

West Port Phillip Bay Groundwater Catchment Statement

June 2016

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Purpose of this document

Victoria has introduced Groundwater Catchments to capture the full extent of connected groundwater resources.

The catchment statement is the first step toward ensuring users and the community have a complete picture of the current management of groundwater in the West Port Phillip Bay Groundwater Catchment. The objective is, over time, to simplify management of groundwater throughout the catchment and enable users to get access to water for future development. The West Port Phillip Bay Groundwater Catchment boundary is available at the Central Plan Office (document reference LEGL./12-062).

This document brings together all the plans affecting the licensed use of groundwater in the West Port Phillip Bay Groundwater Catchment. Water Supply Protection Areas and Groundwater Management Areas exist within the catchment. Statutory management plans apply in some water supply protection areas and local management plans apply in all other areas.

Management plans included in this statement will be reviewed at a minimum of five yearly intervals; however, reviews may be done earlier if required. Reviews will improve existing management and potentially reduce the number of management areas within the catchment. This will make management less complex while ensuring equitable sharing and long term sustainability of the resource.



CHRIS HUGHES

Acting General Manager Groundwater & Rivers

7 June 2016

Definitions

Carryover

Allows entitlement holders to retain ownership of unused water allocated or purchased from the current season into the following season, in accordance with rules specified in a Ministerial Order made under section 62A of the *Water Act 1989*.

Entitlements

Water entitlements referred to in this report refer to entitlements issued under section 51 of the *Water Act 1989*.

Groundwater basins

One or more groundwater catchments within a geological basin. The basin may extend off-shore or across State boundaries. In some cases a basin may be broken into one or more sub-basins to reflect administrative management boundaries.

Groundwater catchments

An area containing a connected groundwater resource(s), bringing together the input (recharge) areas, use (demand) areas and discharge areas.

Groundwater Management Area (GMA)

A Groundwater Management Area (GMA) is a discrete area where groundwater of a suitable quality for irrigation, commercial or domestic and stock use is available or expected to be available.

Groundwater Management Plan (GMP)

The object of a management plan is to make sure that the water resources of the relevant water supply protection area are managed in an equitable manner and to ensure long-term sustainability (section 32(A)(1), *Water Act 1989*).

Groundwater Management Unit (GMU)

Either a groundwater management area or a water supply protection area.

Local Management Plans

Local management plans describe the resource, management objectives and specific rules such as restrictions, carryover (if applicable) and trade. Local management plans cannot amend licence conditions.

Permissible Consumptive Volume (PCV)

The total volume of water that can be taken in an area or water system and a period of time. (section 22(A)(1), *Water Act 1989*)

Victorian Water Accounts

The Victorian Water Accounts document main water resource management issues and provides an overview of water availability and use across Victoria.

Water Supply Protection Area (WSPA)

A Water Supply Protection Area (WSPA) is an area declared under section 27 of the *Water Act 1989* to protect the groundwater or surface water resources through the development of a management plan which aims for equitable management and long-term sustainability.

West Port Phillip Bay Groundwater Catchment

The West Port Phillip Bay Groundwater Catchment is located in the Port Phillip Bay Basin in south-western Victoria (Figure 1). Neighbouring groundwater catchments are the Hopkins-Corangamite to the west, Loddon, Campaspe and Goulburn-Broken to the north and East Port Phillip Bay to the east. The Port Phillip Basin borders the Goulburn Murray Basin to the north, the Otway-Torquay Basin to the west and the Gippsland and Westernport Basins to the east. The basin extends offshore beneath Bass Strait. The West Port Phillip Bay Groundwater Catchment map is lodged with the Central Plan Office, reference number: LEGL./12-062 WEST PORT PHILLIP BAY GROUNDWATER CATCHMENT. Local Management Plans for sub-areas of the catchment form the basis for groundwater management.

The local management plans do not replace permissible consumptive volumes, approved groundwater management plans or place any additional requirements on the use of groundwater for stock and domestic purposes.

The local management plan details can be found in the appendices.

Local Management Plan Area	Plan details
• Cut Paw Paw Groundwater Management Area	Appendix 1
• Deutgam Water Supply Protection Area	Appendix 2
• Lancefield Groundwater Management Area	Appendix 3
• Merrimu Groundwater Management Area	Appendix 4
• All remaining areas	Appendix 5



Figure 1 - Location of the West Port Phillip Bay groundwater catchment and GMA/WSPAs in neighbouring catchments.

Local management plans may (from Policy 3.3, *Western Region Sustainable Water Strategy*, p61):

- document management objectives for the system;
- explain to licence holders (and the broader community) the specific management objectives and arrangements for their water resource and the rules that apply to them as users of that resource;
- be based on existing operational rules, recognising the rights of existing licence holders;
- be consistent with the *Policies for Managing Section 51 Take and Use Licences*;
- document any limits, including water use caps, Permissible Consumptive Volumes (PCVs) or extraction limits that apply to the Groundwater Management Units (GMUs);
- include trading zones and rules; and clarify water sharing arrangements for all users and the environment, including environmental flow requirements;
- document monitoring and reporting requirements, and be periodically reviewed to incorporate new knowledge.

Aquifers in the West Port Phillip Bay Groundwater Catchment

Groundwater is found in aquifers. An aquifer is a layer of fractured rock, gravel, sand or limestone below the ground that is porous enough to hold groundwater and allow it to flow. An aquitard is a layer of rock or clay that may hold some groundwater but is not porous enough to allow it to flow significantly.

The Victorian Aquifer Framework (DSE, 2012) identifies and clearly describes the aquifers and aquitards across the West Port Phillip Bay groundwater catchment. The catchment can be broadly subdivided into three layers; the upper, middle and lower aquifers. The aquifer layers are generally separated from one another by aquitards. A cross section showing the relative position of the aquifer layers is provided in Figure 2.

The local management plans describe the rules for managing all or part of an aquifer group (upper, middle or lower). The aquifer groups comprise layers that have both hydrogeological names (as described in the Victorian Aquifer Framework, DSE, 2012) and primary geological names. The main aquifer managed by each local management plan area and the associated hydrogeological and geological names are summarised in Table 1.

