Government of Western Australia
Department of Water and Environmental Regulation

# Licence

| | |
|---|---|
| **Licence number** | L6004/1992/13 |
| **Licence holder** | Water Corporation |
| **ACN (if applicable)** | 28 033 434 917 |
| **Registered business address** | 629 Newcastle Street<br>LEEDERVILLE WA 6007 |
| **DWER file number** | 2011/007522-1 |
| **Duration** | 1/11/2023 to 31/10/2043 |
| **Date of issue** | 30/10/2023 |
| **Premises details** | Collie Resource Recovery Facility<br>Mungalup Road<br>COLLIE WA 6225<br>Being part of State Forest 4 as depicted by the coordinates in Schedule 3 |

| **Prescribed premises category description** (Schedule 1, ***Environmental Protection Regulations 1987***) | **Assessed production / design capacity** |
|---|---|
| Category 54: Sewage facility: premises —<br>(a) on which sewage is treated (excluding septic tanks); or<br>(b) from which treated sewage is discharged onto land or into waters | Not more than 2,200 $m^3$ per day |

This licence is granted to the licence holder, subject to the attached conditions, on 30 October 2023, by:

Peter Knol

Date: 2023.10.30 15:07:24 +08'00'

Senior Environmental Officer, Industry Regulation
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

# Licence history

| Date | Reference number | Summary of changes |
|---|---|---|
| 29/08/2014 | L6004/1992/12 | Licence re-issue and amendment to new format |
| 23/10/2014 | L6004/1992/12 | Licence amendment to extend licence duration by 4 years |
| 13/09/2019 | L6004/1992/12 | Licence amendment to upgrade sludge dewatering system |
| 17/08/2023 | L6004/1992/12 | Amendment to altering the due date for the environmental report and annual audit compliance report, to be 1 October annually. |
| 30/10/2023 | L6004/1992/13 | Licence renewed for another 20 years |

# Interpretation

In this licence:

(a) the words ‘including’, ‘includes’ and ‘include’ in conditions mean “including but not limited to”, and similar, as appropriate;

(b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;

(c) where tables are used in a condition, each row in a table constitutes a separate condition;

(d) any reference to an Australian or other standard, guideline, or code of practice in this licence:

  (i) if dated, refers to that particular version; and

  (ii) if not dated, refers to the latest version and therefore may be subject to change over time;

(e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and

(f) unless specified otherwise, all definitions are in accordance with the EP Act.

**NOTE:** This licence requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this licence.

# Licence conditions

## Infrastructure and equipment

**1.** The licence holder must ensure that the site infrastructure and equipment listed in Table 1 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 1.

**Table 1: Containment Infrastructure operational requirements**

| Site infrastructure and equipment | Operational requirement | Infrastructure location |
|---|---|---|
| Inlet works | Stored in a sealed bin which is on a bunded hardstand. | As shown in Figure 2 in Schedule 1 |
| SBR Basins (2 basins) | Concrete lined to achieve a permeability of at least $<10^{-9}$ m/s or equivalent. | |
| Treated wastewater holding tanks (Tank # 1 and Tank #2) | Concrete lined to achieve a permeability of at least $< 1x10^{-9}$ m/s or equivalent. | |
| Aerobic sludge digesters (2 digestors) | Store un-dewatered sludge from the treatment plant within concrete lined storage areas;<br>No overtopping of sludge hoppers, leachate sumps or other dewatering equipment infrastructure to occur; and<br>All chemicals must be stored in purpose-built areas that comply with AS3780. | |
| Sludge dewatering system | | |
| Sludge dewatering (decanter centrifuges) | Dewater and store un-dewatered sludge from the treatment plant must be stored within concrete lined storage areas;<br>Leachate centrate to be routed to an impervious sump with cover and returned to the inlet works by impervious pipework;<br>No overtopping of leachate sumps or dewatered sludge containment infrastructure to occur; and<br>All chemicals must be stored in purpose-built areas that comply with AS3780. | |
| Hazardous chemical and hydrocarbon storage area | Must be bunded and compliant with AS1940.<br>Hardstand areas to be impervious and sufficiently graded and bunded to contain spills or accidental discharges to land/waters. | |

**2.** The licence holder must only accept onto the premises waste of a waste type which meets the corresponding acceptance specification set out in Table 2.

**Table 2: Types of waste authorised to be accepted onto the premises**

| Waste type | Acceptance specification |
|---|---|
| Sewage – waste from the reticulated sewerage system | Accepted through sewer inflow(s) only |

**3.** The licence holder must ensure that the waste types specified in Table 3 are only subjected to the corresponding process, subject to the corresponding process limits and specifications.

