



ROTTNEST ISLAND AUTHORITY

**Report to the Economic
Regulatory Authority by the
Rottnest Island Authority
October to December 2008**



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1 Water provider information

Rottnest Island Authority Contact Details	
Name of Company	Rottnest Island Authority
Company Address	Quay 1st Floor, Fremantle WA 6160
Company Phone	(08) 9432 9300 Fax (08) 9432 9301
Company Email	enquiries@rotnnest.wa.gov.au
Chief Executive Officer	Paolo Amaranti
CEO Email	paulo.amaranti@rotnnestisland.com
Operations & Utility Services Manager	Steve Clarke
OUSM Email	sclarke@tungstengroup.com
DoH Liaison Officer	Richard Theobald
DoH Liaison Officer Email	Richard.Theobald@health.wa.gov.au

1.1 SYSTEM INFORMATION

Rottnest Island Distribution System						
Zone	No. of Consumers / Customers	Average Amount of Water Supplied (L/Day)	Sources of Water (Bore/Catchment)	Treatment System	Length of Mains	No. of Sample Points
1	100	50,835	R.O. / Bore / Catchment	Cl ₂	3*	2
2	320	402,760	R.O. / Bore / Catchment	Cl ₂	17*	4

1.1.1 Catchment Details

The Catchment Area on Rottnest Island is currently not being used for drinking water collection. Also, the groundwater bores have been used during this period due to a production fault at the desalination plant, and a high ratio of water consumption to water production on Rottnest Island for this period.



1.1.2 Distribution System

The Rottneſt Island distribution system is relatively ſmall, conſiſting of approximately 20 km of mains. The distribution system conſiſts of two zones. Zone 1 ſupplies Geordie and Longreach Bays while Zone 2 ſupplies the Kingſtown Barracks and Thompson Bay areas.

For the purpoſe of this report Zone 1 conſiſts of ſampling points R12/001, R12/002 and R12/007. Zone 2 conſiſts of ſampling points R12/003, R12/004, R12/005 and R12/006.



2 Performance summary

Water Quality meeting the Drinking Water Guidelines						
	Zone 1			Zone 2		
Microbiological Quality	No. Assessed	No. Within Guidelines	Variance	No. Assessed	No. Within Guidelines	Variance
Total Coliforms	11	10	1	15	14	1
Thermotolerant Coliforms	11	10	1	15	14	1
Amoeba (Thermophyllic Naegleria)	11	11	0	15	15	0
Chemical Quality						
Chemical - Health related	21	21	0	42	42	0
Chemical - Aesthetic	83	82	1	80	79	1
Radiological	0	0	0	0	0	0



3 Microbial performance – October 2008 – December 2008

3.1 MICROBIOLOGICAL - EXCEPTION NOTIFICATIONS

Microbiological Water Quality Exceptions							
Zone	Population Served	Date	Microbiological Characteristic	MoU Alert Level	Remedial Action	DoH Notified	Close Out Date
1 and 2	420	5/10/2008	Coli	1	Chlorination	9/10/2008	10/10/08

3.2 MICROBIOLOGICAL - COMPLIANCE BY ZONE (SUMMARY)

Zone	No. of bacterial samples	Total Coliforms		Thermotolerant Coliforms		No. of amoebae samples	Thermophilic Amoebae		Thermophilic Naegleria	
		Failures	%Compliance	Failures	%Compliance		Failures	%Compliance	Failures	%Compliance
1	11	1	90	1	90	11	0	100	0	100
2	15	1	100	1	100	15	0	100	0	100
Total	26	2	100	2	100	26	0	100	0	100

3.3 MICROBIOLOGICAL INCIDENT SPECIFIC INFORMATION

Exception was traced back to Tank 5 as a section of roof sheet had blown off during a storm, no fauna was found in the tank but believe the contamination was due to faeces as birds were seen flying in and out of the tank.

4 Chemical - health related performance

4.1 CHEMICAL – HEALTH RELATED - CHART

Rottneest Island Distribution System			
Aesthetic Characteristic	No. of Analyses	No. of Analyses Complying	% Compliance
NO ₃	9	9	100
NO ₂	9	9	100
F	0	0	100
CN	0	0	100
Cd	3	3	100
Cr	0	0	100
Cu	9	9	100
Zn	8	8	100
Ni	4	4	100
As	0	0	100
Pb	9	9	100
Se	0	0	100
Sb	3	3	100
THMs	9	9	100



4.2 CHEMICAL - HEALTH RELATED - EXCEPTION NOTIFICATIONS

Health Related Water Quality Exceptions							
Zone	Population Served	Date	Health Related Chemical Characteristic	MoU Alert Level	Remedial Action	DoH Notified	Close Out Date
No Exceptions							

4.3 CHEMICAL - HEALTH RELATED

No chemical health related incidents occurred between October 2008 and December 2008.

5 Chemical - aesthetic performance

5.1 CHEMICAL - AESTHETIC - CHART

Rottneest Island Distribution System			
Aesthetic Characteristic	No. of Analyses	No. of Analyses Complying	% Compliance
Al	3	3	100
Cl	54	52	96
Colour	14	14	100
Hardness	3	3	100
Fe	18	18	100
Mn	18	18	100
pH	70	70	100
Na	0	0	100
SO4	0	0	100
NH4	5	5	100
TDS	0	0	100
Turbidity	14	14	100
H2S	9	9	100

5.2 CHEMICAL - AESTHETIC - INCIDENT SPECIFIC INFORMATION

The Chlorine dosing at Tank 5 was high due to the treatment of the Coli bacteria and hence 2 readings were slightly exceeded.

6 Radiological performance

6.1 RADIOLOGICAL - EXCEPTIONS NOTIFICATIONS

Radiological Water Quality Exceptions							
Zone	Population Served	Date	Radiological Characteristic	MoU Alert Level	Remedial Action	DoH Notified	Close Out Date
No Analyses Performed							

6.2 RADIOLOGICAL PERFORMANCE

Rottnest Island Distribution System	
Zone	% Samples Within Range
1	N/A
2	N/A



7 Planned sample summary (October 08 – December 08)

Zone	Microbiological			Chemical			Radiological		
	Planned	Taken	% Taken	Planned	Taken	% Taken	Planned	Taken	% Taken
1	11	11	100	103	103	100	0	0	-
2	15	15	100	122	122	100	0	0	-

7.1 PLANNED SAMPLE EXCEPTION

Planned Sample Exceptions				
Zone	Sampling Point	Date Due	Characteristic	Reason for Missing Sample

General notes / Other news

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The islands bitumen catchment runoff collection system has been decommissioned pending a review on storage tanks and maintenance requirements. No water from rainfall collection will be used for drinking purposes. Primary source of water is now from desalination and backed up with minimal amounts from fresh groundwater abstraction. Any change to this procedure will be advised in the next report.

Desalination plant upgrade of main pumps from piston type to centrifugal is completed.

Tank 4 has been taking off line for structural inspection, the existing poly liner has been removed for this inspection. The tank is know not serviceable until repairs are completed or a new liner is installed.

Tungsten to meet with Health department in January 2009 to develop an MOU as directed by the ERA.
