



**Quarterly Drinking Water Report
to the
Department of Health**

1 October – 31 December 2025





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1. Water Provider Information

Rottnest Island Authority Contact Details	
Name of Company	Rottnest Island Authority
Company Address	1 Mews Road, Fremantle WA 6160
Company Phone	Ph. (08) 9432 9300
Company Website	http://www.rotnnestisland.com/www.ria.wa.gov.au
Company Email	enquiries@rotnnestisland.com
Executive Director	Jason Banks
Director Environment Heritage and Parks	Arvid Hogstrom
Director Infrastructure	Martin Marerwa
Manager Approvals and Compliance	Tim Macknay
Environmental Compliance Officer (PFM)	Jay Petterwood

1.1 System Information

1.1.1 Consumers

Water demand on Wadjemup / Rottnest Island is highly seasonal, reflecting fluctuations in visitor numbers and accommodation occupancy. Peak demand occurs during the summer months, with lower consumption during winter. In October 2025, ferry arrivals reached 81,935 visitors, with 89,380 in November. The number of arrivals for December has not yet been confirmed.

The Island offers approximately 4,362 guest beds, with an average visitor stay of two nights. During the October - December 2025 reporting period, an additional 99 beds were allocated for contractor accommodation at Mt Herschell.

The Island also maintains a fluctuating population of around 150 permanent residents, which varies in response to seasonal demand.

1.1.2 Distribution System & Water Supply

The Rottnest Island water distribution system is a relatively small network comprising approximately 22 km of mains. Water supply for the island is sourced from six saline bores within the Longreach Borefield. The abstracted seawater is directed to the desalination plant, where it undergoes reverse osmosis (RO) treatment. Following desalination, the water is disinfected through a dual chlorination system, ensuring the provision of safe drinking water to consumers on the island.

The water demand on Rottnest Island is becoming more consistent throughout the year with reduced seasonal variability. Monthly consumption can range from approximately 12,000 kL in July to 24,000kL in December. Consumption levels for October 2025 were 17,454 kL, with 19,017 kL in November 2025 and 23,436 kL in December 2025.

Rottnest Island has a combined potable water storage capacity of 14,000 kL, providing approximately 18 days of supply at full capacity. Water security is managed to maintain a minimum of twelve days storage during peak periods. Trains 1 and 2 within the existing desalination plant are nearing end-of-life but have recently had major refurbishment. The desalination plant has a theoretical maximum production capacity of 910 kL per day with Trains 1, 2, and 4 operational which has been supported by integration of bore 7 into the abstraction system.

The RIA has appointed a contractor to deliver two new 1,000 kL/day seawater reverse osmosis desalination trains as part of a major plant upgrade. The new plant will be up to the equivalent of Water Corporation water quality standard and will include Multi Media Filtration as well as a second pass train.

Remote locations outside the main settlement, such as the outer island ablutions, Wadjemup Lighthouse and surrounding area, are supplied with water via a tanker. The supplied water in these areas is deemed not suitable for drinking and warning signs are posted accordingly.



Figure 1 Example of Public Signage



1.1.3 Sampling Schedule & Procedure

Potable water quality monitoring on Rottnest Island is conducted in line with the Australian Drinking Water Guidelines (ADWG) and follows the sampling schedule outlined in the Rottnest Island Drinking Water Quality Risk Management Plan (November 2022).

All sampling, reporting, and compliance assessments are based on the ADWG Version 3.7 as per direction from Department of Health (DoH)

The monitoring program is adaptable and may be revised in response to:

- Updated risk assessments;
- Emerging industry trends or best practice;
- Guidance or specialist recommendations from Government Departments; and
- Incident investigations or post incident reviews.

In addition to routine sampling under the 2022 risk management plan, RIA also undertakes targeted monitoring of:

- Tanks 4 and 7, however, the data does not form part of the statistical data required for analysis in this quarterly report.
- Drinking water fountains, as recommended by the DoH in 2017.
- Bromate, following testing for additional minerals and metals in 2017. Bromate was identified, and weekly sampling occurs to monitor the results.

2. Performance Summary

Summary of Water Quality results compared to the ADWG October - December 2025			
Parameters	No. of Analyses	No. of Analyses Complying with ADWG	No. of ADWG exceedance events
Microbial			
Bacterial (<i>E.coli</i>)	65 ¹	65	0
Amoeba (Thermophilic <i>Naegleria</i>)	32 ²	32	0
Chemical & Physical			
Health	345 ³	345	0
Aesthetic	423 ⁴	306	117
Radiological			
Gross Alpha	9	9	0
Gross Beta	9	9	0
PFAS⁵			
PFOS & PFHxS	0	NA	NA
PFOA	0	NA	NA

¹ This number does not include Tank 4 & 7

² Ibid

³ Ibid

⁴ Ibid

⁵ Ibid

3. Microbial Performance

During the October - December 2025 reporting period, there were no reported exceedances of microbiological parameters compared against the ADWG in the potable water distribution system.