**Table 3: Waste processing**

| Waste type | Process(es) | Process limits and specifications |
|---|---|---|
| Sewage | Physical, biological and chemical treatment Sequence Batch Reactor (SBR) | Treatment of sewage waste must be targeted at or below the treatment capacity of 2,200 $m^3$ /day. |
| Sewage Sludge | Treatment and Storage | a) Sludge must only be treated through the decanter centrifuge system that dewate sludge to meet the requirements of the Western Australian Guidelines for Biosolids Management, Department of Environment and Conservation (Decem 2012);<br>b) Dispose of sludge and biosolids in accordance with the document Western Australian Guidelines for Biosolids Management, Department of Environment and Conservation (December, 2012). |

**4.** The licence holder must manage the wastewater treatment vessels such that:
- (a) overtopping of the wastewater treatment vessels does not occur;
- (b) stormwater runoff is prevented from entering the wastewater treatment vessels;
- (c) there is no seepage loss from the wastewater treatment vessels; and
- (d) vegetation and floating debris (emergent or otherwise) are prevented from growing or accumulating in the wastewater treatment vessels.

**5.** The licence holder must manage the effluent infiltration channel(s) such that:
- (a) treated wastewater is distributed evenly along the channel(s) to minimise soil erosion and surface ponding of wastewaters;
- (b) no run-off or discharge occurs beyond the boundary of the defined infiltration channel;
- (c) zones of permanent/semi-permanent water (upper reaches of the channel – as defined in Schedule 1) should be kept clear of vegetation to minimise potential for mosquito breeding, and transient/ephemeral wet zones (such as banks and lower reaches of the channel – as defined in Schedule 1) may sustain reeds and other vegetation (not declared weeds) to encourage evapotranspiration and nutrient uptake;
- (d) sludges are removed from the base of the channel to maintain the infiltration performance; and
- (e) warning signs are maintained along the length of the effluent channel to inform the public of the source and quality of water in the channel.

**6.** The licence holder must not allow surface discharge from the effluent channel into Lyalls Brook while there is no surface flow within the Lyalls Brook.

## Emission and discharges

7. The licence holder must ensure that the emissions specified in Table 4**: Authorised discharged points** are discharged only from the corresponding discharge point and only at the corresponding discharge point location.

**Table 4: Authorised discharged points**

| Emission | Discharge Point | Discharge point location |
|---|---|---|
| Treated wastewater from water recovery facility | Offsite effluent discharge point L1 | As shown in Figure 2 in Schedule 1 |

8. The licence holder must target emissions to land at or below the levels specified in Table 5.

**Table 5: Emission targets to land**

| Emission point reference | Parameter | Target (including units) | Averaging period |
|---|---|---|---|
| L1 | Biochemical Oxygen Demand | 20 mg/L | Spot sample |
| | Total Suspended Solids | 20 mg/L | |
| | Total Nitrogen | 10 mg/L | |
| | Total Phosphorus | 2 mg/L | |
| | *Escherichia coli* | 150 cfu/100mL | |

## Monitoring

9. The licence holder must ensure that:
   (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;
   (b) all wastewater sampling is conducted in accordance with AS/NZS 5667.10;
   (c) all groundwater sampling is conducted in accordance with AS/NZS 5667.11
   (d) all microbiological samples are collected in accordance with AS/NZS 2031; and
   (e) all laboratory samples are submitted to a laboratory with current NATA accreditation for the parameters to be measured.

10. The licence holder must ensure that:
   (a) monthly monitoring is undertaken at least 15 days apart; and
   (b) quarterly monitoring is undertaken at least 45 days apart.

11. The licence holder must ensure that all monitoring equipment used on the premises to comply with the conditions of this licence is calibrated in accordance with the manufacturer's specifications and the requirements of this licence.

12. The licence holder must, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.

13. The licence holder must monitor emissions to the emission point reference in accordance with Table 6 and ensure that the emissions from the monitoring locations

do not exceed the corresponding limits specified in that table.

