Unitywater

WIS Recycled Water Management Plan Annual Report 2025–26

Annual Report 2025–26 | Wamuran Irrigation Scheme

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Acknowledgement of Country

Unitywater respectfully acknowledges the Traditional Custodians of the lands and waterways in which we live, work, and operate, the Kabi Kabi, Jinibara and Turrbal Peoples.

We honour their enduring connection to these places and their deep cultural, spiritual, and environmental knowledge and stewardship over the waterways that sustain us all.

We pay our deepest respects to Elders past and present, who hold the wisdom, traditions and stories of their people.

We are dedicated to truth-telling, promoting reconciliation and inclusion, ensuring that the voices and perspectives of First Nations Peoples are heard and valued.

We commit to integrating Indigenous knowledge into our work to protect and sustain our precious water resources.

Together, as one Unitywater, we strive for a harmonious and inclusive community, united in respect, understanding and shared stewardship of our environment.



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Contents

Acknowledgement of Country 2

A successful first full year 4

1. Introduction 5

1.1 Purpose of this report 5
1.2 The scheme 6
1.3 Approval and regulatory framework 8
1.4 Points of supply and scope of water quality reporting 8

2. Recycled water production and supply 9

2.1 Monthly production and supply 9
2.2 Customers 9

3. Water quality performance and compliance 11

3.1 Water quality criteria 11
3.2 Verification monitoring results 11
3.3 Noncompliance with water quality criteria (section 270) 11
3.4 Failure to test and missing data 11
3.5 Prescribed incidents (section 271) 12

4. RWMP review and audit 13

4.1 Review of the RWMP 13
4.2 Audit reports 13

Appendix A: Guideline reporting tables 14

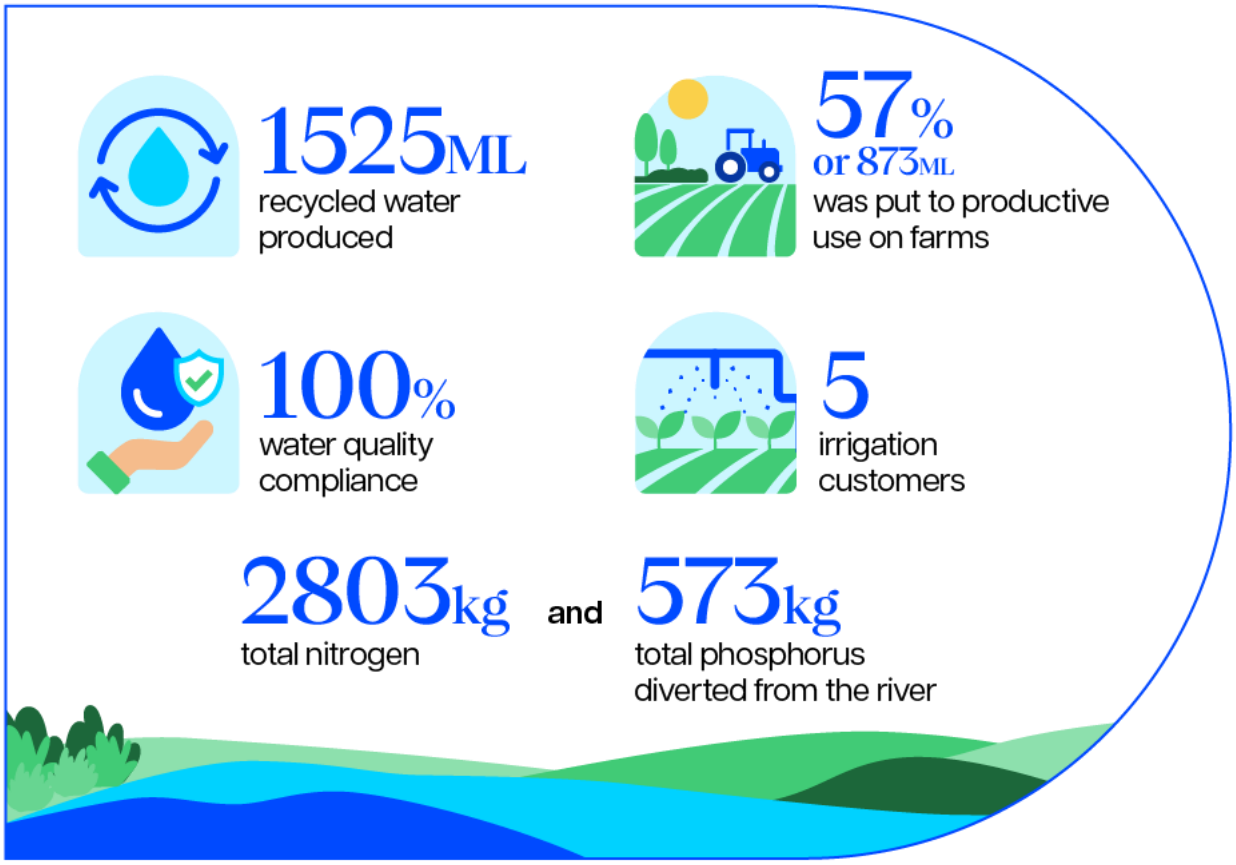
Appendix B: Ongoing verification monitoring program 15