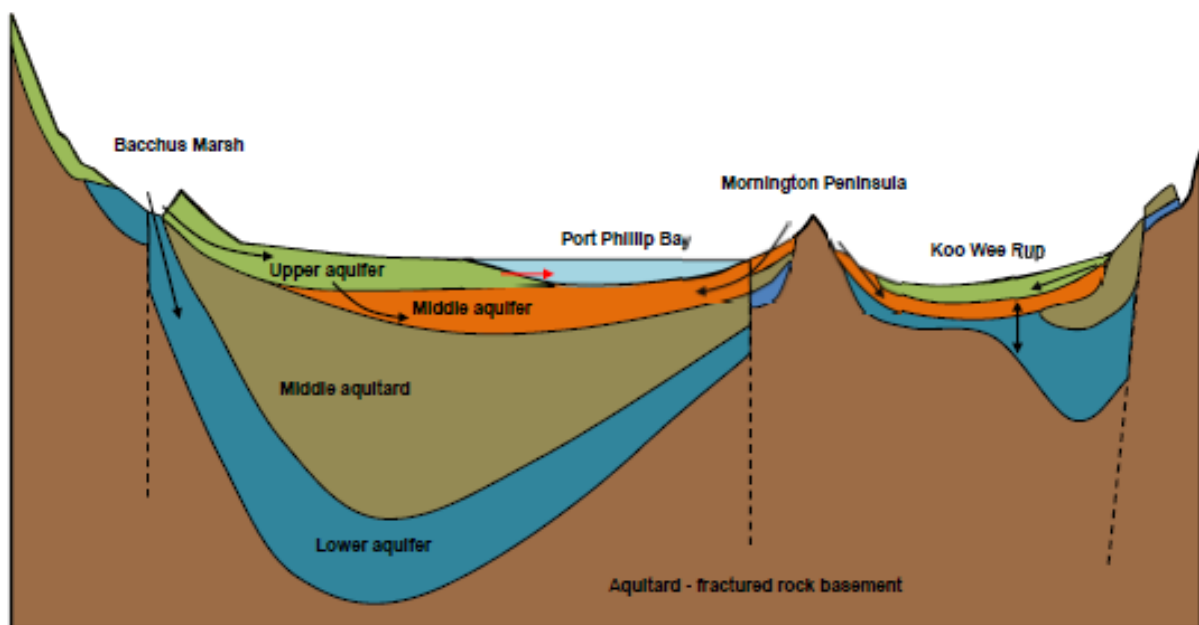


Figure 2 –Cross section through the West Port Phillip Bay Groundwater Catchment, taken from the Port Phillip and Westernport Groundwater Atlas (*in draft*)

Table 1 – Principal aquifer resource managed by the Local Management Plan Area¹

Principal Local Management Plan for the layer (or part layer) and Groundwater catchment ²	Aquifer layer	Hydrogeological layers (Victorian Aquifer Framework, DSE, 2012)	Geological Layers
Deutgam , Merrimu	Upper	QA Quaternary	Various aeolian deposits, various fluvial, lacustrine, alluvial and colluvial sediments. Quaternary sandy limestone, calcarenite and shell deposits.
Lancefield		UTB Upper Tertiary/ Quaternary Basalt Aquifer	Quaternary stoney rises, tuff, undiff. Quaternary basalt (inc Newer Volcanics)
		UTAM Upper Tertiary Aquifer (Marine)	Moorabool Viaduct Formation
		UTAF Upper Tertiary Aquifer (Fluvial)	Brighton Group, Baxter Formation
	Middle	UMTA Upper Mid Tertiary Aquifer	Batesford Limestone, Sherwood Formation, Yallock Formation
		UMTD Upper Mid Tertiary Aquitard	Torquay Group, Fyansford Formation, Newport Silt, Maddingley Coal
		LMTA Lower Mid-Tertiary Aquifer	Maude Formation
		LMTD Lower Mid Tertiary Aquitard	Demons Bluff Group, Anglesea Formation
	Lower	LTB Lower Tertiary Basalts	Phase 2 Basalts, Mornington Volcanics
Cut Paw Paw		LTA Lower Tertiary Aquifer	Childers Fm, Eastern View Formation, Werribee Formation, Yaloak Formation
		LTB Lower Tertiary Basalts	Mornington Volcanics, Older Volcanic Group (Phase 1)
	Basement	BSE Mesozoic and Palaeozoic Bedrock	Permian Glacial Sediments, all Palaeozoic basement rock

Descriptions from Victorian Aquifer Framework (DSE 2012).

Note 1: The areas are often defined by a depth from surface that may incorporate parts of other aquifers and aquitards. The principal aquifer is the primary target for management of groundwater extraction. Any rules, however, apply to the entire defined area (see Appendices).

Note 2: All other aquifer layers not covered by the local management plans above are covered in the “All remaining areas” Local Management Plan (Appendix 5).

Water management arrangements

Overarching responsibilities

Groundwater management falls within both the jurisdiction of Southern Rural Water (SRW) and the Department of Environment and Primary Industries (DEPI) in ensuring the delivery of government policy on water and the environment. They are jointly responsible for the implementation of the Central Region Sustainable Water Strategy. The groundwater catchment statements, of which the West Port Phillip Bay GCS is one, are part of the implementation of this strategy.

The licensing authority for groundwater within the West Port Phillip Bay Groundwater Catchment is SRW. SRW is responsible for issuing bore construction licences (section 67, *Water Act 1989*) and licensing groundwater extractions under “take and use” licences under section 51 of the Act. See the SRW website (www.srw.gov.au) or the Victorian Water Register (waterregister.vic.gov.au) for more information about these.

DEPI is the department responsible for administration of the Water Act 1989, and oversees the management of water resources in Victoria. Sustainable Water Strategies (SWS) and Groundwater (or local) Management Plans are one way that DEPI and SRW ensure the long term sustainability of those resources, and that they are managed equitably.

Monitoring groundwater resources (quality and levels) forms a substantive component of this by providing information to assess the health and availability of the resource. SRW and DEPI undertake extensive monitoring of groundwater in the West Port Phillip Bay catchment.

Water accounting

Information on the management and use of groundwater within this groundwater catchment is included in the Victorian Water Accounts, which are published annually by DEPI. Annual reports on WSPAs with groundwater management plans are produced each year by SRW tabulating usage, allocations and entitlements for those areas. Groundwater entitlements are listed on the Victorian Water Register and are publicly available on the web (waterregister.vic.gov.au).

Review

DEPI may review and evaluate progress on management of groundwater at any time, in collaboration with SRW.

SRW may independently review local management plans. Administrative changes or clarifications may be made without consultation. SRW will consult licence holders and stakeholders on any change that affects the rights of existing users and/or other stakeholders.

Access to information

More information on groundwater can be obtained from the websites listed below. This includes information on groundwater levels, the Port Phillip and Westernport Groundwater Atlas (when completed) and groundwater resource reports.

Southern Rural Water – www.srw.com.au

Department of Environment and Primary Industries – www.depi.vic.gov.au

Victorian Water Register – waterregister.vic.gov.au

SRW Victoria Groundwater Atlases, available online at:
http://www.srw.com.au/Page/page.asp?Page_Id=687&h=0

Groundwater Resource Reports (DSE, 2012):
<http://www.water.vic.gov.au/monitoring/groundwater/groundwater-resource-reports>

Melbourne Groundwater Directory (DSE, 2009):
<http://www.water.vic.gov.au/monitoring/groundwater/general/melbourne-groundwater-directory>

Victorian Aquifer Framework (DSE, 2012) –
<http://www.water.vic.gov.au/environment/groundwater/national-groundwater-action-plan-victorian-projects>

Appendix 1 Cut Paw Paw Local Management Plan

Objective of the Local Management Plan

The objective of the local management plan is to make sure that the groundwater resources in the Cut Paw Paw Groundwater Management Area (GMA) are managed in an equitable and sustainable manner.

Area description

Cut Paw Paw GMA is shown below. The plan is lodged with the Central Plan Office, reference number LEGL./04-131.