**Table 6: Discharge monitoring and limits**

| Emission Point Reference | Monitoring location | Parameter | Averaging period | Frequency |
|---|---|---|---|---|
| L1 | M1 – Discharge from treated wastewater holding tank #2, post chlorination | pH[1] | Spot sample | Monthly |
| | | Biological Oxygen Demand (mg/L) | | |
| | | Total Dissolved Solids (mg/L) | | |
| | | Total Suspended Solids (mg/L) | | |
| | | Total Nitrogen (mg/L) | | |
| | | Total Phosphorous (mg/L) | | |
| | | E. coli (cfu/100mL) | | |

*Note 1: In-field, non-NATA accredited analysis permitted.*

**14.** The licence holder must undertake the monitoring in Table 7 according to the specifications in that table.

**Table 7: Monitoring of inputs and outputs**

| Input/Output | Monitoring point location | Parameter | Units | Averaging period | Frequency |
|---|---|---|---|---|---|
| Sewage – Inlet Flow | Inflow meter | Volumetric flow rate (cumulative) | $m^3$/day | Monthly | Continuous |
| Treated wastewater discharged to infiltration area[1] | | | | | |

*Note 1: Calculated from inflow data.*

## Ambient environmental quality monitoring

**15.** The licence holder must conduct an ambient surface water quality monitoring program in accordance with the requirements specified in Schedule 3: Monitoring and record the results of all monitoring activity conducted under that program.

**16.** The licence holder must adhere to the field quality assurance and quality control procedures specified in Schedule 3: Monitoring for the monitoring required by

condition 15.

**17.** All sample analysis must be undertaken by laboratories with current accreditation from the National Association of Testing Authorities (NATA) for the relevant parameters, unless otherwise specified in Schedule 3: Monitoring.

## Records and reporting

**18.** All information and records required by the licence must:
- (a) be legible;
- (b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
- (c) except for records listed in 18(d) be retained for at least 6 years from the date the records were made or until the expiry of the licence or any subsequent licence; and
- (d) for those following records, be retained until the expiry of the licence and any subsequent licence:
  - (i) off-site environmental effects; or
  - (ii) matters which affect the condition of the land or waters.

**19.** The licence holder must:
- (a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period; and
- (b) prepare and submit to the CEO an Annual Audit Compliance Report in the approved form by 1 of October each year.

**20.** The licence holder must implement a complaints management system that as a minimum record the number and details of complaints received concerning the environmental impact of the activities undertaken at the premises and any action taken in response to the complaint.

**21.** The licence holder must submit to the CEO by October 1 of each year, an Annual Environmental Report for that annual period for the conditions listed in Table 8, and which provides information in accordance with the corresponding requirement set out in Table 8: Annual Environmental Report.

### Table 8: Annual Environmental Report

| Condition or table | Requirement |
|---|---|
| - | Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken. |
| Table 3 | Summary of any treatment capacity target exceedances and any action taken. |
| Table 6 | Summary of any emission to land target exceedances and any action taken. |
| Table 6 & Table 7 | Contaminant loading (kg/day and kg/ha/day – monthly average and total annual loading kg/yr and kg/ha/yr) to land of parameters monitored (except pH and *E. coli*) |
| Table 7 | Monitoring of input and output data |

| Condition or table | Requirement |
|---|---|
| Table 12 | Monitoring of ambient surface water quality data |
| Table 13 | Monitoring of ambient groundwater quality data |
| Table 12 & Table 13 | Assessment of ambient surface water quality and groundwater quality monitoring results against relevant environmental guidelines |
| 19 | Compliance |
| 20 | Complaints summary |

**22.** The licence holder must ensure that the Annual Environmental Report also contains an assessment of the information contained within the report against previous monitoring results and licence targets.

**23.** The licence holder must submit copies of original monitoring reports submitted to the licence holder by third parties within 14 days of the CEOs request.

## Notification

**24.** The licence holder must ensure that the parameters listed in Table 9 notified to the CEO at the Contact Address and in accordance with the notification requirements of the table.

**Table 9**: **Notification requirements**

| Condition or table (if relevant) | Parameter | Notification requirement[1] |
|---|---|---|
| | Breach of any target specified in the licence | As soon as practicable |
| 12 | Calibration report | As soon as practicable, but before 5pm the next usual business day after becoming aware of the breach or something like that |

*Note 1: No notification requirement in the licence must negate the requirement to comply with s72 of the Act.*

# Definitions

In this licence, the terms in Table 10 have the meanings defined.

