

## Curve Details: Crystal Brook - Broken Hill



Jul-15

Note

- [1] Rated speed at ARTC Normal Limits (80mm cant deficiency and 55mm/sec rate of change of cant and cant deficiency with cog 2500mm above rail level, and twist fault of 5mm in 14m transition)
- [2] Cant deficiencies in mm shown where they are 75mm or more for existing curve speeds

Note in comments

TRC Curve data from track recordings

Curve		Hand	Radius m	Cant mm	Transition		Exist posted Speed	Cant def (2)	Rated Speed (1)	Location	Comments
Start	End				Up	Dn					
21.473										T/o at up end of double track	
21.690	22.280	L	2000	20	60	60	90		130		
21.719										Crystal Brook dn t/o	
22.855										Crystal Brook up t/o	
22.885										Main Line t/o to Adel	
22.990	23.620	L	1600	45	80	80	90		130		
23.660										T/o to Adelaide	TRC
23.700	24.280	R	1600	40	80	80	90		127		Some data from TRC
24.400	25.700	L	805	80	80	80	90		104		TRC
26.180	27.120	R	705	80	80	80	90		98		
27.200	28.470	L	604	80	80	80	100	115	90		TRC
28.540	28.940	R	1600	30	80	80	100		120		TRC
29.170	29.530	L	1600	30	80	80	100		120		TRC
29.890	31.460	R	980	50	80	80	100		103		TRC
31.980	32.170	R	1600	30	80	80	100		120		TRC
32.340	33.500	L	800	80	80	80	100		103		TRC
33.930	34.180	L	1600	30	80	80	100		120		TRC
34.850	36.050	R	800	80	80	80	100		103		TRC
36.100	37.330	L	800	80	80	80	100		103		TRC
38.050	39.460	R	1600	30	80	80	100		120		TRC
39.600	40.100	R	1225	50	100	100	100		115		TRC
40.850	41.220	L	1610	30	80	80	100		120		TRC
41.993										Gladstone up t/o	
42.900	43.160	L	350	10	65	45	40		50		TRC
43.190	43.420	L	230	30	45	60?	40		50		TRC
43.450	43.520	L	1200	10	0	0	40		80		Some data from TRC
44.050	44.110	R	1100	0	30	30	100	107	85		TRC
44.160										Gladstone dn t/o	

Curve		Hand	Radius m	Cant mm	Transition		Exist posted Speed	Cant def (2)	Rated Speed (1)	Location	Comments
Start	End				Up	Dn					
44.350	45.040	R	1200	50	100	100	100	115			
46.070	46.770	R	1415	60	100	100	115	130			
47.340	47.790	R	1660	40	80	80	115	130			
47.850	48.230	L	1605	40	80	80	115	127		TRC	
51.950	52.400	L	1625	40	80	80	115	127		TRC	
52.520	53.000	R	1618	40	80	80	115	127		TRC	
54.050	54.350	R	1600	45	80	80	115	130			
55.650	56.550	L	1600	45	80	80	115	130		TRC	
58.340	59.380	R	1000	50	80	80	90	105		TRC	
59.440									Caltowie up t/o		
59.480	59.700	R	800	50	80	80	90	95		TRC	
60.520	60.810	L	700	50	80	80	80	88		TRC	
60.639									Caltowie dn t/o	Turnout on curve	
60.860	61.080	L	800	50	80	80	90	95		TRC	
61.110	61.330	R	800	50	80	80	90	95		TRC	
63.100	64.050	R	1200	50	100	100	110	115		TRC	
64.530	64.860	R	1600	45	80	80	115	130		TRC	
66.370	67.870	L	1200	80	100	100	115	127			
68.160	68.560	R	1200	80	100	100	115	127			
68.840	69.130	R	1600	45	80	80	115	130		TRC	
69.600	70.050	L	1600	30	80	80	115	120		TRC	
71.840	72.180	R	1600	30	80	80	80	120		TRC	
72.560	73.740	L	600	55	80	80	80	83		TRC	
73.516									Jamestown up t/o	Turnout on curve	
74.718									Jamestown dn t/o		
75.150	75.630	R	1600	45	80	80	115	130		TRC	
82.120	82.480	R	1600	45	80	80	115	130		TRC	
84.080	85.600	R	1600	45	80	80	115	130		TRC	
85.870	86.250	R	1600	45	80	80	115	130		TRC	
87.250	88.130	L	1600	45	80	80	115	130		TRC	
92.030	92.380	L	1600	45	80	80	115	130		TRC	
94.800	96.250	R	1600	30	80	80	115	120		TRC	
96.770	99.050	L	1600	45	80	80	115	130		TRC	
99.020									Yongala up t/o		
99.880	100.900	R	1600	45	80	80	115	130		TRC	
100.280									Yongala dn t/o	Turnout on curve	
104.570	105.110	R	1600	45	80	80	115	130			
107.550	107.760	L	1600	45	80	80	115	130		TRC	
107.820	108.000	R	1600	45	80	80	100	130			