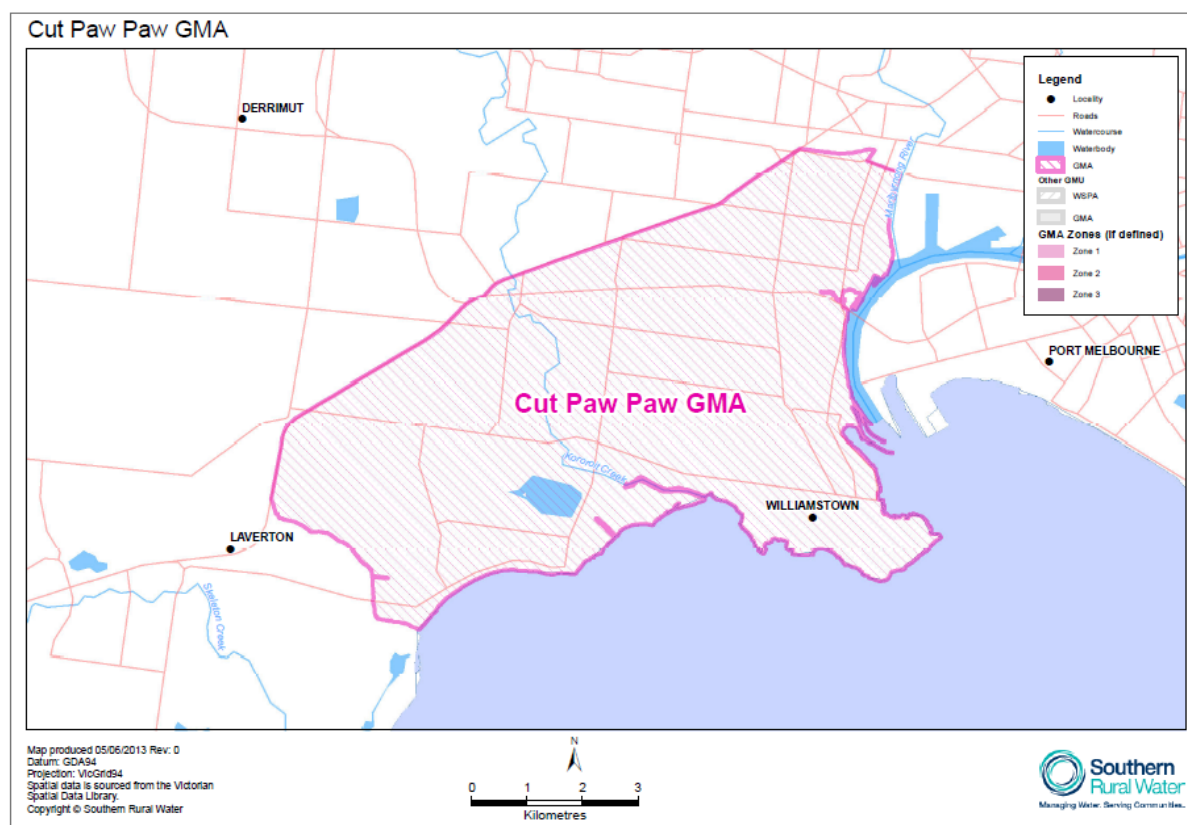


Figure A1-1: Map of Cut Paw Paw Groundwater Management Area

Permissible Consumptive Volume

A Permissible Consumptive Volume (PCV) currently applies to the Cut Paw Paw GMA. The PCV is a cap on the amount of groundwater allocated in this management unit. The PCV for Cut Paw Paw GMA is 3,650 ML/yr.

The PCV applies to the area covered in Figure A1-1, for all formations below 50 metres.

Water entitlements

The extraction of groundwater for purposes other than domestic and stock use is authorised under a groundwater licence. There are 5 groundwater licences in the Cut Paw Paw GMA

that authorise a total of 515 ML. People have rights to take groundwater for domestic and stock use without a groundwater licence.

Groundwater is used in the Cut Paw Paw GMA for irrigation, industrial and commercial purposes. Metered groundwater use is less than the total groundwater entitlements and varies each year according to the seasonal conditions.

Licence holders must not take more than their annual licence volumes.

Restrictions

The PCV determines the maximum volume of water that can be extracted from the Cut Paw Paw GMA; however the Local Management Plan does not place specific restrictions on taking groundwater.

If necessary, SRW is able to temporarily qualify rights to groundwater under section 33AAA of the *Water Act 1989* if a water shortage occurs - for example, if regional drawdown is affecting access to groundwater by users.

Groundwater licences also allow SRW to restrict extraction if required - for example, to minimise the effect of extraction from specific sites if there is a significant impact on nearby users or the aquifer. If restrictions are necessary, SRW will notify licence holders in advance.

Trading

In considering an application to transfer a licence (temporarily or permanently), SRW must undertake a thorough assessment of the application. An application to transfer a licence is not automatically approved. In deciding whether or not to approve an application SRW must consider section 40 of the Act, including:

- Availability of water now and in the future;
- Adverse effects that an approval may have on existing users, on waterways and aquifers and on the environment; and
- Existing and projected water quality in the GMA.

When an application is made, SRW will assess whether groundwater extractions at the new site will cause adverse and material interference to any nearby groundwater user. If interference is likely, SRW may set transfer conditions to minimise interference, or it may refuse the application. Approval of an application to transfer may be subject to technical assessments to determine bore interference and impact on surface water bodies.

In the Cut Paw Paw GMA:

- Permanent transfers are permitted
- Temporary transfers are permitted for a period of up to five years

New licences

New licences can be issued up to the PCV and in accordance with the *Water Act 1989* and policies for managing take and use licences.

Metering

Southern Rural Water meters new and existing licensed water users. This allows SRW to keep track of how much water is being used and enables licence holders to keep within their allocated volume. This means:

1. All new licences for irrigation or commercial purposes require a meter
2. Existing licences of 10ML or greater require a meter

The meters are supplied by SRW, and the licence holder will be responsible for paying the full cost of the meter and initial installation. The meter remains the property of SRW. SRW is responsible for maintenance and replacement.

Meters are read at least twice per year.

Consultation

SRW will consult with licence holders and relevant stakeholders before making changes to the Local Management Plan, other than administrative changes or clarifications.

The Local Management Plan will be reviewed every 5 years, unless an update is required sooner.

Appendix 2 Deutgam Local Management Plan

Plan Approval

The Deutgam Local Management Plan (LMP) has been developed for the area known as the Deutgam Groundwater Management Area. It is a significant step in the management of groundwater for the region. The LMP provides clear information to Southern Rural Water (SRW) customers and the general community on the management and use of groundwater in this aquifer.

The primary benefit of this plan is that licence holders will have more information and certainty around how SRW manages the risk of seawater intrusion into the aquifer. The plan provides details about how SRW makes restriction decisions, and should eliminate unexpected or reactive decisions to restrict groundwater use. Instead decisions will be made ahead of the season to give groundwater users a level of certainty about access to groundwater.

SRW customers and stakeholders have provided valuable contributions to the LMP. The plan is a first step towards managing groundwater and water from other sources such as channels or river, in an integrated manner.

This LMP will require periodic review as changes to Victoria's groundwater management framework take effect and as information about the aquifer continues to improve. SRW will continue to work with our customers, local communities and other stakeholders on reviews and updates.

