



Supplement of

Using geochemical tracers to distinguish groundwater and parafluvial inflows in rivers (the Avon Catchment, SE Australia)

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Table A1. Geochemistry of the Avon River

Location	Distance^a m	²²²Rn Bq m ⁻³	Cl mg l ⁻¹	Na mg l ⁻¹
<i>February 2009</i>				
Browns	0	523	9.4	6.8
Wombat Flat	4810	2040	10.2	7.2
Valencia	10902	674	22.6	14.6
Bushy Park	16312	608	32.1	17.8
Pearces Lane	20043	3689	35.3	19.9
Schools Lane	25304	1813	51.3	34.5
Stewarts Lane	30112	1021	50.8	37.1
Stratford	35076	275	55.1	41.7
Redbank	41344	550	56.8	43.8
Chinns Bridge	49690	143	58.0	47.2
<i>April 2010</i>				
Browns	0	400	4.7	5.2
Wombat Flat	4810	650	5.0	5.4
Smyths Road	8080	502	7.4	6.2
Valencia	10902	825	9.2	9.1
Bushy Park	16312	850	17.5	13.8
Pearces Lane	20043	2296	18.4	14.2
Ridleys Lane	22980	2028	23.9	19.5
Schools Lane	25304	801	35.3	24.5
Stewarts Lane	30112	508	35.1	26.2
Stratford	35076	620	42.0	30.5
Knobs Reserve	37813	728	44.2	31.9
Chinns Bridge	49690	167	47.9	35.1
<i>September 2010</i>				
Browns	0	154	3.8	3.9
Wombat Flat	4810	212	4.2	3.9
Smyths Road	8080	227	4.3	4.0
Valencia	10902	420	4.9	4.6
Bushy Park	16312	363	6.3	6.1
Pearces Lane	20043	735	7.5	6.4
Ridleys Lane	22980	675	8.3	7.2
Schools Lane	25304	493	9.1	8.3
Stewarts Lane	30112	406	9.2	8.7
Stratford	35076	369	9.7	9.3
Knobs Reserve	37813	314	10.1	9.7
Redbank	41344	165	12.0	10.1
Chinns Bridge	49690	89	19.2	14.9

March 2014

Browns	0	565	11.3	9.2
Wombat Flat	4810	1285	10.2	7.1
Smyths Road	8080	452	13.6	9.0
Valencia	10902	770	23.4	13.2
Bushy Park	16312	2735	56.6	26.9
Pearces Lane	20043	2165	63.7	27.0
Ridleys Lane	22980	1430	55.2	31.6
Schools Lane	25304	1245	67.0	39.5
Stewarts Lane	30112	520	75.3	45.9
Stratford	35076	670	76.5	47.0
Knobs Reserve	37813	710	74.5	46.3
Chinns Bridge	49690	74	98.5	63.3

July 2014

Browns	0	195	5.8	5.3
Wombat Flat	4810	370	5.9	5.1
Smyths Road	8080	338	6.4	6.9
Valencia	10902	445	7.8	8.2
Bushy Park	16312	975	8.7	9.0
Pearces Lane	20043	720	15.3	10.5
Ridleys Lane	22980	568	17.2	12.1
Schools Lane	25304	770	20.9	14.8
Stewarts Lane	30112	302	22.8	15.6
Stratford	35076	560	23.8	16.5
Knobs Reserve	37813	513	25.0	17.0
Chinns Bridge	49690	185	36.2	23.3

February 2015

Browns	0	438	4.4	4.8
BR-WF1	2590	714	4.6	4.7
BR-WF2	3638	920	5.0	4.8
Wombat Flat	4810	1210	5.6	4.8
WF-SM	6190	621	5.8	6.1
Smyths Road	8080	460	5.5	6.1
Valencia	10902	810	10.5	9.9
VA-BP	13380	1350	21.1	14.2
Bushy Park	16312	2650	25.6	15.3
BP-PL1	17368	2160	27.4	16.7
BP-PL2	18723	1812	27.5	16.9
Pearces Lane	20043	2230	28.7	17.4
PL-RL	21339	2195	29.4	17.3
Ridleys Lane	22980	1986	29.9	18.0
RL-SC1	23669	1580	30.4	17.9
RL-SC2	24439	1298	30.4	17.7
Schools Lane	25304	910	32.3	18.0

SC-ST1	26557	827	33.4	18.2
SC-ST2	27462	952	33.6	18.2
SC-ST3	28525	649	34.1	18.7
Stewarts Lane	30112	578	33.6	18.6
ST-SA1	30831	596	33.7	18.8
ST-SA2	31801	637	34.4	18.7
ST-SA3	33301	543	34.4	18.9
ST-SA4	34296	771	33.7	18.7
Stratford	35076	709	34.1	19.2
SA-KR	36713	722	36.4	19.7
Knobs Reserve	37813	751	35.6	20.1
Redbank	41344	471	35.6	21.0
Chinns Bridge	49690	172	36.4	21.7

a: distance downstream from Browns

Table A2. Geochemistry of groundwater from Stratford and Pearces Lane

Bore	²²² Rn (Bq m ⁻³)			EC (μS cm ⁻¹)		Cl (mg l ⁻¹)	
	Apr-11	Mar-12	Feb-14	Apr-11	Mar-12	Apr-11	Mar-12
^a Stratford 1	3172	4332	6230	207	284	46	59
Stratford 2	22896	19632	28980	441	361	92	78
Stratford 3	8823	9833	9540	393	311	85	67
Stratford 4	11083	16073	12015	490	521	106	119
^b Pearces 2	23000	21190	17560	417	398	89	74
Pearces 3	9670	10320	11210	294	330	62	71
Pearces 4	16800	12365	14210	678	575	146	125
Pearces 5 ^c	480	550		143	97	31	21

a: Bores located in bank of river between Stratford and Knobs Reserve sampling sites (Fig. 2)

b: Bores located in bank of river at Pearces Lane sampling site (Fig.2)

c: Probably sampling parafluvial zone water