

Assessment of Significant Habitat trees at Scrivener Road Gravel Pit

Project area.

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The purpose of this survey was to assess a number of trees, especially those over 50 cm diameter at breast height (DBH), within the proposed disturbance area to identify any nesting sites for black cockatoos (i.e. Forest Red-tailed Black Cockatoo *Calyptorhynchus banksii naso*, Baudin's Cockatoo *Calyptorhynchus baudinii* and Carnaby's Cockatoo *Calyptorhynchus latirostris* in and adjacent to the proposed disturbance area.

The site was visited on 23 July 2015 and 22 October 2015. All trees over 50 cm at DBH were marked and 137 trees deemed trees with habitat potential (large hollows) were inspected with binoculars for hollows with signs of use by cockatoos e.g. wear around the hollow, chewing, scarring and scratch marks on trunks and branches. Trees with possible nest sites were scratched and raked with a pole to flush any sitting birds from hollow and we recorded any birds in the area for signs of breeding including males making breeding call and males feeding females. We also searched for any old or recent evidence of cockatoos feeding in the proposed disturbance area and these sites were logged with hand held GPS.

Results

Of the 137 trees inspected 4 were deemed 'significant' trees i.e. trees with cockatoo nest hollows. Two Jarrah *Eucalyptus marginata* trees (Numbers 66 and 78 see spreadsheet) contained hollows showing recent evidence of use by cockatoos.

A Marri *Corymbia calophylla* (Tree Number 286) also showed evidence of recent use by cockatoos (probably Forest Red-tailed Black Cockatoos). Another Marri (Tree Number 130) contained a hollow previously used by cockatoos but more recently taken over by feral European Honeybees *Apis mellifera*.

At 0935 hrs a pair flew into the proposed disturbance area from the east of the gravel pit and the male fed the female several times before she preened herself and began feeding on Jarrah seeds. Judging from this behaviour these birds were breeding in the area.

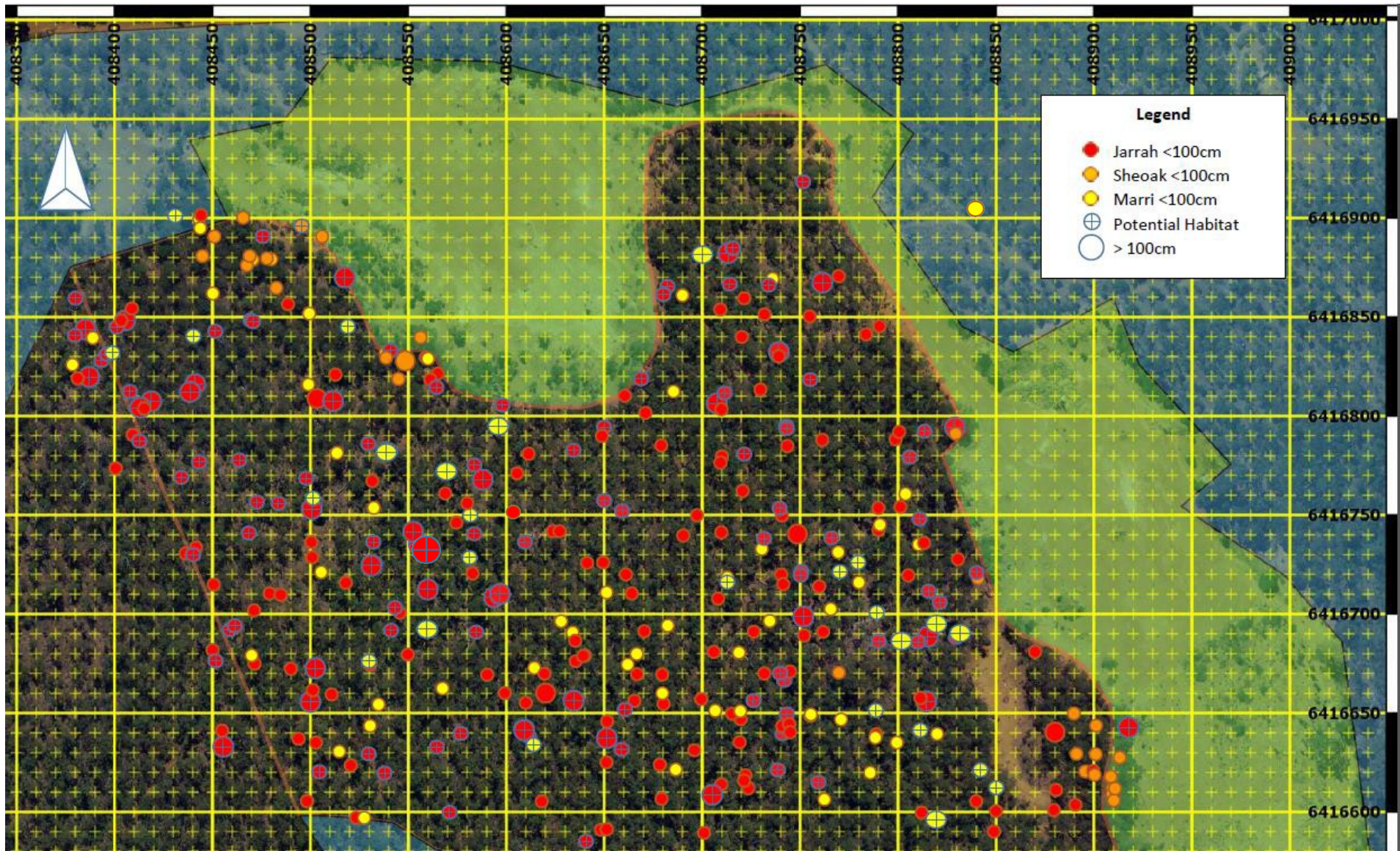
Both old and recent evidence of Forest Red-tailed Black Cockatoos feeding on Jarrah and Marri seeds were located in and around the proposed disturbance area.