I approve this plan.



Craig Parker

General Manager Groundwater and Rivers

Southern Rural Water Rural Water Corporation

Date: 7th May 2015

Statutory Management Plan

There is no statutory management plan for groundwater resources in this area.

Objective of the Local Management Plan

The objective of the Local Management Plan is to make sure that the groundwater resources in the Deutgam Water Supply Protection Area (WSPA) are managed in an equitable and sustainable manner.

Area description

Deutgam WSPA is shown below. The plan is lodged with the Central Plan Office, reference number LEGL./97-230.

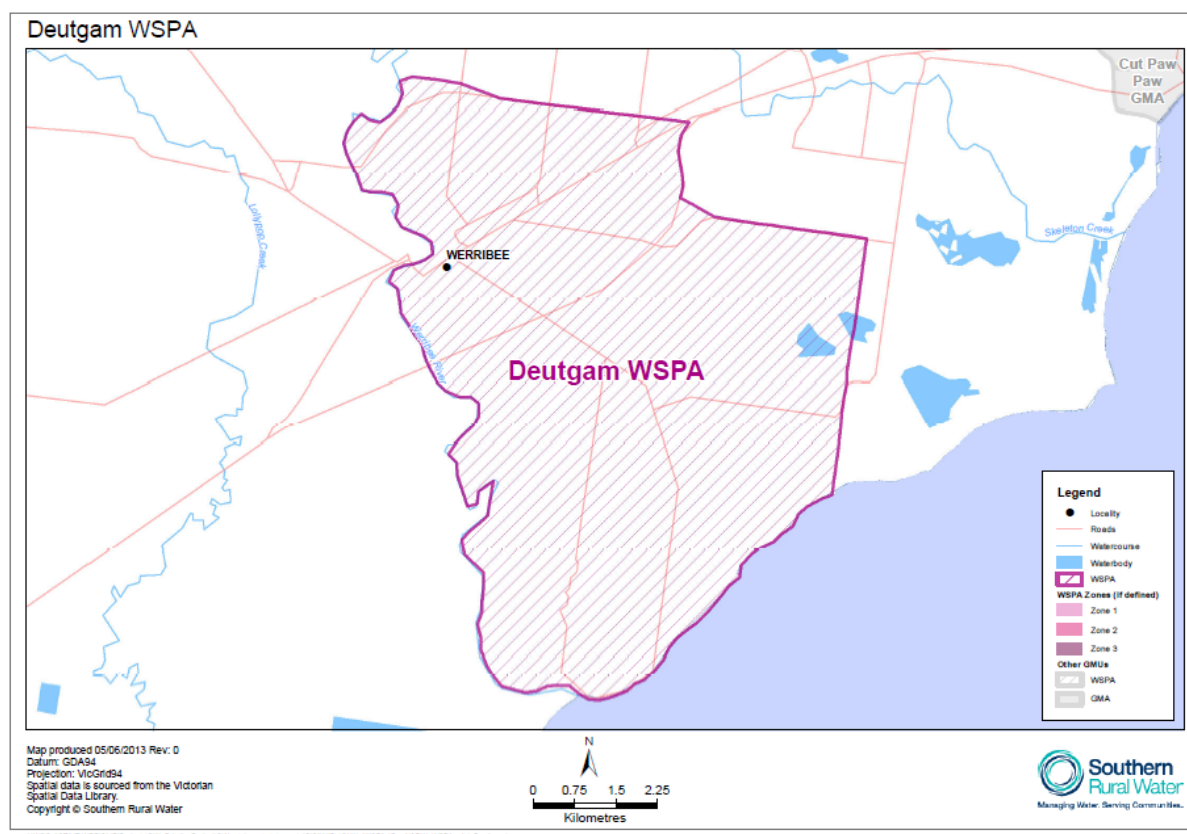


Figure A2-1: Map of Deutgam Water Supply Protection Area

Permissible Consumptive Volume

A Permissible Consumptive Volume (PCV) currently applies to the Deutgam WSPA. The PCV is a cap on the amount of groundwater allocated in this management unit. The PCV for Deutgam WSPA is 5,100 ML/yr.

The PCV applies to the area covered in Figure A2-1, for all formations from the surface to 30m below the surface.

Water entitlements

The extraction of groundwater for purposes other than domestic and stock use is authorised under a groundwater licence. There are 145 groundwater licences in the Deutgam WSPA that authorise a total of 4,898.6 ML. Over 95% of groundwater is licensed for irrigation purposes, with a small volume licensed for industrial or commercial purposes.

Licence holders must comply with all conditions of their licence.

People have rights to take groundwater for domestic and stock use without a groundwater licence.

Monitoring

Groundwater bores are monitored in the Deutgam WSPA to manage the threat of saline intrusion from Port Phillip Bay and the Werribee River. To assess this threat, groundwater in the watertable and underlying aquifers is monitored for level and salinity.

- Groundwater levels are monitored in all 25 observation bores monthly (shown in Figure A2-2)
- Salinity sampling is undertaken from up to 9 observation bores monthly
- Additional groundwater monitoring in key bores along the river and coast may be conducted by SRW if deemed necessary

Groundwater levels and salinity data is collected and reviewed by SRW's hydrogeologists monthly against historical data, irrigation deliveries, rainfall, river flow and river salinity.

