

Resource Operations Licence

Water Act 2000



Name of licence

Boyne River and Tarong Water Supply Scheme Resource Operations Licence

Holder

Sunwater Limited

Water plan

The licence relates to the Water Plan (Burnett Basin) 2014.

Water infrastructure

The water infrastructure to which the licence relates is detailed in Attachment 1.

Authority to interfere with the flow of water

The licence holder is authorised to interfere with the flow of water to the extent necessary to operate the water infrastructure to which the licence relates.

Authority to use watercourses to distribute water

The licence holder is authorised to use the watercourses listed in Table 1 for the distribution of supplemented water.

Table1 – Watercourses to be used for distribution of supplemented water

Watercourse	Description
Boyne River	The Boyne River from the upstream limit of Boondooma Dam (AMTD 110.5 km) to the confluence of the Boyne River and the Burnett River (AMTD 0 km).
Stuart River	The Stuart River from the upstream limit of Boondooma Dam (AMTD 19.8 km) to the confluence of the Stuart River and the Boyne River (AMTD 0 km).

Conditions

1. Requirement for operations manual

- 1.1. The licence holder must operate in accordance with an approved operations manual.
- 1.2. The approved operations manual must include:
 - 1.1.1. operating rules for water infrastructure,
 - 1.1.2. water sharing rules, and
 - 1.1.3. seasonal water assignment rules.

2. Environmental management rules

- 2.1. The licence holder must comply with the environmental management rules set out in Attachment 2.

3. Metering

- 3.1. The licence holder must meter the taking of water under all water allocations and seasonal water assignments managed under this licence.

4. Monitoring and reporting requirements

- 4.1. The licence holder must carry out and report on the monitoring requirements as set out in Attachment 3.
- 4.2. The licence holder must provide any monitoring data required under 4.1 to the chief executive within a stated time upon request.
- 4.3. The licence holder must ensure that the monitoring, including the measurement, collection, analysis and storage of data, is consistent with the Water Monitoring Data Collection Standards¹.

¹ The Water Monitoring Data Collection Standards and the Water Monitoring Data Reporting Standards can be accessed online at www.business.qld.gov.au

4.4. The licence holder must ensure that the transfer of data and reporting are consistent with the Water Monitoring Data Reporting Standards¹.

5. Other conditions

- 5.1. The operating and supply arrangements and the monitoring required under this licence do not apply in situations where implementing the rules or meeting the requirements would be unsafe to a person or persons. In these circumstances the licence holder must comply with the operational or emergency reporting requirements prescribed in part 2 of Attachment 3.
- 5.2. The licence holder may at any time submit an interim program or an amendment to an existing program to the chief executive for approval in accordance with Attachment 4 if the holder proposes to operate in a way that does not meet the requirements of this licence.
- 5.3. Where there is conflict between the requirements of this licence and an interim program, the program prevails for the time it is in place.
- 5.4. The licence holder is required to collect and make publicly available through an industry accepted digital channel, updated at least monthly, details of each seasonal water assignment managed under this licence, including the sale price, the volume of water assigned and the location of where the water was assigned to and from.
- 5.5. The licence holder must provide the chief executive information about seasonal water assignments as directed by the chief executive within the stated time upon request¹.

This Resource Operations Licence is subject to the conditions attached.

Commencement of licence

The licence took effect on 15 December 2006.

Granted on 15 December 2006.

Amended under section 186 of the *Water Act 2000* on 10 January 2022.

Jarrold Cowley-Grimmond
Executive Director, Divisional Support

Attachment 1 Infrastructure details for Boyne River and Tarong Water Supply Scheme

