

BARCOO SHIRE COUNCIL
Dickson & Perkins Streets
(PO Box 14)
JUNDAH QLD 4736



**Registered Water Service
Provider No. 9**

DROUGHT MANAGEMENT PLAN

Towns of Jundah, Windorah and Stonehenge

Copy No.

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9 September 2009

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ENGINEERS
*Engineering
the Outback*

Document control sheet

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If you have any questions regarding this document or if you have a suggestion for improvements, please contact:

Works Manager

Phone 07 4658 6912

Revision history

Revision No.	Date	Changed by	Position	Nature of amendment
1.0	9 September 2009	Simon Bourne	Consulting Engineer	Final

DOCUMENT REGISTER

Copy No.	Holder	Document Rev.	Issue Date
Copy No. 1 of 4	Chief Executive Officer		
Copy No. 2 of 4	Works Manager		
Copy No. 3 of 4	Department of Environment and Resource Management		
Copy No. 4 of 4	George Bourne & Associates		

**CERTIFICATION OF
DROUGHT MANAGEMENT PLAN**

Council Name : BARCOO SHIRE COUNCIL

Service Provider
Registered Number: 9

The attached document has been prepared as the Drought Management Plan for Barcoo Shire Council, towns of Jundah, Windorah and Stonehenge.

I certify that this Drought Management Plan is appropriate for the infrastructure and the registered services of Barcoo Shire Council and has been formally adopted by Council resolution No.....

In determining the appropriateness of the Water Conservation & Drought Management Plan, I have taken the following matters into account:

1. The Drought Management Plan complies with, and addresses, all requirements of Chapter 2 – Part 4 of the Water Supply (Safety & Reliability) Act 2008 and the Guidelines for the Preparation of a Water Conservation & Drought Management Plan; and
2. That the proposed financial arrangements put in place by the Barcoo Shire Council should be sufficient/adequate to implement the Drought Management Plan as presented; and
3. That the strategies, processes, procedures and actions in this plan will minimise the economic and social impacts on our customers.

Certified by: **Michael Parker**

 Chief Executive Officer (Signature)

 Barcoo Shire Council

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1.0 INTRODUCTION

Drought is a natural climatic condition that has occurred many times in the past and will occur again in the future. The purpose of Barcoo Shire Council's Water Conservation and Drought Management Plan is to provide a management strategy of appropriate responses to drought conditions in the Jundah, Windorah and Stonehenge townships in the event available water for reticulation is drastically reduced.

To ensure an adequate water supply for the Council's water users, the Water Conservation & Drought Management Plan establishes the criteria for action at each stage of water supply reduction. The plan aims to minimise negative impact on water users and the economy. Water demand reduction includes all measures presently in place and taken by the Barcoo Shire Council to reduce the use of potable water in response to drought.

This document demonstrates Council's commitment to sustainable water management as well as constituting its Drought Management Plan for the purposes of complying with Chapter 2 of the Water Supply (Safety & Reliability) Act 2008. It includes water saving initiatives that will allow our community to achieve permanent water efficiency savings.

2.0 POLICY STATEMENT

The Barcoo shire council regards the long-term sustainability of our water resources as an issue of primary importance, requiring continual monitoring.

Council has set targets for per capita consumption and is committed to achieving these targets to ensure future generations have a cost effective, sustainable water supply system.

3.0 PURPOSE

The purpose of this strategy is to:

- a) Provide contingency plans to ensure that appropriate management resources are available to continue delivering an adequate, safe and reliable supply of reticulated water to all customers.
- b) Define the conditions under which water restrictions will be implemented and recommend a programmed response for each stage which would most effectively reduce water consumption to the available supply with the least adverse impact.
- c) Identify strategies which will motivate the community to reduce normal water consumption.
- d) To identify other water sources and actions that Council will consider during periods of extreme drought to maintain essential water services sufficient to ensure minimum health requirements; and
- e) To comply with Water Supply (Safety & Reliability) Act 2008.

4.0 SERVICES & SYSTEMS OVERVIEW

4.1 Registered Water Service

Barcoo Shire Council is the registered Water Service Provider to an estimated total population of 268 people for Jundah (103), Windorah (112) and Stonehenge (53).

Table 4.1 summarises the types of services provided by (Barcoo Shire Council) to Jundah, Windorah and Stonehenge to which this Drought Management Plan applies.

Table 4.1: Types of Service

Type	✓ if applicable	Scheme Name
Bulk Water		
Retail Water	✓	Jundah, Windorah and Stonehenge -River Jundah- supplementary sub-artesian bores
Irrigation		
Stock & Domestic		
Other		

4.2 Nature and Extent of Water Services

The nature and extent of services provided by Barcoo Shire Council are summarised in Tables 4.2 and 4.3. Ten (10) year projections of demands/flows are summarised in Table 4.4.

Table 4.2: Overview of Schemes

Scheme Name	Scheme No	Communities Served	No. of Connections	Treatment
Jundah	-	Jundah	72	Treated water supply
			72	Raw water supply
Windorah		Windorah	80	Treated water supply
			80	Raw water supply
Stonehenge		Stonehenge	40	Treated water supply

Table 4.3: Nature of Services

Water Supply	Nature of Service (tick as appropriate)				
	Potable	Non-Potable	Pressurised on Demand	Constant Flow or Trickle Feed	Dual Reticulation
Jundah	✓	✓	✓		✓
Windorah	✓	✓	✓		✓
Stonehenge	✓		✓		

Table 4.4: Projected Demand

Water Supply Services						
Scheme Name	Water Average Day (kL/d)					
	Current		5 years (projected)		10 years (projected)	
	Raw	Treated	Raw	Treated	Raw	Treated
Jundah	483	120	508	126	533	132
Windorah	528	132	555	139	583	146
Stonehenge		330	0	347	0	365

- The 5 and 10 year projections are based on dual reticulation in Jundah and Windorah and only treated water reticulation in Stonehenge (due to low population). A small water treatment plant was installed in Stonehenge in 2008.
- Predictions of water schemes in these towns are based on historical consumption trends and 2% pa connection growth.
- Water saving devices and community education are expected to reduce the above projected water consumption levels.
- A modest growth rate of 1% per annum was assumed for demand projection.