**Table 10: Definitions**

| Term | Definition |
|---|---|
| ACN | Australian Company Number |
| AHD | means the Australian height datum |
| AS/NZS 2031 | means the Australian Standard AS/NZS 2031 Selection of containers and preservation of water samples for microbiological analysis |
| AS/NZS 5667.1 | means the Australian Standard AS/NZS 5667.1 Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples |
| AS/NZS 5667.6 | means the Australian Standard AS/NZS 5667.6 Water Quality – Sampling – Guidance on sampling of rivers and streams |
| AS/NZS 5667.10 | means the Australian Standard AS/NZS 5667.10 Water Quality – Sampling – Guidance on sampling of waste waters |
| AS/NZS 5667.11 | means the Australian Standard AS/NZS 5667.11 Water Quality – Sampling – Guidance on sampling of groundwaters |
| Annual period | a 12 month period commencing from 1 July until 30 June of the immediately following year. |
| Approved form | means the Annual Audit Compliance Report (AACR) form template approved by the CEO for use and available via DWER's external website. |
| averaging period | means the time over which a limit or target is measured or a monitoring result is obtained |
| CEO | means Chief Executive Officer of the Department. "submit to / notify the CEO" (or similar), means either:<br>Director General<br>Department administering the *Environmental Protection Act 1986*<br>Locked Bag 10 Joondalup<br>DC WA 6919<br>or:<br>info@dwer.wa.gov.au |
| condition | a condition to which the licence is subject under section 62 of the *Environmental Protection Act 1986* |

| | |
|---|---|
| Department | means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3. |
| EP Act | *Environmental Protection Act 1986* (WA) |
| EP Regulations | *Environmental Protection Regulations 1987* (WA) |
| freeboard | means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point |
| hardstand | means a surface with a permeability of 10-9 metres/second or less |
| leachate | means any vessel or tank containment infrastructure associated with the treatment of wastewater |
| licence | refers to this document, which evidences the grant of a licence by the CEO under section 57 of the EP Act, subject to the specified conditions contained within. |
| licence holder | refers to the occupier of the premises, being the person specified on the front of the licence as the person to whom this licence has been granted. |
| monthly period | means a one-month period commencing from day 1 of a month until the last day of that same month. |
| NATA | means the National Association of Testing Authorities, Australia |
| NATA accredited | means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis |
| premises | refers to the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map in Schedule 1 to this licence. |
| relevant environmental guidelines | means the Department of Environment and Conservation guideline, Assessment Levels for Soil, Sediment and Water (February 2010), as amended from time to time. |
| Schedule 1 | means Schedule 1 of this Licence unless otherwise stated |
| Schedule 2 | means Schedule 2 of this Licence unless otherwise stated |
| Spot sample | means a discrete sample representative at the time and place at which the sample is taken; and |
| Wastewater treatment vessels | means any vessel or tank containment infrastructure associated with the treatment of wastewater |

