

**ENVIRONMENTAL PLANNING, ASSESSMENT &  
BIODIVERSITY CONSULTANT**

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# Preliminary Site Impact Statement

## Dubbo North West Urban Release Area, Dubbo



### General Information

The site of the Dubbo North West Urban Release Area (DNWURA) on Bumblegum Road was inspected throughout the period Wednesday 11<sup>th</sup> to Friday 13<sup>th</sup> of October 2023.

The inspection was carried out by Renae Hill (Graduate Diploma Environmental Management (2022) and Biodiversity Accredited Assessor (BAAS No.23003)), Tony Moody (Bachelor Applied Science) and Cameron Rowling-Scott (Graduate Diploma of Science (Ecology)) for Dubbo Regional Council (Council). Field work was undertaken using provisions outlined in the Biodiversity Assessment Method (BAM) 2020 and records were taken of tree species, position, condition, site details and other location risks.







Figure 2: Parts of the assessment area, not accessed.

## Cultural Heritage

The Aboriginal Heritage Information Management System (AHIMS) database was queried before the site inspection and showed records of artefacts and modified trees (**Figure 2**). There are remnant mature trees evident on the site with signs of potential cultural scarring. Groundcover was quite dense and there was no opportunistic discovery of additional surface cultural heritage items. The entire area has a high level of historical disturbance from agricultural practices. A specific cultural heritage assessment will be undertaken separately and was not the focus of this investigation.

## Species Information

Native tree species at the site are:

### Common name

River red gum  
Yellow box  
Grey box  
Spotted gum (planted)  
Kurrajong

### Scientific name

*Eucalyptus camaldulensis*  
*Eucalyptus melliodora*  
*Eucalyptus microcarpa*  
*Corymbia maculata*  
*Brachychiton populneus*

The most common trees at the site were river red gum (*Eucalyptus camaldulensis*) (**Figure 3**), yellow box (*E. melliodora*), inland grey box (*E. microcarpa*) and kurrajong (*Brachychiton populneus*). The eucalypts are naturally occurring in this locality whereas the kurrajong trees have typically been planted. Nesting sites were evident, particularly in the advanced, large diameter *E. melliodora* and *E. camaldulensis* trees, which should be protected wherever possible (**Figure 4**). Thick, mostly non-native, grass and herbaceous ground cover was evident across the majority of the site.



*Figure 3: River red gums near the Macquarie River.*





*Figure 4: Many trees had hollows and nests.*

Identified Risks:

- There were many significant habitat trees which should be retained wherever possible.
- Significant cultural heritage trees must be protected. It is an offence to harm indigenous heritage items under the National Parks and Wildlife Act 1974.
- Removal or trimming of trees or branches should only be performed by a professional arborist for safety and to minimise damage to the tree.
- Many areas of stockpiles and fill material of unknown origin exist across the site.
- Possible threatened species (TS) and endangered ecological communities (EEC).

Even though the land in the study area is excluded from the provisions of the Local Land Services (LLS) Act 2013 due to land zoning some zones satisfy the requirements for category 1 – exempt land because:

- (a) existing cleared areas on the land were cleared of native vegetation as at 1 January 1990, or
- (b) the land was lawfully cleared of native vegetation after January 1990, or
- (c) the land contains low conservation value grasslands.

Historical aerial imagery shows areas of the site have been cropped and site survey confirms most of the agricultural / grazing zones to have low conservation value (LCV) grassland. The BAM does not assess biodiversity impacts on category 1 – exempt land other than prescribed impacts. Consideration of impacts under the Biodiversity Conservation (BC) Act 2016 (a test of significance) and the Environment Protection Biodiversity Conservation (EPBC) Act 1999 is necessary for areas in proposed developments where the BAM may not apply.

BAM assessment of planted native vegetation (established for functional, aesthetic, horticultural or plantation forestry purposes) needs to consider the possible provision of habitat for threatened species only.