Conclusion

The four nest sites are near the edge of the proposed project area and if possible these should be retained and some follow-up monitoring could be carried out to determine hollow usage. It is noteworthy that two of the hollows are in large Jarrah trees as Marri is by far the most preferred nest tree in the Jarrah-Marri Forest (see Johnstone, Kirkby and Sarti 2013).

The clearing of the proposed site could impact on the availability or quality of feeding habitat for black cockatoos especially Forest Red-tailed Black Cockatoos within the area and could impact on the local population.

We would suggest that the effects of clearing would be ameliorated by revegetation of much of the existing gravel pit with plants that will provide future food resources for cockatoos.



<p>Shire Of Serpentine Jarrahdale Scrivener Road, Serpentine Gravel Extraction.</p>	<p>Plotted Trees ≥ 50cm. GDA94 Zone50</p>
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Sample Area Species Over 50cm At DBH

No.	Tree Species	Habitat Potential	DBH	Comments	Eastings	Northings	Trunk Area Cm2
1	Jarrah <i>Eucalyptus marginata</i>		70		408665	6416656	3848.451001
2	Marri <i>Corymbia calophylla</i>		66		408663	6416674	3421.1944
3	Jarrah <i>Eucalyptus marginata</i>		79		408643	6416677	4901.669938
4	Jarrah <i>Eucalyptus marginata</i>	Present	129		408636	6416655	13069.81084
5	Jarrah <i>Eucalyptus marginata</i>		104		408618	6416660	8494.866535
6	Marri <i>Corymbia calophylla</i>		64		408614	6416671	3216.990877
7	Marri <i>Corymbia calophylla</i>		51		408629	6416697	2042.820623
8	Marri <i>Corymbia calophylla</i>		68		408634	6416690	3631.681108
9	Jarrah <i>Eucalyptus marginata</i>		68		408621	6416670	3631.681108
10	Marri <i>Corymbia calophylla</i>	Present	109		408559	6416995	9331.315579
11	Jarrah <i>Eucalyptus marginata</i>	Present	55		408566	6416629	2375.829444
12	Jarrah <i>Eucalyptus marginata</i>	Present	60		408585	6416691	2827.433388
13	Jarrah <i>Eucalyptus marginata</i>		67		408591	6416672	3525.652355
14	Jarrah <i>Eucalyptus marginata</i>	Present	145		408607	6416644	16512.99639
15	Jarrah <i>Eucalyptus marginata</i>	Present	80		408661	6416638	5026.548246
16	Marri <i>Corymbia calophylla</i>	Present	59		408613	6416634	2733.971007
17	Jarrah <i>Eucalyptus marginata</i>		54		408651	6416625	2290.221044
18	Jarrah <i>Eucalyptus marginata</i>	Present	67		408658	6416631	3525.652355
19	Jarrah <i>Eucalyptus marginata</i>		61		408648	6416593	2922.466566
20	Jarrah <i>Eucalyptus marginata</i>		73		408651	6416591	4185.386813
21	Jarrah <i>Eucalyptus marginata</i>	Present	73		408641	6416586	4185.386813
22	Jarrah <i>Eucalyptus marginata</i>		72		408618	6416605	4071.504079
23	Jarrah <i>Eucalyptus marginata</i>		50		408610	6416655	1963.495408
24	Jarrah <i>Eucalyptus marginata</i>		64		408599	6416659	3216.990877

25	Jarrah <i>Eucalyptus marginata</i>	Present	51		408584	6416740	2042.820623
26	Jarrah <i>Eucalyptus marginata</i>		54		408566	6416771	2290.221044
27	Jarrah <i>Eucalyptus marginata</i>	Present	80		408564	6416814	5026.548246
28	Jarrah <i>Eucalyptus marginata</i>	Present	94		408533	6416737	6939.778172
29	Jarrah <i>Eucalyptus marginata</i>	Present	138		408533	6416725	14957.12262
30	Jarrah <i>Eucalyptus marginata</i>	Present	84		408545	6416703	5541.769441
31	Jarrah <i>Eucalyptus marginata</i>		59		408546	6416701	2733.971007
32	Jarrah <i>Eucalyptus marginata</i>	Present	93		408543	6416691	6792.908715
33	Marri <i>Corymbia calophylla</i>		52		408567	6416662	2123.716634
34	Jarrah <i>Eucalyptus marginata</i>	Present	52		408576	6416638	2123.716634
35	Jarrah <i>Eucalyptus marginata</i>	Present	54	Near the road	408572	6416599	2290.221044
36	Marri <i>Corymbia calophylla</i>		51		408532	6416644	2042.820623
37	Jarrah <i>Eucalyptus marginata</i>		84	Near the road	408547	6416679	5541.769441
38	Marri <i>Corymbia calophylla</i>	Present	90		408530	6416676	6361.725124
39	Jarrah <i>Eucalyptus marginata</i>		65		408530	6416675	3318.30724
40	Jarrah <i>Eucalyptus marginata</i>		61		408518	6416718	2922.466566
41	Marri <i>Corymbia calophylla</i>		55		408533	6416754	2375.829444
42	Jarrah <i>Eucalyptus marginata</i>		50		408532	6416766	1963.495408
43	Jarrah <i>Eucalyptus marginata</i>	Present	90	Dead	408532	6416781	6361.725124
44	Marri <i>Corymbia calophylla</i>		69		408514	6416781	3739.280656
45	Jarrah <i>Eucalyptus marginata</i>		60		408514	6416822	2827.433388
46	Jarrah <i>Eucalyptus marginata</i>	Present	135	Dead	408512	6416809	14313.88153
47	Jarrah <i>Eucalyptus marginata</i>	Present	116	Dead	408504	6416809	10568.31769
48	Marri <i>Corymbia calophylla</i>	Present	79		408520	6416845	4901.669938
49	Jarrah <i>Eucalyptus marginata</i>		107		408518	6416870	8992.023573
50	sheoak <i>Allocasuarina fraseriana</i>		65	Sample Collected	408505	6416880	3318.30724
51	sheoak <i>Allocasuarina fraseriana</i>	Present	85		408496	6416886	5674.501731
52	Jarrah <i>Eucalyptus marginata</i>	Present	54		408476	6416890	2290.221044
53	sheoak <i>Allocasuarina fraseriana</i>		81		408480	6416877	5152.99735