B.1 CBSRTP – Final reuse POS (WIS06RTP) 15
B.2 Moodlu – Post 3ML Balance Tank Pump Shed (WIS07DIS) 17

Unitywater

A successful first full year

The Wamuran Irrigation Scheme completed its first full financial year of operation in FY2025 – 26, and it has been a strong result for the environment, Unitywater, and the local farming community. The scheme takes water that would otherwise be discharged to the Caboolture River, recycles it to a high standard, and delivers it to Wamuran-district farms as a secure, year-round irrigation supply.



1. Introduction

1.1 Purpose of this report

This annual report has been prepared for the Wamuran Irrigation Scheme (WIS) for the 2025–26 financial year. It is prepared by Unitywater as the recycled water provider for the scheme, in accordance with section 273 of the *Water Supply (Safety and Reliability) Act 2008* (Qld) (the Act) and the *Queensland Water Supply Regulator's Annual Reporting Guideline for Recycled Water Schemes (September 2010)*.

WIS is a single-entity recycled water scheme operating under an approved Recycled Water Management Plan (RWMP). Accordingly, this report addresses each of the matters required for an approved-plan holder: information provided to the regulator under sections 270 and 271 of the Act during the year, the outcomes of any RWMP review, and the findings of any audit report given to the regulator during the year. A description of the scheme and a summary of recycled water production, supply and quality are also provided.

Scheme Details	
Scheme Name	Wamuran Irrigation Scheme
Scheme Reference Number	SRN216
Recycled water provider	Northern SEQ Distributor - Retailer Authority (trading as Unitywater)
Registered business address	PO Box 953, Caboolture QLD 4510
Website	www.unitywater.com
Email	Customer.service@unitywater.com

1.2 The scheme

The WIS recycles treated water that would otherwise be discharged to the Caboolture River and supplies it to farms in the Wamuran district for year-round irrigation. The scheme supports Unitywater's commitment to return net zero nutrients to waterways by 2040, while providing customers with a secure, high-quality irrigation supply.

Water is recycled at the Caboolture South Recycled Water Treatment Plant (CBSRTP), which receives treated effluent from the adjacent Caboolture South Wastewater Treatment Plant (WWTP). Treatment at CBSRTP comprises multimedia filtration, ultraviolet (UV) disinfection and two-stage chlorination, producing Class A recycled water suitable for the irrigation of minimally processed food crops.

Recycled water is transferred approximately 17 kilometres to the Moodlu Quarry, a repurposed quarry that provides around 1.4 gigalitres of environmental storage and buffers supply across the year. From the Moodlu Water Quality Management Facility (WQMF), water is re-chlorinated and pumped into a dedicated distribution network that delivers it to customer offtakes, each fitted with metering, isolation and backflow-prevention. Because the quarry stores water between treatment and supply, the volume treated in any given month does not exactly match the volume supplied and discharged in the same month.