Planted exotic vegetation is not relevant to BAM assessment unless it is found to be used for habitat of threatened species.

Preliminary analysis of field data allows designation and mapping of cropped areas and LCV grasslands which fit the criteria for category 1 - exempt land and will only be considered for prescribed biodiversity impacts under the BAM (**Figure 5**).

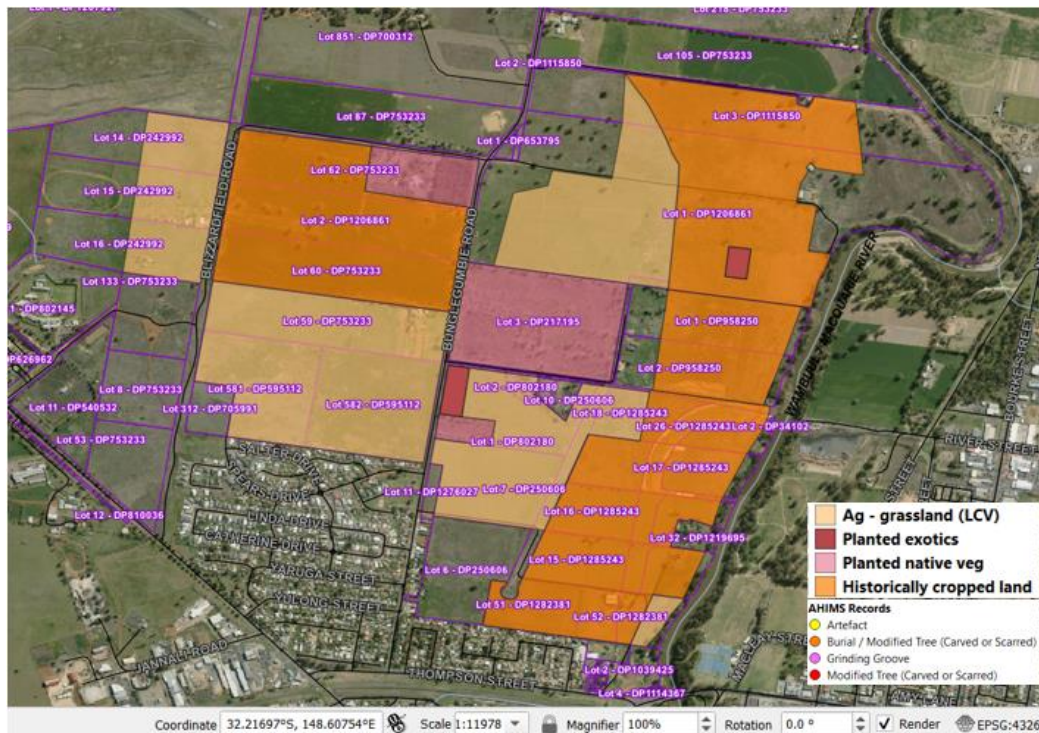


Figure 5: Many trees had hollows and nests.

### Habitat features

Regeneration of *Eucalyptus* species is not evident and shrub cover was minimal. Fallen timber was not often present, limiting habitat that may occur when logs larger than 10 cm lay on the ground. No emergent rocky outcrops were noted.

There was minimal occurrence of cryptogams, indicators of soil crust health (e.g. mosses, algae, ferns, lichens, fungi). The Macquarie River runs adjacent to the eastern boundary of the site and a small number of farm dams occur however there were no wetlands or springs located nearby and no other evidence of stored water in the landscape.



Figure 6: Cropped paddocks and low conservation value grasslands.