Table 1 – Boondooma Dam- Boyne River- AMTD86.7 km

Description of water infrastructure	
Description	Concrete faced rock-fill dam
Full supply level	EL 280.4 m AHO
Saddle dam(s)	Nil
Fabridams	Nil
Gates	Nil
Storage capacity	
Full supply volume	204 200 ML
Minimum operating volume	8 360 ML
Storage curves / tables	Drawing no: A3-211850A
Spillway arrangement	
Description of works	The spillway consists of a concrete crest and largely unlined chute excavated through rock on the northern abutment of Sandy Creek. Softer rocks in the chute are capped with concrete.
Spillway level	EL 280.4 m AHO
Spillway width	115 m
Discharge characteristics	Drawing no: A3-63064
River Inlet/outlet works	
Description of works	A single 2159 mm diameter pipe with a bellmouth from the diversion tunnel plug with a bifurcation into two 1 600 mm outside diameter (OD) offtakes which reduce to 1 200 mm OD and finally to 750 mm OD connected to 750 mm diameter cone dispersion valves providing control, discharging into a dissipater chamber. Shut off is provided by 1 200 mm diameter guard valves.
Multilevel Inlet	Inlet works consist of a reinforced concrete inlet tower that is connected to a 4 000 mm inside diameter (ID) reinforced concrete shaft that has an inlet diameter of 2 200 mm at the base of the tower. The shaft is connected to a 4 000 mm ID reinforced concrete diversion tunnel.
Minimum operating level	EL252 m AHO
Maximum discharge rate	The estimated maximum discharge capacity of the outlet is 1 330 ML/day.
Fish transfer system	
Description of works	Nil

Attachment 2 Environmental management rules

1 Change in rate of release from infrastructure

The licence holder must minimise the occurrence of adverse environmental impacts by ensuring that any change in the rate of release of water from Boondooma Dam occurs incrementally

2 Low flow objectives

Low flow releases should be within the constraints of existing infrastructure and are required to minimise deviations from low flow environmental flow objectives for the Boyne River at Derra gauging station.

3 Water quality

Where infrastructure incorporates multilevel inlets, the licence holder must draw water from the inlets that maximise the quality of the water released.

Attachment 3 Licence holder monitoring and reporting

Part 1 Monitoring requirements

Division 1 Water quantity

1 Stream flow and storage water level data

The licence holder must in accordance with table 1—

- (a) record storage water level and volume and flow data; and
- (b) record continuous time series height and flow data for tailwater flows.

Table 1 – Locations where continuous time series height and flow data and storage water level data are required.

Location	Gauging station site	Water level and volume data	Water level and volume data
Boondooma Dam Headwater	GS 136316A	✓	
Boondooma Dam Tailwater ²	GS 136317A		✓

2 Releases from storages

(1) The licence holder must measure and record for each release of water from Boondooma Dam—

- (a) the daily volume released;
- (b) the release rate, and for each change in release rate—
 - (i) the date and time of the change; and
 - (ii) the new release rate;
- (c) the reason for each release and the component volumes³ for each release; and
- (d) the water level in the storage from which the release was made.

(2) In addition to the requirements under subsection (1), for storage outlets with selective withdrawal capabilities the licence holder must record-

- (a) the outlet used for each release of water; and
- (b) the reason for the release.

² This gauging station only measures release water. Total tailwater discharge will need to be calculated from headwater discharge data and any releases.

³ Component volumes comprise of the following;

- passing flows under the low flow management strategy, where applicable;
- passing flows under the medium to high flow management strategy, where applicable;
- volume released for water supply in the storage's local supply area;
- an estimate of the volume released to meet transmission and operating losses in the local supply area;
- volume released to maintain the water level in the next downstream storage; volume released through fishways;
- total volume released from the storage; and
- for storages with a multilevel outlet, the water level from which the release was made

3 Announced allocations

The licence holder must record details of—

- (a) announced allocation determinations for—
 - (i) high priority water allocations; and
 - (ii) medium priority water allocations;
- (b) the date announced allocations are determined; and
- (c) the value of each parameter applied for calculating the announced allocation.

4 Water taken by water users

The licence holder must record the total volume of water taken by each water user for each zone as follows—

- (a) the total volume of water taken each quarter;
- (b) the total volume of water entitled to be taken at any time;
- (c) the basis for determining the total volume of water entitled to be taken at any time; and
- (d) the basis for determining the total volume of water entitled to be taken, including adjustments for volumes moved into or out of the water year and seasonal water adjustments.

5 Seasonal water assignment of water allocations

On consent to each seasonal water assignment, the licence holder must record details of the assignment arrangement, including—

- (a) the name of assignee and the assignor;
- (b) volume of the assignment;
- (c) and location—
 - (i) from which it was assigned;
 - (ii) to which it was assigned;
- (d) the effective date of the assignment; and
- (e) the sale price.

Division 2 Impact of infrastructure operation on natural ecosystems

6 Water quality

The licence holder must monitor and record water quality data in relation to relevant infrastructure listed in Attachment 1 of this licence.