The scheme commenced supplying recycled water to customers in January 2025, and 2025–26 is its first full financial year of operation. The verification monitoring program has operated across the whole of the reporting period.

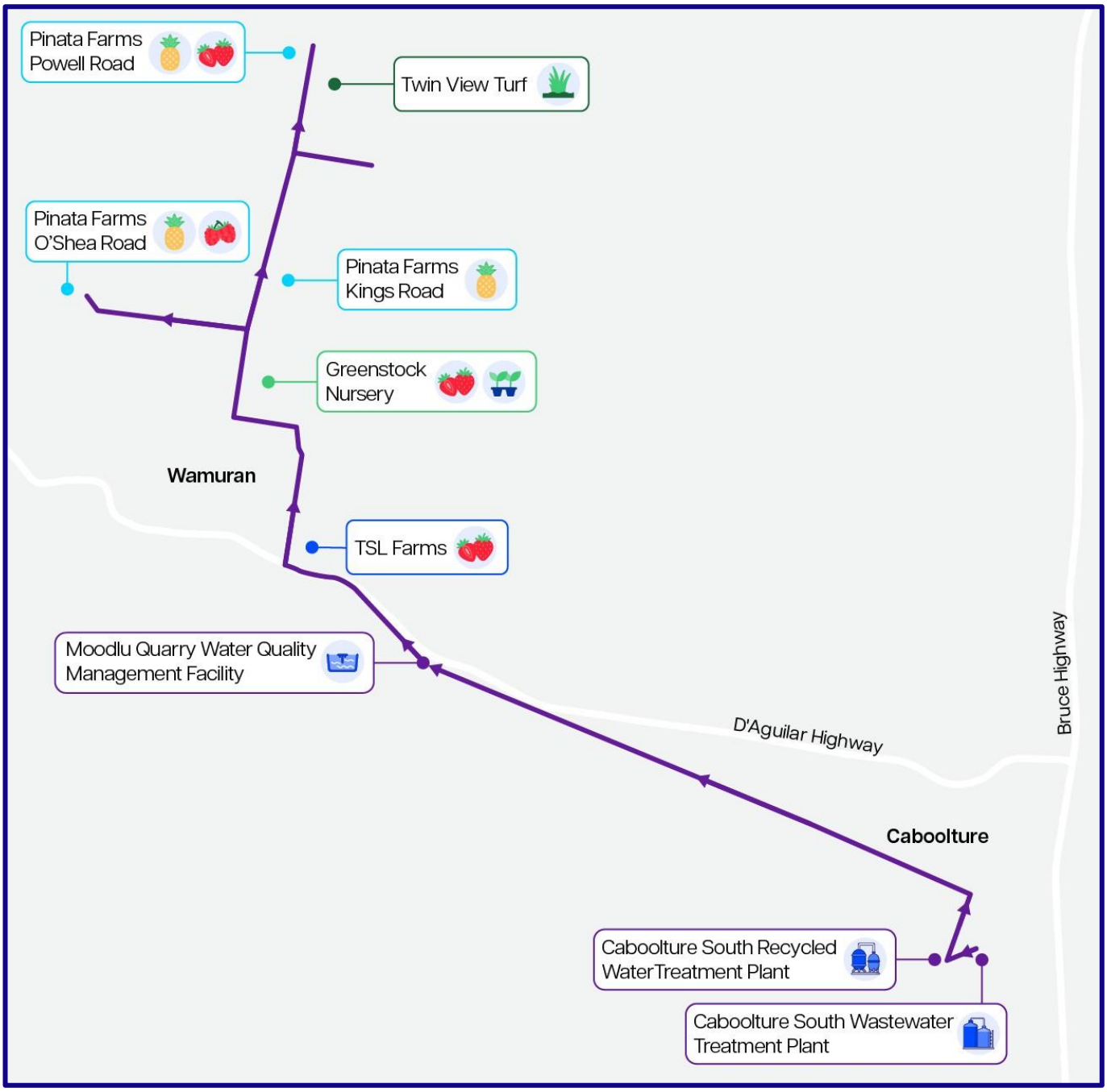


Figure 1: Wamuran Irrigation Scheme overview

1.3 Approval and regulatory framework

Unitywater's RWMP for the scheme (Version 1.0, August 2024) was approved with conditions by the regulator's delegate on 19 November 2024, with the Information Notice for the decision given on 21 November 2024. The approval authorises the supply of recycled water for the following high-exposure uses via drip irrigation:

- Berries (strawberries and raspberries).
- Pineapples.