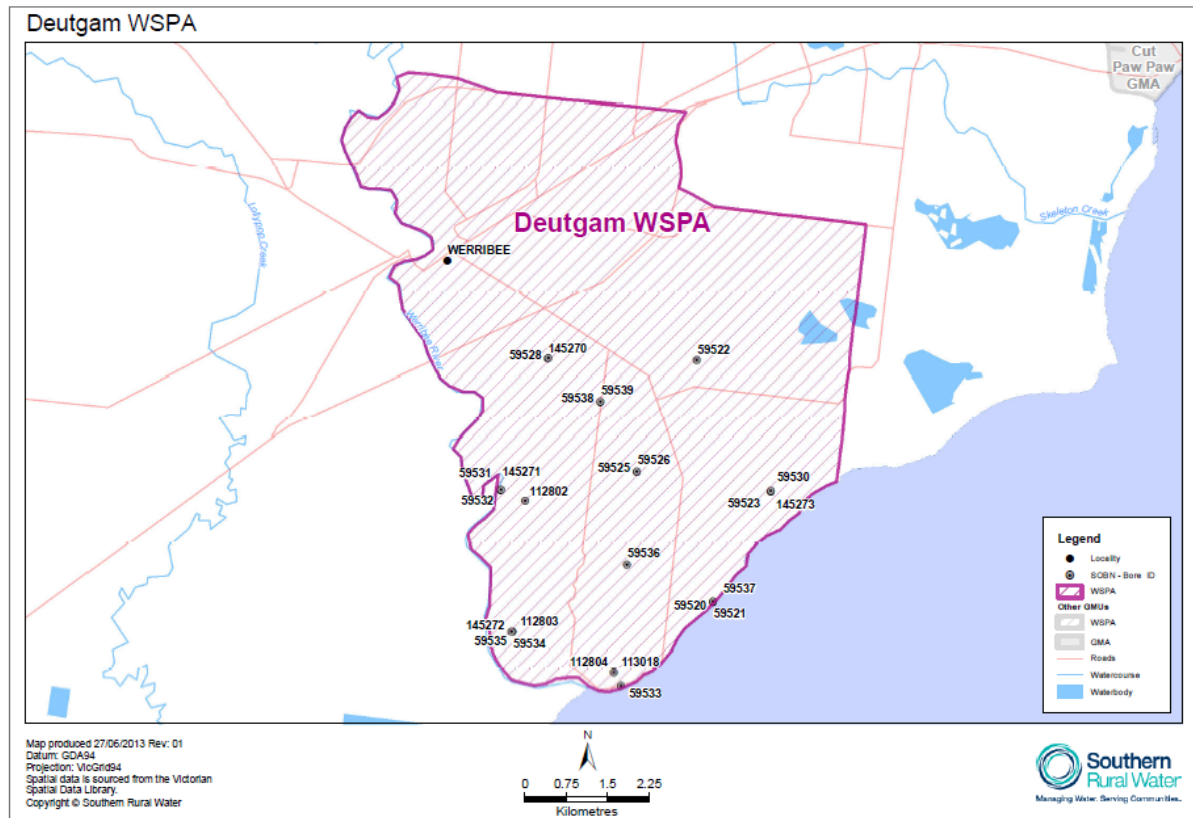


Figure A2-2: Groundwater monitoring bores in the Deutgam WSPA

Groundwater allocation

To protect against saline intrusion into the aquifer from the estuarine reaches of the Werribee River and Port Phillip Bay, groundwater levels must remain well above sea level (0 mAHD) at the coast and at the tidal extent of the river. Inland groundwater levels (bore 59539) should also be significantly higher than sea level to maintain the overall groundwater flow direction and discharge to the bay.

SRW will determine a groundwater allocation for Deutgam on 1 July each year. The groundwater allocation will depend on:

- groundwater level triggers;
- the river water allocation;
- availability of recycled water; and
- the seasonal rainfall and temperature outlook.

Groundwater level triggers are shown below. Three or more bores have to set off the trigger before a response is required.

Bore ID	50% Allocation Trigger	25% Allocation Trigger	0% Allocation Trigger
	Head (mAHD)	Head (mAHD)	Head (mAHD)
145273 (coast)	3.9	3.6	3.2
145272 (river)	2	1.5	1
145271 (river)	1.25	1	0.75
145270 (inland)	9	8.25	7.5
113018 (coast)	1.2	0.9	0.75

As groundwater in the area recharges during Summer (with help from river and recycled water), allocation will be reviewed regularly through the season and may be increased, if conditions allow.

Allocation will not be reduced during the season.

Groundwater allocation will be 100% if groundwater levels are above the 50% allocation trigger in three or more bores.

Groundwater extraction ban

In extreme circumstances, a ban on all groundwater extraction, including private rights (domestic and stock), may be imposed under section 33AAA of the Water Act through a water shortage declaration and qualification of rights.

Communication

Customers shall be notified of groundwater allocation via text message and SRW's website. To ensure that water users consider water availability in their planning, SRW will provide regular groundwater level updates on our website and as much advance notice as possible before making an allocation decision.

In the event of a complete groundwater extraction ban, customers shall be notified in writing and the community shall be notified via a public notice in the local newspaper.

Trading

In considering an application to transfer a licence (temporarily or permanently), SRW must undertake a thorough assessment of the application. An application to transfer a licence is not automatically approved. In deciding whether or not to approve an application, SRW must consider section 40 of the Act, including:

- Availability of water now and in the future;

- Adverse effects that an approval may have on existing users, on waterways and aquifers and on the environment; and
- Existing and projected water quality in the area.

When an application is made, SRW will assess whether groundwater extractions at the new site will cause adverse and material interference to any nearby groundwater user. If interference is likely, SRW may set transfer conditions to minimise interference, or it may refuse the application. Approval of an application to transfer may be subject to technical assessments to determine bore interference and impact on surface water bodies.

In the Deutgam WSPA:

- Permanent transfers are permitted
- Temporary transfers are permitted for a period of up to five years

New licences

Although total licensed entitlement is slightly lower than the PCV, no new entitlement will be issued due to the threat of saline intrusion.

Metering

Southern Rural Water meters new and existing licensed water users. This allows SRW to keep track of how much water is being used and enables licence holders to keep within their allocated volume.

The meters are supplied by SRW, and the licence holder will be responsible for paying the full cost of the meter and initial installation. The meter remains the property of SRW. SRW is responsible for maintenance and replacement.

Removing or interfering with a meter in any way is an offence under the Water Act 1989.

Meters are read regularly by SRW

Consultation

SRW will consult with licence holders and relevant stakeholders before making changes to the Local Management Plan, other than administrative changes or clarifications.

The Local Management Plan will be reviewed every 5 years, unless an update is required sooner.

Appendix 3 Lancefield Local Management Plan

Objective of the Local Management Plan

The objective of the local management plan is to make sure that the groundwater resources in the Lancefield Groundwater Management Area (GMA) are managed in an equitable and sustainable manner.

Area description

Lancefield GMA is shown below. The plan is lodged with the Central Plan Office, reference number LEGL./04-143.