4.3 Infrastructure Details

Tables below outline the infrastructure used for water supply.

Table 4.5: Summary of Water Supply Infrastructure for Jundah, Windorah and Stonehenge (Treated Bore Water Supply)

Scheme Name Jundah	Jundah	
	Name	Capacity
Source Facility	Bore No 1 – License No:69946J Bore No 2 River water (Thomson River)	3 l/s 3 l/s 310 ML
Reservoir	On-ground storage (raw) Elevated storage (galvanised steel tank - raw) Elevated storage (premaglass tank - clean)	390 kL 90 kL 630 kL
Pump Stations	River pump Relift pump Bore No 1 – pump Bore No 2 - pump Pressure pump No 1 Pressure pump No 2	10 l/s 25 l/s 3 l/s 3 l/s 8 l/s 8 l/s
Treatment plant	Reverse Osmosis (treats bore water) Treatment plant– polymer flocculation (treats river water) Evaporation ponds Settlings pond (excavated earth ponds)	9.0 kl/hr 6 x 12m 2x50x50x1.0m deep 2 x 30x14m
Length of Pipelines	1410m rising mains, 7511 reticulation mains	

Scheme Name Windorah Bores	Windorah	
	Name	Capacity
Source Facility	River water (Murken waterhole on Cooper's Creek) " Currareva" waterhole	123 ML 4756 ML
Reservoir	Elevated storage Ground level reservoir	2x 60kL (clean & raw) 90kL (clean)

Pump Stations	Raw water pump No1 Raw water pump No2 Filter pump No 1 Filter pump No 2 Relift pump	6.0 l/s 6.5 l/s 3.0 l/s 3.0 l/s 5.0 l/s
Treatment plant	6m x 10m Metal construction, flocculation tank and filter Settling pond (excavated Earth)	3.0 l/s 3 x 100 kL
Length of Pipelines	18350 rising mains, 8318 reticulation mains	

Scheme Name Stonehenge	Stonehenge	
	Name	Capacity
Source Facility	Dam off Thomson river	140 ML
Reservoir	Elevated Reservoir (clean) Ground storage 1 (raw) Ground storage 2 (raw)	50kL 50kL 50kL
Pump Stations	Harvest pump – Thomson river Pump at dam Booster pump (reticulation)	100 l/s 3.0 l/s 3.0 l/s
Length of Pipelines	650 rising mains, 1255 reticulation mains	

Please refer to **Appendix A** for the schematic layout of Jundah, Windorah and Stonehenge water supply system.

4.4 Water Sources Assessment

Please find below a list of previous reports / Assessments that have been commissioned by Barcoo Shire Council. The reports may not have been specifically commissioned to assess the Water source of each scheme; however all of the reports contain relevant information with respect to sources of water for the schemes.

1. George Bourne & Associates - Total Management Plan: Jundah, Windorah and Stonehenge Water Supply Schemes Nov 2006.
2. George Bourne & Associates - Stonehenge Water Supply Augmentation 2004 New Treatment Plant & Raw Water Reticulation
3. George Bourne & Associates – Planning Report Raw Water Supply Augmentation for Town of Jundah 2004

4.4.1 Water Sources Assessment for Jundah, Windorah and Stonehenge

4.4.1.1 Current Water Sources

Jundah

Jundah has treated water and raw water services available in the town. The treated water service is potable. Treated water is sourced from river water backed up by RO treated bore water.

Windorah

The main source of water for the Windorah town water supply is Murken waterhole on Cooper's Creek, located 8km east of the town. Since 1997 water from "Currareva" waterhole 11km from Windorah, has provided an emergency back-up source of raw water for the town.

Stonehenge

The Stonehenge water supply is now treated and reliant on the infrequent but consistent flows in the Thomson River which drains a large area of the Central Lowlands and Upper Western Areas of Queensland from north of Muttaborra. Water is harvested during river flows to fill an off stream earth storage.

A low head/high flow pump is used to pump river water at a rate of 100 litres/second (360m³/hour) via a 250mm diameter UPVC rising main to the town water supply storage dam.

4.4.1.2 Future Sources of Jundah, Windorah and Stonehenge

Currently, there is no research on future water sources for Jundah, the current bores supply are sufficient to cater for the town in any event.

Windorah and Stonehenge presently have enough storage to last 18 months to 2 years with a flow in the Thomson River, Cooper Creek system. This is presently considered adequate.

4.4.1.3 Emergency Sources of Jundah, Windorah and Stonehenge

Carting Water

Trucking water would be the viable short term option although it is a costly and logistically difficult process. There are a number of sources that could be trucked or railed for Jundah, Windorah and Stonehenge.

In an emergency, water shall be trucked from Jundah to Windorah or Windorah to Jundah. There are other potential sources of bore water and surface water in the region. The choice of water source would need to be determined on a case by case basis as there are many parameters to consider.

Jundah

A volume of 21 kℓ/day which, equates to 200 ℓ/p/day, for the population of 103 would be required for Jundah. If all the water was to be carted, it equates to:-

- one 75 kL water tanker per three days; or
- two 12 kL water tankers per day.

Windorah

A volume of 23 kℓ /day which, equates to 200 ℓ/p/day, for the 112 population would be required for Windorah. If all the water was to be carted, it equates to:-

- one 75 kL water tanker per three days; or
- two 12 kL water tankers per day.

Stonehenge

A volume of 11 kℓ/day which, equates to 200 ℓ/p/day, for the 53 population would be required for Stonehenge. If all the water was to be carted, it equates to:-

- one 75 kL water tanker per six days; or
- one 12 kL water tanker per day.

Dependant on the water source and water cart capacity, costs are calculated in **Appendix B**. Carting of water will cost approximately:-

- \$605 to \$719 /day; or
- \$28.76 to \$50.43 /kL.

The purpose of the calculations in **Appendix B** is to illustrate the potential water sources and to provide indicative costs for carting of water from these sources. The following costs in **Appendix B** have not been considered:-

- The carted water would need to have some form of treatment, at the minimum dosed with chlorine;
- Water sources that may be closer than used in **Appendix B**; and
- Other costs associated with processing the water from the source to the reticulation mains.