54	sheoak <i>Allocasuarina fraseriana</i>		58		408472	6416880	2642.079422
55	sheoak <i>Allocasuarina fraseriana</i>		62		408467	6416876	3019.07054
56	sheoak <i>Allocasuarina fraseriana</i>		68		408454	6416878	3631.681108
57	sheoak <i>Allocasuarina fraseriana</i>		59		408445	6416881	2733.971007
58	Marri <i>Corymbia calophylla</i>		51		408450	6416862	2042.820623
59	Jarrah <i>Eucalyptus marginata</i>	Present	95		408453	6416843	7088.218425
60	Jarrah <i>Eucalyptus marginata</i>	Present	113		408443	6416816	10028.74915
61	Jarrah <i>Eucalyptus marginata</i>	Present	139		408438	6416811	15174.67792
62	Jarrah <i>Eucalyptus marginata</i>	Present	124		408419	6416806	12076.28216
63	Jarrah <i>Eucalyptus marginata</i>		66		408415	6416802	3421.1944
64	Jarrah <i>Eucalyptus marginata</i>	Present	106	Dead	408413	6416803	8824.733764
65	Jarrah <i>Eucalyptus marginata</i>	Present	69		408407	6416812	3739.280656
66	Jarrah <i>Eucalyptus marginata</i>	Present	141	Jarrah nest tree	408387	6416818	15614.50089
67	Jarrah <i>Eucalyptus marginata</i>	Present	50		408394	6416827	1963.495408
68	Jarrah <i>Eucalyptus marginata</i>	Present	63		408395	6416830	3117.245311
69	Marri <i>Corymbia calophylla</i>	Present	67		408397	6416832	3525.652355
70	Jarrah <i>Eucalyptus marginata</i>	Present	77		408401	6416845	4656.625711
71	Jarrah <i>Eucalyptus marginata</i>	Present	160	Exceeded tape	408405	6416847	20106.19298
72	Jarrah <i>Eucalyptus marginata</i>		68		408404	6416854	3631.681108
73	Jarrah <i>Eucalyptus marginata</i>		55	tagged No.641	408405	6416888	2375.829444
74	Marri <i>Corymbia calophylla</i>		55		408389	6416887	2375.829444
75	Jarrah <i>Eucalyptus marginata</i>		63		408377	6416876	3117.245311
76	Jarrah <i>Eucalyptus marginata</i>		53		408381	6416868	2206.183441
77	Jarrah <i>Eucalyptus marginata</i>	Present	83	Dead	408378	6416859	5410.607948
78	Jarrah <i>Eucalyptus marginata</i>	Present	145	Jarrah nest tree	408385	6416844	16512.99639
79	Jarrah <i>Eucalyptus marginata</i>	Present	85		408380	6416841	5674.501731
80	Jarrah <i>Eucalyptus marginata</i>	Present	71		408410	6416790	3959.192142
81	Jarrah <i>Eucalyptus marginata</i>		59		408409	6416790	2733.971007
82	Jarrah <i>Eucalyptus marginata</i>	Present	86		408413	6416787	5808.804816

