

Letter from Bourke Shire Council regarding water supply

Appendix C



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The Council of The Shire of Bourke

29 Mitchell St, Bourke, N.S.W 2840
P.O. Box 21, Bourke, N.S.W 2840
Telephone (02) 6830 8000 Fax (02) 6872 3030
Email: bourkeshire@bourke.nsw.gov.au
Web: <http://www.bourke.nsw.gov.au>



Please address all
communications to
the General Manager

Our Ref: AL-KSH-T4.1-C8.9.1-S8.1

11th February 2016

Mr. James Price
General Manager
JPA Business Pty Ltd.
Suite 7
Level 2
113 Byng Street
ORANGE 2800

Dear James,

Re: Water Supply in relation to the proposed Small Stock Processing Facility near Bourke

I refer to our recent conversations regarding the above and the request for details in relation to the ability of Council to be able to supply both adequate quantities of filtered and raw water.

The information supplied as part of the Secretary's Environmental Assessment Requirements (SEARS) indicated a consumption of 1 megalitre per day which equates to around 250-365 megalitres per year depending on actual days worked.

Detailed below is Council's response to the queries raised.

Council Current Licence

Council currently holds a licence for 3500 megalitres annually for its town supply and the current level usage is approximately 1500 megalitres so there is adequate supply capacity within the entitlement licence to handle the increased demand of the abattoir.

Water Treatment Plant Capacity

The Bourke Water Treatment Plant has a capacity of 3.3 megalitres per day with the current maximum production being around 1.5 megalitres per day in the summer months with a year around average of a little over 1 megalitre per day.

The addition of 1 megalitre would only take the production required to 2.5 megalitres well within the maximum production of 3.3 megalitres demonstrating that the Water treatment Plant has ample capacity to provide the water required.

This is of course assuming that the 1 megalitre needs to be filtered and also bearing in mind that the requirements for the 1 megalitre to be required for seven (7) days

Note: Council is currently evaluating options to replace the Water Treatment Plant and it is proposed that a 4.00 megalitres capacity plant would be built at that time.

Supply Strategy

It is proposed that the Abattoir would be serviced by both a raw water connection and a filtered water connection from North Bourke. These supplies would be dedicated for Abattoir use.

The capacity and specification of each of these connections is contained within the following table

Type	Flow rate	Pressure	Daily flow	Pipe size
Filtered water	11 l/s	40 psi	950,400 l	150mm
Raw water	6 l/s	40 psi	518,400 l	100mm

Drought Impacts

Water restrictions have not been beyond level 3 since recordings have been undertaken. The Drought Management Plan (DMP) was implemented in 2003 which is over twelve (12) years ago and Bourke has not run out of water in modern times.

At level three (3) restrictions, water for the abattoir is still available.

A review of data available shows that since the current Drought Management Plan was implemented in 2003 that Bourke has been on water restrictions just 9% of the time.

Bourke Shire Council has investigated what the impact on the town supply will be in times of drought once the abattoir is fully operational which is detailed in the following table

In order to model the impacts of the abattoir requirements on the weir pool we have assumed in this model that:

- that the weir will stop flowing on December 1 to allow for predictions on evaporation to be made in relation to the hottest seasonal conditions,
- that the current drought management plan will remain in place.
- the abattoir will require 5 ML of water per week.
- no automatic pumping from 19A. (19A is an additional weir pool 19 kilometres downstream)
- the inflow from Walkden's Bore

Walkden's Bore is the only planned emergency supply at present to be able to supplement supply and is yet to be fully commissioned but will be operational over the next few months with tenders having been received for the undertaking of the remaining work and the

successful tenderer will be awarded the project before the end of the year. It has a capacity of 1 megalitre per day.

There is the potential for an additional bore to be commissioned as well; however, no allowance has been made for this in the modelling.

	Weir Pool		Water	Total Use					Weir Pool
	Total Use		Restriction	Town	Evaporation	Abattoir		Class A	Inflow
Date	Gauge Ht	ML Remaining	STAGES	ML Usage	ML Lost	ML Usage		ML Usage	ML
		5124				0		0	0
1-Dec		4838	1	50	131	5		100	0
8-Dec		4554	1	50	129	5		100	0
15-Dec	3.5	4289	2	40	126	5	0	100	7
22-Dec		4028	2	40	124	5	0	100	7
29-Dec		3769	2	40	121	5	0	100	7
5-Jan		3504	2	40	127	5	0	100	7
12-Jan		3342	2	40	124	5	0	0	7
19-Jan		3184	2	40	121	5	0	0	7
26-Jan		3028	2	40	118	5	0	0	7
2-Feb		2890	2	40	100	5	0	0	7
9-Feb	2.7	2744	3	30	118	5	0	0	7
16-Feb		2601	3	30	115	5	0	0	7
23-Feb		2462	3	30	111	5	0	0	7
1-Mar		2348	3	30	86	5	0	0	7
8-Mar		2240	3	30	80	5	0	0	7
15-Mar		2131	3	30	80	5	0	0	7
22-Mar		2026	3	30	78	5	0	0	7
29-Mar		1923	3	30	75	5	0	0	7
5-Apr	2.1	1857	4	20	47	5	0	0	7
12-Apr		1790	4	20	49	5	0	0	7
19-Apr		1725	4	20	47	5	0	0	7
26-Apr		1661	4	20	46	5	0	0	7
3-May		1598	4	20	46	5	0	0	7
10-May		1553	4	20	27	5	0	0	7
17-May		1509	4	20	27	5	0	0	7
24-May		1464	4	20	27	5		0	7

The table shows that water can be provided to the abattoir at full demand levels and that in fact if the water available from Walkden's bore is turned on at level 2 restrictions then the impact on the weir pool is minimal.

The NSW Department of Primary Industries has also confirmed that while riparian usage for stock and domestic reasons is allowed that no A Class irrigation is allowed once the water flow at Warraweena is below 350 ML per day.

I trust this gives an understanding of the level of water security.

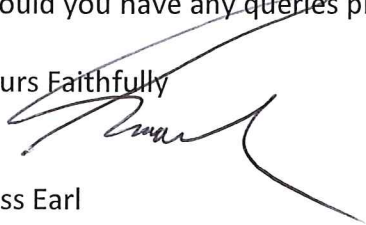
In addition to the above, environment flows whilst not being able to be utilised for irrigation will top the weir pool and the above usage pattern would effectively be reset.

Water Analysis

Detailed below are tables which detail an analysis of both raw and filtered water

Should you have any queries please contact the Manager of Works, Peter Brown.

Yours Faithfully

A handwritten signature in black ink, appearing to read 'Ross Earl', is written over the 'Yours Faithfully' text.

Ross Earl
GENERAL MANAGER