



# Yarram WSPA

## Groundwater Management Plan

Annual Report  
2022-2023



Status	Date	Comments	Author
Draft	07/09/2023	Final draft version completed	M Onken/M Hudson
Approved	07/09/2023	Approved – Manager Groundwater & Rivers	B Morden
Approved	12/09/2023	Approved – General Manager Service Delivery	S Wilkinson
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# Contents

Forward.....	3
Area Summary.....	3
1. Executive Summary .....	4
2. Introduction .....	5
3. Key Observations.....	6
3.1 Rainfall.....	6
3.2 Water Levels.....	6
3.3 Groundwater Salinity.....	7
3.4 Water Use.....	8
3.5 Non-Compliance .....	9
4. Plan Implementation.....	10
4.1 Monitoring .....	10
4.2 Metering.....	10
4.3 Restrictions on Licensing and Licence Transfers.....	12
4.4 Licensing Activities.....	13
5. Conclusions.....	14
6. Appendices .....	15
6.1 Licence Details .....	15
6.2 Hydrographs.....	15
6.3 Links for Compliance .....	20

## Forward

This report is submitted to the Minister for Water and West Gippsland Catchment Management Authority in accordance with s32C *Water Act 1989*. A copy of this report is available by contacting Southern Rural Water at [srw@srw.com.au](mailto:srw@srw.com.au) or by calling 1300 139 510. A notice of report availability will be published as required by s32D of the *Water Act 1989*.

The purpose of this report is to detail Southern Rural Water activities implementing the groundwater management plan along with documenting information that is required to be reported under that plan.

## Area Summary

<b>Area</b>	Yarram Water Supply Protection Area
<b>Segment</b>	Groundwater
<b>Area Declared</b>	4 November 2002
<b>Plan Approved</b>	14 October 2010
<b>Permissible Consumptive Volume</b>	25,690 ML
<b>Scheduled Plan Review</b>	The Plan will be reviewed on an as-needs basis
<b>Implementation Authority</b>	Southern Rural Water
<b>Relevant CMA</b>	West Gippsland Catchment Management Authority
<b>Report Period</b>	1 July 2022 – 30 June 2023

# 1. Executive Summary

The Yarram Groundwater Management Plan (GMP) was prepared under Division 3 Part 3 of the *Water Act 1989* for the Yarram Water Supply Protection Area (WSPA) and relates to the groundwater resources of the protection area. The Yarram GMP was approved by the Minister for Water in October 2010.

The objective of the management plan is to make sure that the water resources of the area are managed in an equitable manner and to ensure the long-term sustainability of those resources.

Southern Rural Water (SRW) is the authority responsible for managing and administering the plan, which includes the preparation of an annual report to demonstrate compliance. The annual report summarises licence information, metered usage and monitoring data collected for the reporting period in accordance with the requirements of the Yarram GMP.

The Yarram GMP Annual Report for 2022-23 demonstrates that SRW has complied with the requirements of the plan.

Monitoring and metering indicate no significant changes in the condition of the resource or water usage patterns, therefore, it is considered that the groundwater resources of the Yarram WSPA are being managed sustainably.



Bryce Morden  
Manager Groundwater & Rivers  
Southern Rural Water

## 2. Introduction

This report summarises licence information, metered usage and monitoring data collected for the period between 1 July 2022 and 30 June 2023 in accordance with the requirements of the Yarram GMP.

The Yarram WSPA is located south of the Strzelecki Ranges and includes the onshore area of the Gippsland Groundwater Basin. This is a relatively small component of the whole Gippsland Groundwater Basin but covers an area where groundwater is extracted primarily for irrigating pasture in Yarram and surrounding districts. The Yarram WSPA also incorporates forested areas along the Strzelecki Ranges comprising State Parks and plantation forestry.

The WSPA includes the aquifers in the Latrobe Group and the shallower Balook Formation which are the main sources of water used for irrigation. The Latrobe Group and Balook Formations are in hydraulic connection. From Woodside to Golden Beach, the Latrobe Group is much deeper, underlying the Gippsland Limestone and Boisdale Formations. These aquifers are overlain by the Haunted Hills Formation, which is a shallow, unconfined aquifer incised by local streams. It is low yielding and generally poorer quality than the other aquifers, typically suitable for stock watering and dairy wash purposes rather than irrigation.

The Yarram GMP identifies SRW as the authority responsible for managing and administering the plan.

The objective of a management plan, as set out in the *Water Act 1989*, is to make sure that the *water resources of the area are managed in an equitable manner to ensure the long-term sustainability of those resources*. The Yarram GMP includes measures to ensure the long-term sustainability of groundwater resources by setting limits on licensed entitlements and by defining trading rules.

The GMP requires SRW to:

- Coordinate groundwater level monitoring and metering programs.
- Review monitoring and metering data to understand resource status.
- Administer groundwater licensing within the prescriptions of the plan.
- Review and report annually to the Minister administering the *Water Act 1989* on the implementation of the plan; and
- Periodically review the plan and if, in its opinion, amendments are necessary or desirable, make recommendations to the Minister accordingly.

The success of the Yarram GMP is measured through a number of licensing, metering, and monitoring objectives. These include:

- All consumptive use to be metered and recorded in line with both State Government and Corporation metering policies.
- Groundwater usage is to be maintained within licence volumes.
- Water levels and water quality (salinity) is to be monitored to maintain acceptable levels and to ensure the long-term sustainable use of the aquifer(s).
- Transfer of existing licences occurs in accordance with all relevant provisions of the *Water Act 1989* and/or any supplementary rules adopted for the Yarram WSPA; and
- No new groundwater licences will be issued if the total of all groundwater licence entitlements would exceed the PCV declared for the Yarram WSPA, unless in accordance with prescriptions 3 & 4.

Further information can be obtained from the Yarram WSPA Groundwater Management Plan. A copy of the plan can be found on Southern Rural Water’s website: [www.srw.com.au](http://www.srw.com.au)

### 3. Key Observations

#### 3.1 Rainfall

Rainfall during the reporting period was 584mm measured at Yarram Airport. This is below the long-term average rainfall of 633mm per year.

#### 3.2 Water Levels

Groundwater levels are measured in twelve (12) observation bores, targeting the Haunted Hills, Latrobe Valley Coal Measures, Balook Formation and Latrobe Group aquifers (Lower Tertiary Aquifer). Additional bore WRK059124 was monitored intermittently between 2012 and 2018 however was dry throughout the monitoring period.

The location of observation bores in the area are shown below in Figure 1 and a sample hydrograph in Figure 2.