4.5 Past Performance Review for Jundah, Windorah and Stonehenge Water Supplies – bores and water holes.

There is only anecdotal evidence of the past performance of the various water sources.

Jundah

The Jundah hole on the Thomson is limited in volume and the town regularly entered severe water restrictions after 9-10 months of no river flow. The town continually felt the threat of a water shortage towards the end of the dry season in September/October of each year.

The addition of 2 sub artesian bores and a small RO plant has ensured Jundah a limited supply of good quality water until the river flows each year.

Windorah

Windorah relied on the Murken hole for water until 1998 when a new rising main was installed from the Currareva hole 11km away. As with the Jundah hole, the Murken hole can be low towards the end of each dry season with the town experiencing severe water restrictions and poor quality water.

The Currareva hole is a much more extensive water hole and has not been exhausted in living memory.

Stonehenge

Stonehenge has always relied on an off stream storage on the Thomson river. With some growth in the town in the 1990's the dam also became near exhausted towards the end of each dry season. The town dam was enlarged in 2002 and the town now has 18 moths of water once the dam is filled.

General

In living memory the Thomson River has never failed to flow at least once a year, generally in the wet season November-March each year. If the river flow ever fails, both Stonehenge and Windorah will exhaust their supply in 18 to 20 months. An evaporation rate of 3m / year will generally limit earth storages to this length due to their depth.

4.6 Water Consumption

4.6.1 Annual Treated Water Consumption for Jundah and Windorah

	Annual Water Consumption (ML)	Average Day Demand (kL)
Jundah	44	120
Windorah	48	132
Stonehenge	120	
Total	212	

Treated Water consumption = 212 ML/annum
 = 580 kL/day
 = **2164 L/p/day** (based on 268 population)

4.6.2 Annual Raw Water Consumption for Jundah, Windorah and Stonehenge

	Annual Water Consumption (ML)	Average Day Demand (kL)
Jundah	176	483
Windorah	192	528
Stonehenge	-	-
Total	368	

4.6.3 Projected Consumption for Jundah, Windorah and Stonehenge

Refer to Table 4.4 above.

5.0 WATER CONSERVATION & DROUGHT MANAGEMENT PLAN

5.1 General

This Water Conservation & Drought Management Plan addresses both Council's ongoing water conservation strategy and its drought response plan. It is important that the community understands the difference between the two. Restrictions which are part of the Water Conservation Plan are ongoing and intended to ensure that we adopt sustainable water use practices as part of our normal way of life. Restrictions which are introduced in response to a drought or other temporary water shortage event will only be implemented to various levels during the drought or event and will be lifted when conditions return to normal.

Residents in Jundah, Windorah and Stonehenge are informed of water restrictions and drought conditions via a mail drop to every residential home and business.

5.2 Restrictions Trigger Points

Refer to **Appendix C** for Trigger Points and restrictions for Jundah, Windorah and Stonehenge.

The most effective way to reduce water consumption is to introduce water restrictions. Water restrictions theoretically allow the water source to last longer under a variety of usage and drought scenarios taking into account future population growth. Under the Water Supply (Safety & Reliability) Act 2008, Section 41 and 42, Council has the legal power to determine, implement and enforce water restrictions. Trigger points are set according to changes in the water level in waterholes and dam. Trigger points and corresponding restrictions will apply when the water levels fall below Permanent Conservation Measures (full) level.

Appendix C show the details of trigger point and restrictions for storages in Jundah, Windorah and Stonehenge

The CEO with the advice from the Drought Management Response Team Members is authorised to implement any and all drought measures necessary to achieve the needed outcome. Measures placed in effect at lower drought stages will remain in effect at more stringent response levels. Additional measures may be added when determined necessary by the CEO.

Following each drought event the targets should be reviewed against actual performance and modified where necessary. Target consumptions also provide a useful community education tool during droughts. The targets can be used to easily communicate to the community whether their water saving efforts are working.

Declaration of drought at any stage will initiate an intensive public education and information program to advise and educate customers impacted by the water shortage and the need for possible drought measures. At more severe drought stages, this public education and information program will also be utilised to communicate required drought measures and the penalties for non-compliance.

5.3 Details of Restrictions

The allowable watering usage or restrictions for Jundah, Windorah and Stonehenge is outlined in **Appendix C**. Exemptions may be applied for (see Section 6.4 below for details).

6.0 IMPLEMENTATION

6.1 Drought Management Response Team

As a guide, the Drought Management Response Team should consist of the following positions:-

Chairperson: Chief Executive Officer of Barcoo Shire Council

Team Members: Works Manager
Works supervisor
Operational support officer

Barcoo Shire Council will establish the above Drought Management Response Team. The team members are responsible to advise the CEO on the implementation of restrictions, review performance, conduct post event reviews and recommend any changes to the Water Conservation and Drought Management Plan.

6.2 Authorising Provisions

Approval to impose water restrictions must be sought via a report from the Drought Management Response Team Members to the CEO for the implementation of water restrictions under the Water Supply (Safety & Reliability) Act 2008.

6.3 Enforcement

Barcoo Shire Council will enforce the Water Restrictions by:-

- Notification to all Barcoo Shire Council staff that any observed breaches of the water restrictions are to be formally reported to the authorised officer within Barcoo Shire Council Drought Management Response Team;
- Regular patrols by Barcoo Shire Council authorised officer;

- Rapid response to report misuse and breaches by authorised officer;
- First time offenders are to be given a warning and provided with information on the restrictions and water conservation practices;
- Repeat offenders and those obviously and blatantly disregarding the restrictions are to be issued with an infringement notice or the issue of a fine in accordance with Section 43 of the Water Supply (Safety & Reliability) Act 2008.

Enforcement is the essential tool or mechanism that Council can use to implement demand management.

6.4 Exemptions

Where an exemption or amendment to water conservation measures is sought, applicants shall apply for each individual property or circumstance.

Applications shall be forwarded to the Chief Executive Officer.

Applications may be:-

- approved unconditionally; or
- approved subject to certain conditions; or
- not approved.