The conditions of approval set the water quality criteria for the scheme, the verification monitoring requirements, and the intervals for review and audit of the RWMP. These conditions form the basis of the compliance reporting in section 3 and section 4 of this annual report.

1.4 Points of supply and scope of water quality reporting

The scheme's RWMP and verification monitoring program (VMP) provide for monitoring at a number of points through the treatment and distribution system. Many of these parameters are monitored to confirm that the treatment process is performing as intended — they are indicative of operational performance rather than direct measures of the quality of water supplied to customers.

Accordingly, this report assesses water quality compliance at the two points of supply (POS) that represent the quality of recycled water actually supplied to customers for the approved uses: CBSRTP – Final reuse POS (WIS06RTP) and Moodlu – Post 3ML Balance Tank Pump Shed (WIS07DIS). These are the points at which recycled water is delivered to customers, and they are the verification monitoring locations specified in the conditions of approval for the scheme's water quality criteria. Reporting compliance at these two points therefore provides a direct measure of the quality and safety of the recycled water supplied for irrigation of the approved food crops.

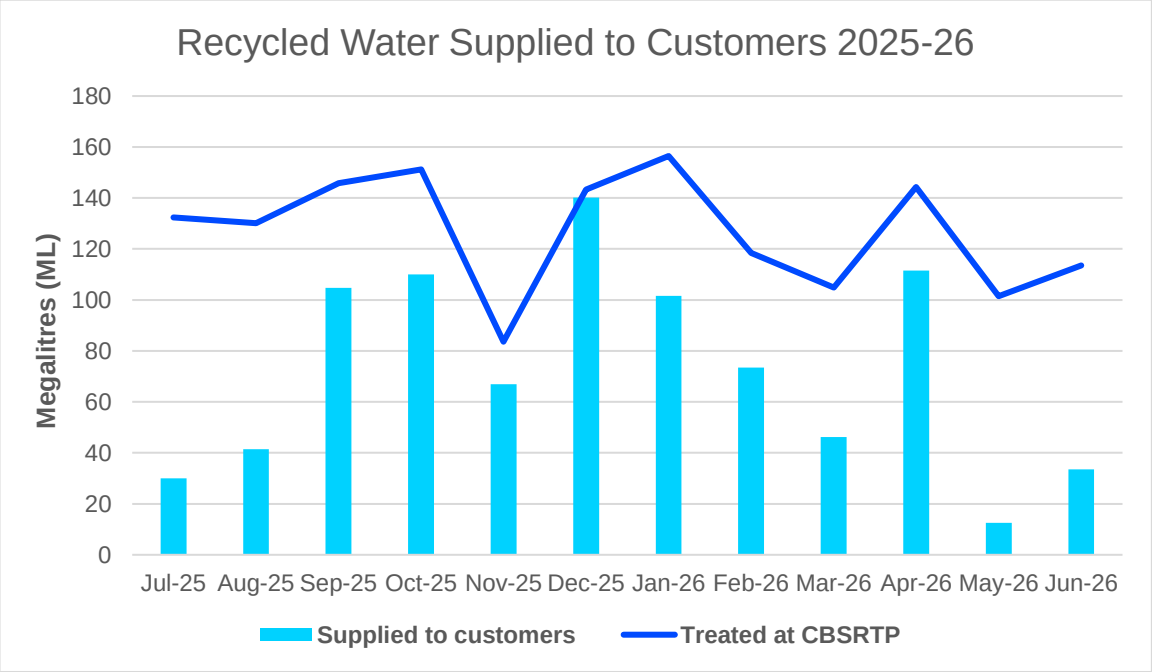
The complete set of ongoing VMP parameters monitored at these two POS, including the broader physical, chemical and operational-indicator parameters, is reported for completeness in Appendix B.