7 Bank condition

(1) The licence holder must inspect banks for evidence of collapse and/or erosion identified within the ponded area of Boondooma Dam and downstream reaches, following instances of—

- (a) rapid water level changes; or
- (b) large flows through Boondooma Dam; or
- (c) other occasions when collapse and/or erosion of banks may be likely.

- (2) For subsection (1), downstream reaches means the distance of influence of infrastructure operations.

8 Fish stranding

The licence holder must record and assess reported instances of fish stranding in watercourses and ponded areas associated with the operation of the licence holder's infrastructure as listed in Attachment 1 of this licence to determine if any instance is associated with the operation of that infrastructure.

Part 2 Reporting requirements

9 Reporting requirements

The licence holder must provide—

- (a) quarterly reports;
- (b) annual reports for the previous water year; and
- (c) operational or emergency reports.

Division 1 Quarterly reporting

10 Quarterly report

- (1) The licence holder must submit a quarterly report to the chief executive after the end of each quarter of the water year.
- (2) The report should include for each quarter—
 - (a) storage water levels and stream flows recorded under section 1;
 - (b) releases from storages—all records referred to in section 2;
 - (c) water quality data recorded under section 6; and
 - (d) a summary of bank condition monitoring and instances of slumping carried out in accordance with section 7.

Division 2 Annual reporting

11 Annual report

- (1) The licence holder must submit an annual report to the chief executive after the end of the water year.
- (2) The annual report must include—
 - (a) water quantity monitoring results required under section 12;
 - (b) details of the impact of infrastructure operation on natural ecosystems as required under section 13;
 - (c) a discussion on any issues that arose as a result of operating in accordance with this licence; and
 - (d) a summary of sale price disclosure information and other seasonal water assignment information as per Attachment 3, Part 1, Division 1(5).

12 Water quantity monitoring

The licence holder must include in the annual report—

- (a) a summary of announced allocation determinations, including—
 - (i) an evaluation of the announced allocation procedures and outcomes; and
 - (ii) the date and value for each announced allocation;
- (b) instances where critical water supply sharing rules have been implemented, including—
 - (i) an evaluation of the effectiveness of the rules and outcomes; and
 - (ii) the commencement date(s) and time period(s) for which the rules were in effect;
- (c) details of seasonal water assignments including—
 - (i) the total number of seasonal water assignments; and
 - (ii) the total volume of seasonally water assigned;
- (d) the total annual volume of water taken by each water user, specified by zone for the scheme, including—
 - (i) the total volume of supplemented water taken;
 - (ii) the total volume of supplemented water entitled to be taken; and
 - (iii) the basis for determining the total volume entitled to be taken;
- (e) the total annual volume of water taken by all water users, specified by zone for the scheme, including—
 - (i) the total volume of supplemented water taken;
 - (ii) the total volume of supplemented water entitled to be taken; and
 - (iii) the basis for determining the total volume entitled to be taken;
- (f) all details of changes to the storage and delivery infrastructure or the operation of the storage and infrastructure that may impact on compliance with this licence; and
- (g) details of any new monitoring devices used such as equipment to measure stream flow.

13 Impact of storage operation on natural ecosystems

The licence holder must include in its annual report—

- (a) a summary of the environmental considerations made by the licence holder in making operational and release decisions;
- (b) a summary of the environmental outcomes of the decision including any adverse environmental impacts;
- (c) a summary of bank condition and fish stranding monitoring and assessment including—
 - (i) results of investigations of bank slumping and/or erosion identified in ponded areas and/or downstream of the storages;
 - (ii) results of any investigations of fish stranding downstream of the storages; and
 - (iii) changes to the operation of the storage to reduce instances of bank slumping and/or erosion or fish stranding;
- (d) a discussion and assessment of the following water quality issues—
 - (i) water quality in each storage;
 - (ii) thermal and chemical stratification in the storage;

- (iii) contribution of the storage and its management to the quality of water released;
- (iv) cyano-bacterial population changes in each storage; and
- (v) any proposed changes to the monitoring program as a result of evaluation of the data.