Exemptions may be granted for the following scenarios (but not limited to):-

- sprinklers with automatic timers;
- adverse disruption to business;
- water use for construction works.

Applications will only be considered where reasonable grounds for such exemption have been presented and the prescribed fee has been paid. Application fees are non-refundable.

Approval, if granted, will be in writing and takes effect as of the date of such approval.

Approvals may be modified or withdrawn at any time Barcoo Shire Council sees fit. Any such approval is final and binding upon acceptance by the applicant.

Approved Applications will be issued with an Exemption Permit with the approval. The exemption permit is to be displayed in a prominent position on the approved property and is to be removed on the expiry of the permit and returned to Council.

Displaying an expired exemption permit or an exemption permit on any property other than the approved property will be considered to be an offence.

6.5 Communications Plan

Barcoo Shire Council, as part of the Water Conservation Strategy, will actively promote permanent water conservation measures and, when required, the introduction of water restrictions.

The Communication Plan will:-

- Inform the community of the current water supply situation and the reasons for introducing water restrictions
- Provide an explanation of the water restriction requirements
- Provide an explanation of the enforcement procedures
- Include an educational campaign to encourage water conservation practices
- Provide ongoing feedback to the community on the water supply situation

Generally, the communication plan will be publicised by direct mail drop to every residential house and business.

6.6 Monitoring Plan

The Water Conservation & Drought Management Plan must be responsive, effective and flexible. In order to achieve this, it is very important to monitor the water supply systems on a regular basis to allow proper implementation of the plan.

As a guide the following monitoring and its frequency should be performed as per the table below

Trigger Points	Frequency				
	0	1	2	3	4
PCML of water	Bi-M	M	F	W	D
Consumption	Bi-M	M	F	W	D
Water Quality	AR	AR	AR	AR	AR
Investigations of consumption and impact of restrictions	NA	M	F	W	D

Legend:

- Bi-M** = **Bi - Monthly**
- M** = **Monthly**
- F** = **Fortnightly**
- W** = **Weekly**
- D** = **Daily**
- AR** = **As Required**
- NA** = **As Required**
- PCML** = **Permanent Conservation Measures Level**

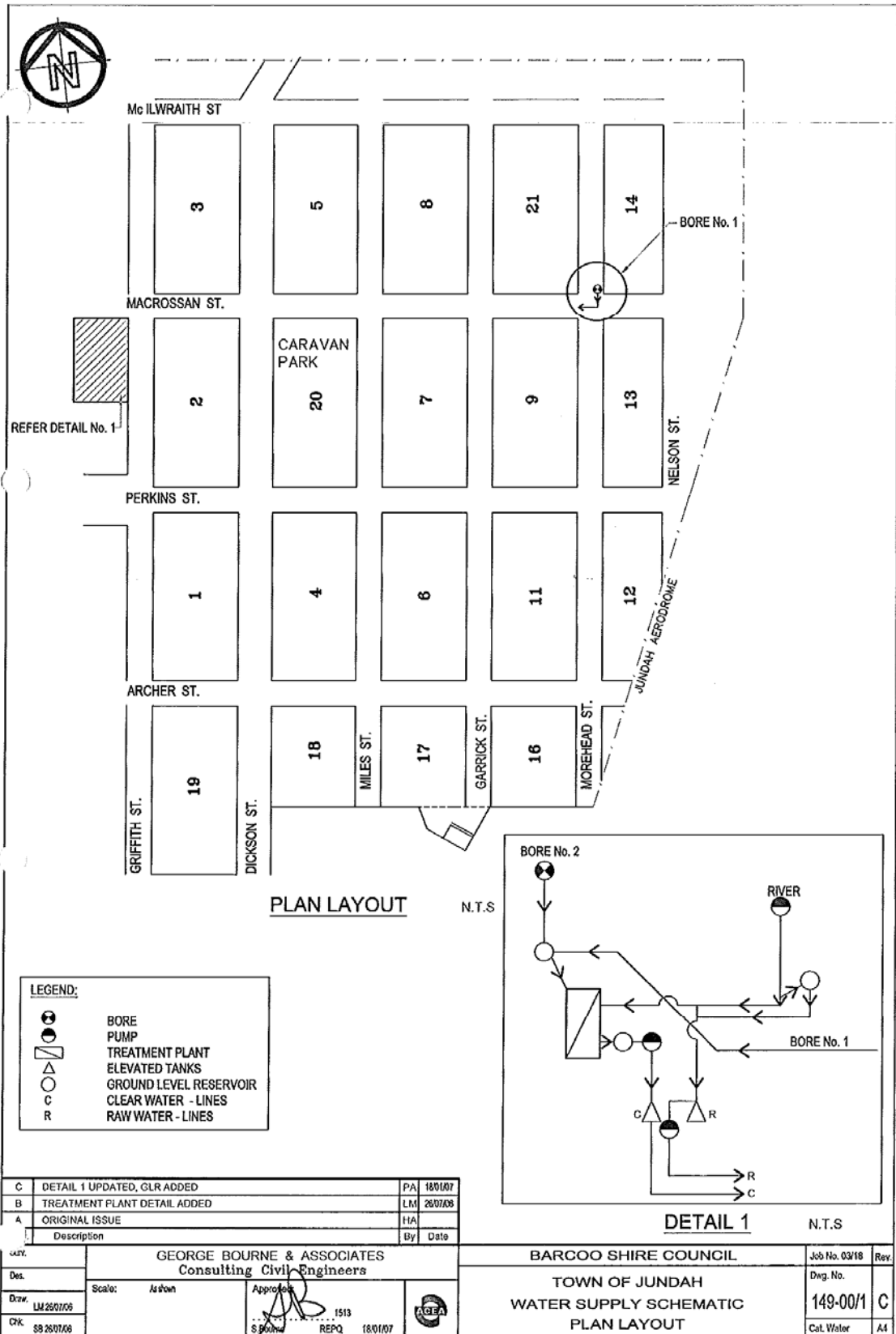
Data collected from the monitoring shall be compared with the base criteria/assumptions used to develop the Water Conservation & Drought Management Plan. All collected data shall be well recorded and reported in the Council's General Meetings as required.