## Threats/Disturbances

Removal of dead standing trees and timber debris from the ground is a key threatening process (KTP) as it removes or destroys natural assets potentially used by fauna. The use of the site for agriculture has resulted in minimal existing woody debris. To reduce impacts from proposed works, the removal of dead standing trees or debris from the ground should be limited to that which is necessary for the safe use of the area. Clearing of native vegetation is also a KTP and the design of the proposed residential housing area should consider preservation of existing mature habitat trees wherever possible. There was very limited occurrence of invasive weeds like prickly pear (*Opuntia sp.*) and pepper tree (*Schinus molle*) (**Figure 7**). Erosion was not evident at the site.



*Figure 7: Prickly pear for removal and control.*

## Possible Endangered Ecological Communities

The Environment Protection and Biodiversity Conservation (EPBC) Act 1999 listed endangered ecological communities (EEC) that are likely to occur in areas of the site include:

- Grey box (*Eucalyptus microcarpa*) grassy woodlands and derived native grasslands, and
- Natural grasslands on basalt and fine textured alluvial plains of northern NSW, and
- White box – yellow box – Blakely's red gum grassy woodland and derived native grassland.

Also the Biodiversity Conservation (BC) Act 2016 listed:

- Fuzzy box woodland on alluvial soils
- Inland grey box woodland in the Riverina, NSW South Western slopes, Cobar Peneplain, Nandewar and Brigalow Belt South bioregions, and
- White box – yellow box – Blakely's red gum grassy woodland and derived native grassland (box-gum woodland).

A large proportion of the site has been extensively modified by agriculture and it is unlikely these endangered ecological communities persist. A detailed analysis of potential zones of these communities will be included in the biodiversity assessment.

## Threatened Species

No threatened plant or animal species were observed during the site visit.

## Trees with Cultural Scars

There were seven trees noted as potentially showing cultural scars. Indigenous scarred trees have pieces of bark removed that would have been used for traditional purposes and are one of the more identifiable and visible facets of cultural heritage. These trees (at WPs 77, 81-85 and 89) should be

protected from all disturbance with at least a 10 m buffer. Further study of Indigenous cultural heritage aspects will be specifically assessed by a separate site Aboriginal Cultural Heritage Assessment (ACHA).



*Figure 8: Culturally modified tree.*

Three lots ( Lot 8, 53 and 133 in DP 753233) in the western portion of the site are owned by the Dubbo Local Aboriginal Land Council (LALC) and were recently burned, preventing field assessment.



*Figure 9: Recent fire prevented any observation of plant matter.*

### Infrastructure

There is subsurface irrigation infrastructure throughout all of Lot 3 DP 217195 and part of Lot 1 DP 802180.

Residual materials from the decommissioned Sewage Treatment Plant exist (Lots 1 and 2 DP 958250 and Lot 1 DP 217195) and further investigation of this area is required.





*Figure 10: Building debris, waste and stockpiles of material of unknown composition.*



*Figure 11: Existing hazard signage.*

## Concluding Remarks

Some areas of the site were not inspected due to access issues, time limitations and the condition of the Dubbo LALC land being recently burned. These areas should be inspected before the biodiversity assessment is finalised. Any remaining scattered paddock trees that have not been inspected, will be assessed before the biodiversity assessment is finalised.

#### Further Information:

Australian Government, Commonwealth Conservation Advice (detailed information) – Grey box grassy woodlands and derived native grasslands of south-eastern Australia,

<http://www.environment.gov.au/biodiversity/threatened/communities/pubs/86-listing-advice.pdf>

NSW Department of Planning and Environment, Inland Grey Box woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South bioregions – profile

<https://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=20072#:~:text=Inland%20Grey%20Box%20Woodland%20occurs,up%20to%20the%20Queensland%20Border.>

NSW National Parks and Wildlife Service, Identification Guidelines for Endangered Ecological Communities, 2002

