Rotoiti / Rotoma Sewerage Scheme Investigations /
Options Register and Current Status and Indicative Costs

WORKING DRAFT Issue Number: 1
Date: 28/04/2015

Table: RDC Technical Officers Working Draft

Key: Well meets with the criteria
Marginal / may meet the criteria
Fails to meet the criteria

Option		Option Components	Must have's										
			RRSSC Goals										
			Goal #1	Goal #2	Goal #3	Goal #4	Goal #5	Goal #6	Goal #7	Goal #8	Goal #9	Goal #10	Goal #11
			Comply with local Action Plan Nutrient target levels	Culturally acceptable	Met communities environmental outcomes	Acceptable public health risks	All key planning and statutory requirements met	Qualifies for Central Government Subsidy	Reasonable capital and long term operational cost	Socially acceptable	Can mitigate technical, resilience, risk matters	Superior option (if other similar option is presented)	Outside of former Manawahe Site (WWTP & LTS)
DO NOTHING													
CB-1	Do nothing	None											
CENTRALISED RETICULATION TO EXISTING WWTP													
RDC-1	To Rotorua	-Low pressure grinder pump reticulation -Trunk mains to Rotorua WWTP -Expand Rotorua WWTP and LDS					Resource consent						
RDC-2	To Kawerau	-Low pressure grinder pump reticulation -Trunk mains to Kawerau WWTP -Expand Kawerau WWTP and LDS					Resource consent						
	Hybrid of RDC-1 and RDC-2 with treatment in catchment and conveyance of treated wastewater to wither Rotorua WWTP or Kawerau WWTP discharge / disposal facilities	-Centralised treatment plant or Two individual treatment plants -Conveyance of treated wastewater to existing discharge/disposal facilities					Resource consent						
CENTRALISED RETICULATION WITH A NEW COMMON WWTP & LAND DISPOSAL SYSTEM (LDS)													
RDC-3	To WWTP and LDS in Tautara / General Matawhara Area site as first investigation possibility located in Rotoehu Catchment	-Low pressure grinder reticulation -Two communities joined by trunk sewer system -Common WWTP and LDS -Within boundaries of two communities											
	To WWTP and LDS within the catchment Manawahe Site	-Low pressure grinder reticulation -Two communities joined by trunk sewer system -Common WWTP and LDS -Within boundaries of two communities											

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			Comply with local Action Plan Nutrient target levels	Culturally acceptable	Met communities environmental outcomes	Acceptable public health risks	All key planning and statutory requirements met	Qualifies for Central Government Subsidy	Reasonable capital and long term operational cost	Socially acceptable	Can mitigate technical, resilience, risk matters	Superior option (if other similar option is presented)	Outside of former Manawahe Site (WWTP & LTS)
TWO CENTRALISED RETICULATION SYSTEMS FOR ROTOMA & ROTOITI WITH INDUVIDUAL WWTP & LAND DISPOSAL SYSTEM (LDS) FOR EACH COMMUNITY													
RDC-4	Separate communities plants for both Rotoiti and Rotoma	-Low pressure grinder reticulation -Two separate trunk sewer systems -Two separate WWTP and LDS - Within boundaries of two communities											
COMBINATION OPTION WITH TWO RETICULATION SYSTEMS FOR ROTOMA AND ROTOITI WITH SEPARATE WWTP AND LDS													
	Rotoiti pumped to Rotorua WWTP and community plant for Rotoma	-Low pressure grinder reticulation -Two separate trunk sewer systems -Rotoiti pumped to Rotorua WWTP -New WWTP and LDS within Rotoma community											
CLUSTERED SEWERAGE SYSTEM													
RDC-5	Clusters with package WWTP to achieve high nutrient removal / LDS. Cluster location and size based on location	-Property clusters (approximately 29) -Gravity reticulation -Common WWTP and LDS for each cluster -WWTP to achieve high nutrient removal				GW separation of LTS							
CB-6a	Urine Separation, cluster Biolytix (or similar system)	-Individual on-site urine separation -Cluster Biolytix (or similar) for 10 HUE on average -Cluster reticulation to Biolytix (or similar) -Cluster LDS				Urine and compost handling			Cost to be determined				
CB-6b	Urine separation, individual Biolytix (or similar) and cluster subsurface irrigation	-Individual on-site urine separation -Individual on-site Biolytix (or similar) -Reticulation to cluster LDS				Urine and compost handling			Cost to be determined				

Option		Option Components	Must have's RRSSC Goals Goal #1 Comply with local Action Plan Nutrient target levels	Goal #2 Culturally acceptable	Goal #3 Met communities environmental outcomes	Goal #4 Acceptable public health risks	Goal #5 All key planning and statutory requirements met	Goal #6 Qualifies for Central Government Subsidy	Goal #7 Reasonable capital and long term operational cost	Goal #8 Socially acceptable	Goal #9 Can mitigate technical, resilience, risk matters	Goal #10 Superior option (if other similar option is presented)	Goal #11 Outside of former Manawahe Site (WWTP & LTS)
INDUVIDUAL ON-SITE (HUE OPTIONS) OSET RULES COMPLIANT NUTRIENT REMOVING SYSTEM													
RDC-6 OSET-1	Individual OSET compliant nutrient removal systems	-Individual on-site AWTS+NR (aerated wastewater treatment system with nutrient removal package plant) -Approved on-site ground soakage system	Nutrient removal less than Action Plan requirements			GW separation of LTS in high water table areas							
OSET-2	OSET compliant System 1	-Existing OSET compliant septic tank -septic tank land application area -Resource Consent OSET financial contribution $5,000	Nutrient removal less than Action Plan requirements										
OSET-3	OSET Compliant System 2	-New OSET compliant septic tank -Complying land application area - Resource Consent -OSET financial contribution $2,800?	Nutrient removal less than Action Plan requirements										
CB-3	On-site urine separating toilets	-Urine separating toilets -Existing or new septic tanks -Existing or new ground soakage area	Nutrient removal less than Action Plan requirements						Cost to be determined				
CB-5	On-site Composting toilets	-Urine separating toilets -Composting toilet -Existing or new ground soakage area for grey water and any liquid from composting toilet	Nutrient removal less than Action Plan requirements						Cost to be determined				
ONSITE AND/OR CLUSTER													
CB-4	Targeted Upgrades + Improved Management	-Targeting through an onsite approach areas needing upgrading -Putting in place on-site and/or cluster system management							Cost to be determined				
OFF-SET MITIGATION OPTIONS													
CB-2	Buy and Decommission a Farm	-Purchase existing farm in area -Decommission farm to offset nutrient loading							Cost to be determined				
CB-7	Stop using Phosphate in Household Detergents	-Depends on the sewerage scheme selected							Cost to be determined				
MIX AND MATCH													
	Combining elements of Craig Brown Options 1-7 for Cluster or Individual on-site systems		TO BE DISCUSSED - NO BASIS OF EVALUATION YET DETERMINED										

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Notes

1 Key sources of options are
-Environment Court Evidence
-Post Environment Court Review: Overview of Options
-RDC Summary Table to RRSSC 10/02/2014
-RDC summary sheets and presentation 14/04/2014 to RRSSC workshop
-RDC options 1-6
-Craig Brown presentation to RRSSC workshop 14/04/2014
-Terry long EBoPRC OSET options
-RRSSC workshop output 14/04/2014

2 RDC = Rotorua District Council, CB = Craig Brown