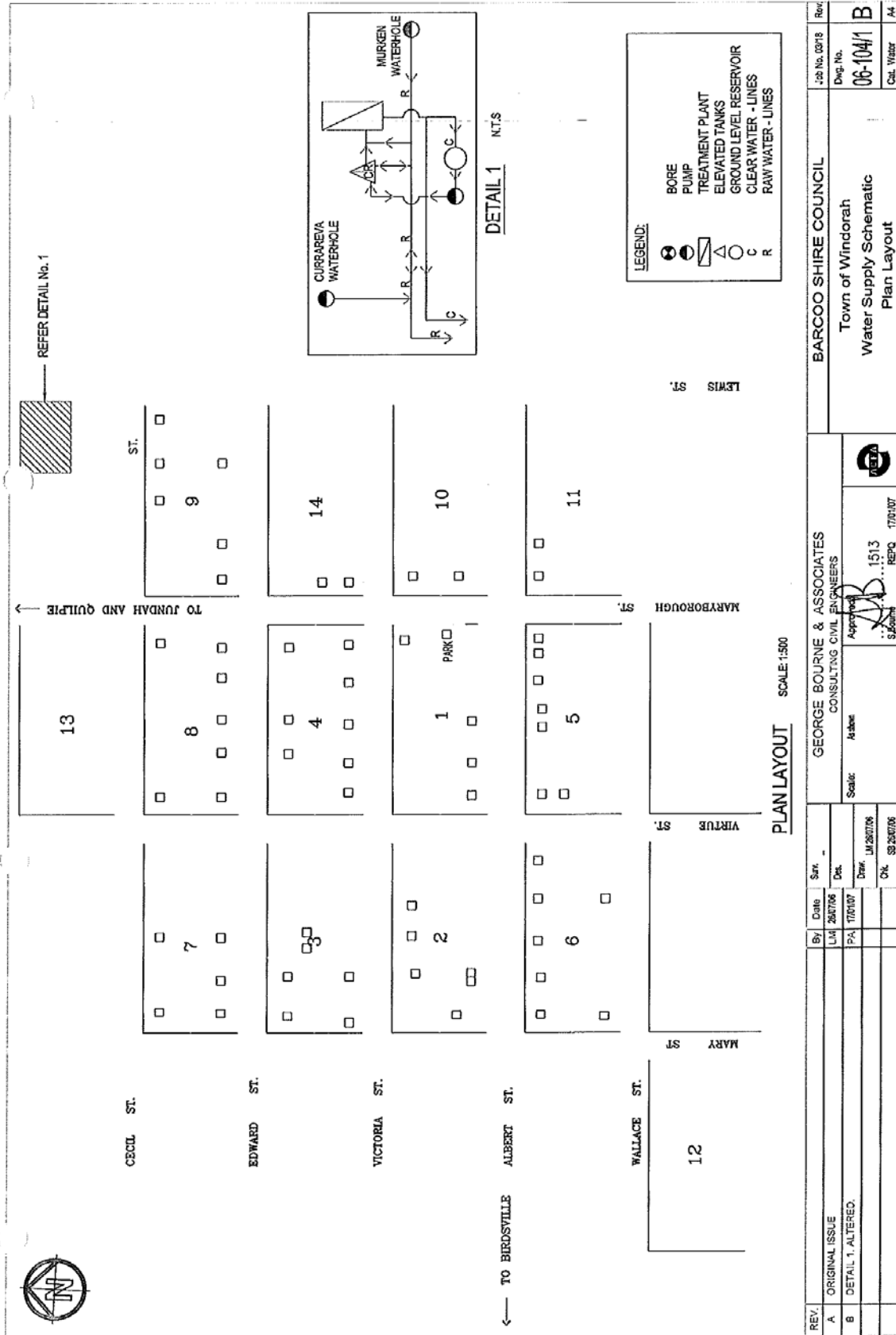
6.7 External Assistance

Organisation	Contact Person	Contact Details	Type of Service/Role
Department of Natural Resources, Mine and Water, Longreach	Daniel Larsen	(07) 4650 1930	Non-compliance with License allocation
Department of Local Government, Planning, Sport and Recreation	General Line	(07) 4967 0900	Drought assistance funding
Environmental Protection Authority	General Line	1300 130 372	Access to water from environmentally sensitive areas
Lake Eyre Basin Community Advisory Committee	General Line	(03) 6331 8406	Matters relevant to the management of water