<https://www.environment.nsw.gov.au/resources/nature/box-gumIdGuidelines.pdf>



### Waypoints (WP) with GPS location details

WPs	Comments	Latitude	Longitude
1	Transect 1	-32.22576539	148.6030461
2	Transect 1 end	-32.22576799	148.6020853
3	Kurrajong dbh 60 cm retain if possible African boxthorn next to it, non-native understorey	-32.23080564	148.5915465
4	Kurrajong dbh 50 cm, non-native understorey	-32.23070736	148.5915807
5	Stand pipe	-32.23073779	148.5918051
6	Side road and disturbed area, non-native groundcover	-32.23082813	148.5917592
7	Council waste site	-32.23152034	148.5948298
8	Corner of site	-32.23169451	148.5962732
9	Potential asbestos	-32.23245475	148.5959229
10	Stacked tyres	-32.23179258	148.5960983
11	Fill stockpiles of Unknown origin	-32.23262057	148.5953764
12	Transect 2 Start	-32.23248216	148.5965896
13	Transect 2 finish	-32.2333517	148.5969008
14		-32.23247398	148.5965888
15	Transect 2 finish	-32.23335314	148.5968953
16	Transect 2 finish pts 12 to 15 may be wrong	-32.23336024	148.5969115
17	Culvert	-32.23291985	148.5966145
18	Steel pipe	-32.23284503	148.596697
19	Transects 2 start	-32.2325067	148.596571
20	African box thorn	-32.22412428	148.6005841
21	DNWURA BAM plot 1 front centre	-32.22562708	148.6068866
22	Grassland 1 centre back	-32.22518323	148.6068508
23	Grassland 1 right front	-32.22560699	148.6070089
24	Grassland 1 front left	-32.22565267	148.6067898
25	Transect 3 Start	-32.22372949	148.5970934
26	Transect 3 Finish	-32.22319636	148.5979386
27	Wheat crop on this block	-32.22323248	148.5885305

28	Sown crop wheat	-32.22803826	148.5831262
29	Riverbank veg weedy groundcover	-32.23946697	148.5997419
30	Overlooking weedy annual paddock	-32.23896149	148.5958497
31	River 1 BAM plot Centre front	-32.23904669	148.6000448
32	River 1 centre back	-32.23864569	148.6002662
33	River 1 front right	-32.23907897	148.6001657
34	River 1 front left	-32.23900718	148.5999707
35	Planted native tree E. Viminalis? Mud nest	-32.23728954	148.5964547
36	Prickly pear x 5 plants	-32.23711182	148.594106
37	Farming paddock grazed	-32.23679829	148.5941093
38	Start of row spotted gum immature canopy dead	-32.23039148	148.5940358
39	End row spotted gum dbh Max 16 cm	-32.22999538	148.5941372
40	Row of planted silky oak, immature Max dbh 15 cm	-32.2298694	148.5941379
41	Row Mostly dead casuarina	-32.22993114	148.5942005
42	End row casuarina	-32.22952401	148.5942666
43	Row of small paperbark	-32.22965528	148.5943105
44	Row dead trees	-32.22994986	148.5942715
45	Row of Mostly dead casuarina	-32.23006529	148.5943025
46	Row Eucalypts unknown	-32.23000694	148.5944672
47	Acacia salicina row maybe 10 trees dbh less than 15 cm	-32.22987812	148.5946126
48	A. salicina maybe 2 A. pendula in row about 30 m long	-32.22994063	148.594748
49	A. salicina row to south	-32.23003199	148.5948687
50	Row of spotted gum to south Mostly dead	-32.22996109	148.5945186
51	Paulownia plantation from road	-32.23113935	148.5923047
52	Wheat crop	-32.22866252	148.5917261
53	Wheat crop	-32.22706024	148.5920323
54	GW 1 BAM plot	-32.22290653	148.606814
55	GW 1 Front right	-32.22295453	148.6068516
56	GW 1 front Left	-32.22280809	148.606766
57	GW 1 Front Centre	-32.22289186	148.6068017
58	GW 1 Back centre	-32.22269638	148.6072593