Section 3.1 presents an overall compliance summary for all microbial-related sample analyses.

3.1 Microbial – Compliance Summary

Rottnest Island Distribution System October – December 2025				
Microbial Characteristic	Memorandum of Understanding Compliance Criteria	No. of Analyses	No. of Analyses Complying with Memorandum of Understanding	% Compliance
Bacterial				
<i>E.coli</i>	Non-Detect	65	65	100%
Amoeba				
Thermophilic <i>Naegleria</i>	Non-Detect	32	32	100%

4. Chemical: Health Related Performance

During the October – December 2025 reporting period, no exceedances of the chemical health parameters outlined in the ADWG were recorded for the potable water distribution system. Special investigations have been undertaken to investigate lead and bromate at specific portions of the island that are not identified in this section on potable water distribution, please refer to Section 10.

Section 4.1 presents an overall compliance summary for all chemical health-related sample analyses.

4.1 Chemical: Health Related – Compliance Summary

Rottnest Island Distribution System October - December 2025					
Health Parameter	ADWG Compliance Criteria (mg/L)	No. of Analyses	No. of Analyses Complying with ADWG	% Compliance with ADWG	Max Value of Analysis (mg/L)
Antimony (Sb)	0.003	27	27	100%	< 0.001
Bromate (BrO ₃ ⁻)	0.02	117	117	100%	0.011
Chlorine Total (Cl ₂) <i>(in house testing Total Residual)</i>	5	117	117	100%	1.62
Copper (Cu)	2	4	4	100%	0.053
Fluoride (F)	1.5	36	36	100%	0.03
Lead (Pb)	0.01	4	4	100%	0.001
Nickel (Ni)	0.02	4	4	100%	< 0.001
Nitrate (NO ₃ ⁻)	50	4	4	100%	0.001
Nitrite (NO ₂ ⁻)	3	16	16	100%	< 0.01
Trihalomethanes (THMs)	0.25	16	16	100%	0.0067

5. Chemical: Aesthetic Performance

During the October – December 2025 reporting period, there were 117 sample exceedances of chemical aesthetic parameters in the potable water distribution system, the details of which are outlined in Section 5.2.

5.1 Chemical: Aesthetic - Compliance Summary

Rottneest Island Distribution System October - December 2025					
Aesthetic Parameter	ADWG (mg/L unless stated)	No. of Analyses	No. of Analyses Complying with ADWG	% Compliance with ADWG	Max Value of Analysis (mg/L)
Aluminium (Al)	0.2	3	3	100%	< 0.05
Ammonia (NH ₃)	0.5	16	16	100%	< 0.02
Chloride (Cl ⁻)	250	1	1	100%	99
Free Chlorine (Cl) <i>(in house testing)</i>	0.6	117	0	0%	1.56
Colour	15 (HU)	7	7	100%	< 5
Hardness (CaCO ₃)	200	1	1	100%	14
Hydrogen Sulphide	0.05	4	4	100%	< 0.05
Iron (Fe)	0.3	27	27	100%	0.25
pH	6.5 – 8.5	117	117	100%	6.78, 7.76 ⁶
Sodium (Na)	180	117	117	100%	69
Sulphate	250	1	1	100%	1.8
TDS	600	1	1	100%	140
Turbidity	5 (NTU)	7	7	100%	0.30 (NTU)
Zinc (Zn)	3	4	4	100%	0.034

⁶ The two numbers represent the lowest and the highest pH values measured respectively.

5.2 Chemical: Aesthetic – Incident Specific Information

- **Chlorine (free):** During this reporting period, 117 recorded samples exceeded the ADWG aesthetic limit of 0.6 mg/L for chlorine.

The ADWG establishes an aesthetic odour threshold of 0.6 mg/L, however, these exceedances do not pose any health risks, as all values remained well below the health guideline limit of 5.0 mg/L.

Aesthetic exceedances were observed across multiple distribution sampling points over the three-month period, with a maximum recorded concentration of 1.56 mg/L at R12/001 on 2 December 2025.

While higher chlorine concentrations may affect the aesthetic quality of drinking water, maintaining adequate disinfection is essential to ensuring its safety.