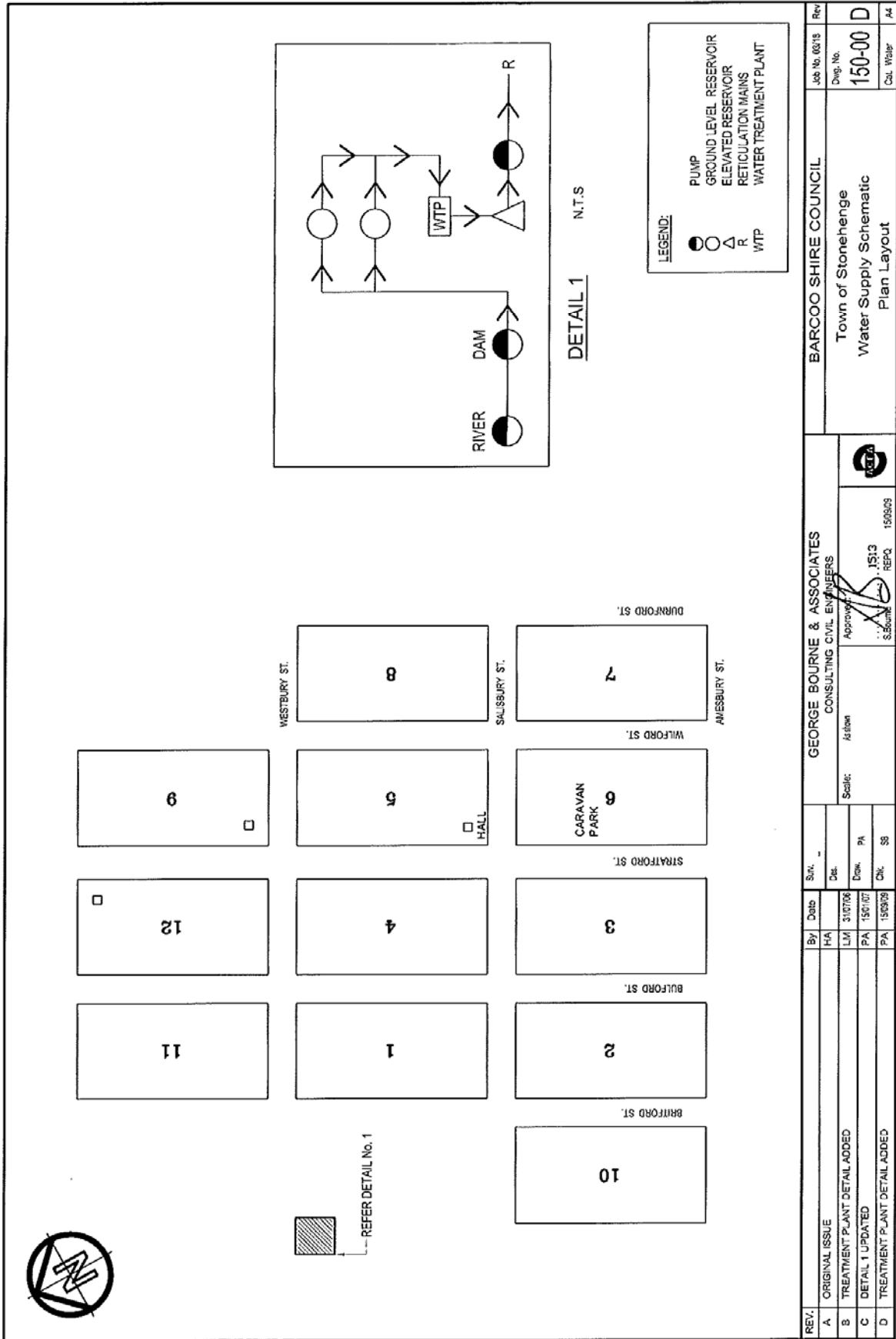
APPENDIX A

Schematic of Water Supply System for Jundah, Windorah and Stonehenge





REV.	By	Date	Rev.	Job No.	0818	Rev.
A	LM	28/7/06		Dwg. No.	06-1041	B
B	PA	17/10/07		Cal. Water		A4
ORIGINAL ISSUE DETAIL 1, ALTERED.			BARCOO SHIRE COUNCIL Town of Windorah Water Supply Schematic Plan Layout			
Scale: As above Approved: [Signature] S. J. [Signature] 15/13 REPO 17/10/07			GEORGE BOURNE & ASSOCIATES CONSULTING CIVIL ENGINEERS [Logo]			



APPENDIX B

Water Carting Estimates

BARCOO SHIRE COUNCIL

Jundah, Windorah and Stonehenge Drought Management Plan

Appendix B

Cost Estimates for Water Carting from Various Location to Jundah during Emergency Stage

Township	Capacity of truck (kL)	Water Required (kL/day)	Trips required	Source	Return Travel Distance (km)	Travel Time (Hr)	Breaks fill & Dump (Hr)	Total Hrs/trip	Hire (\$/Hr)	Hire Cost (\$/trip)	Water (\$/kL)	Water (\$/trip)	Total cost (\$/trip)	Total cost (\$/day)	Total Cost (\$/kL)
Jundah	12	21	2	Windorah	232	2.5	0.5	3	130	390	0.60	7.20	397.20	\$794.40	33.10
Jundah	25	21	1	Windorah	232	2.5	0.7	3.2	220	704	0.60	15.0	719	\$719	28.76

Cost Estimates for Water Carting from Various Location to Windorah during Emergency Stage

Township	Capacity of truck (kL)	Water Required (kL/day)	Trips required	Source	Return Travel Distance (km)	Travel Time (Hr)	Breaks fill & Dump (Hr)	Total Hrs/trip	Hire (\$/Hr)	Hire Cost (\$/trip)	Water (\$/kL)	Water (\$/trip)	Total cost (\$/trip)	Total cost (\$/day)	Total Cost (\$/kL)
Windorah	12	23	2	Jundah	232	2.5	0.5	3	130	390	0.60	7.20	397.20	794.40	33.10
Windorah	25	23	1	Jundah	232	2.5	0.5	3	220	704	0.60	15.0	719	719	28.76

Cost Estimates for Water Carting from Various Location to Stonehenge during Emergency Stage

Township	Capacity of truck (kL)	Water Required (kL/day)	Trips required	Source	Return Travel Distance (km)	Travel Time (Hr)	Breaks fill & Dump (Hr)	Total Hrs/trip	Hire (\$/Hr)	Hire Cost (\$/trip)	Water (\$/kL)	Water (\$/trip)	Total cost (\$/trip)	Total cost (\$/day)	Total Cost (\$/kL)
Stonehenge	12	11	1	Longreach	320	4	0.60	4.6	130	598	0.60	7.20	605.20	605.20	50.43
Stonehenge	12	11	1	Jundah	60	2	0.60	2.6	130	338	0.60	7.20	345.20	345.20	28.77

APPENDIX C

Trigger Points and Restrictions for Jundah, Windorah and Stonehenge

Trigger Points and Restrictions of the Water Supply for Jundah

The restriction level is determined by the lowest visible marker on the gauge board at the Thompson River bridge at Jundah.