Curve		Hand	Radius m	Cant mm	Transition		Exist posted Speed	Cant def (2)	Rated Speed (1)	Location	Comments
Start	End				Up	Dn					
108.680	109.190	R	1200	40	80	80	65		110		Some data from TRC
109.220	109.300	R	2000	0	25	25	65		88		TRC
109.295										Peterborough up t/o	
110.400	110.410	L	2000	0	0	0	65		115		Does not show on track chart
111.711										Peterborough dn t/o	
111.760	112.300	L	1596	30	80	80	100		120		
114.630	115.230	L	1610	30	80	80	100		120		TRC
115.410	115.900	R	1607	30	80	80	100		120		
116.420	116.890	R	812	45	80	80	90		93	Dowds Hill	Up end of curve in tunnel
116.970	117.430	L	800	45	80	80	90		92	Dowds Hill	TRC
118.400	119.200	R	1600	45	80	80	115		130		TRC
122.170	122.580	L	1615	40	80	80	115		128		TRC
123.070	123.690	L	1600	45	80	80	115		130		TRC
124.780	125.100	R	1600	45	80	80	115		130		TRC
126.200	126.350	R	1200	80	80	80	115		130		TRC
126.400	126.550	L	1200	80	80	80	115		130		TRC
130.960	131.840	R	1600	45	80	80	115		130		TRC
132.630	132.820	R	1600	45	80	80	115		130		TRC
133.830	134.250	L	1647	40	80	80	115		130		TRC
135.820	136.800	L	1600	45	80	80	115		130		TRC
138.800	139.350	R	1632	40	80	80	115		129		
141.260	141.480	R	1950	20	60	60	115		130		TRC
142.010	143.800	L	1611	40	80	80	115		128		
145.300	145.800	R	1691	40	80	80	115		130		
146.016										Hillgrange up t/o	
147.185										Hillgrange dn t/o	
147.300	147.780	L	1641	40	80	80	115		129		TRC
149.480	150.030	R	3230	10	80	80	115		130		TRC
150.300	150.800	L	1654	40	80	80	115		130		
151.280	151.550	R	1702	35	80	80	115		130		TRC
154.340	154.650	L	1650	40	80	80	115		130		TRC
158.980	159.180	R	1600	45	80	80	115		130		TRC
164.200	164.550	R	1605	40	80	80	115		128		
170.190	170.500	R	2024	20	60	60	115		130		
171.630	171.950	R	2079	20	60	60	115		130		TRC
181.450	181.880	L	2200	10	80	80	115		130		TRC
183.150	183.450	R	2060	20	80	80	115		130		TRC
192.970	193.450	L	1611	40	80	80	115		128		TRC
194.370										Yunta up t/o	