59	GW 1 Back right	-32.22260542	148.6072199
60	GW 1 Back left	-32.22272867	148.6073479
61	GW 2 BAM plot Front centre	-32.22474926	148.6054279
62	GW 2 Front right	-32.22481102	148.6055115
63	GW 2 Front left	-32.22468999	148.6053639
64	Wheat crop	-32.22294904	148.5864006
65	Wheat crop	-32.22426687	148.5838363
66	Recent burn cannot assess	-32.22950441	148.5821273
67	Soil stockpiles	-32.23181555	148.6013594
68	Weedy disturbed paddock	-32.23158241	148.6012999
69	On top of what is potentially a level bank weedy	-32.2316626	148.6015942
70	Soil stock pile	-32.23182569	148.5993719
71	Sewage treatment stockpiles	-32.23178167	148.5987226
72	Sewage treatment stockpile	-32.23099063	148.5985056
73	Sewerage treatment stockpile	-32.23053704	148.5984301
74	Pump station	-32.22990376	148.5985335
75	Thistles potential high nutrient load	-32.22965262	148.5982806
76	Cover, sump? Pump	-32.22958737	148.5983482
77	Underground tank	-32.22957668	148.5982354
78	Stockpile soil material of unknown origin	-32.22969138	148.5980389
79	Kurrajong dbh 35 cm no nests	-32.22914138	148.5981035
80	Pipe	-32.22982229	148.5964902
81	Pipe	-32.22978987	148.5964452
82	Evidence of underground irrigation from STP	-32.22994227	148.5949228
83	Irrigation infrastructure	-32.23003244	148.5950183
84	Irrigation outlets	-32.23016606	148.595236
85	Irrigation pipework	-32.22900721	148.5922592
86	Trees planted in rows, looking north	-32.2288622	148.5921224
87	Tree planted looking east	-32.22879023	148.5921402
88	Iron bark dbh 30 cm remnant ?	-32.22836545	148.5920596
89	Poplar box dbh 45 cm no hollows or nests	-32.22831835	148.5920339

90	Yellow box dbh 35 cm no hollows or nests, planted with a star picket right near it	-32.22823147	148.592094
91	Remnant grey box dbh 60 cm no nests or hollows	-32.22824975	148.5921933
92	Spotted gum planted, dbh 15 cm young no habitat	-32.22792256	148.592252
93	Spotted gum planted dbh 30 cm no nests or hollows	-32.22752931	148.592317
94	Spotted gum planted dbh 40 cm no nests or hollows	-32.22756233	148.5924759
95	Yellow box dbh 45 cm no nests or hollows	-32.22753332	148.5927183
96	Evidence of irrigation	-32.22760441	148.592685
97	Line of trees to the east 1 x ironbark mostly spotted gum planted	-32.22760496	148.5926977
98	Gleditsia weed isolated occurrences throughout site	-32.2277556	148.5925123
99	Grazed paddock, horses, Barley grass shepherd's purse	-32.22908998	148.589649
100	Wild sage	-32.22938904	148.5895311
101	Row of planted Kurrajong no visible nests or hollows	-32.22880786	148.5885768
102	Kurrajong dbh estimated dbh 50 cm, stick nest maybe 20 cm in diameter 2/3 of way up, no activity while observing	-32.22881851	148.5884346
103	End of Kurrajong over fence	-32.22912055	148.5911852
104	Effluent sign	-32.23126344	148.5937783
105	Bitumen stockpile	-32.23178319	148.5952695
106	Old pipes also a patch of silver leaf nightshade	-32.22801429	148.5979454
107	Pile of old wire, tin etc	-32.22771505	148.5972886
108	Stockpile of old fencing wire, fence post	-32.22741112	148.5972109
109	Potential mound contamination	-32.22740447	148.5973993
110	Eucalypt sp.	-32.22720036	148.5930608
111	Eucalypt sp. Grey box? dbh 1 metre. Nest re 40 cm in diameter. 12 m off ground, Approx. 4 very small hollows	-32.22675313	148.5929394
112	Euc. Sp. dbh approx. 75 cm. Large hollow at base off tree. Hollow potentially extending metres up the tree	-32.22692726	148.5928003
113	Euc sp dbh 210 cm. Large hollow in middle of tree. dbh of hollow re. 70 cm.	-32.22697048	148.5926901
114	Kurrajong dbh 71 cm. Up to 8 small hollows about 10 cm in diameter. Population of starlings in tree. Wood borers in tree	-32.2264515	148.5927234
115	Euc sp. dbh 75 cm. Hollow at base of tree	-32.22631864	148.5929527
116	GW 3. (BAM plot) Front centre	-32.22694557	148.5926829