Visual management is used to monitor water availability

RESTRICTION LEVEL	GAUGE MARK AND RESTRICTION REQUIREMENTS
<p style="text-align: center;">0</p> <p style="text-align: center;">GREEN</p> <hr style="background-color: green; height: 10px; border: none;"/> <p style="text-align: center;">(RL 135.40) 310+ MI remaining</p>	<p>Permanent Conservation Measures (PCM) Level Above 00 mark (Full Supply Mark / Green) on gauge board.</p> <ul style="list-style-type: none"> • Hand held hoses anytime for domestic use (all hours available). • Garden drippers or other water saving gardening devices at all times. • Sprinklers are limited to residential properties. • Public properties at the discretion of Council at any time.
<p style="text-align: center;">1</p> <p style="text-align: center;">YELLOW</p> <hr style="background-color: yellow; height: 10px; border: none;"/> <p style="text-align: center;">(RL 134.40) 310 MI remaining</p>	<p>-1.00m from Full Supply mark on gauge board.</p> <ul style="list-style-type: none"> • Hand held hoses anytime for domestic use. • Garden drippers and other water saving gardening devices at all times. • Sprinklers limited to between the hours of 4.00pm and 8.00am for residential properties. • Public properties, at the discretion of Council at any time.
<p style="text-align: center;">2</p> <p style="text-align: center;">ORANGE</p> <hr style="background-color: orange; height: 10px; border: none;"/> <p style="text-align: center;">(RL 133.40) 186 MI remaining</p>	<p>-2.00m from Full Supply mark on gauge board.</p> <ul style="list-style-type: none"> • Hand held trigger hoses anytime for domestic use. • Garden drippers or other water saving gardening devices. (Sat., Sun. and Wed only). • Sprinklers limited to between the hours of 10.00pm and 6.00am for residential properties. • Public properties at the discretion of Council but limited to business hours on work days.
<p style="text-align: center;">3</p> <p style="text-align: center;">RED</p> <hr style="background-color: red; height: 10px; border: none;"/> <p style="text-align: center;">(RL 132.40) 75 MI remaining</p>	<p>-3.0m from full supply mark on gauge.</p> <ul style="list-style-type: none"> • Hand held trigger hoses Sun., and Wed only. • Garden drippers or other water saving gardening devices. (Tue. and Fri only). • Sprinklers not allowed at any time. • Public properties at the discretion of Council but limited to 6 pm to 8 am daily. if monitored by a responsible person.
<p style="text-align: center;">4</p> <p style="text-align: center;">BLACK</p> <hr style="background-color: black; height: 10px; border: none;"/> <p style="text-align: center;">Below RL 131.80 46 MI remaining</p>	<p>-3.6m from full supply mark on gauge.</p> <ul style="list-style-type: none"> • Hoses and garden and lawn watering not allowed. • Garden drippers, sprinklers and other water saving gardening devices not allowed. • Watering of parks and gardens is not allowed. • Plans in place for cartage of water.

Trigger Points and Restrictions of the Water Supply for Windorah

When the river stops running across McPhellamy’s Crossing full usable supply of approx 2,400ML remains in Currareva hole. This level represents the change from Restriction Level “0” (Green) to Restriction Level “1” (Yellow). Gauge boards at this location are used to define the trigger levels for Windorah water restrictions.

Visual management is used to monitor water availability

RESTRICTION LEVEL	GAUGE MARK AND RESTRICTION REQUIREMENTS
<p style="text-align: center;">0</p> <p style="text-align: center;">GREEN</p> <hr style="background-color: green; height: 10px; border: none;"/> <p style="text-align: center;">(RL 121.55+) 4,756+ MI absolute</p>	<p>Permanent Conservation Measures (PCM) Level Above 00 mark (Full Supply Mark / Green) on gauge board.</p> <ul style="list-style-type: none"> • Hand held hoses anytime for domestic use. • Garden drippers / water saving gardening devices at all times. • Sprinklers are limited to residential properties (all hours available). • Public properties at the discretion of Council at any time. <p>Max. capacity / Ponded Level: 2,400 MI usable</p>
<p style="text-align: center;">1</p> <p style="text-align: center;">YELLOW</p> <hr style="background-color: yellow; height: 10px; border: none;"/> <p style="text-align: center;">(RL 119.55) 3,015 MI absolute</p>	<p>-2.00m from Full Supply mark on gauge board.</p> <ul style="list-style-type: none"> • Hand held hoses anytime for domestic use. • Garden drippers and other water saving gardening devices at all times. • Sprinklers limited to between the hours of 4.00pm and 8.00am for residential properties. <p>Public properties, at the discretion of Council at any time.</p>
<p style="text-align: center;">2</p> <p style="text-align: center;">ORANGE</p> <hr style="background-color: orange; height: 10px; border: none;"/> <p style="text-align: center;">(RL 118.55) 2,221 MI absolute</p>	<p>-3.00m from Full Supply mark on gauge board.</p> <ul style="list-style-type: none"> • Hand held trigger hoses anytime for domestic use. • Garden drippers or other water saving gardening devices. (Sat., Sun. and Wed only). • Sprinklers limited to between the hours of 10.00pm and 6.00am for residential properties. • Public properties at the discretion of Council but limited to business hours on work days.
<p style="text-align: center;">3</p> <p style="text-align: center;">RED</p> <hr style="background-color: red; height: 10px; border: none;"/> <p style="text-align: center;">(RL 117.55) 1,564 MI absolute</p>	<p>-4.0m from full supply mark on gauge (205ML usable).</p> <ul style="list-style-type: none"> • Hand held trigger hoses Sun., and Wed only. • Garden drippers or other water saving gardening devices. (Tue. and Fri only). • Sprinklers not allowed at any time. • Public properties at the discretion of Council but limited to 6 pm to 8 am daily. if monitored by a responsible person.
<p style="text-align: center;">4</p> <p style="text-align: center;">BLACK</p> <hr style="background-color: black; height: 10px; border: none;"/> <p style="text-align: center;">(RL 118.55) 985 MI absolute</p>	<p>-5m from full supply mark on gauge (65ML usable)</p> <ul style="list-style-type: none"> • Hoses and garden and lawn watering not allowed. • Garden drippers, sprinklers and other water saving gardening devices not allowed. • Watering of parks and gardens is not allowed. • Plans in place for cartage of water.

