanetoa William	complete	1	1	2	1096
NAS 19	Leleau Ruarau	complete	1	1	2	1094
NAS 20	Tumoe Rabana	complete	1	1	2	60116
NAS 21	Avavete Vila	complete	1	1	2	1058
NAS 22	Mexico Jack	complete	1	1	2	1059
NAS 23	Yvonne Neiao	complete	1	1	2	1181
NAS 24	Terepai	complete	1	1	2	1338
NAS 25	Veveia Ayoka	complete	1	1	2	1092
NAS 26	Tiruano Angoika	complete	1	1	2	1062



Traditional thatched houses on Nassau now with newly installed roof catchment, spouting and water tanks







3 x tanks located by the taro swamps in the centre of the island.

2. Houses complete Re-roof with water tank, fascia board, spouting & first flush system

Ref No.	Name	Roofing Works	Tanks	Fascia	Spouting	Water Tank #
			6kL	6m lgth	3m lgth	
NAS 12	Kumara Papitai	complete	1	2.5	4	1158
NAS 13	Tuaine Tuatai	complete	1	2.5	4	1097



Tuaine Tuatai
NAS 13



Kumara Papitai
NAS 12



3. Installed water tank, fascia board, spouting, first flush system and outlet tap

Ref No.	Name	Roofing Works	Tanks 6kL	Fascia 6m lgth	Spouting 3m lgth	Water Tank #
NAS 1	Poila Poila	NR	1	*		1182
NAS 2	Topetai Neiao	NR	1	*		1132
NAS 3	Tuakatau wuatai	NR	1	*		1159
NAS 4	Course Topetai	NR	1	*		1161
NAS 5	Mark Jack	NR	1	*		1337
NAS 6	Tuaine William	NR	1	*		1129
NAS 7	Tewola Jack	NR	1	*		1061
NAS 8	Repeta George	NR	1	*		1095
NAS 9	Roaiti Vailoa	NR	1	*		60079
NAS 10	Arona Nio	NR	1	*		1339
NAS 11	Mama Litia	NR	1	*		1160

4. Leftover tanks

There are 8 tanks leftover from the project. The project manager spoke with the local council of Nassau to suggest where the remaining tanks should be allocated on the island to utilise maximum water catchment/storage and that they are to be used on buildings with excellent roofing iron and accessible to all.

After much deliberation with the local Nassau Community Council and approval by the Pukapuka Island Council, the remaining tanks have been issued as shown in the table below. It was also agreed that 3 tanks should be used in the centre of the island near the taro patches/plantations where everyone works. The centre of the island is also where everyone would gather during cyclones.

Ref No.	Name	Tanks 6kL	Fascia 6m lgth	Spouting m lgth	Water Tank #
NAS 27	Nassau School	2	*	16	1149, 1183
NAS 28	Admin Office	1	*	3	1341
NAS 29	Seventh Day Ad	1	*	6	1340
NAS 30	TV Station	1	*	4	1139
NAS 31	Taro Patch	3	*	9	1093, 1208, 1138

NASSAU:

Project Milestone

Practical Completion achieved on Monday 24th October 2011

1. Approved households for re-roofing

Penryhn: re-roofing

A total of 4 houses were fixed with new roofing. 2 on Omoka and 2 on Tetautua.

Penryhn: water tank, spouting, fascia board and first flush

A total of 23 houses have been installed. Starting with Omoka.

Ref No.	Name	Works
Omoka Village		
PUK 42	Ruasei Meremere	complete re-roof
PUK 43	Tini Joseph	one-side re-roof
Tetautua Village		
PUK 64	Saitu Marsters	complete re-roof
PUK 65	Tapita Tinirau	one-side re-roof

2. Installed water tank, fascia board, spouting, first flush system and outlet tap

Tank numbers and fascia board/spouting details will be confirmed when Onsite Assessment Forms are returned to PM.

OMOKA VILLAGE			Tanks	Fascia	Spouting	Water	Extra
Ref No.	Name		6kL or 2x3kL	m length	m length	Tank #	Tank
PEN 1	Abela William		1 x 6kL				
PEN 2	Alex Maretapu		1 x 6kL				
PEN 3	Andrew Vaeau		1 x 6kL				
PEN 4	Arake Tonitara		1x 6kL				
PEN 5	Ben Samuela		1 x 6kL				
PEN 6	Bill Marsters		2 x 3kL				
PEN 7	Kirikava Moerangi		1 x 6kL				
PEN 8	Manata Akapurua		1 x 6kL				
PEN 9	Mita Soa		1 x 6kL				
PEN 10	One Brother Joseph		1 x 6kL				
PEN 11	Pahu Toka		1 x 6kL				
PEN 12	Warwick Latham		1 x 6kL				
PEN 13	William Tekena		2 x 3kL				
PEN 14	Aru William		1 x 6kL				
PEN 15	Tutavake Andrew		1 x 6kL				
PEN 16	Reisura Samatua		1 x 3kL				
PEN 17	Tehio Mairiki		1 x 6kL				
PEN 18	Pora Pora		1 x 6kL				
PEN 19	Rangitava Taia		1 x 6kL				
PEN 20	Rangi Rass		2 x 3kL				
PEN 21	Tata Tonitara		1 x 6kL				
PEN 22	Tira Nikau		1x 6kL				
PEN 23	Sope Carnahan		1x 3kL				

RAKAHANGA

1. Approved households for re-roofing

Rakahanga: re-roofing

To date a total of 10 houses were fixed with new roofing and water tanks.

OMOKA VILLAGE			Tanks	Fascia	Spouting	Water	Extra
Ref No.	Name	6kL or 2x3kL	m length	m length	Tank #	Tank	
RAK 23	Amosa Greig	1 x 6kL					
RAK 24	Anete Aratangi	1 x 6kL					
RAK 25	Aporo Piho	1 x 6kL					
RAK 26	Hagai Takai	1x 6kL					
RAK 27	Kimiora Takai	1 x 6kL					
RAK 28	Kimo Temu	2 x 3kL					
RAK 29	Leitu Akaloa	1 x 6kL					
RAK 30	Neti Tarau	1 x 6kL					
RAK 31	Ngatangata Takai	1 x 6kL					
RAK 32	Nitikika Tuteru	1 x 6kL					

2. Installed water tank, fascia board, spouting, first flush system and outlet tap

No Water tank installations at this stage.

Kia Manuia,

Romani Katoa
Project Manager
ROMANISDESIGN LTD