Curve		Hand	Radius m	Cant mm	Transition		Exist posted Speed	Cant def (2)	Rated Speed (1)	Location	Comments
Start	End				Up	Dn					
194.500	195.030	R	1650	40	80	80	115		130		TRC
196.470	196.968	R	1200	40	50	50	100		108		Re-alignment
196.532										Yunta dn t/o	Turnout on curve
197.060	197.600	L	1600	30	80	80	100		122		TRC
199.820	200.200	L	2000	20	60	60	115		130		TRC
200.820	201.300	R	1600	45	80	80	115		130		TRC
206.300	206.700	R	1600	45	80	80	115		130		
207.250	208.220	L	1600	45	80	80	115		130		TRC
210.340	210.680	R	1600	45	80	80	115		130		TRC
213.600	214.000	R	1600	45	80	80	115		130		TRC
215.650	215.900	R	1700	40	80	80	115		130		TRC
218.370	218.720	L	1675	40	80	80	115		130		TRC
220.700	221.000	R	1695	40	80	80	115		130		TRC
222.630	222.880	L	2174	10	60	60	115		130		TRC
224.280	224.540	R	2032	20	60	60	115		130		TRC
227.130	227.670	L	1630	40	80	80	115		128		TRC
232.080	232.300	R	1877	30	80	80	115		130		TRC
237.030	237.450	R	1650	40	80	80	115		130		TRC
238.933										Mannahill up t/o	
239.010	239.210	R	1898	30	40	60	100		130		TRC
241.591										Mannahill dn t/o	
242.800	243.320	L	1612	40	80	80	115		128		TRC
249.600	250.100	L	1600	45	80	80	115		130		TRC
255.720	255.970	L	2175	10	60	60	115		130		TRC
264.870	265.620	R	1617	40	80	80	115		128		TRC
269.330	269.470	R	2000	20	60	60	115		130		TRC
275.700	275.830	R	2671	30	50	60	115		130		TRC
275.830	275.990	L	3553	20?	65	65	115		130		TRC
276.221										Olary up t/o	
277.399										Olary dn t/o	
277.400	278.580	L	1613	40	80	80	115		128		TRC
278.940	279.880	R	1630	40	80	80	115		128		TRC
282.900	283.430	R	1998	20	60	60	115		130		TRC
284.200	285.300	L	1614	40	80	80	115		128		TRC
286.830	287.560	R	1607	40	80	80	115		127		TRC
288.330	288.860	L	1607	40	80	80	115		127		
288.930	289.690	R	1505	50	80	80	115		129		TRC
289.710	290.490	L	1505	50	80	80	115		129		TRC
292.750	293.490	R	1595	45	80	80	115		130		TRC

Curve		Hand	Radius m	Cant mm	Transition		Exist posted Speed	Cant def (2)	Rated Speed (1)	Location	Comments
Start	End				Up	Dn					
298.800	299.010	R	2499	10	80	80	115		130		TRC
304.700	305.160	R	1610	40	80	80	115		128		TRC
305.160	305.620	L	1620	40	80	80	115		128		TRC
306.020	306.470	L	1600	45	80	80	115		130		TRC
319.230										Mingary up t/o	TRC
319.850	319.970	R	4000	45	60	60	115		130+		TRC - to be verified
320.220	320.510	R	1653	40	80	80	115		130		TRC
321.290										Mingary dn t/o	
321.550	321.900	L	1600	40	60	60	115		127		TRC
321.940	322.420	R	1632	40	80	80	115		129		TRC
342.680	343.030	R	1600	45	80	80	115		130		TRC
346.500	346.650	R	1625	40	80	80	115		128		TRC
356.900	357.310	R	1630	40	80	80	115		129		TRC
358.150	358.660	L	1623	40	80	80	115		128		TRC
359.300	359.620	R	1690	40	80	80	115		130+		TRC
361.340	361.750	L	1630	40	80	80	115		129		TRC
362.903										Thackaringa up t/o	
364.075										Thackaringa dn t/o	
364.340	364.650	L	1650	40	80	80	115		130		TRC
366.220	366.780	L	1618	40	80	80	115		128		TRC
370.310	370.780	L	1640	40	80	80	115		129		TRC
373.440	373.770	R	1650	40	80	80	115		130		TRC
376.800	377.270	R	1615	40	80	80	115		128		TRC
377.620										Pinnacles Siding c/o	TRC
379.690	380.120	L	1640	40	80	80	115		129		TRC
386.690										Bemax Siding c/o	TRC
387.270	387.750	R	1605	40	80	80	115		128		TRC
389.292										Kanandah up t/o	TRC
390.420										Kanandah dn t/o	TRC
390.470	390.750	L	790	80	80	80	80		104		TRC
391.250	391.810	L	604	80	80	80	80		90		TRC
391.860	392.200	R	800	80	80	80	80		104		TRC
392.200										Broken Hill Yard	