Trigger Points and Restrictions of the Water Supply for Stonehenge

Visual management is used to monitor dam water availability

RESTRICTION LEVEL	GAUGE MARK AND RESTRICTION REQUIREMENTS
<p style="text-align: center;">0</p> <p style="text-align: center;">GREEN</p> <p style="text-align: center;">(RL 155.00)</p> <p style="text-align: center;">140 MI available</p>	<p>Permanent Conservation Measures (PCM) Level Above 00 mark (Full Supply Mark / Green) on gauge board.</p> <ul style="list-style-type: none"> • Hand held hoses anytime for domestic use. • Garden drippers / water saving gardening devices at all times. • Sprinklers are limited to residential properties. • Public properties at the discretion of Council at any time.
<p style="text-align: center;">1</p> <p style="text-align: center;">YELLOW</p> <p style="text-align: center;">(RL 154.00)</p> <p style="text-align: center;">107 MI available</p>	<p>-1.00m from Full Supply mark on gauge board.</p> <ul style="list-style-type: none"> • Hand held hoses anytime for domestic use. • Garden drippers and other water saving gardening devices at all times. • Sprinklers limited to between the hours of 4.00pm and 8.00am for residential properties. • Public properties, at the discretion of Council at any time.
<p style="text-align: center;">2</p> <p style="text-align: center;">ORANGE</p> <p style="text-align: center;">(RL 153.00)</p> <p style="text-align: center;">43.7 MI available</p>	<p>-2.00m from Full Supply mark on gauge board.</p> <ul style="list-style-type: none"> • Hand held trigger hoses anytime for domestic use. • Garden drippers or other water saving gardening devices. (Sat., Sun. and Wed only). • Sprinklers limited to between the hours of 10.00pm and 6.00am for residential properties. • Public properties at the discretion of Council but limited to business hours on work days.
<p style="text-align: center;">3</p> <p style="text-align: center;">RED</p> <p style="text-align: center;">(RL 151.00)</p> <p style="text-align: center;">14.16 MI available</p>	<p>-4.0m from full supply mark on gauge</p> <ul style="list-style-type: none"> • Hand held trigger hoses Sun., and Wed only. • Garden drippers or other water saving gardening devices. (Tue. and Fri only). • Sprinklers not allowed at any time. • Public properties at the discretion of Council but limited to 6 pm to 8 am daily. if monitored by a responsible person.
<p style="text-align: center;">4</p> <p style="text-align: center;">BLACK</p> <p style="text-align: center;">(RL 149.50)</p> <p style="text-align: center;">3.7 MI available</p>	<p>-5.5m from full supply mark on gauge</p> <ul style="list-style-type: none"> • Hoses and garden and lawn watering not allowed. • Garden drippers, sprinklers and other water saving gardening devices not allowed. • Watering of parks and gardens is not allowed. • Plans in place for cartage of water.

APPENDIX D

Exemption Application Forms for water restrictions

Office Use Only PN#
Ref#
Registration Number.....

All correspondence to:
BARCOO SHIRE COUNCIL
PO Box 14
JUNDAH QLD 4736

Phone: (07) 4658 6900
Fax: (07) 4658 6137

Water restrictions
EXEMPTION REQUEST FORM
BARCOO SHIRE COUNCIL

Applicant's Name: _____

Business Trading Name: _____

Property Details:

Township: _____
Lot Number: _____
Street Number: _____

Customer Details:

Name: _____
Address: _____

Contact Numbers:
Home: _____
Business: _____
Mobile: _____
After hours: _____
Facsimile: _____

For use if applicant is a Company
Registered Company name: _____

Company Trading Name: _____

Registered Head Office Address: _____

ABN: _____

Category of Water Restriction to which the exemption is requested: (Please tick)	
<input type="checkbox"/>	Residential or Commercial Garden
<input type="checkbox"/>	Public Gardens
<input type="checkbox"/>	Sportsgrounds
<input type="checkbox"/>	Ponds and Lakes
<input type="checkbox"/>	Fountains and Water Features
<input type="checkbox"/>	Private Pools and Spas
<input type="checkbox"/>	Public Pools and Spas
<input type="checkbox"/>	Dams and Tanks
<input type="checkbox"/>	Mobile Water Tankers
<input type="checkbox"/>	Commercial Market Garden / Nursery
<input type="checkbox"/>	Motor Vehicle Cleaning
<input type="checkbox"/>	Motor Dealer Vehicle Cleaning
<input type="checkbox"/>	Food Transport Vehicle Cleaning
<input type="checkbox"/>	Boat Motor Cleaning
<input type="checkbox"/>	Hard Surface Cleaning
<input type="checkbox"/>	Windows/Buildings Facades/Walls etc.
<input type="checkbox"/>	Dust Suppression
<input type="checkbox"/>	Construction Industry
<input type="checkbox"/>	Animal Husbandry

Exemption Information

The following additional information is required in order to determine whether an exemption may be granted:

Is the exemption sought (Please tick):

- ⊗ Temporarily
- ⊗ For the term of the current level of restrictions

Reason for seeking an exemption:

Please note that the principle reasons for seeking an exemption are:

- ⊗ To avoid an inequitable impact upon the livelihood of the applicant
- ⊗ An adverse effect on public health and safety

Please provide details and attach any specific documents to support your request.

Conditions for Granting an Exemption

If this exemption is granted, I agree to:

- Authorise the water business to publicly disclose any relevant details of the exemption;
- Adhere to all the specific requirements contained within the exemption; and
- Provide appropriate access (as required) to enable the water business to assess the initial application and monitor the ongoing adherence to any exemption conditions.
- Any other specified conditions as determined by the Water business.

Signature of Applicant: _____

Name (Print): _____

Company Title: _____

(if applicable) _____

Date: _____

Exemptions

In certain circumstances, a water business may consider granting an exemption to water restrictions upon an application being made by a customer.

The overriding objective is to maximize water conservation during times of restriction, while at the same time, endeavouring to ensure that no customer segment or individual is disproportionately impacted by water restrictions.

Applications for an exemption must be made either on this form or in writing.

All approved exemptions may be logged on a register, where the public may seek clarification over the status of an exemption. The only information which will be made public is:

- The site address for which the exemption is granted;
- Details of the terms of exemption;
- Date approved and sunset date, if appropriate.

Approval of exemption terms is conditional to the applicant agreeing to:

- The exemption will be granted to a specific site address, or a particular person or organisation, or in special circumstances, both a particular person or organisation AND a particular site;
- Where applicable, signage will be provided by the water business to be prominently displayed;
- Co-operating with any random audit of site compliance for granted exemptions, to ensure alternative arrangements are being adhered to;
- Re-applying should the restriction level change.