**END OF CONDITIONS**

# Schedule 1: Maps

## Premises map

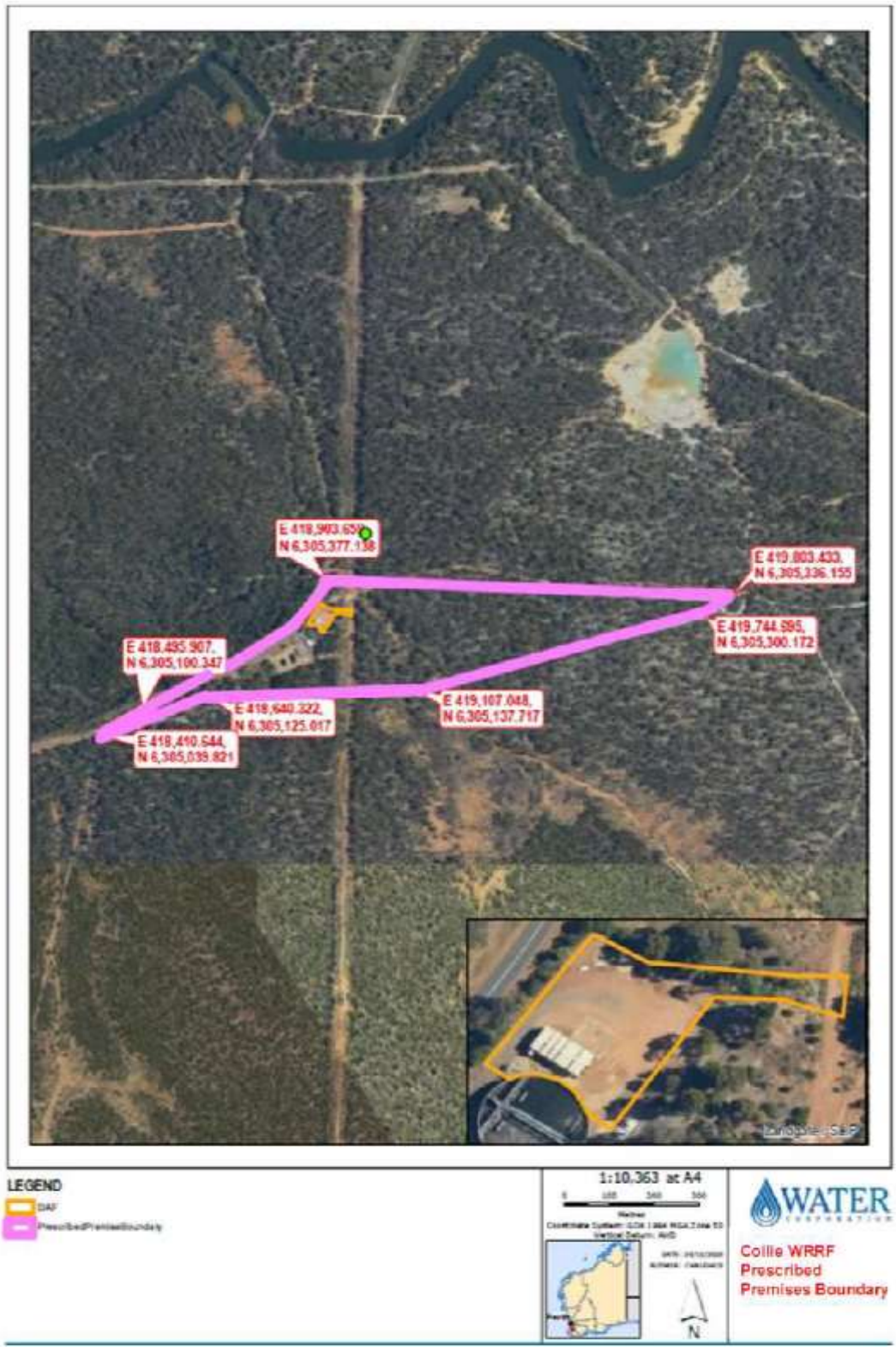



**Figure 1: Map of the boundary of the prescribed premises**

## Collie Water Resource Recovery Facility Premises Map


**Figure 2: Collie Water Resource Recovery Facility Premises Map**

## Map of monitoring locations

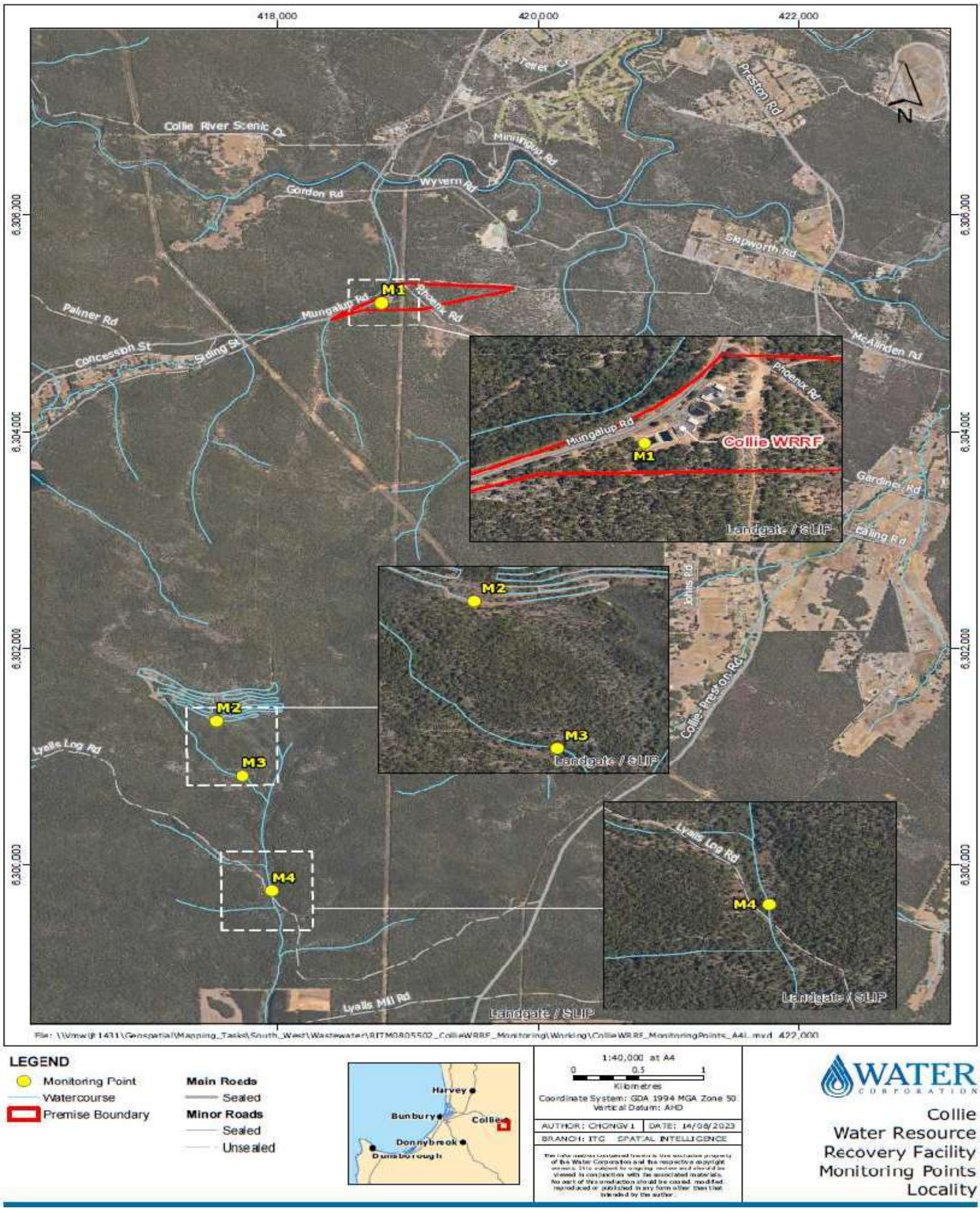



**Figure 3: locations of the monitoring points**

## Location of Ambient Surface Water monitoring points

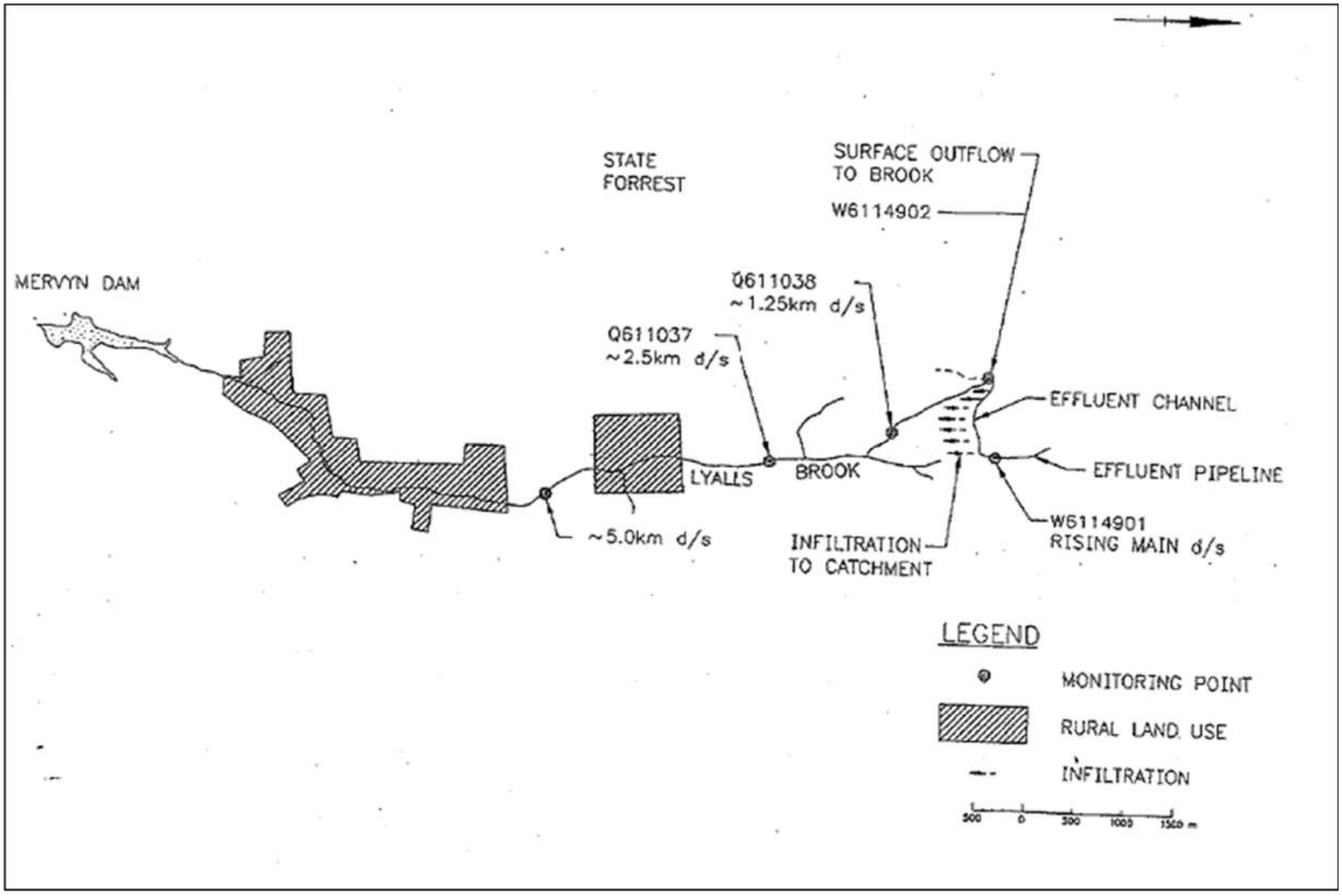
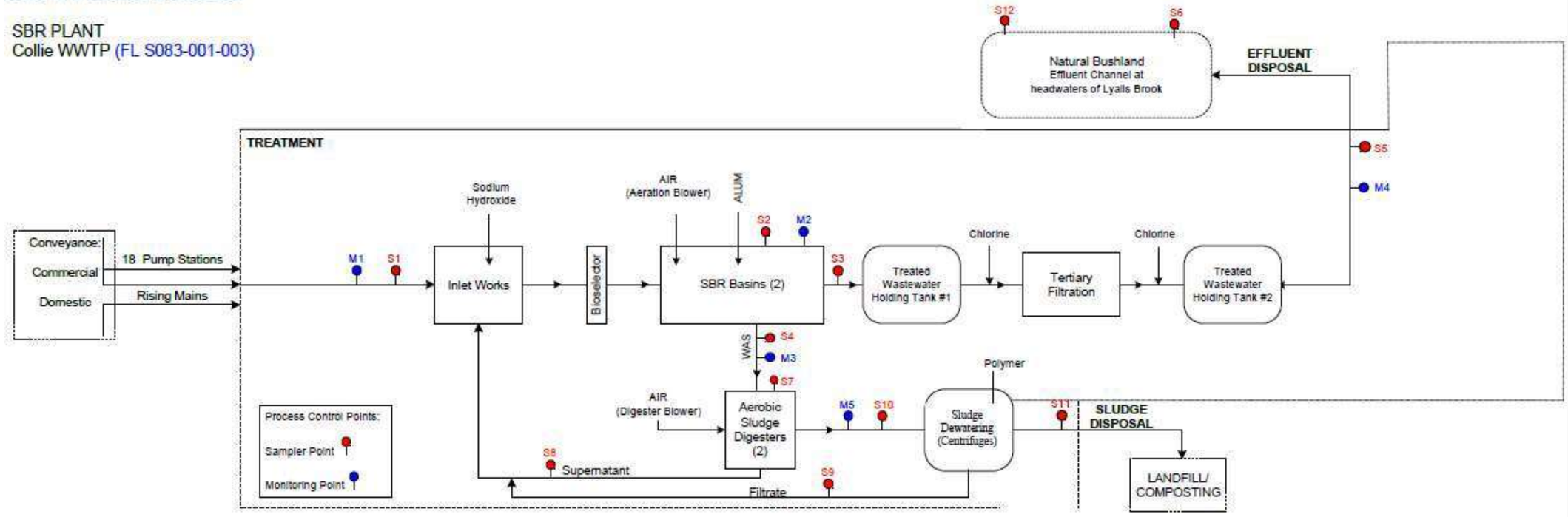