Division 3 Operational or emergency reporting

14 Operational or emergency reporting⁴

- (1) The licence holder must notify the chief executive—
 - (a) within one business day of becoming aware of any of the following operational incidents—
 - (i) non-compliance by the licence holder with the conditions of this licence;
 - (ii) instances when a waterhole is drawn down 0.5 m below cease to flow level;
 - (iii) instances of fish stranding, cyanobacterial growth or bank slumping within the ponded areas or downstream of the water infrastructure to which this licence relates; and
 - (iv) a decision being made to introduce a reduced full supply level under section 399B of the Water Supply (Safety and Reliability) Act 2008;
 - (b) of an emergency where, as a result of the emergency, the licence holder cannot comply with the conditions of the licence.
- (2) The licence holder must provide to the chief executive upon request, and within the timeframe requested, a report which includes details of—
 - (a) the incident or emergency;
 - (b) the conditions under which the incident or emergency occurred;
 - (c) any responses or activities carried out as a result of the incident or emergency;
 - (d) in relation to an emergency only, any requirements under this licence that the licence holder is either permanently or temporarily unable to comply with due to the emergency;
 - (e) a summary of any other non-compliances by the licence holder; and
 - (f) in relation to the commencement of a stage of critical water supply situation – conditions that have initiated the critical water supply arrangements.
- (3) The licence holder must—
 - (a) notify the chief executive within one business day—
 - (i) upon setting an initial announced allocation or resetting an announced allocation during the water year;
 - (ii) with details of any arrangements for addressing circumstances where they are unable to supply water allocations;
 - (iii) upon activation of critical water supply arrangements;

⁴ This does not preclude requirements for dam safety under the *Water Supply (Safety and Reliability) Act 2008*, *Water Act 2000* and any other applicable legislation.

- (iv) upon commencement or cessation of each stage of a critical water supply situation; and
 - (v) when the water level in Boondooma Dam is below the minimum operating level – if the licence holder becomes aware of impacts on aquatic biota;
- (b) provide the chief executive with relevant supporting information used in making any decision under subsection (a)(i).

Attachment 4 Interim programs

1 **Submission of interim program**

The licence holder may, at any time, submit an interim program to the chief executive for approval, including a timetable for returning to full compliance with the licence and interim arrangements.

2 **Implementing and publishing interim program**

Following approval of the program by the chief executive, the licence holder must—

- (a) implement and operate in accordance with the interim program; and
- (b) make public details of the interim program on its internet site.

Glossary

Term	Definition
AMTD	Adopted middle thread distance
Announced allocation	For a water allocation managed under a water resource operations licence, means a number, expressed as a percentage, which is used to determine the maximum volume of water that may be taken in a water year under the authority of a water allocation.
Assignee	The person or entity to whom an interest or right to water is being transferred (e.g. seasonally assigned).
Assignor	The person or entity that transfers an interest or right in water to an assignee (e.g. a seasonal assignment).
EL	Elevation
Full supply volume	The specified maximum volume of water within the ponded area of a dam, weir or barrage, which corresponds to the full supply level.
Headwater level	The level (or elevation) of the water immediately upstream of a dam, weir, or other hydraulic structure.
Infrastructure	A dam, weir or other water storage and any associated works for taking or interfering with water in a watercourse, lake or spring.
Inlet	Infrastructure comprised of an entrance channel, intake structure, and gate or valve, which allow for water to be taken from the storage and discharged into the watercourse downstream of the storage.
Location	For a water allocation, means the zone and/or place from which water under the water allocation can be taken. For a water licence, means the section of the watercourse, lake or spring abutting or contained by the land described on the water licence at which water may be taken.
Megalitre (ML)	One million litres
Minimum operating level	For a dam or weir, is the volume of water within the ponded area of a dam, weir or barrage below which water cannot be released or taken from the infrastructure under normal operating conditions.
Minimum operating volume	The specified minimum volume of water within the ponded area of a dam weir or barrage below which water cannot be released or taken from the infrastructure under normal operating conditions.
Outlet	Means an arrangement on a dam or weir that allows stored water to be released downstream.
Ponded area	Area of inundation at full supply level of a dam, weir or barrage.
Release	Water from a dam or weir that passes downstream from the dam or weir either through the dam or weir outlet works or over the dam spillway.
Release rate	Rate of release of water from a storage facility, for example, a dam or weir.
Tailwater	The flow of water immediately downstream of a dam, weir or barrage. Tailwater includes all water passing the infrastructure, for example controlled releases and uncontrolled overflows.