6. Radiological Performance

During the October – December 2025 reporting period, no exceedances of radiological parameters outlined in the ADWG were recorded for the potable water distribution system.

6.1 Radiological - Compliance Summary

Rottneest Island Distribution System October - December 2025					
Radiological Parameter	ADWG (Bq/L unless stated)	No. of Analyses	No. of Analyses Complying with ADWG	% Compliance with ADWG	Max Value of Analysis (Bq/L)
Gross Alpha	0.5	9	9	100%	< 0.046
Gross Beta less K-40	0.5	9	9	100%	0.055 ± 0.046



7. PFAS Performance

No PFAS water quality samples were collected during this reporting period due to an oversight. The samples are scheduled to be collected in January 2026. There will be no reduction in the overall number of samples collected.

8. Planned Sample Summary

During the October - December 2025 reporting period, routine monitoring was conducted in accordance with the planned sampling schedule for microbial, chemical, and radiological parameters, with a total of 539 samples collected. A summary of sample numbers and compliance with the sampling program is provided in Section 8.1.

8.1 Planned Sample – Compliance Summary

Planned Samples October - December 2025								
Microbial			Chemical			Radiological		
Planned ⁷	Taken ⁸	% Taken	Planned	Taken	% Taken	Planned	Taken	% Taken
194	194	100%	347	345	99%	18	18	100%

⁷ A planned sample is defined as being included in the sampling schedule for this reporting period.

⁸ A taken sample is the physical sample taken for this reporting period.



9. Customer Complaints

There were no customer complaints relating to drinking water quality performance during this reporting period. RIA has a [Utilities Customer Complaint Procedure](#), which outlines how complaints can be submitted.

10. Special Investigations

10.1 Bromate Management

The RIA continues to actively monitor and manage bromate formation across the distribution network, in line with the decisions made during the Quarterly Meeting held on 26 September 2019 between the RIA, PFM, and the DoH. To ensure water quality, bromate levels are tested weekly at the following locations: R12/001 - R12/008, Fays Bay, Tank 4, and Homestead. Additionally, bromide levels are monitored weekly at Tank 7 to support effective management of bromate formation. During this reporting period investigations and controls are detailed in section 10.7.

10.2 Drinking Fountain Monitoring Initiative

The RIA initiated a drinking fountain monitoring program in December 2017, following a recommendation from the DoH. The findings from this sampling program played a key role in supporting the island's drinking fountain replacement project, which involved the replacement of all existing drinking fountains and the installation of new facilities throughout the settlement.

The drinking fountain monitoring program and its sampling results are reported separately from the broader distribution system or network. The results for the October - December 2025 quarter are provided in the table below. Sampling of the drinking fountains occurs on a four-week cycle. During this reporting period, there were no exceedances.

Rottnest Island Drinking Fountain October - December 2025					
Health Characteristic	ADWG (mg/L)	No. of Analyses	No. of Analyses Complying with ADWG	% Compliance with ADWG	Max Value of Analysis (mg/L)
Antimony (Sb)	0.003	68	68	100%	< 0.001
Cadmium (Cd)	0.002	68	68	100%	< 0.0001
Copper (Cu)	2	68	68	100%	0.14
Lead (Pb)	0.010	68	68	100%	0.001
Nickel (Ni)	0.020	68	68	100%	0.007
Aesthetic Characteristic	ADWG (mg/L)	No. of Analyses	No. of Analyses Complying with ADWG	% Compliance with ADWG	Max Value of Analysis (mg/L)
Zinc (Zn)	3	68	68	100%	0.15

10.3 Water Quality Assurance Program

RIA undertook a water quality assurance program in November and December 2025 in response to detections of lead in drinking water at the Kingstown Barracks. The investigation was completed in conjunction with DoH. The investigation initially focused on implementing corrective and preventative actions at Kingstown Barracks and this portion of the investigation was closed out via confirmatory sampling at Kingstown Barracks on 21 November 2025. RIA then undertook an assurance program that included 12 buildings sampled on a weekly basis between 26 November 2025 to 10 December 2025. DoH provided confirmation on 12 December 2025 that the program was suitable to be closed out.

10.4 Tank 7 Recommissioning

Tank 7 was taken offline to undertake Level 3 condition assessments on the concrete structure and roof structure. Following completion of these works, the tank was recommissioned and returned to service, with a full suite of potable water sampling undertaken to verify water quality and suitability for supply. Sampling was conducted on 7 October 2025, and all analytical results returned within specification and compliant with ADWG requirements.