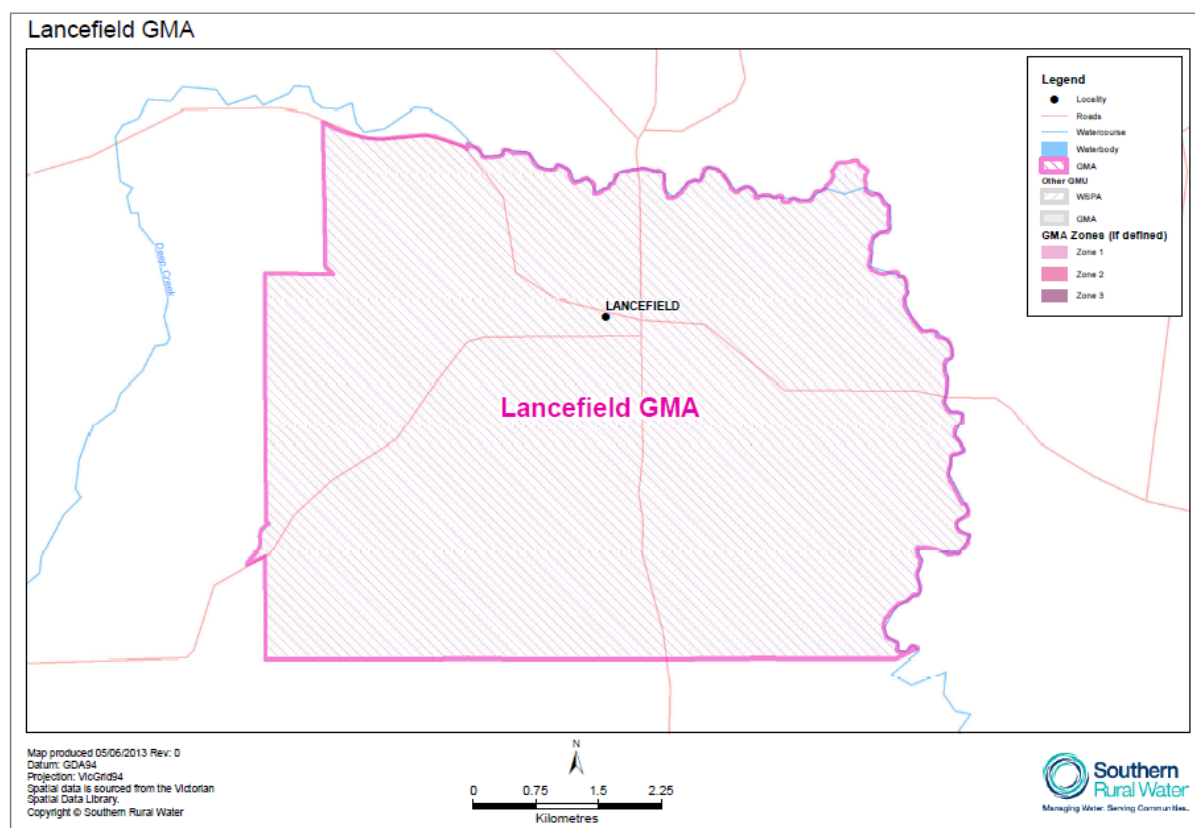


Figure A3-1: Map of Lancefield Groundwater Management Area

Permissible Consumptive Volume

A Permissible Consumptive Volume (PCV) currently applies to the Lancefield GMA. The PCV is a cap on the amount of groundwater allocated in this management unit. The PCV for Lancefield GMA is 1,485 ML/yr.

The PCV applies to the area covered in Figure A3-1, for all formations below the surface.

Water entitlements

The extraction of groundwater for purposes other than domestic and stock use is authorised under a groundwater licence. There are 14 groundwater licences in the Lancefield GMA

that authorise a total of 1,377.5 ML. People have rights to take groundwater for domestic and stock use without a groundwater licence.

Groundwater is mostly used for irrigation purposes, with one bore licensed for urban use. Metered groundwater use is less than the total groundwater entitlements, and varies each year according to the seasonal conditions.

Licence holders must not take more than their annual licence volumes.

Restrictions

The PCV determines the maximum volume of water that can be extracted from the Lancefield GMA; however, the local management plan does not place specific restrictions on taking groundwater.

If necessary, SRW is able to temporarily qualify rights to groundwater under section 33AAA of the *Water Act 1989* if a water shortage occurs - for example, if regional drawdown is affecting access to groundwater by users.

Groundwater licences also allow SRW to restrict extraction if required - for example, to minimise the effect of extraction from specific sites if there is a significant impact on nearby users or the aquifer. If restrictions are necessary, SRW will notify licence holders in advance.

Trading

In considering an application to transfer a licence (temporarily or permanently), SRW is required to undertake a thorough assessment of the application. An application to transfer a licence is not automatically approved. In deciding whether or not to approve an application SRW must consider section 40 of the Act, including:

- Availability of water now and in the future;
- Adverse effects that an approval may have on existing users, on waterways and aquifers and on the environment; and
- Existing and projected water quality in the GMA.

When an application is made, SRW will assess whether groundwater extractions at the new site will cause adverse and material interference to any nearby groundwater user. If interference is likely, SRW may set transfer conditions to minimise interference, or it may refuse the application. Approval of an application to transfer may be subject to technical assessments to determine bore interference and impact on surface water bodies.

In the Lancefield GMA:

- Permanent transfers are permitted
- Temporary transfers are permitted for a period of up to five years

New licences

New licences can be issued up to the PCV and in accordance with the *Water Act 1989* and policies for managing take and use licences.

Metering

Southern Rural Water meters new and existing licensed water users. This allows SRW to keep track of how much water is being used and enables licence holders to keep within their allocated volume. This means:

1. All new licences for irrigation or commercial purposes require a meter
2. Existing licences of 10ML or greater require a meter

The meters are supplied by SRW, and the licence holder will be responsible for paying the full cost of the meter and initial installation. The meter remains the property of SRW. SRW is responsible for maintenance and replacement.

Meters are read at least twice per year.

Consultation

SRW will consult with licence holders and relevant stakeholders before making changes to the Local Management Plan, other than administrative changes or clarifications.

The Local Management Plan will be reviewed every 5 years, unless an update is required sooner.

Appendix 4 Merrimu Local Management Plan

Objective of the Local Management Plan

The objective of the local management plan is to make sure that the groundwater resources in the Merrimu Groundwater Management Area (GMA) are managed in an equitable and sustainable manner.

Area description

Merrimu GMA is shown below. The Merrimu GMA underlies the Bacchus Marsh Irrigation District. The plan is lodged with the Central Plan Office, reference number LEGL./04-145.

