



# **ROTTNEST ISLAND AUTHORITY**

**Report to the Health  
Department by the Rottnest  
Island Authority  
January to March 2009**



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# 1 Water provider information

<b>Rottnest Island Authority Contact Details</b>	
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## 1.1 SYSTEM INFORMATION

<b>Rottnest Island Distribution System</b>						
<b>Zone</b>	<b>No. of Consumers / Customers</b>	<b>Average Amount of Water Supplied (L/Day)</b>	<b>Sources of Water (Bore/Catchment)</b>	<b>Treatment System</b>	<b>Length of Mains</b>	<b>No. of Sample Points</b>
1	100	59,890	R.O. / Bore / Catchment	Cl <sub>2</sub>	3*	2
2	320	515,516	R.O. / Bore / Catchment	Cl <sub>2</sub>	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	12	11	1	18	17	1
Thermotolerant Coliforms	12	11	1	18	17	1
Amoeba (Thermophyllic Naegleria)	12	12	0	18	18	0
Chemical Quality						
Chemical - Health related	15	15	0	30	30	0
Chemical - Aesthetic	65	64	1	62	61	1
Radiological	0	0	0	0	0	0



### 3 Microbial performance – January 2009 - March 2009

#### 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	5/03/2009	Coli	2	Chlorination	9/03/2009	12/03/2009

#### 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	10	1	90	1	90	10	0	100	0	100
2	14	1	93	1	93	14	0	100	0	100
Total	24	2	92	2	92	24	0	100	0	100

#### 3.3 MICROBIOLOGICAL INCIDENT SPECIFIC INFORMATION

Exception was traced back to Tank 5 as a section of roof flashing had come away from the structure, no fauna was found in the tank but it is believed that 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 <sub>3</sub>	9	9	100
NO <sub>2</sub>	9	9	100
F	0	0	100
CN	0	0	100
Cd	3	3	100
Cr	0	0	100
Cu	9	9	100
Zn	3	3	100
Ni	0	0	100
As	0	0	100
Pb	3	3	100
Se	0	0	100
Sb	0	0	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 January 2009 and March 2009.

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## 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	68	66	97
Colour	12	12	100
Hardness	3	3	100
Fe	21	21	100
Mn	18	18	100
pH	79	79	100
Na	0	0	100
SO4	0	0	100
NH4	9	9	100
TDS	0	0	100
Turbidity	15	15	100
H2S	9	9	100

### 5.2 CHEMICAL - AESTHETIC - INCIDENT SPECIFIC INFORMATION

The Chlorine dosing at Tank 4 required manual adjustment 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 (Jan 2009 – Mar 2009)

Zone	Microbiological			Chemical			Radiological		
	Planned	Taken	% Taken	Planned	Taken	% Taken	Planned	Taken	% Taken
1	10	10	100	135	135	100	0	0	-
2	14	14	100	147	147	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.

Tank 4 refurbishment has commenced with the intention of spraying a polyurethane membrane onto the existing concrete structure. The tank is now not serviceable until refurbishment is completed.

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