83	Jarrah <i>Eucalyptus marginata</i>	Present	60		408435	6416769	2827.433388
84	Jarrah <i>Eucalyptus marginata</i>	Present	66		408447	6416776	3421.1944
85	Jarrah <i>Eucalyptus marginata</i>	Present	93		408464	6416777	6792.908715
86	Jarrah <i>Eucalyptus marginata</i>	Present	82		408475	6416756	5281.017251
87	Jarrah <i>Eucalyptus marginata</i>	Present	79		408485	6416767	4901.669938
88	Jarrah <i>Eucalyptus marginata</i>		66		408501	6416774	3421.1944
89	Jarrah <i>Eucalyptus marginata</i>	Present	50		408497	6416768	1963.495408
90	Marri <i>Corymbia calophylla</i>	Present	60		408503	6416757	2827.433388
91	Marri <i>Corymbia calophylla</i>		62		408498	6416816	3019.07054
92	Marri <i>Corymbia calophylla</i>		52		408499	6416852	2123.716634
93	Jarrah <i>Eucalyptus marginata</i>		57		408489	6416856	2551.758633
94	sheoak <i>Allocasuarina fraseriana</i>		75		408830	6416791	4417.864669
95	Jarrah <i>Eucalyptus marginata</i>	Present	118		408827	6416795	10935.88403
96	Jarrah <i>Eucalyptus marginata</i>	Present	87		408813	6416793	5944.678699
97	Jarrah <i>Eucalyptus marginata</i>		71		408797	6416787	3959.192142
98	Jarrah <i>Eucalyptus marginata</i>		55		408780	6416793	2375.829444
99	Jarrah <i>Eucalyptus marginata</i>	Present	75		408779	6416806	4417.864669
100	Jarrah <i>Eucalyptus marginata</i>		80		408761	6416788	5026.548246
101	Jarrah <i>Eucalyptus marginata</i>		73		408746	6416785	4185.386813
102	Jarrah <i>Eucalyptus marginata</i>	Present	92		408744	6416795	6647.610055
103	Jarrah <i>Eucalyptus marginata</i>	Present	69		408744	6416795	3739.280656
104	Jarrah <i>Eucalyptus marginata</i>	Present	96		408721	6416780	7238.229474
105	Jarrah <i>Eucalyptus marginata</i>		64		408711	6416779	3216.990877
106	Jarrah <i>Eucalyptus marginata</i>		59		408707	6416778	2733.971007
107	Jarrah <i>Eucalyptus marginata</i>		59		408710	6416804	2733.971007
108	Jarrah <i>Eucalyptus marginata</i>	Present	106		408706	6416806	8824.733764
109	Jarrah <i>Eucalyptus marginata</i>		55		408673	6416803	2375.829444
110	Jarrah <i>Eucalyptus marginata</i>	Present	97		408667	6416817	7389.811319
111	Jarrah <i>Eucalyptus marginata</i>		52		408659	6416810	2123.716634

112	Jarrah <i>Eucalyptus marginata</i>	Present	73		408649	6416794	4185.386813
113	Jarrah <i>Eucalyptus marginata</i>		52		408648	6416790	2123.716634
114	Jarrah <i>Eucalyptus marginata</i>	Present	55		408635	6416782	2375.829444
115	Jarrah <i>Eucalyptus marginata</i>		53		408610	6416781	2206.183441
116	Marri <i>Corymbia calophylla</i>	Present	109		408596	6416796	9331.315579
117	Jarrah <i>Eucalyptus marginata</i>	Present	101		408590	6416812	8011.846665
118	Jarrah <i>Eucalyptus marginata</i>	Present	52		408598	6416805	2123.716634
119	Jarrah <i>Eucalyptus marginata</i>		59		408565	6416822	2733.971007
120	Jarrah <i>Eucalyptus marginata</i>		81		408562	6416817	5152.99735
121	Marri <i>Corymbia calophylla</i>		57		408560	6416829	2551.758633
122	Jarrah <i>Eucalyptus marginata</i>		82		408558	6416837	5281.017251
123	sheoak <i>Allocasuarina fraseriana</i>		59		408556	6416837	2733.971007
124	sheoak <i>Allocasuarina fraseriana</i>		110		408547	6416827	9503.317777
125	sheoak <i>Allocasuarina fraseriana</i>		52		408542	6416818	2123.716634
126	Jarrah <i>Eucalyptus marginata</i>		53		408542	6416832	2206.183441
127	sheoak <i>Allocasuarina fraseriana</i>		94		408538	6416832	6939.778172
128	Marri <i>Corymbia calophylla</i>	Present	120		408539	6416783	11309.73355
129	Marri <i>Corymbia calophylla</i>	Present	112		408570	6416773	9852.034562
130	Jarrah <i>Eucalyptus marginata</i>	Present	69	Marri nest tree now has bees	408574	6416775	3739.280656
131	Jarrah <i>Eucalyptus marginata</i>	Present	105	Bees Present	408588	6416768	8659.014751
132	Jarrah <i>Eucalyptus marginata</i>		51		408569	6416762	2042.820623
133	Jarrah <i>Eucalyptus marginata</i>		72		408575	6416746	4071.504079
134	Jarrah <i>Eucalyptus marginata</i>		75		408574	6416731	4417.864669
135	Jarrah <i>Eucalyptus marginata</i>	Present	160	Exceeded tape	408556	6416735	20106.19298
136	Jarrah <i>Eucalyptus marginata</i>	Present	114		408552	6416742	10207.03453
137	Jarrah <i>Eucalyptus marginata</i>	Present	139		408566	6416712	15174.67792
138	Jarrah <i>Eucalyptus marginata</i>	Present	114		408594	6416709	10207.03453
139	Jarrah <i>Eucalyptus marginata</i>	Present	123		408651	6416644	11882.28881
140	Jarrah <i>Eucalyptus marginata</i>		53		408653	6416646	2206.183441