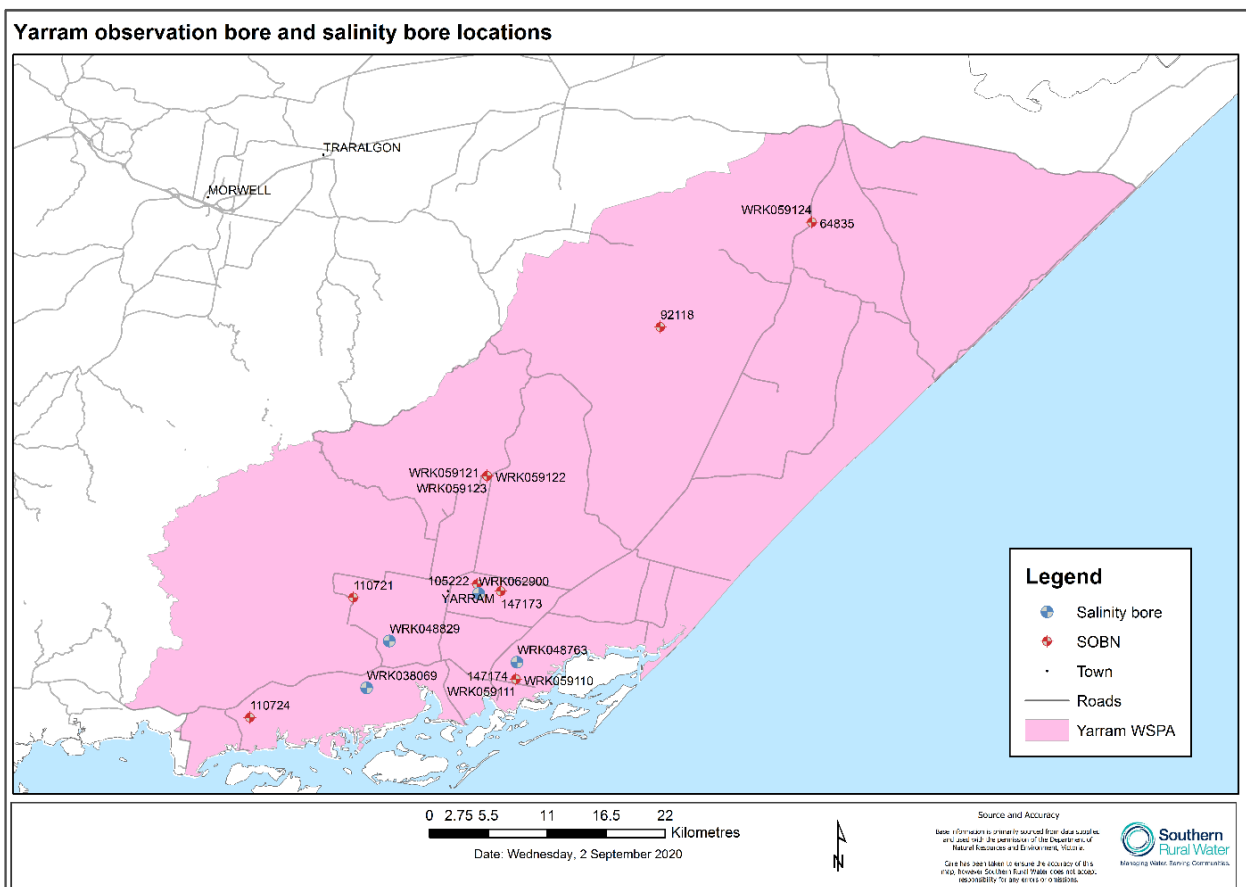
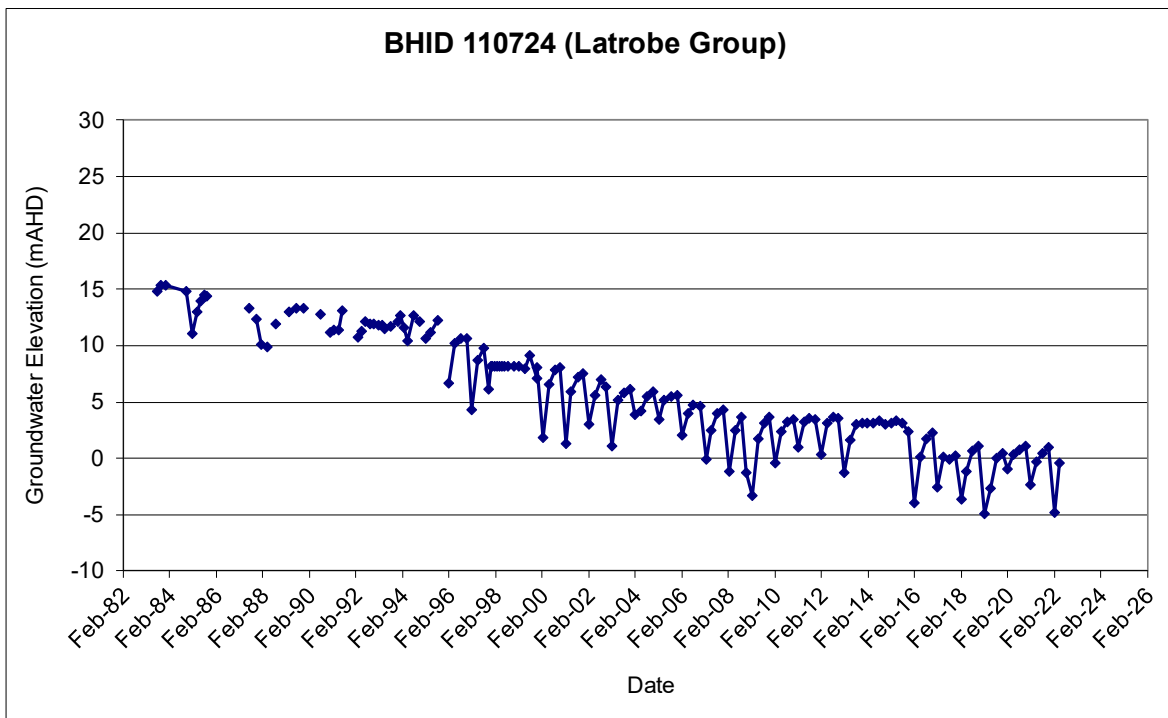


Figure 1 – map showing State Observation Bore and Salinity Bore locations



**Figure 2 – example hydrograph**

All hydrographs are presented in appendix 1. Overall, the observation bore hydrographs indicate that:

- Groundwater levels in the Latrobe aquifer (Lower Tertiary Aquifer) are primarily influenced by offshore extraction, with a secondary influence from localised groundwater pumping. Levels had been falling steadily by up to one meter per year since the early 1980s. Recent groundwater monitoring indicates some stabilisation of levels. This may be associated with reduced irrigation during the period of higher rainfall experienced since 2017. SRW will continue to consider the impacts to groundwater levels associated with offshore hydrocarbon developments.
- Some seasonal groundwater level drawdown and recovery can be seen in bores 105222 and 110724, where onshore groundwater extraction is concentrated.

### 3.3 Groundwater Salinity

One of the key drivers for monitoring salinity in the plan is the potential for saline intrusion into the aquifer, as well as broader resource management issues.

A monitoring program was established in 2014 to measure salinity every twelve months from four private irrigation bores in the Yarram district. Bore locations are shown in Figure 1 (see 'Salinity Bores'). Sampling of the four irrigation bores has not been conducted since December 2020, following a review of access and safety risks. The results of data collected to December 2020 indicate that groundwater salinity was stable, with no trends evident. With the stabilisation of groundwater levels observed in recent years, SRW have concluded that the risk of impact to groundwater salinity is considered to be low and no further monitoring is proposed.



Figure 3 displays groundwater salinity trends in four bores in the Yarram WSPA. The available data record indicates that groundwater quality in all four bores is considered suitable for irrigation purposes, with no saline groundwater intrusion indicated however note that an updated assessment of this cannot be made for the 2022 – 2023 reporting period.