**Figure 4: Location of Ambient Surface Water monitoring points**

## Location of Ambient Groundwater monitoring bores and infiltration channels


**Figure 5: Location of Ambient Groundwater monitoring bores and infiltration channels**

## Process Schematic with monitoring and sampling points




| Monitoring/Sampling Points | |
|---|---|
| M1 | S8000917 Collie WWTP Meter Inflow |
| M2 | S8006254 Collie WWTP Aeration Tank 1 |
| M2 | S8006255 Collie WWTP Aeration Tank 2 |
| M2 | S8006620 Collie WWTP Analyser DO SBR 1 |
| M2 | S8006621 Collie WWTP Analyser DO SBR 2 |
| M2 | Collie WWTP SBR 1 RAS Pump |
| M2 | Collie WWTP SBR 2 RAS Pump |
| M3 | S8000926 Collie WWTP WAS Pump Tank 1 |
| M3 | S8000927 Collie WWTP WAS Pump Tank 2 |
| M4 | S8006609 Collie WWTP Meter Outflow |
| M5 | S8008291 Collie WWTP Sludge Feed Flow |
| M6 | S8005352 Collie WWTP Bore 1/00 (Bore A) |
| | S8005353 Collie WWTP Bore 2/00 (Bore B) |
| | S8005354 Collie WWTP Bore 2 A/00 |
| | S8005355 Collie WWTP Bore 3/00 (Bore C) |
| | S8005356 Collie WWTP Bore 4/00 (Bore D) |