10.5 Turbine Road Camp Commissioning

As part of commissioning activities at the Turbine Road Camp, comprehensive potable water sampling was undertaken across multiple locations and dates, including full analytical suites where required. Initial commissioning samples were collected from the water storage tank on 2 December 2025, covering the full suite of potable water parameters. Additional follow-up sampling at the water tank was conducted on 9 December 2025 to confirm stability of results. Further commissioning verification sampling was undertaken on 17 December 2025 at two kitchen outlets within the camp facilities to confirm water quality at points of use.

All analytical results from the above sampling events returned within specification and compliant with ADWG requirements, confirming the potable water system was suitable for operational use at the Turbine Road Camp

10.6 Tank 7 Microbiological Sampling

In accordance with the Tank 7 Management Plan, microbiological sampling is required following a rainfall event after an extended dry period. A rainfall event occurred on 14 December 2025, and microbiological samples were collected on 16 December, with all results returning within specification and showing no abnormal microbiological activity.

In subsequent routine weekly monitoring, microbiological testing was undertaken at Tank 7 on 17 December 2025. An early laboratory notification advised detection of *E. coli* and thermotolerant coliforms at that location. In response, the Tank 7 Interim Microbiological Exceedance Management Procedure was immediately implemented, including shock dosing of Tank 7 and follow-up microbiological sampling at all storage tanks.

All follow-up sampling from Tanks 4, 5 and 7 returned compliant results on 19 December 2025, and further confirmatory samples collected from Tanks 4, 5 and 7 on 23 December 2025 also showed no microbiological detections, confirming that the incident had been effectively managed and closed out. Sampling points across the network all returned compliant results during this period confirming the network was in compliance regarding microbiological safety.

10.7 Other Sampling

10.7.1 Central Thompson and Utility Maintenance Area

Sampling was undertaken across a range of representative internal plumbing locations within worker accommodation and operational area drinking fountains in the Central Thomson area. A total of 17 results exceeded the ADWG health guideline for bromate during this sampling program as shown in the table below. The investigation has implemented corrective actions and management controls for identified exceedances during this reporting quarter. The investigation is ongoing into the January to March 2026 reporting period.

Central Thompson and Utility Maintenance Area Bromate Exceedances		
Location	Date	Value (mg/L)
6 Brand Way	20/10/2025	0.031
6 Brand Way	29/10/2025	0.024
6 Brand Way	18/11/2025	0.026
10A Brand Way	20/11/2025	0.050
10C Brand Way	20/11/2025	0.027
7 Brand Way	20/11/2025	0.027
10A Brand Way	03/11/2025	0.028
10C Brand Way	03/11/2025	0.028
6 Brand Way	03/11/2025	0.029
7 Brand way	03/11/2025	0.025
Crib Room Drink Fountain	03/11/2025	0.033
10A Brand Way	11/12/2025	0.033
10C Brand Way	11/12/2025	0.035
7 Brand Way	11/12/2025	0.025
Crib Room Drink Fountain	19/12/2025	0.030
Trades Sink	19/12/2025	0.049
Luggage Drink Fountain	19/12/2025	0.028

10.7.2 Homestead

The Rottneest Island Homestead drinking water supply is a 50kL potable water storage tank which is directly supplied by the pressurised water main. This is sampled weekly for bromate levels and monthly for microbiological indicators to ensure drinking water quality compliance. During the reporting period, eight bromate exceedance events were recorded above the ADWG chemical guideline value of 0.02 mg/L. These occurred on the following dates:

- 07 October 2025: Bromate level of 0.024 mg/L
- 14 October 2025: Bromate level of 0.034 mg/L
- 21 October 2025: Bromate level of 0.034 mg/L
- 28 October 2025: Bromate level of 0.026 mg/L
- 04 November 2025: Bromate level 0.033 mg/L
- 11 November 2025: Bromate level 0.022 mg/L
- 18 November 2025: Bromate level 0.026 mg/L
- 25 November 2025: Bromate level 0.031 mg/L.

In accordance with Protocol 10 – Chemical Exceedances, the required response actions, including immediate stakeholder notification, increased sampling frequency, and targeted flushing of the Homestead’s internal system were undertaken. The pattern of results and timing of the exceedances indicate a correlation with periods of low water turnover and stagnation within the Homestead tank. Installation of an outdoor sprinkler system to promote turnover and maintain more consistent flow through the tank was undertaken in July 2025. These controls aim to minimise stagnation, stabilise disinfectant residuals, and reduce bromate formation risk during future low-demand periods.