2. Recycled water production and supply

During 2025–26 the scheme treated approximately 1,525 ML of recycled water. Of the water supplied over the year, around 873 ML (about 57% of the volume treated) was delivered to customers for irrigation, with the balance of about 672 ML directed to the licensed outfall. The proportion supplied to customers grew through the year as demand increased and additional customers were connected.

2.1 Monthly production and supply

Figure 2.1: Monthly recycled water treated from the Recycled Water Treatment Plant (RTP) and volumes supplied to customers 2025–26. Volumes treated are measured at the treatment plant; volumes to customers are measured downstream of the Moodlu Quarry storage, so the two do not reconcile exactly within a single year.



2.2 Customers

Recycled water was supplied to five agricultural and horticultural customers during the year, two of which – TSL Family Farms and Greenstock Nursery – commenced taking supply in May 2026 as the customer base expanded. Volumes delivered to each customer are summarised below.

Table 2.2: Recycled water supplied to customers, 2025–26.

Customer	Irrigation use	Supplied 2025–26 (ML)
Twin View Turf	Turf	777.11
Piñata Farms — Powell Road	Strawberries	59.02
Piñata Farms — O'Shea Road	Raspberries	27.83

Customer	Irrigation use	Supplied 2025–26 (ML)
TSL Family Farms	Strawberries (from May 2026)	4.88
Greenstock Nursery	Ornamental trees and strawberries (from May 2026)	3.48
Total		**872.32**

3. Water quality performance and compliance

This section reports the information provided to the regulator under sections 270 and 271 of the Act during the financial year, as required by section 273(2)(c). It covers noncompliance with the water quality criteria, any failure to test or missing data, and prescribed incidents.

3.1 Water quality criteria

The water quality criteria for the scheme are set by the conditions of approval. Recycled water must be tested for *Escherichia coli* (*E. coli*) at each of the two verification monitoring locations, at the frequency and against the standard set out below.

Table 3.1: Water quality criteria for the scheme (conditions of approval 8.6 and 8.7). Verification locations: 'CBSRTP – Final reuse POS' and 'Moodlu – Post 3ML Balance Tank Pump Shed'.

Parameter	Frequency	Initial value	Annual value
E. coli	Weekly	Less than 10 cfu/100mL or 10 MPN/100mL	At least 95% of samples taken over a rolling 12-month period less than 10 cfu/100mL or 10 MPN/100mL

3.2 Verification monitoring results

E. coli was monitored weekly at both verification locations throughout the year. All results complied with the water quality criteria: every sample returned a result below the regulated standard of 10 MPN/100mL, and the annual value of at least 95% compliance was achieved at both locations.

Table 3.2: *E. coli* verification monitoring results against the water quality criteria, 2025–26.

Verification location	Samples taken	Compliant (<10 MPN/100mL)	Annual value achieved
CBSRTP – Final reuse POS	53	100%	Yes
Moodlu – Post 3ML Balance Tank Pump Shed	53	100%	Yes

3.3 Noncompliance with water quality criteria (section 270)

There was no noncompliance with the water quality criteria during 2025–26, and no notifications were made to the regulator under section 270 of the Act in relation to the water quality criteria. As all verification results complied with the regulated standard, the noncompliance reporting formats in Appendix A (Tables 1 to 3) are not applicable for this reporting period.

3.4 Failure to test and missing data

The water quality criteria require *E. coli* to be tested weekly at each of the two verification monitoring locations. A total of 104 verification tests of the water quality criteria were required over the financial year – 52 tests at each of the two locations – and 106 tests were actually taken during the period. No tests

were missed and there was no missing data. Verification monitoring was undertaken for the full financial year.

Beyond the regulated water quality criterion, the scheme also monitors a broad suite of physical, chemical and microbiological parameters at the two POS under its ongoing verification monitoring program. This broader monitoring was also substantially complete for 2025–26: each weekly parameter was sampled 53 times and each monthly parameter 12 times at both POS, with no scheduled samples missed. The full set of parameters and sampling counts is provided in Appendix B.