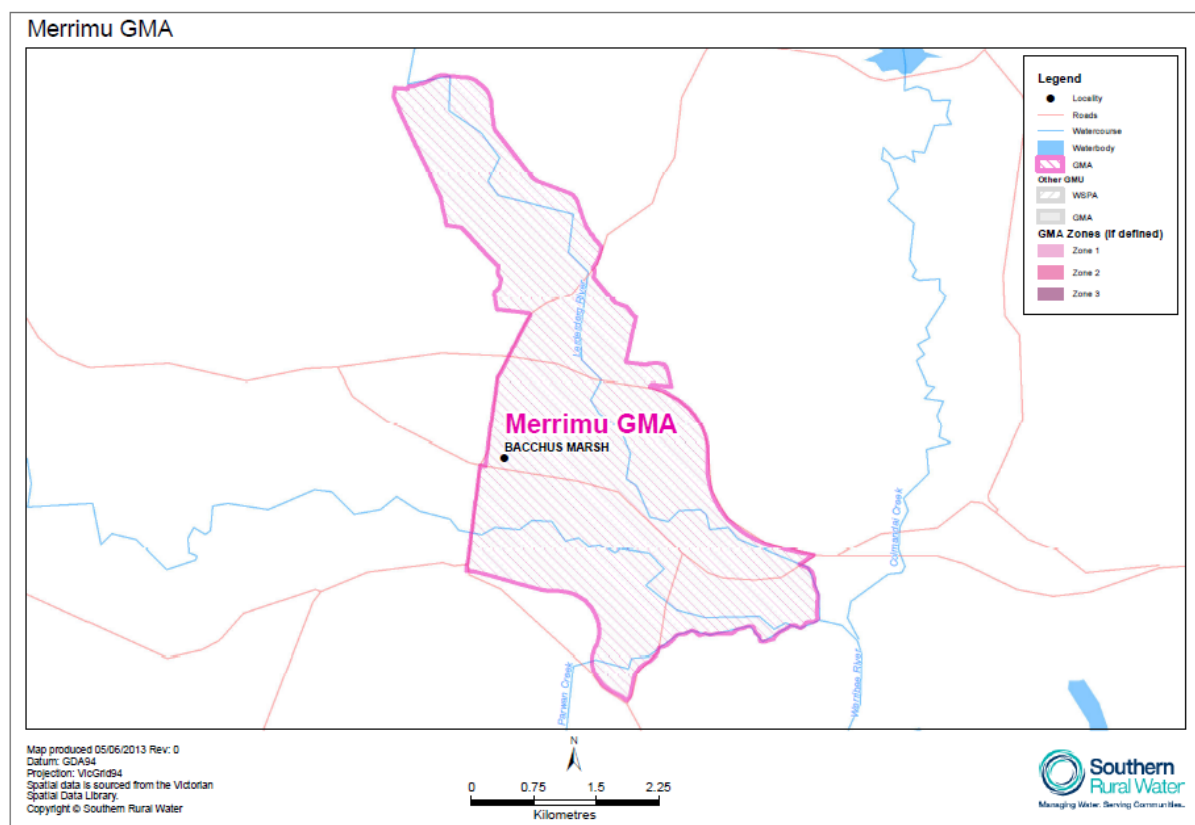


Figure A4-1: Map of Merrimu Groundwater Management Area

Permissible Consumptive Volume

A Permissible Consumptive Volume (PCV) currently applies to the Merrimu GMA. The PCV is a cap on the amount of groundwater allocated in this management unit. The PCV for Merrimu GMA is 451 ML/yr.

The PCV applies to the area covered in Figure A4-1, for all formations from the surface to 30m below the surface.

The depth boundary is to be corrected to exclude the Lower Tertiary Werribee Formation aquifer which occurs below the Maddingley Coal Seam at depths shallower than 30 metres.

Water entitlements

The extraction of groundwater for purposes other than domestic and stock use is authorised under a groundwater licence. There are no licences in the Merrimu GMA. People have rights to take groundwater for domestic and stock use without a groundwater licence.

Restrictions

The PCV determines the maximum volume of water that can be extracted from the Merrimu GMA; however, the local management plan does not place specific restrictions on taking groundwater.

If necessary, SRW is able to temporarily qualify rights to groundwater under section 33AAA of the *Water Act 1989* if a water shortage occurs - for example, if regional drawdown is affecting access to groundwater by users.

Groundwater licences also allow SRW to restrict extraction if required - for example, to minimise the effect of extraction from specific sites if there is a significant impact on nearby users or the aquifer. If restrictions are necessary, SRW will notify licence holders in advance.

Trading

In considering an application to transfer a licence temporarily or permanently, SRW must undertake a thorough assessment of the application. An application to transfer a licence is not automatically approved. In deciding whether or not to approve an application SRW must consider section 40 of the Act, including:

- Availability of water now and in the future;
- Adverse effects that an approval may have on existing users, on waterways and aquifers and on the environment; and
- Existing and projected water quality in the GMA.

When an application is made, SRW will assess whether groundwater extractions at the new site will cause adverse and material interference to any nearby groundwater user. If interference is likely, SRW may set transfer conditions to minimise interference, or it may refuse the application. Approval of an application to transfer may be subject to technical assessments to determine bore interference and impact on surface water bodies.

In the Merrimu GMA:

- Permanent transfers are permitted
- Temporary transfers are permitted for a period of up to five years

New licences

New licences can be issued up to the PCV and in accordance with the *Water Act 1989* and policies for managing take and use licences.

Metering

Southern Rural Water meters new and existing licensed water users. This allows SRW to keep track of how much water is being used and enables licence holders to keep within their allocated volume. This means:

1. All new licences for irrigation or commercial purposes require a meter
2. Existing licences of 10ML or greater require a meter

The meters are supplied by SRW, and the licence holder will be responsible for paying the full cost of the meter and initial installation. The meter remains the property of SRW. SRW is responsible for maintenance and replacement.

Meters are read at least twice per year.

Consultation

SRW will consult with licence holders and relevant stakeholders before making changes to the Local Management Plan, other than administrative changes or clarifications.

The Local Management Plan will be reviewed every 5 years, unless an update is required sooner.

Amendments

9 June 2016

A recent review confirmed there are no licences in the shallow alluvial aquifer defined by Merrimu. Licence volume references have been changed to reflect this.

Appendix 5 West Port Phillip Bay Groundwater Catchment (Areas outside of GMUs) Local Management Plan

Objective of the Local Management Plan

The objective of the local management plan is to make sure that the groundwater resources in West Port Phillip Bay Groundwater Catchment are managed in an equitable and sustainable manner.

Area description

The remaining region of the West Port Phillip Bay Groundwater Catchment comprises all areas excluding:

Cut Paw Paw Groundwater Management Area	Appendix 1
Deutgam Water Supply Protection Area	Appendix 2
Lancefield Groundwater Management Area	Appendix 3
Merrimu Groundwater Management Area	Appendix 4

The remaining area of the West Port Phillip Bay Groundwater Catchment is subdivided into two zones based on depth. The boundary between the zones is defined as 200m below the natural surface or 50 metres below the base of the Tertiary surface (whichever is the greater, refer Figure A5-1).

Where it can be demonstrated that extraction from the deeper zone has no material impact on the upper zone, a licence is still required. However, upper zone management rules, in particular, PCVs and restrictions, would not apply.

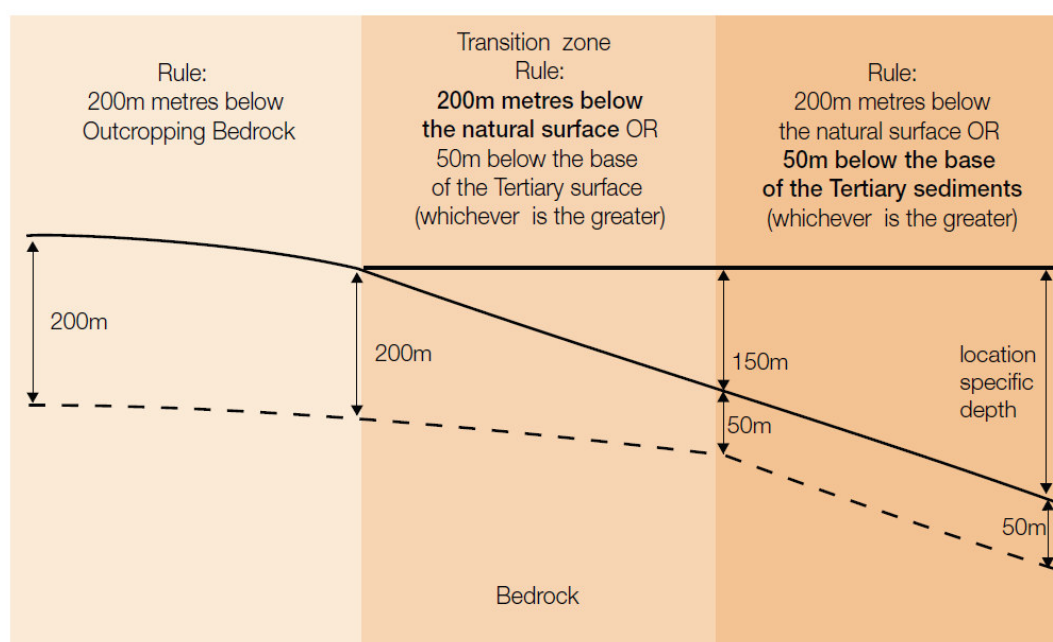


Figure A5-1: Depth defined management zones

Permissible Consumptive Volume (PCV)

There are no PCVs that currently apply to this area or its zones.