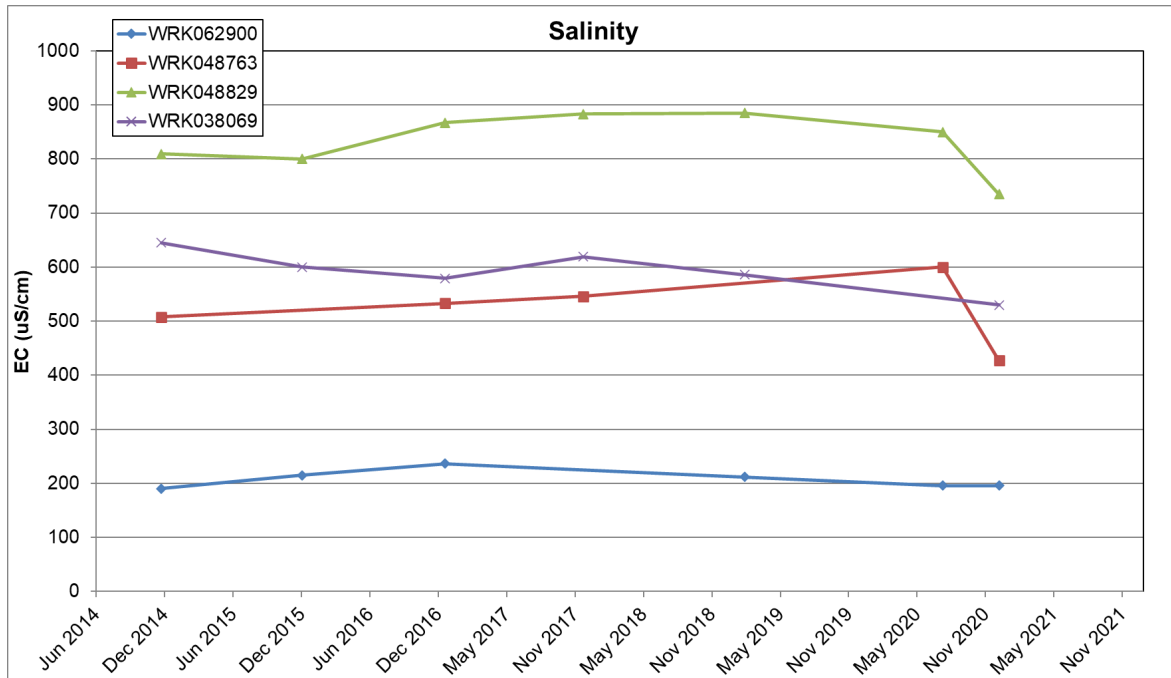


Figure 3 – Groundwater salinity trends in the Yarram WSPA

### 3.4 Water Use

Details of water use in the 2022-2023 year with comparison to the four previous years are provided in Table 1 and Figure 4. The total number of licences is stable.

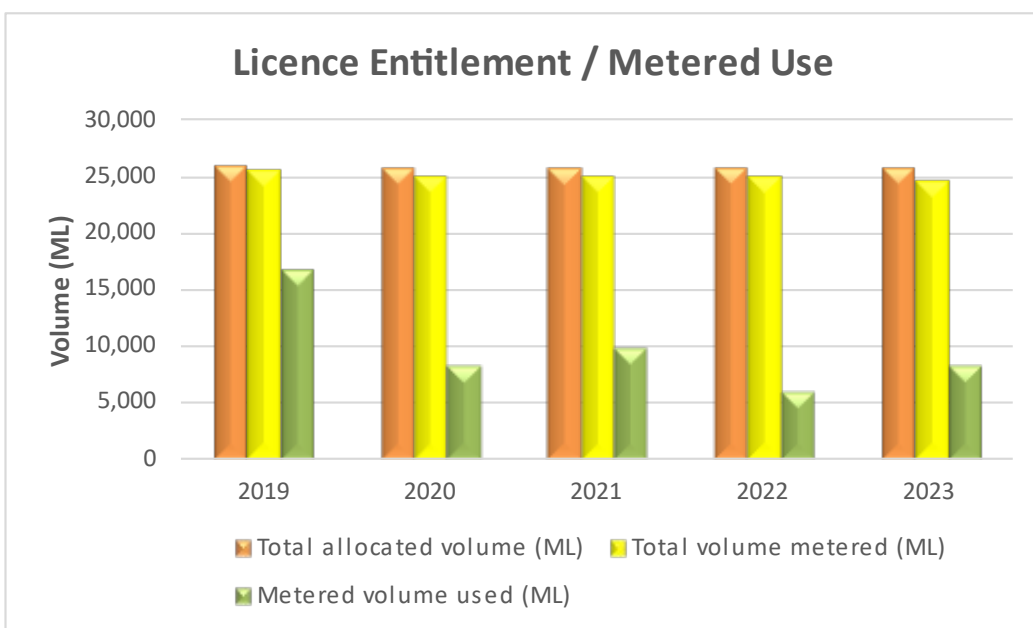


Figure 4 – Licence allocation compared to metered volume and usage

At 30 June	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
No. of licences	85	85	86	85	85
Total allocated volume (ML)	25,688	25,688	25,688	25,627	25,627
No. of metered licences	56	56	56	55	56
Total allocated volume metered (ML)	25,304.2	24,914.20	24,914.2	24,914.8	24,481.0
Metered volume used (ML)	16,557.1	8,194.1	9,676.8	5,931.7	8,237.7
Metered use of allocation (%)	64%	32%	38%	23%	32%
No. of licences with unauthorised take <sup>1</sup> at 30 June 2022 (refer to section 3.5)	1	0	0	0	0
Permissible Consumptive Volume (PCV)	25,690	25,690	25,690	25,690	25,690
Metered use as a % of PCV	64%	32%	38%	23%	32%
No. of D&S bores <sup>2</sup>	229	227	224	224	224
D&S bores estimated use <sup>2</sup>	343.5	340.5	336	336	336
Estimated D&S use from licenced bores <sup>3</sup>	127.5	127.5	129	127.5	127.5

**Table 1 – Water use (ML) and total resource summary for the past 5 years**

<sup>1</sup> Unauthorised Take of Non-Urban Water

<sup>2</sup> Taken from the Victorian Water Accounts. Note that the D&S bore count for 2022-2023 was unavailable at the time of issue – therefore the 2020-2021 count was assumed

<sup>3</sup> Estimated 1.5ML per licence 2013 onwards

### 3.5 Non-Compliance

The Victorian Government and SRW have a zero-tolerance approach to unauthorised take of non-urban water. SRW is responsible for ensuring water users in southern Victoria comply with their licence conditions.

Further information regarding Southern Rural Water and State Governments approach to compliance is provided in appendix 6.1.2

SRW investigates all compliance issues and considers several factors such as the seriousness of the breach and impact on the resource and other users, prior to deciding on the most appropriate action. The action taken by SRW can include the use of direction notices, warning letters and prosecution.

No compliance issues were identified in the Yarram WSPA during 2022-23.