Table 3.3: Testing summary for the water quality criteria, 2025–26 (Appendix A, Table 4 format). No tests were missed during the year.

Parameter	Regulated standard	Frequency	Required tests	Tests taken	Missed
E. coli	<10 MPN/100mL (2 locations)	Weekly	104	106	0

3.5 Prescribed incidents (section 271)

No prescribed incidents were notified to the regulator under section 271 of the Act during 2025–26. There is currently no regulation prescribing incidents for the purposes of section 271.

4. RWMP review and audit

4.1 Review of the RWMP

No review of the approved RWMP was conducted during 2025–26, and no review was due during the reporting period. Under the conditions of approval, regular reviews of the RWMP must be conducted at least every two years, with the next review due by 1 September 2026. There has been no failure to undertake a required review.

4.2 Audit reports

No internal or external audit of the approved RWMP was conducted during 2025–26, and no audit report was given to the regulator during the reporting period. Under the conditions of approval, the next regular (external) audit must be conducted by 1 September 2027 and the next internal audit by 1 September 2029. No audit was due during the current reporting period.

Appendix A: Guideline reporting tables

The Annual Reporting Guideline for Recycled Water Schemes provides suggested table formats for reporting noncompliance and missing-data information. The formats used or not used in this report, and the reasons, are set out below.

Guideline table	Purpose	Status for 2025–26
Table 1	Noncompliance — annual values	Not applicable — no non-compliances
Table 2	Noncompliance — resample values	Not applicable — no non-compliances
Table 3	Other non-compliances	Not applicable — no non-compliances
Table 4	Failure to test and missing data	Provided at Table 3.3

Guideline Tables 1, 2 and 3 are the prescribed formats for presenting the details of non-compliances notified to the regulator under section 270 of the Act. As there were no non-compliances with the water quality criteria during 2025–26, and no section 270 notifications were made, these three tables are not applicable and have not been included. The failure-to-test and missing-data information (Guideline Table 4) is provided at Table 3.3, together with the mandatory testing-summary statement in section 3.4. The underlying verification monitoring results that demonstrate compliance are summarised in section 3.2 and Appendix B.

Appendix B: Ongoing verification monitoring program

This appendix reports the results of the scheme's ongoing verification monitoring program (VMP) at the two points of supply: CBSRTP – Final reuse POS (WIS06RTP) and Moodlu – Post 3ML Balance Tank Pump Shed (WIS07DIS). The parameters required and their monitoring frequency are taken from the ongoing VMP and are set out in Table B.1 and B.2. The results for each required parameter over 2025–26 are also summarised in these tables.

***E. coli* verification monitoring summary.** *E. coli* was monitored weekly at both POS throughout 2025–26, with 53 samples taken at each location (106 in total). At the CBSRTP – Final reuse POS, every result was below the laboratory limit of reporting (<1 MPN/100 mL). At the Moodlu – Post 3ML Balance Tank Pump Shed, all but three results were below the limit of reporting, with three low-level detections (1, 1 and 5 MPN/100 mL) recorded during the year. All results were below the critical limit of 10 MPN/100 mL set by the scheme's water quality criteria, and the annual value (at least 95% of samples less than 10 MPN/100 mL) was achieved at both locations, consistent with section 3.

Sampling completeness. All required verification samples were taken during the reporting period. Each weekly parameter was sampled 53 times (52 required) and each monthly parameter 12 times (12 required) at both POS – no scheduled verification samples were missed.

B.1 CBSRTP – Final reuse POS (WIS06RTP)

Table B.1: Verification monitoring results summary, CBSRTP – Final reuse POS (WIS06RTP), 2025–26.