Water use and entitlements

The extraction of groundwater for purposes other than domestic and stock use is authorised under a groundwater licence. People have the right to take groundwater for domestic and stock use without a groundwater licence. This applies for the entire area and all zones.

Guidelines on the rights to take and use groundwater under section 51 of the Act are available on the water register site (www.waterregister.vic.gov.au).

Restrictions

This local management plan does not place any restrictions on taking groundwater.

If necessary, SRW is able to temporarily qualify rights to groundwater under section 33AAA of the *Water Act 1989* if a water shortage occurs - for example, if regional drawdown is affecting access to groundwater by users.

Groundwater licences also allow SRW to restrict extraction if required - for example, to minimise the effect of extraction from specific sites if there is a significant impact on nearby users or the aquifer. If restrictions are necessary, SRW will notify licence holders in advance.

New licences

New groundwater licences can be issued within this local management plan area. In considering an application for a groundwater licence, SRW must undertake a thorough assessment. An application is not automatically approved. In deciding whether or not to approve an application, SRW must consider a range of matters including:

- Availability of water now and in the future;
- Adverse effects that an approval may have on existing users, on waterways and aquifers and on the environment; and
- Existing and projected water quality.

When an application is made, SRW will assess whether groundwater extractions at the new site will cause adverse and material interference to any nearby groundwater user. If interference is likely, SRW may set conditions to minimise interference, or it may refuse the application. Approval of an application may be subject to technical assessments to determine water availability, bore interference and impact on surface water bodies.

Groundwater trade

Trading rules in this area are limited to the Parwan Trading Zone (see details below).

In considering an application to transfer a licence temporarily or permanently, SRW must undertake a thorough assessment of the application. An application to transfer a licence is

not automatically approved. In deciding whether or not to approve an application SRW must consider section 40 of the Act, including:

- Availability of water now and in the future;
- Adverse effects that an approval may have on existing users, on waterways and aquifers and on the environment; and
- Existing and projected water quality in the area.

When an application is made, SRW will assess whether groundwater extractions at the new site will cause adverse and material interference to any nearby groundwater user. If interference is likely, SRW may set transfer conditions to minimise interference, or it may refuse the application. Approval of an application to transfer may be subject to technical assessments to determine bore interference and impact on surface water bodies.

Parwan Trading Zone

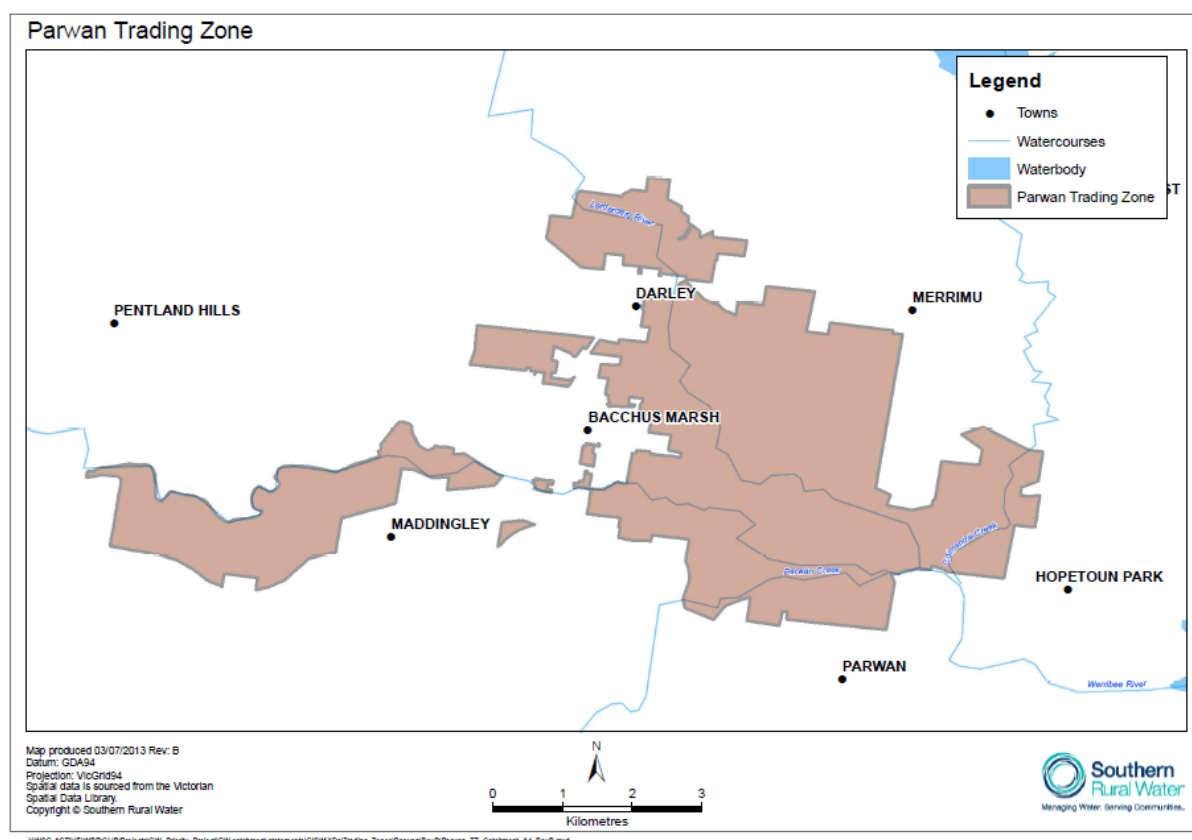


Figure A5-2 - Map of Parwan Trading Zone.

The Parwan Trading Zone is described as the Werribee formation within the boundary of the Bacchus Marsh Irrigation District as shown in Figure A5-2.

There are groundwater transfer rules that apply to the Parwan trading zone. These include:

- Transfers within the Parwan Trading Zone are permitted
- Transfers from the Parwan Trading Zone to the Merrimu GMA are not permitted

- Transfers from the Parwan Trading Zone to capped GMAs and WSPAs are not permitted
- SRW may use its discretion to allocate additional entitlement temporarily to manage seasons where the allocation from the Bacchus Marsh Irrigation District is low.

Metering

Southern Rural Water meters new and existing licensed water users. This allows SRW to keep track of how much water is being used and enables licence holders to keep within their allocated volume. This means:

1. All new licences for irrigation or commercial purposes require a meter
2. Existing licences of 10ML or greater require a meter

The meters are supplied by SRW, and the licence holder will be responsible for paying the full cost of the meter and initial installation. The meter remains the property of SRW. SRW is responsible for maintenance and replacement.

Meters are read at least twice per year.

Consultation

SRW will consult with licence holders and relevant stakeholders before making changes to the Local Management Plan, other than administrative changes or clarifications.

The Local Management Plan will be reviewed every 5 years, unless an update is required sooner.

Amendments

9 June 2016

The allocation limit in the Parwan trading zone has been amended because

- Licences allocated to Merrimu GMA have been moved to Parwan GMA
- The limit on allocation is existing licences plus a new allocation of 600 ML made available by SRW Board approval in February 2016