## 4. Plan Implementation

### 4.1 Monitoring

#### Prescriptions

Table 2 below details the requirements of the management plan in relation to monitoring

Plan Requirement	Activity / Reference	Complies
9. The Department must ensure that monitoring bores are properly maintained and replaced if necessary; and	The monitoring bores are owned and managed by the Department of Energy, Environment and Climate Action (DEECA).	Yes
10. The Department and the Corporation must ensure that data collected from monitoring bores is entered into the groundwater management system	All bores have minor maintenance carried out annually which includes site clearance, rust removal, painting and ensuring the bore is safe and secure.  DEECA carries out maintenance on bores that have been identified as needing maintenance following field inspections.	Yes
11. The Department and the Corporation must ensure that water level monitoring and investigations are carried out at appropriate locations throughout the Yarram WSPA to:  a) assess annual and long-term impact on water levels from groundwater pumping b) monitor saline intrusion c) monitor regional and local seasonal drawdown d) examine interaction between groundwater, surface water and groundwater dependent ecosystems e) provide information for future resource assessments; and f) monitor the impacts of groundwater	SRW works closely with DEECA to ensure the monitoring program meets the requirements of the Plan.  SRW regularly reviews the groundwater level program (this covers sections a, c, e and f).  If SRW identifies bores of greater interest, monitoring may be undertaken in addition to DEECA's monitoring program.  Refer to section 3.3 for further information on points 11b.	Yes

**Table 2 – Monitoring requirements**

### 4.2 Metering

#### Prescriptions

The plan does not have specific prescriptions relating to metering.

Active licence holders in the Yarram WSPA are metered in accordance with the Victorian Non-Urban Water Metering Policy (2020) and SRW's Meter Action Plan (2020). The rollout of automated meter

read technology improves the ability of licence holders to actively manage the resource throughout the year while reducing the risk of non-compliance.

All meters are read at least twice per year in December/January and May/June. The meter readings and usage data are recorded and stored in SRW's metering system and reported into the Victorian Water Register.

### Metering Activities

Table 3 below details the meter activity.

	Year to 30 June 2023	Total for WSPA at 30 June 2023
Number of metered licences issued	1	85
Number of meters installed	0	87
Number of meters repaired, or maintenance activity conducted.	0	Not applicable
Meters replaced	0	Not applicable
Meters read mid-year (date range)	Jan/Feb 2023	
Meters read end of year (date range)	May/June 2023	
Number of estimated readings	0	
Meters fitted with Taggle (telemetry)		65

**Table 3 – Summary of meter details for Season 2022-2023 and overall**

## 4.3 Restrictions on Licensing and Licence Transfers

### Prescriptions

Table 4 below details the requirements of the management plan in relation to licencing.

Plan Requirement	Activity / Reference	Complies
1. The Corporation must not approve an application for the permanent or temporary transfer of a licence under section 62 of the Act into the Coastal Zone.	No transfers were processed into the Coastal Zone.	Yes
2. The Corporation must not approve an application for the permanent transfer of a licence under section 62 of the Act into the Central Zone.	No new licences have been issued	Yes
3. A new licence may be issued to overcome an administrative oversight or other anomaly or through a transfer of entitlement provided the PCV is not exceeded.	No activity to report.	Yes
4. The Corporation may issue or amend a groundwater licence in accordance with any state-wide policy and the PCV (by application to the Minister) will be adjusted accordingly.	No new licences have been issued	Yes
5. The volume of any groundwater licence that is surrendered, revoked, or not renewed, cannot be reallocated other than for the purposes of Prescriptions 3 and 4.	No activity to report	Yes
6. No new licences are permitted in the Haunted Hills Formation. This applies to any applications to transfer into or within the Haunted Hills Formation. Exceptions may apply in accordance with Prescriptions 3 and 4.	No activity to report	Yes
7. All groundwater licences within the Yarram WSPA will be migrated to the State Water Register within 6 months of ministerial approval of the Management Plan.	All licences are in the Water Register	Yes
8. The Corporation must report the details of any licence referred to in Prescriptions 3 to 5 in the annual report on the administration and enforcement of the management plan required under section 32 of the Act.	No activity to report	Yes

**Table 4 – Licensing requirements**

## 4.4 Licensing Activities

Table 5 provides summary details of licencing activities.

Year to 30 June 2023	No.	Volume ML
New licences issued	0	0
Additional volumes on existing licences	0	0
Licences revoked	0	0
Permanent transfers	1	8
Temporary transfers	0	0
D&S Bores notifying use	0	0

**Table 5 – Licencing activities 2022-23**

### Compliance and Exceptions

Activities undertaken during the reporting period comply with the requirements of the Plan.

### Issues Affecting Implementation

There are no issues to report

## 5. Conclusions

The objective of a management plan, as set out in the Act, is to make sure that the water resources of the area are managed in an equitable manner as to ensure the long-term sustainability of those resources.

Monitoring and metering indicate no significant changes in the condition of the resource or water usage patterns compared to previous years. The steady decline in pressures resulting from offshore extraction is continuing, although the rate of decline has slowed in recent years, which is likely to be due in part to the reduced demand for local groundwater. There are no reports of bore or groundwater access issues.

The Yarram GMP Annual Report for 2022-23 demonstrates that SRW has complied with the requirements of the plan.

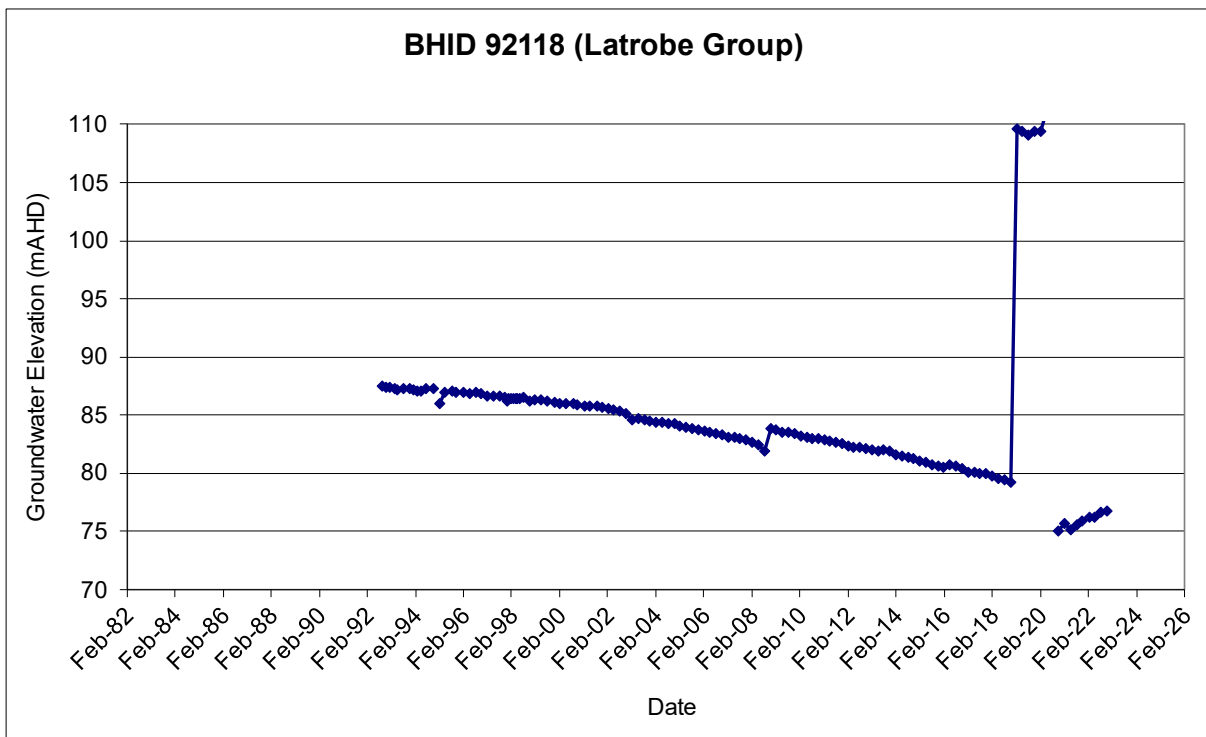
## 6. Appendices

### 6.1 Licence Details

Water trade details for the 2022-23 season can be found at:

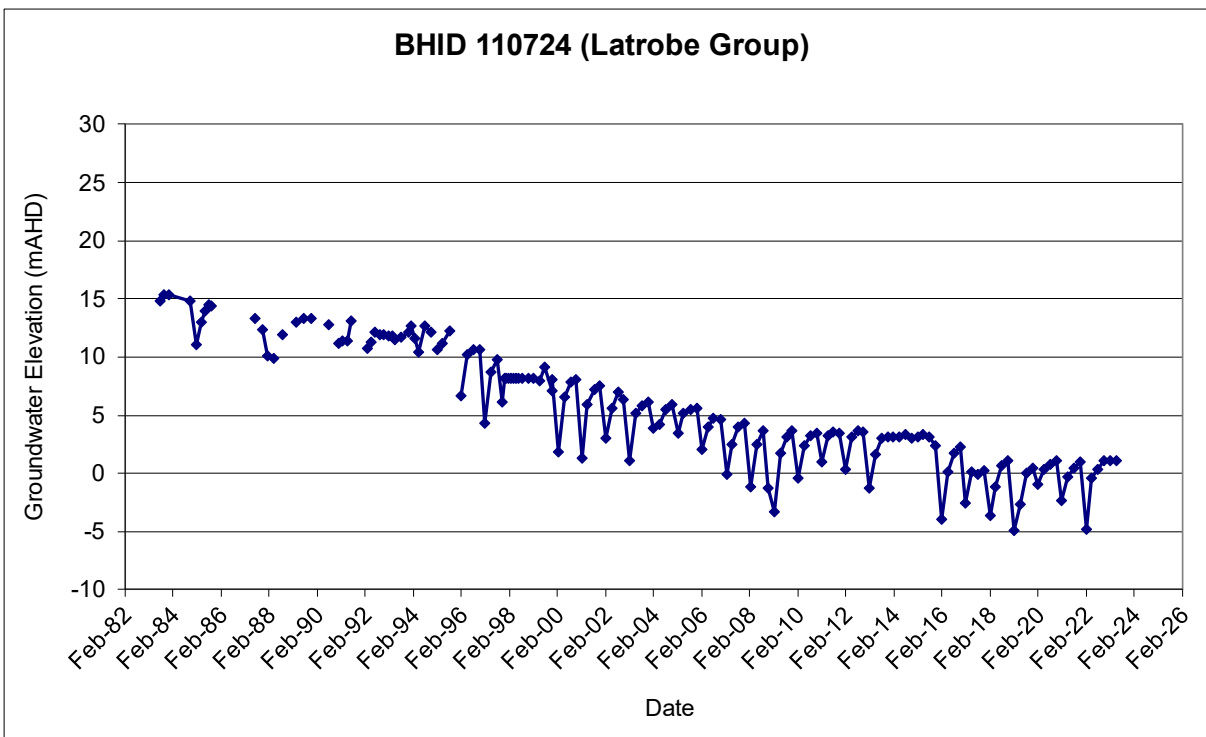
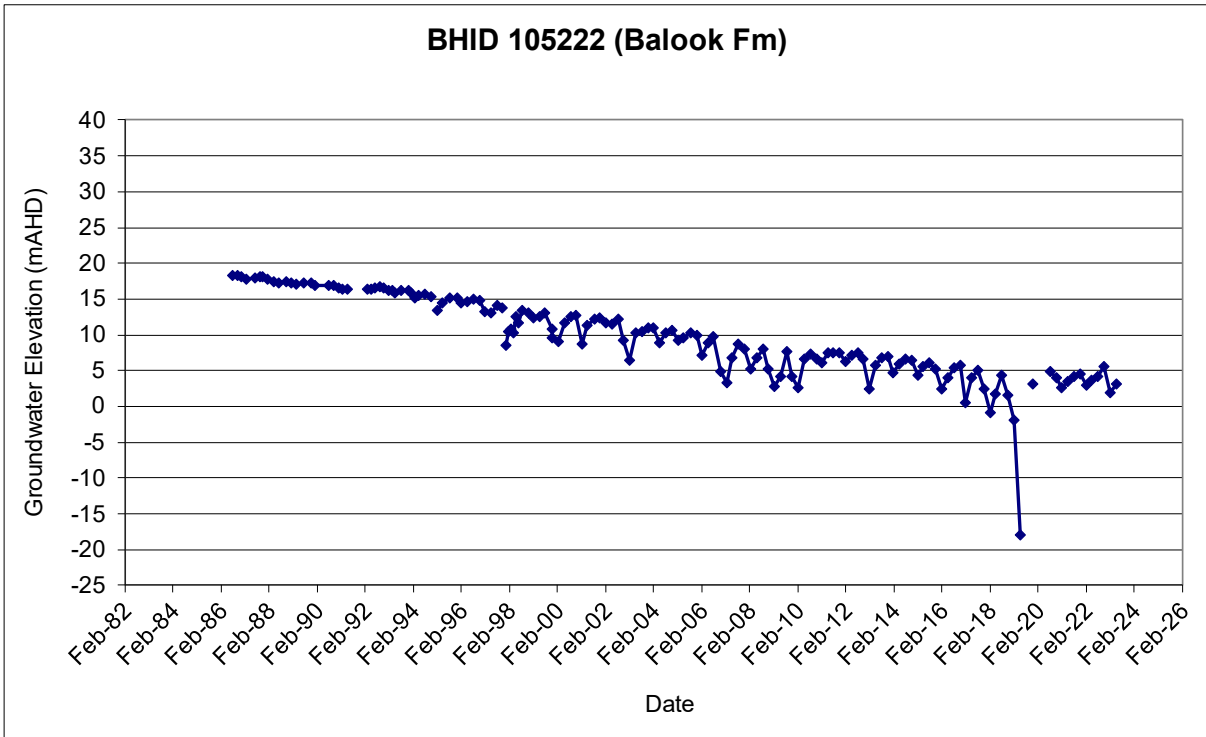
<http://waterregister.vic.gov.au/water-trading/take-and-use-licence-trading>