Parameter	Units	Frequency	Samples taken	Missed	Min	Max	Mean
E. coli	MPN/100 mL	Weekly	53	0	<1	<1	<1
Chlorine (free)	mg/L	Weekly	53	0	<0.10	1.7	<0.1
Chlorine (total)	mg/L	Weekly	53	0	0.1	3	0.7
Temperature	°C	Weekly	53	0	16.9	29.7	24.7
Turbidity	NTU	Weekly	53	0	0.58	1.5	0.83
pH	pH units	Weekly	53	0	6.4	7.3	6.9
Conductivity	µS/cm	Weekly	53	0	584	708	639
Total Dissolved Solids	mg/L	Weekly	53	0	391	474	428
Salinity	ppt	Weekly	53	0	0.4	0.5	0.4
Suspended Solids	mg/L	Weekly	53	0	<2	9	<2
Nitrogen (Ammonia)	mg/L	Weekly	53	0	<0.05	0.2	<0.051
Nitrogen (Total)	mg/L	Weekly	53	0	2.07	10.9	3.75

Parameter	Units	Frequency	Samples taken	Missed	Min	Max	Mean
Nitrogen (Oxidised)	mg/L	Weekly	53	0	0.93	9.15	2.46
Phosphorus (Total)	mg/L	Weekly	53	0	0.2	1.31	0.74
Chloride	mg/L	Weekly	53	0	91	111	100
Alkalinity (Bicarbonate)	mg/L $CaCO_3$	Weekly	53	0	22.5	76.6	56
Sodium Adsorption Ratio (SAR)	—	Weekly	53	0	3.1	4.6	3.9
Total Hardness	mg/L $CaCO_3$	Weekly	53	0	64	101	82
Calcium	mg/L	Weekly	53	0	18	27	22
Magnesium	mg/L	Weekly	53	0	5	10	7
Sodium	mg/L	Weekly	53	0	62	96	82
Aluminium	mg/L	Monthly	12	0	0.04	0.56	0.25
Arsenic	mg/L	Monthly	12	0	<0.001	<0.001	<0.001
Barium	mg/L	Monthly	12	0	0.003	0.008	0.005
Beryllium	mg/L	Monthly	12	0	<0.001	<0.001	<0.001
Boron	mg/L	Monthly	12	0	0.06	0.1	0.08
Cadmium	mg/L	Monthly	12	0	<0.0006	<0.0006	<0.0006
Chromium	mg/L	Monthly	12	0	<0.001	0.002	<0.001
Cobalt	mg/L	Monthly	12	0	<0.001	0.001	<0.001
Copper	mg/L	Monthly	12	0	0.001	0.006	0.002
Fluoride	mg/L	Monthly	12	0	0.1	1.5	0.5
Iron	mg/L	Monthly	12	0	0.02	0.04	0.03
Lead	mg/L	Monthly	12	0	<0.001	0.001	<0.001
Lithium	mg/L	Monthly	12	0	<0.05	0.05	<0.05
Manganese	mg/L	Monthly	12	0	0.009	0.11	0.027
Mercury	mg/L	Monthly	12	0	<0.0001	<0.0001	<0.0001
Molybdenum	mg/L	Monthly	12	0	<0.001	0.002	<0.001
Nickel	mg/L	Monthly	12	0	0.001	0.002	0.001
Selenium	mg/L	Monthly	12	0	<0.01	<0.01	<0.01

Parameter	Units	Frequency	Samples taken	Missed	Min	Max	Mean
Silver	mg/L	Monthly	12	0	<0.001	<0.001	<0.001
Uranium	mg/L	Monthly	12	0	<0.002	<0.002	<0.002
Vanadium	mg/L	Monthly	12	0	<0.001	<0.001	<0.001
Zinc	mg/L	Monthly	12	0	0.02	0.05	0.03

Note: the regulated critical limit for E. coli under the scheme's water quality criteria is 10 MPN/100 mL; all E. coli results at this point of supply were below the laboratory limit of reporting. PFAS (PFHxS + PFOS) and PFOA is monitored at the Moodlu point of supply only (Table B.2).

B.2 Moodlu – Post 3ML Balance Tank Pump Shed (WIS07DIS)

Table B.2: Verification monitoring results summary, Moodlu – Post 3ML Balance Tank Pump Shed (WIS07DIS), 2025–26.