141	Jarrah <i>Eucalyptus marginata</i>	Present	78		408661	6416651	4778.362426
142	Jarrah <i>Eucalyptus marginata</i>	Present	75		408440	6416730	4417.864669
143	Jarrah <i>Eucalyptus marginata</i>		77		408437	6416727	4656.625711
144	Marri <i>Corymbia calophylla</i>	Present	53		408440	6416684	2206.183441
145	Jarrah <i>Eucalyptus marginata</i>		54		408449	6416681	2290.221044
146	Jarrah <i>Eucalyptus marginata</i>		61		408451	6416716	2922.466566
147	Jarrah <i>Eucalyptus marginata</i>	Present	112		408452	6416753	9852.034562
148	Jarrah <i>Eucalyptus marginata</i>		69		408468	6416847	3739.280656
149	Jarrah <i>Eucalyptus marginata</i>		72		408471	6416847	4071.504079
150	sheoak <i>Allocasuarina fraseriana</i>		50		408484	6416864	1963.495408
151	sheoak <i>Allocasuarina fraseriana</i>		52		408469	6416888	2123.716634
152	sheoak <i>Allocasuarina fraseriana</i>		63		408466	6416900	3117.245311
153	sheoak <i>Allocasuarina fraseriana</i>		78		408451	6416890	4778.362426
154	Marri <i>Corymbia calophylla</i>		62		408445	6416896	3019.07054
155	Marri <i>Corymbia calophylla</i>		57		408444	6416899	2551.758633
156	Marri <i>Corymbia calophylla</i>		78		408443	6416901	4778.362426
157	Marri <i>Corymbia calophylla</i>	Present	70		408432	6416921	3848.451001
158	Jarrah <i>Eucalyptus marginata</i>		67		408733	6416851	3525.652355
159	Jarrah <i>Eucalyptus marginata</i>		74		408754	6416850	4300.840343
160	Jarrah <i>Eucalyptus marginata</i>		70		408784	6416841	3848.451001
161	Jarrah <i>Eucalyptus marginata</i>		71	Dead	408793	6416845	3959.192142
162	Jarrah <i>Eucalyptus marginata</i>		52		408767	6416868	2123.716634
163	Jarrah <i>Eucalyptus marginata</i>	Present	112		408760	6416867	9852.034562
164	Marri <i>Corymbia calophylla</i>		63		408736	6416868	3117.245311
165	Jarrah <i>Eucalyptus marginata</i>	Present	62		408734	6416865	3019.07054
166	Jarrah <i>Eucalyptus marginata</i>		51		408723	6416859	2042.820623
167	Jarrah <i>Eucalyptus marginata</i>		53		408720	6416841	2206.183441
168	Jarrah <i>Eucalyptus marginata</i>		54		408709	6416854	2290.221044
169	Marri <i>Corymbia calophylla</i>		89		408690	6416860	6221.138852

170	Jarrah <i>Eucalyptus marginata</i>	Present	84		408714	6416866	5541.769441
171	Jarrah <i>Eucalyptus marginata</i>	Present	114	Dead	408714	6416866	10207.03453
172	Marri <i>Corymbia calophylla</i>	Present	129	Dead	408702	6416882	13069.81084
173	Jarrah <i>Eucalyptus marginata</i>	Present	52		408683	6416865	2123.716634
174	Jarrah <i>Eucalyptus marginata</i>	Present	64		408679	6416863	3216.990877
175	Jarrah <i>Eucalyptus marginata</i>	Present	95	Dead	408765	6416885	7088.218425
176	Jarrah <i>Eucalyptus marginata</i>	Present	83	Dead	408752	6416917	5410.607948
177	Jarrah <i>Eucalyptus marginata</i>	Present	93		408756	6416817	6792.908715
178	Jarrah <i>Eucalyptus marginata</i>	Present	146		408739	6416831	16741.54725
179	Jarrah <i>Eucalyptus marginata</i>		50		408738	6416829	1963.495408
180	Jarrah <i>Eucalyptus marginata</i>		64		408729	6416813	3216.990877
181	Jarrah <i>Eucalyptus marginata</i>	Present	76		408711	6416813	4536.459792
182	Marri <i>Corymbia calophylla</i>		54		408685	6416823	2290.221044
183	Jarrah <i>Eucalyptus marginata</i>		50		408678	6416785	1963.495408
184	Jarrah <i>Eucalyptus marginata</i>		57		408643	6416726	2551.758633
185	Jarrah <i>Eucalyptus marginata</i>		56		408635	6416686	2463.00864
186	Jarrah <i>Eucalyptus marginata</i>		62		408635	6416685	3019.07054
187	Jarrah <i>Eucalyptus marginata</i>		50		408637	6416678	1963.495408
188	Jarrah <i>Eucalyptus marginata</i>	Present	129	King Jarrah	408454	6416634	13069.81084
189	Jarrah <i>Eucalyptus marginata</i>		73		408455	6416641	4185.386813
190	Jarrah <i>Eucalyptus marginata</i>		86		408503	6416635	5808.804816
191	Jarrah <i>Eucalyptus marginata</i>		55	Located at cross roads	408526	6416596	2375.829444
192	Marri <i>Corymbia calophylla</i>		63		408528	6416596	3117.245311
193	Jarrah <i>Eucalyptus marginata</i>		66		408521	6416624	3421.1944
194	Marri <i>Corymbia calophylla</i>		53		408515	6416630	2206.183441
195	Jarrah <i>Eucalyptus marginata</i>		53		408494	6416636	2206.183441
196	Jarrah <i>Eucalyptus marginata</i>	Present	73		408505	6416620	4185.386813
197	Jarrah <i>Eucalyptus marginata</i>		55		408496	6416605	2375.829444
198	Jarrah <i>Eucalyptus marginata</i>	Present	62		408487	6416618	3019.07054