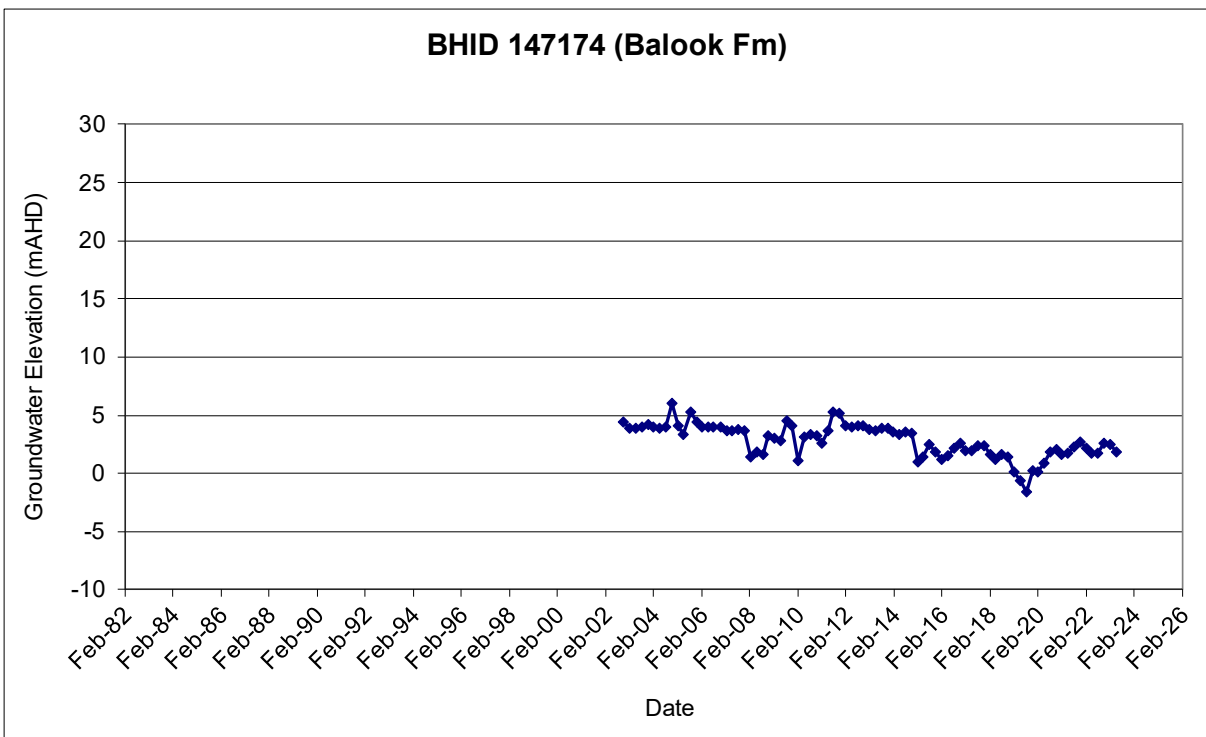
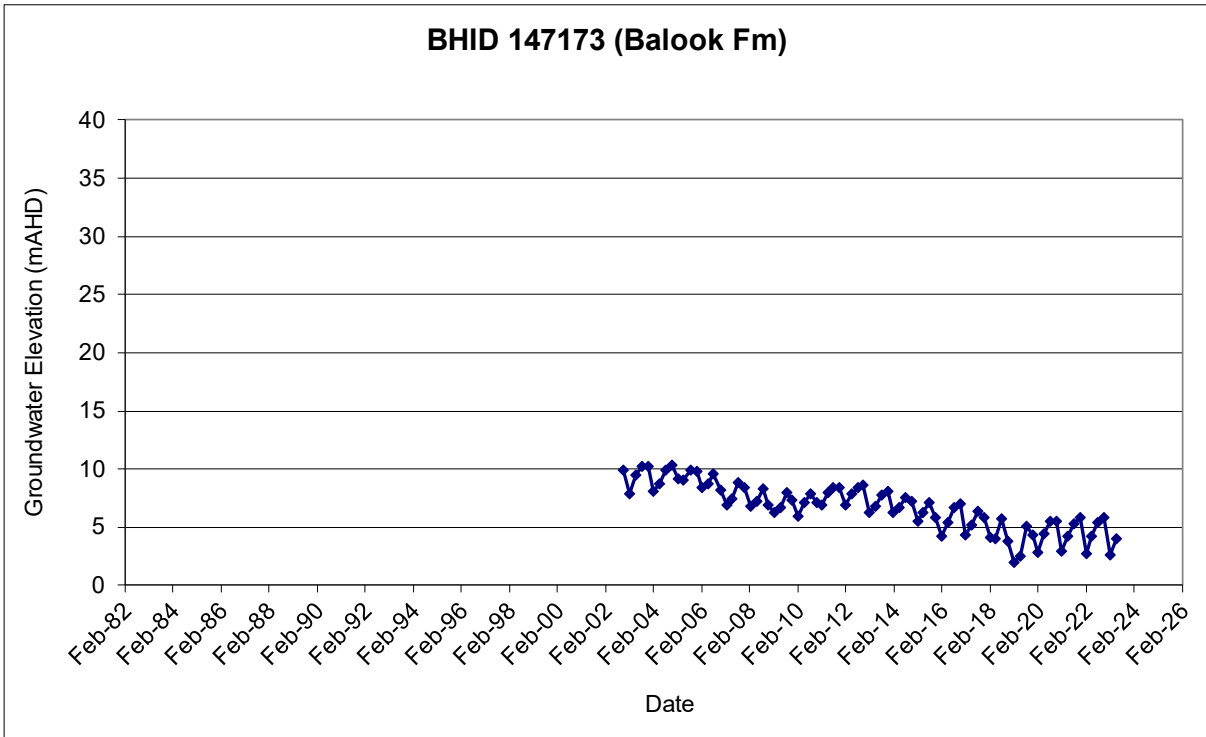
### 6.2 Hydrographs