117	GW 3 Front right	-32.2269555	148.592795
118	GW 3 Front left	-32.2269237	148.5925757
119	GW 3 back right	-32.2265245	148.5926658
120	GW3 Back left	-32.22651456	148.5928391
121	Yellow box. Potentially up to 6 hollows, medium sized. dbh 100 cm.	-32.22593998	148.59253
122	Yellow box. dbh 90 cm. No hollows.	-32.22576904	148.592509
123	Grey box. dbh 115 cm. 3-4 hollows. One very large hollow re 40 cm. About 3 small hollows	-32.22540487	148.5933009
124	Yellow box. dbh 75 cm. 1 potential small hollow,	-32.22465781	148.5928574
125	Grey box. dbh 120 cm. 3-4 small hollows in centre of tree.	-32.22403066	148.593136
126	Grey box. dbh 110 cm. No hollows	-32.22421839	148.5940491
127	2 x grey box. dbh 1. 85 cm 2. 75 cm. Large hollows in tree on left of photo - approximately 30 cm diameter	-32.22488667	148.5971223
128	Stump pile	-32.2264385	148.598321
129	Riparian veg	-32.22903127	148.6040974
130	Olive planting	-32.22704449	148.6022848
131	Olive planting	-32.22804881	148.6020899
132	Olive planting	-32.22788711	148.6013766
133	Olive planting	-32.22700743	148.6016352
134	Channel running east west	-32.22684754	148.6015712
135	Grey box dbh 120 cm at least 4 hollows	-32.22665831	148.6014578
136	Poplar box dbh 120 cm multiple hollows 2 x 10 cm width 1 small stick nest	-32.22766715	148.5989382
137	1 x eucalypt yellow box? Small stick nest dbh 70 cm myoporum next to it and pepper corn trees	-32.22834586	148.5986411
138	Large banded stockpile	-32.22843283	148.5986168
139	Horse yard and paddock	-32.23062138	148.5913231
140	Old shed potential asbestos broken and on ground and tyres	-32.22525524	148.6040116
141	Old age chemical drums	-32.22540191	148.6042532
142	Old drum	-32.22548414	148.6037616
143	Old bath tub could have been a trough or used for applying chemical to stock	-32.22541643	148.6038241
144	Old drums of ag chemical in shed	-32.22399912	148.6043592