| Sampling Points | |
|---|---|
| S1 | S8000051 SP Collie WWTP Raw Influent |
| S2 | S8006254 Collie WWTP Aeration Tank 1 |
| S2 | S8006255 Collie WWTP Aeration Tank 2 |
| S3 | S8000866 SP Collie WWTP Final Eff SBR 1 |
| S3 | S8020062 SP Collie WWTP Final Eff SBR 2 |
| S4 | SP Collie WWTP Waste Activated Sludge |
| S5 | S8021850 SP Collie WWTP Final Effluent ex Auto Sampler |
| S6 | S8006101 SP Collie WWTP Discharge U/S Lyles Brook |
| | S8000053 SP Collie WWTP Discharge 1.25 km DS (Q611038) |
| | S8000054 SP Collie WWTP Discharge 2.5 km DS (Q611037) |
| S7 | S8000922 Collie WWTP Digester Basin 1 |
| | S8000923 Collie WWTP Digester Basin 2 |
| S8 | S8020016 SP Collie WWTP Digester Supernatant |
| S9 | S8020015 SP Collie WWTP Belt Press Filtrate |
| S10 | SP Belt Press Feed Sludge |
| S11 | S8000931 SP Collie WWTP Sludge |

| Sampling Points | |
|---|---|
| S12 | S8000713 SP Collie WWTP Bore 1/00 (Bore A) |
| | S8000714 SP Collie WWTP Bore 2/00 Bore B) |
| | S8000715 SP Collie WWTP Bore 2a/00 |
| | S8000716 SP Collie WWTP Bore 3/00 (Bore C) |
| | S8000717 SP Collie WWTP Bore 4/00 (Bore D) |

**Figure 6: Process Schematic with monitoring and sampling points**

# Schedule 2: Premises boundary coordinates

**Table 11**: **Premises boundary coordinates (GDA2020)**

| Easting | Northing | Zone |
|---|---|---|
| 418495.91 | 6305100.35 | 50 |
| 418903.66 | 6305377.14 | 50 |
| 419803.43 | 6305336.16 | 50 |
| 419744.70 | 6305300.17 | 50 |
| 419107.05 | 6305137.72 | 50 |
| 418640.32 | 6305125.02 | 50 |
| 418410.64 | 6305039.82 | 50 |

# Schedule 3: Monitoring

**1.** The licence holder must undertake the monitoring in Table 12 and Table 13 according to the specifications in that table and record and investigate results that do not meet any target specified.

**2.** The licence holder must operate and maintain the inflow meter and offsite groundwater monitoring bores A, B, C and D to the manufacturer's or installation specifications.

**Table 12**: **Monitoring of ambient surface water quality**

| **Monitoring point reference and location on Map of Monitoring points.** | **Parameter** | **Units** | **Averaging period** | **Frequency** |
|---|---|---|---|---|
| M2 – surface outflow of effluent channel to Lyalls Brook (W6114902)<br>M3 –1.25km down stream (Lyalls Brook) of effluent infiltration channel (Q611038)<br>M4 –2.5km down stream (Lyalls Brook) of effluent infiltration channel (Q611037) | Total Nitrogen | mg/L | Spot sample | Monthly (when Flowing) |
| | Total Phosphorus | | | |
| | Escherichia coli | cfu/100mL | | |

**Table 13: Monitoring of ambient groundwater quality**

| Monitoring point reference and location on Map of monitoring points | Parameter | Units | Averaging period | Frequency |
|---|---|---|---|---|
| Offsite groundwater monitoring bores<br>A, B, C, D | pH[1] | - | Spot sample | Quarterly |
| | Total Dissolved Solids (calculated from conductivity) | mg/L | | |
| | Nitrate + Nitrite-nitrogen | mg/L | | |
| | Ammonium- nitrogen | mg/L | | |
| | Total Nitrogen | mg/L | | |
| | Total Phosphorus | mg/L | | |
| | Standing Water Level | m(AHD) and mBGL | | |