199	Jarrah <i>Eucalyptus marginata</i>	Present	87		408483	6416629	5944.678699
200	Jarrah <i>Eucalyptus marginata</i>	Present	140		408450	6416656	15393.804
201	Jarrah <i>Eucalyptus marginata</i>		67		408463	6416658	3525.652355
202	Marri <i>Corymbia calophylla</i>		92		408485	6416654	6647.610055
203	Jarrah <i>Eucalyptus marginata</i>		51		408501	6416661	2042.820623
204	Jarrah <i>Eucalyptus marginata</i>	Present	127		408503	6416672	12667.68698
205	Jarrah <i>Eucalyptus marginata</i>		63		408501	6416687	3117.245311
206	Jarrah <i>Eucalyptus marginata</i>		58		408409	6416674	2642.079422
207	Jarrah <i>Eucalyptus marginata</i>		74		408473	6416675	4300.840343
208	Marri <i>Corymbia calophylla</i>		53		408471	6416677	2206.183441
209	Jarrah <i>Eucalyptus marginata</i>		95		408453	6416676	7088.218425
210	Jarrah <i>Eucalyptus marginata</i>	Present	70		408458	6416692	3848.451001
211	Jarrah <i>Eucalyptus marginata</i>	Present	90		408460	6416694	6361.725124
212	Jarrah <i>Eucalyptus marginata</i>		66		408473	6416704	3421.1944
213	Jarrah <i>Eucalyptus marginata</i>		51		408477	6416710	2042.820623
214	Jarrah <i>Eucalyptus marginata</i>		73		408475	6416709	4185.386813
215	Marri <i>Corymbia calophylla</i>		57		408504	6416723	2551.758633
216	Jarrah <i>Eucalyptus marginata</i>		71		408503	6416727	3959.192142
217	Jarrah <i>Eucalyptus marginata</i>		54		408501	6416736	2290.221044
218	Jarrah <i>Eucalyptus marginata</i>	Present	92		408468	6416742	6647.610055
219	Jarrah <i>Eucalyptus marginata</i>		71		408443	6416733	3959.192142
220	Jarrah <i>Eucalyptus marginata</i>		68		408663	6416729	3631.681108
221	Jarrah <i>Eucalyptus marginata</i>		68		408692	6416739	3631.681108
222	Jarrah <i>Eucalyptus marginata</i>		69		408708	6416708	3739.280656
223	Marri <i>Corymbia calophylla</i>		85		408714	6416717	5674.501731
224	Marri <i>Corymbia calophylla</i>		86		408732	6416734	5808.804816
225	Jarrah <i>Eucalyptus marginata</i>		69		408741	6416721	3739.280656
226	Jarrah <i>Eucalyptus marginata</i>	Present	99		408730	6416738	7697.687399
227	Jarrah <i>Eucalyptus marginata</i>	Present	59		408751	6416722	2733.971007

228	Jarrah <i>Eucalyptus marginata</i>		53		408750	6416721	2206.183441
229	Marri <i>Corymbia calophylla</i>	Present	89		408771	6416722	6221.138852
230	Marri <i>Corymbia calophylla</i>	Present	90		408781	6416726	6361.725124
231	Marri <i>Corymbia calophylla</i>		70		408788	6416716	3848.451001
232	Jarrah <i>Eucalyptus marginata</i>		53		408805	6416717	2206.183441
233	Marri <i>Corymbia calophylla</i>		63		408811	6416735	3117.245311
234	Jarrah <i>Eucalyptus marginata</i>		56		408813	6416734	2463.00864
235	Jarrah <i>Eucalyptus marginata</i>	Present	84		408811	6416748	5541.769441
236	Marri <i>Corymbia calophylla</i>		76		408805	6416761	4536.459792
237	Jarrah <i>Eucalyptus marginata</i>	Present	93		408815	6416711	6792.908715
238	Jarrah <i>Eucalyptus marginata</i>		72		408818	6416714	4071.504079
239	Jarrah <i>Eucalyptus marginata</i>	Present	116		408822	6416706	10568.31769
240	Jarrah <i>Eucalyptus marginata</i>		73		408869	6416676	4185.386813
241	sheoak <i>Allocasuarina fraseriana</i>		53		408887	6416649	2206.183441
242	Jarrah <i>Eucalyptus marginata</i>		101		408878	6416641	8011.846665
243	sheoak <i>Allocasuarina fraseriana</i>		78		408903	6416644	4778.362426
244	sheoak <i>Allocasuarina fraseriana</i>		60		408841	6416727	2827.433388
245	Jarrah <i>Eucalyptus marginata</i>		62		408802	6416754	3019.07054
246	Jarrah <i>Eucalyptus marginata</i>		61		408793	6416743	2922.466566
247	Marri <i>Corymbia calophylla</i>		55		408793	6416744	2375.829444
248	Jarrah <i>Eucalyptus marginata</i>		60		408789	6416751	2827.433388
249	Marri <i>Corymbia calophylla</i>		68		408769	6416730	3631.681108
250	Jarrah <i>Eucalyptus marginata</i>	Present	96		408765	64166737	7238.229474
251	Jarrah <i>Eucalyptus marginata</i>	Present	112		408747	6416739	9852.034562
252	Jarrah <i>Eucalyptus marginata</i>		86		408742	6416750	5808.804816
253	Jarrah <i>Eucalyptus marginata</i>	Present	96		408738	6416752	7238.229474
254	Jarrah <i>Eucalyptus marginata</i>		57		408721	6416763	2551.758633
255	Jarrah <i>Eucalyptus marginata</i>		69		408710	6416742	3739.280656
256	Jarrah <i>Eucalyptus marginata</i>		58		408698	6416750	2642.079422