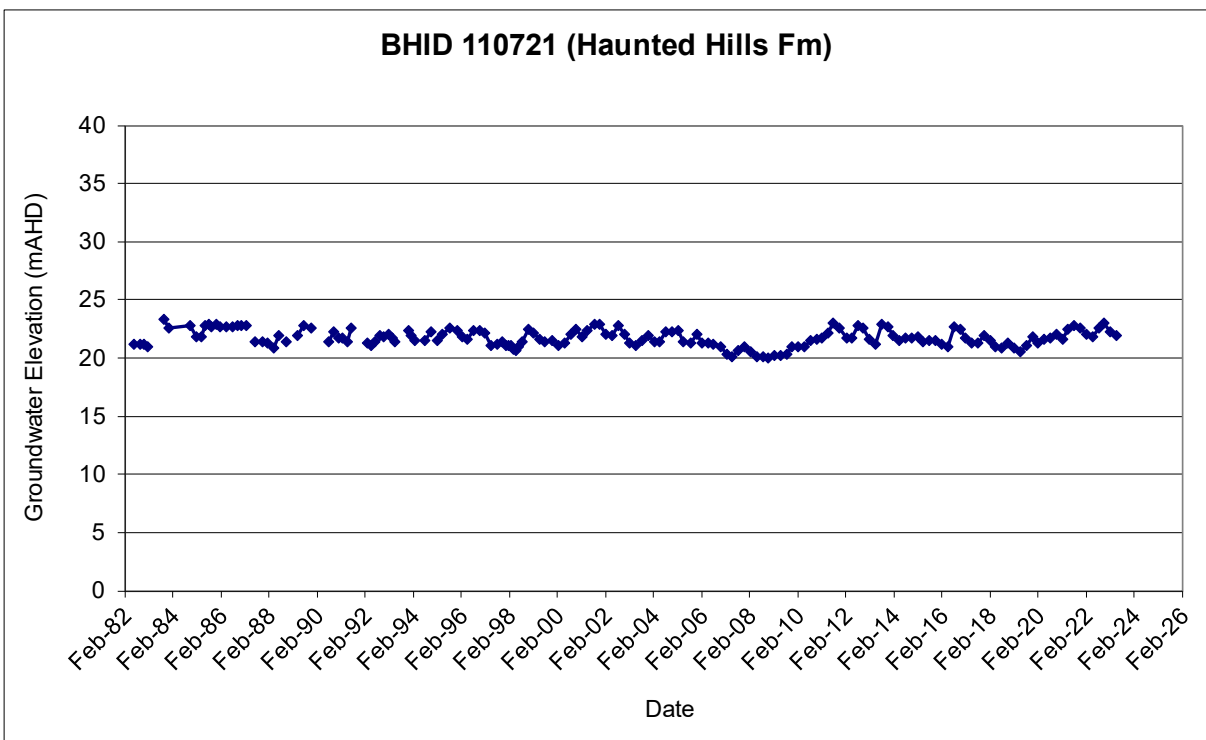
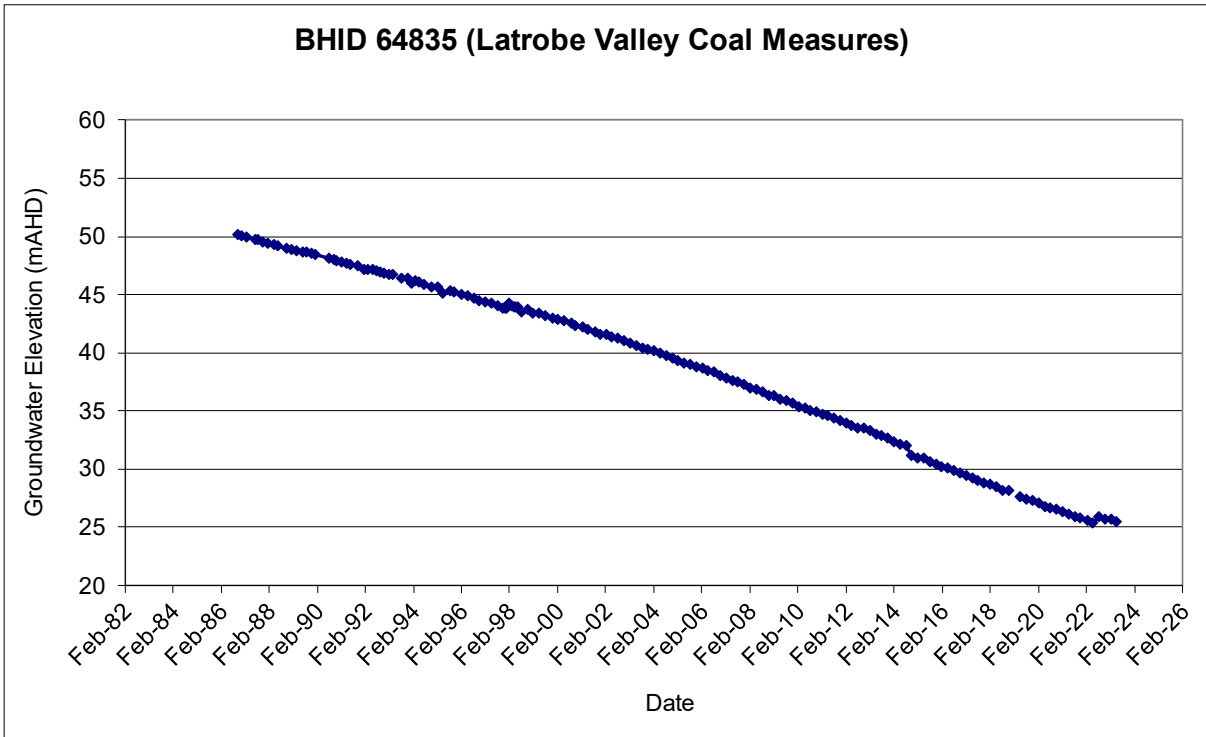


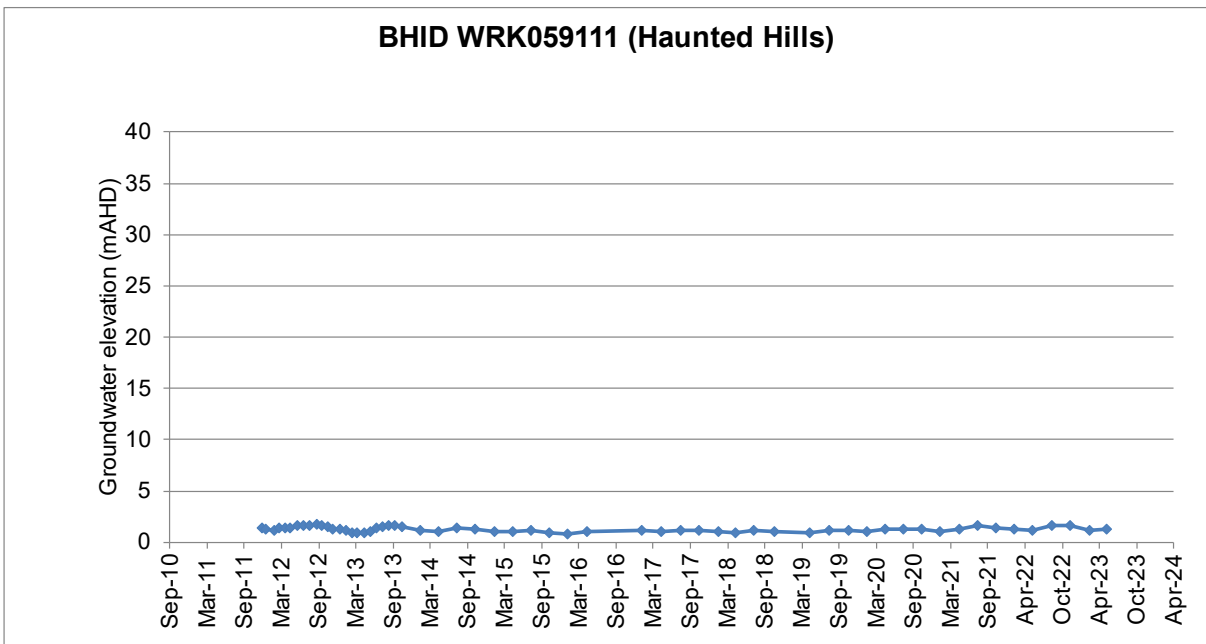
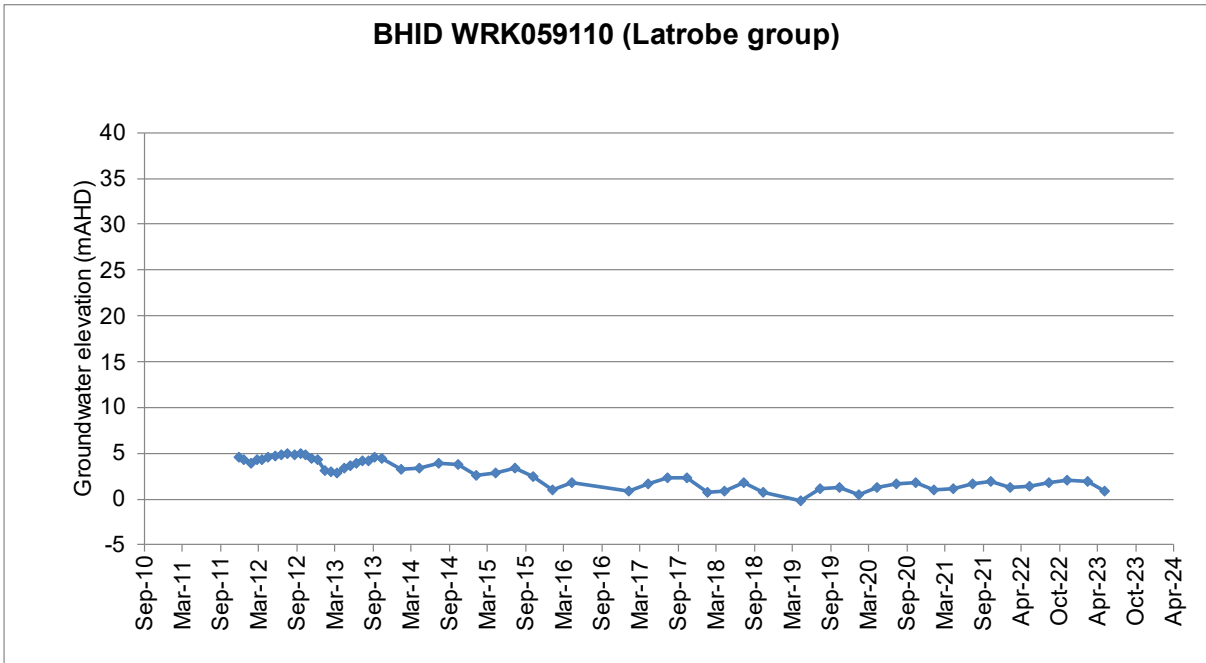
Note: an increase in pressures was recorded following observation bore refurbishment in late 2019. The groundwater elevation in the bore has now stabilised and is considered to be representative.