Parameter	Units	Frequency	Samples taken	Missed	Min	Max	Mean
E. coli	MPN/100 mL	Weekly	53	0	<1	5	<1
Chlorine (free)	mg/L	Weekly	53	0	<0.1	0.8	0.2
Chlorine (total)	mg/L	Weekly	53	0	<0.1	1.8	0.7
Temperature	°C	Weekly	53	0	19.1	29.6	25.0
Turbidity	NTU	Weekly	53	0	0.56	2.7	0.91
pH	pH units	Weekly	53	0	6.1	7.5	6.9
Conductivity	µS/cm	Weekly	53	0	400	708	550
Total Dissolved Solids	mg/L	Weekly	53	0	268	474	369
Salinity	ppt	Weekly	53	0	0.3	0.5	0.4
Suspended Solids	mg/L	Weekly	53	0	<2	5	<2
Nitrogen (Ammonia)	mg/L	Weekly	53	0	<0.05	0.06	<0.05
Nitrogen (Total)	mg/L	Weekly	53	0	0.24	11.8	2.5
Nitrogen (Oxidised)	mg/L	Weekly	53	0	0.05	9.1	1.66
Phosphorus (Total)	mg/L	Weekly	53	0	<0.05	1.43	0.51

Parameter	Units	Frequency	Samples taken	Missed	Min	Max	Mean
Chloride	mg/L	Weekly	53	0	52	114	86
Bicarbonate alkalinity	mg/L $CaCO_3$	Weekly	53	0	0	72.8	56.7
Sodium Adsorption Ratio (SAR)	—	Weekly	53	0	2.2	4.4	3.3
Total Hardness	mg/L $CaCO_3$	Weekly	53	0	66	102	83
Calcium	mg/L	Weekly	53	0	17	27	22
Magnesium	mg/L	Weekly	53	0	5	10	7
Sodium	mg/L	Weekly	53	0	46	98	69
Aluminium	mg/L	Monthly	12	0	0.02	0.36	0.15
Arsenic	mg/L	Monthly	12	0	<0.001	<0.001	<0.001
Barium	mg/L	Monthly	12	0	0.002	0.008	0.004
Beryllium	mg/L	Monthly	12	0	<0.001	<0.001	<0.001
Boron	mg/L	Monthly	12	0	0	0.08	0.05
Cadmium	mg/L	Monthly	12	0	<0.0006	<0.0006	<0.0006
Chromium	mg/L	Monthly	12	0	<0.001	0.002	<0.001
Cobalt	mg/L	Monthly	12	0	<0.001	0.003	<0.001
Copper	mg/L	Monthly	12	0	<0.001	0.002	<0.001
Fluoride	mg/L	Monthly	12	0	<0.1	1	0.5
Iron	mg/L	Monthly	12	0	0.01	0.05	0.03
Lead	mg/L	Monthly	12	0	<0.001	<0.001	<0.001
Lithium	mg/L	Monthly	12	0	<0.05	0.05	<0.05
Manganese	mg/L	Monthly	12	0	0.007	0.03	0.014
Mercury	mg/L	Monthly	12	0	<0.0001	<0.0001	<0.0001
Molybdenum	mg/L	Monthly	12	0	0.001	0.009	0.005
Nickel	mg/L	Monthly	12	0	<0.001	0.001	<0.001
Selenium	mg/L	Monthly	12	0	<0.01	<0.01	<0.01
Silver	mg/L	Monthly	12	0	<0.001	<0.001	<0.001

Parameter	Units	Frequency	Samples taken	Missed	Min	Max	Mean
Uranium	mg/L	Monthly	12	0	<0.002	<0.002	<0.002
Vanadium	mg/L	Monthly	12	0	<0.001	<0.001	<0.001
Zinc	mg/L	Monthly	12	0	0.01	0.03	0.019
PFAS Sum PFHxS + PFOS	µg/L	Monthly	12	0	<0.01	0.09	<0.01
PFOA	µg/L	Monthly	12	0	<0.01	<0.01	<0.01

Note: the regulated critical limit for *E. coli* under the scheme's water quality criteria is 10 MPN/100 mL, and the critical limit for PFAS Sum PFHxS + PFOS is 0.13 µg/L and PFOA is 10 µg/. All 2025–26 results at this POS were below these critical limits.