257	Jarrah <i>Eucalyptus marginata</i>	Present	90		408658	6416752	6361.725124
258	Jarrah <i>Eucalyptus marginata</i>	Present	77		408650	6416756	4656.625711
259	Jarrah <i>Eucalyptus marginata</i>		67		408629	6416743	3525.652355
260	Jarrah <i>Eucalyptus marginata</i>		55		408626	6416742	2375.829444
261	Jarrah <i>Eucalyptus marginata</i>	Present	52		408608	6416736	2123.716634
262	Marri <i>Corymbia calophylla</i>	Present	76		408595	6416713	4536.459792
263	Jarrah <i>Eucalyptus marginata</i>	Present	110		408596	6416709	9503.317777
264	Marri <i>Corymbia calophylla</i>	Present	71		408583	6416728	3959.192142
265	Marri <i>Corymbia calophylla</i>	Present	97		408583	6416749	7389.811319
266	Jarrah <i>Eucalyptus marginata</i>		113		408580	6416755	10028.74915
267	Jarrah <i>Eucalyptus marginata</i>	Present	129		408918	6416644	13069.81084
268	sheoak <i>Allocasuarina fraseriana</i>		77		408913	6416627	4656.625711
269	sheoak <i>Allocasuarina fraseriana</i>		57		408907	6416611	2551.758633
270	sheoak <i>Allocasuarina fraseriana</i>		64		408908	6416608	3216.990877
271	sheoak <i>Allocasuarina fraseriana</i>		65		408910	6416606	3318.30724
272	sheoak <i>Allocasuarina fraseriana</i>		54		408895	6416623	2290.221044
273	Jarrah <i>Eucalyptus marginata</i>		60		408899	6416623	2827.433388
274	sheoak <i>Allocasuarina fraseriana</i>		82		408901	6416627	5281.017251
275	sheoak <i>Allocasuarina fraseriana</i>		65		408899	6416617	3318.30724
276	Jarrah <i>Eucalyptus marginata</i>		52		408908	6416617	2123.716634
277	sheoak <i>Allocasuarina fraseriana</i>		57		408909	6416613	2551.758633
278	Jarrah <i>Eucalyptus marginata</i>		53		408879	6416600	2206.183441
279	Jarrah <i>Eucalyptus marginata</i>		51		408493	6416604	2042.820623
280	Jarrah <i>Eucalyptus marginata</i>		56		408882	6416611	2463.00864
281	Jarrah <i>Eucalyptus marginata</i>		50		408849	6416600	1963.495408
282	Jarrah <i>Eucalyptus marginata</i>		58		408841	6416605	2642.079422
283	Marri <i>Corymbia calophylla</i>	Present	86		408850	6416613	5808.804816
284	Jarrah <i>Eucalyptus marginata</i>		54		408864	6416599	2290.221044
285	Marri <i>Corymbia calophylla</i>		55		4088356	6416619	2375.829444

286	Marri <i>Corymbia calophylla</i>	Present	111	Marri nest tree	408819	6416596	9676.890771
287	Marri <i>Corymbia calophylla</i>	Present	97		408794	6416622	7389.811319
288	Jarrah <i>Eucalyptus marginata</i>	Present	73		408759	6416615	4185.386813
289	Marri <i>Corymbia calophylla</i>		55		408762	6416606	2375.829444
290	Jarrah <i>Eucalyptus marginata</i>	Present	58		408737	6416621	2642.079422
291	Jarrah <i>Eucalyptus marginata</i>		82		408724	6416618	5281.017251
292	Jarrah <i>Eucalyptus marginata</i>		83		408725	6416614	5410.607948
293	Jarrah <i>Eucalyptus marginata</i>		75		408722	6416614	4417.864669
294	Jarrah <i>Eucalyptus marginata</i>		68		408708	6416614	3631.681108
295	Jarrah <i>Eucalyptus marginata</i>	Present	157		408704	6416607	19359.27933
296	Jarrah <i>Eucalyptus marginata</i>		53		408702	6416589	2206.183441
297	Marri <i>Corymbia calophylla</i>		53		408686	6416623	2206.183441
298	Jarrah <i>Eucalyptus marginata</i>		61		408679	6416606	2922.466566
299	Jarrah <i>Eucalyptus marginata</i>		52		408677	6416634	2123.716634
300	Jarrah <i>Eucalyptus marginata</i>		59		408696	6416631	2733.971007
301	Jarrah <i>Eucalyptus marginata</i>		53		408717	6416635	2206.183441
302	Jarrah <i>Eucalyptus marginata</i>		61		408718	6416646	2922.466566
303	Jarrah <i>Eucalyptus marginata</i>		66		408715	6416648	3421.1944
304	Marri <i>Corymbia calophylla</i>		73		4088718	6416650	4185.386813
305	Marri <i>Corymbia calophylla</i>		62		408706	6416651	3019.07054
306	Jarrah <i>Eucalyptus marginata</i>	Present	90		408726	6416655	6361.725124
307	Jarrah <i>Eucalyptus marginata</i>	Present	91		408742	6416639	6503.882191
308	Jarrah <i>Eucalyptus marginata</i>	Present	67		408744	6416647	3525.652355
309	Jarrah <i>Eucalyptus marginata</i>		53		408742	6416642	2206.183441
310	Jarrah <i>Eucalyptus marginata</i>		53		408744	6416642	2206.183441
311	Jarrah <i>Eucalyptus marginata</i>		56		408745	6416645	2463.00864
312	Marri <i>Corymbia calophylla</i>		59		408755	6416647	2733.971007
313	Marri <i>Corymbia calophylla</i>		64		408773	6416646	3216.990877
314	Marri <i>Corymbia calophylla</i>	Present	114		408787	6416652	10207.03453