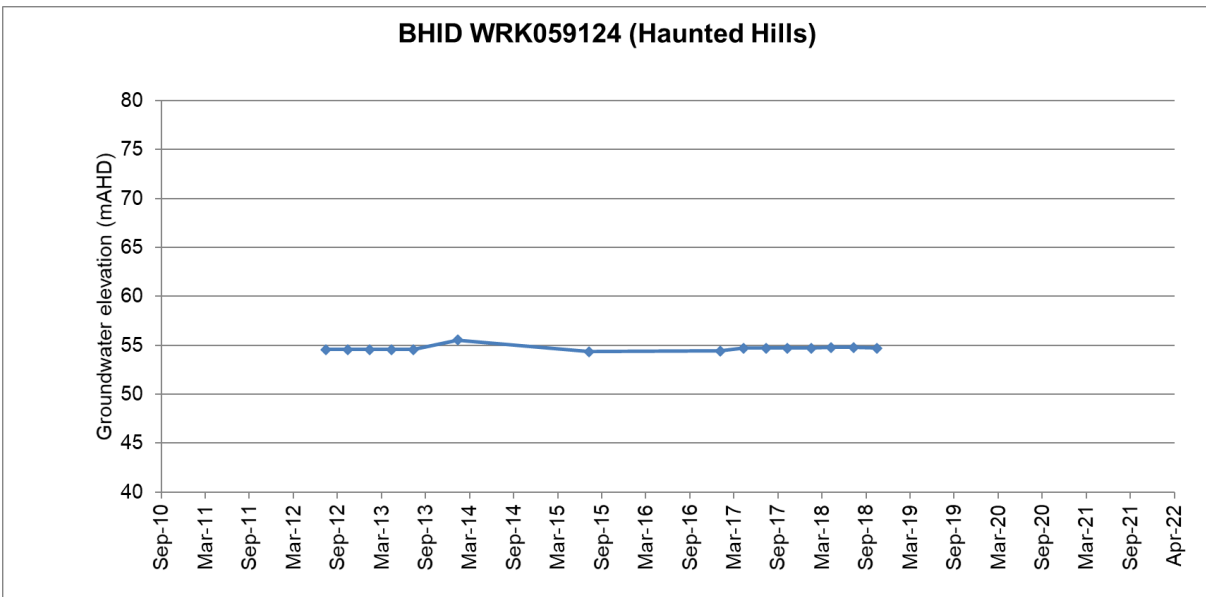
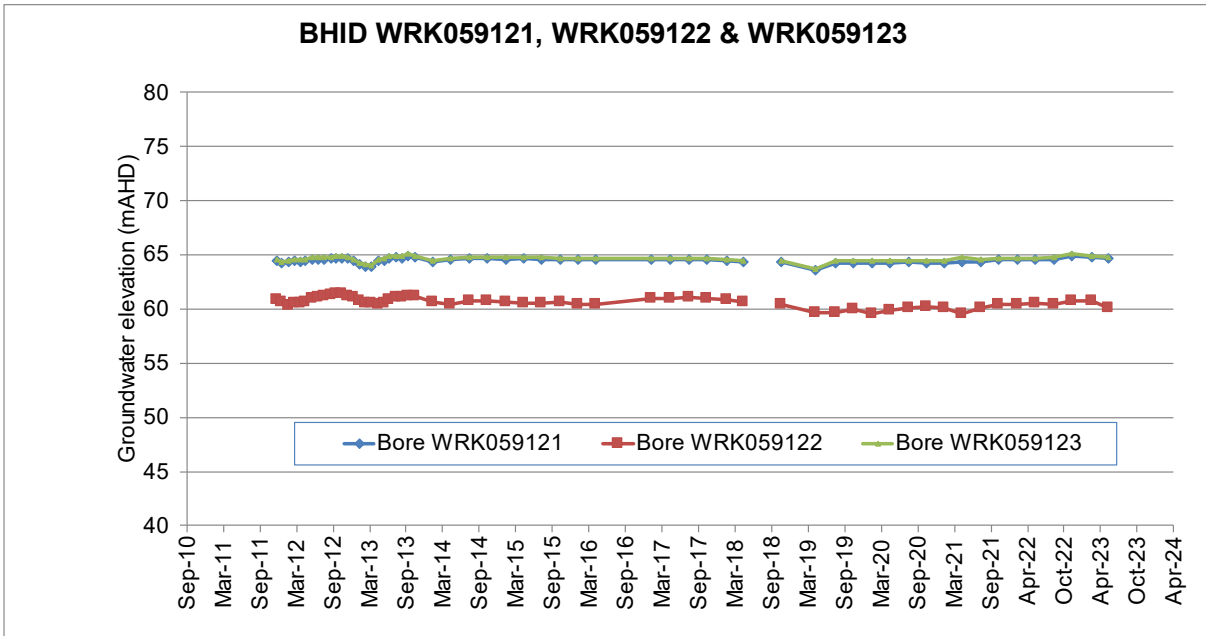












### 6.3 Links for Compliance

[Zero Tolerance To Water Theft In Victoria | Premier of Victoria](#)

[Compliance | SRW](#)

[Non-urban water compliance and enforcement in Victoria](#)