315	Jarrah Eucalyptus marginata		52		408787	6416639	2123.716634
316	Marri Corymbia calophylla		57		408787	6416636	2551.758633
317	Marri Corymbia calophylla		62		408800	6416635	3019.07054
318	Marri Corymbia calophylla	Present	81		408812	6416642	5152.99735
319	Marri Corymbia calophylla		53		408820	6416637	2206.183441
320	Jarrah Eucalyptus marginata	Present	129		408815	6416655	13069.81084
321	Jarrah Eucalyptus marginata		66		408812	6416656	3421.1944
322	Jarrah Eucalyptus marginata	Present	134		408815	6416689	14102.60942
323	Jarrah Eucalyptus marginata	Present	80		408809	6416686	5026.548246
324	Marri Corymbia calophylla	Present	103		408802	6416686	8332.289115
325	Marri Corymbia calophylla	Present	145		408820	6416695	16512.99639
326	Jarrah Eucalyptus marginata	Present	63		408829	6416689	3117.245311
327	Marri Corymbia calophylla	Present	102		408832	6416690	8171.282492
328	Jarrah Eucalyptus marginata	Present	82		408841	6416720	5281.017251
329	sheoak Allocasuarina fraseriana		60		408842	6416721	2827.433388
330	Jarrah Eucalyptus marginata		66		408833	6416726	3421.1944
331	sheoak Allocasuarina fraseriana		67		408836	6416732	3525.652355
332	Marri Corymbia calophylla		69		408770	6416670	3739.280656
333	Jarrah Eucalyptus marginata		76		408744	6416666	4536.459792
334	Jarrah Eucalyptus marginata		63		408745	6416672	3117.245311
335	Jarrah Eucalyptus marginata		79		408753	6416688	4901.669938
336	Jarrah Eucalyptus marginata		73		408752	6416688	4185.386813
337	Jarrah Eucalyptus marginata	Present	138		408753	6416697	14957.12262
338	Jarrah Eucalyptus marginata	Present	75		408740	6416670	4417.864669
339	Jarrah Eucalyptus marginata		68		408733	6416668	3631.681108
340	Jarrah Eucalyptus marginata		73		408697	6416656	4185.386813
341	Jarrah Eucalyptus marginata		62		408682	6416654	3019.07054
342	Marri Corymbia calophylla		67		408680	6416659	3525.652355
343	Marri Corymbia calophylla		58		408673	6416665	2642.079422

344	Jarrah Eucalyptus marginata		94		408678	6416668	6939.778172
345	Marri Corymbia calophylla		93		4088684	6416685	6792.908715
346	Jarrah Eucalyptus marginata		79		408670	6416693	4901.669938
347	Jarrah Eucalyptus marginata		75		408666	6416698	4417.864669
348	Marri Corymbia calophylla	Present	66		408789	6416698	3421.1944
349	Jarrah Eucalyptus marginata	Present	91		408780	6416686	6503.882191
350	Jarrah Eucalyptus marginata		93		408763	6416691	6792.908715
351	Marri Corymbia calophylla		71		408765	6416704	3959.192142
352	Jarrah Eucalyptus marginata		82		408757	6416714	5281.017251
353	Jarrah Eucalyptus marginata		82		408746	6416715	5281.017251
354	Marri Corymbia calophylla		56		408734	6416696	2463.00864
355	Jarrah Eucalyptus marginata		54		408726	6416692	2290.221044
356	Marri Corymbia calophylla		78		408719	6416680	4778.362426
357	Jarrah Eucalyptus marginata		56		408705	6416681	2463.00864
358	Marri Corymbia calophylla		66		408866	6416679	3421.1944
359	Jarrah Eucalyptus marginata		50		408654	6416710	1963.495408
360	Marri Corymbia calophylla		53		408653	6416711	2206.183441
0	Jarrah Eucalyptus marginata		51		408649	6416726	2042.820623
Totals			Sum		27162		1763463.921
			Mean		75.24099723		
			SD		23.66526012		

Cockatoo species	Remarks	Australian Geocentric 1994 (GDA94)	
		Eastings	Northings
Forest Red-tailed Black Cockatoo	Old evidence of feeding on seeds from Jarrah	408816	6416743
Forest Red-tailed Black Cockatoo	Old evidence of feeding on seeds from Jarrah	408721	6416825
Forest Red-tailed Black Cockatoo	Recent/fresh evidence of feeding on seeds from Marri	408541	6416811
Forest Red-tailed Black Cockatoo	Recent evidence of feeding on seeds from Jarrah	408416	6416758
Forest Red-tailed Black Cockatoo	Old evidence of feeding on seeds from Marri	408492	6416765
Either Baudin's or Carnaby's Cockatoo	Old evidence of feeding on grubs from Balga	408437	6416736
Forest Red-tailed Black Cockatoo	Four feeding on seeds from Jarrah	408800	6416749