145	Grey box dbh 130 cm one hollow	-32.22377777	148.6045858
146	Possible hydrocarbon spill	-32.22496019	148.6042569
147	GW plot from 12/10 mid back	-32.22442827	148.6057816
148	Potential sheep dip	-32.22554646	148.6050362
149	Old harvester	-32.22566697	148.6050175
150	Bio hazard, basin on the other side of fence	-32.22606013	148.6049386
151	Grey box 100 cm 4 hollows	-32.22550329	148.6048109
152	Grey box dbh 100 cm stick nest estimated 40 cm wide small hollows	-32.22507925	148.6006228
153	Tin roof or cover	-32.23374364	148.5935385
154	Controls	-32.23371817	148.5935111
155	Rubbish rubber belting concrete cylinder tin sheet	-32.23381713	148.5938767
156	Small stockpile covered over with groundcover	-32.23382159	148.5937927
157	2 yellow box trees dbh 40 cm no nests or hollows	-32.23304449	148.5953519
158	Depressions stockpiles and disturbed earth	-32.23406293	148.5955371
159	Looking onto adjacent lot	-32.23435376	148.5956826
160	Small soil pile	-32.23325506	148.5946538
161	Cooba in rows	-32.23306238	148.591844
162	Paulownia planting	-32.23284913	148.5919313
163	Swainsona?	-32.23412715	148.5903213
164	Ryegrass, oats, saffron thistle, purple top, horehound	-32.2335904	148.5897175
Different recording device			
201	Twin stem yellow box. 1 stem 80 cm dbh, other stem 60 cm dbh. 2 hollows, 1 possible inactive nest	-32.23264369	148.5964625
202	Small white cedar	-32.23251708	148.5968577
203	Very significant river red gum dbh 380 cm	-32.22566665	148.60712
204	Large dead habitat tree - retain	-32.22577508	148.6065619
205	Very significant river red gum dbh 360 cm numerous hollows	-32.22542033	148.608079
206	Significant river red gum dbh 200 cm. Numerous hollows	-32.22523227	148.6086791
207	Very significant river red gum dbh 280 cm numerous hollows	-32.22526923	148.609009
208	Significant river red gum dbh 180 cm hollows	-32.22549381	148.6092307
209	Very significant river red gum dbh 380 cm. Few visible hollows	-32.22526193	148.609654

210	Significant river red gum dbh 250 cm, some hollows	-32.22533392	148.6102862
211	Very significant river red gum dbh 300 cm, some large hollows	-32.22625187	148.6106846
212	Very significant river red gum dbh 400 cm, some hollows	-32.22576825	148.6096796
213	Very significant river red gum dbh 200 cm, numerous hollows	-32.22599178	148.6085531
214	Yellow box dbh 60 cm minor hollows	-32.223759	148.5966656
215	Yellow box dbh 60 cm some hollows	-32.22362775	148.5956261
216	Half dead yellow box dbh 60 cm, some hollows	-32.22369193	148.5951635
217	Significant yellow box dbh 190 cm, some hollows	-32.22387444	148.5946782
218	Significant dead habitat tree dbh 60 cm	-32.22290799	148.5942607
219	Significant dead habitat tree dbh 60 cm	-32.22296976	148.5942461
220	Yellow box dbh 80 cm, significant hollows some are active	-32.2224607	148.5944734
221	Yellow box dbh 75 cm some hollows, noisy miners active in canopy	-32.22260016	148.5951043
222	Yellow box dbh 70 cm. Some hollows	-32.22250136	148.595596
223	Significant yellow box dbh 90 cm, some hollows	-32.22271422	148.5958731
224	Yellow box dbh 80 cm, some hollows	-32.22239763	148.5963785
225	Significant yellow box dbh 75 cm, some hollows	-32.22146904	148.5970845
226	Large dead habitat tree	-32.22182702	148.5985878
227	Yellow box dbh 60 cm, some hollows	-32.2223003	148.5972754
228	Yellow box dbh 70 cm, significant habitat hollows and dead branches	-32.2225401	148.5974571
229	Unknown eucalyptus dbh 40 cm. Significant hollows	-32.22270682	148.5969472
230	Yellow box 2 stem 1x30 cm, 1x20 cm. Possible active magpie nest	-32.22292639	148.5963066
231	Yellow box dbh 50 cm, bird of prey in canopy	-32.22324239	148.5971545
232	Yellow box? dbh 40 cm minor hollows	-32.22407141	148.597064
233	Extent of dead trees	-32.23070763	148.5950504
234	Extent of dead trees	-32.23094081	148.5950734
235	Extent of dead trees	-32.23126369	148.5950631
236	Extent of dead trees	-32.23134236	148.5953617
237	Extent of dead trees	-32.23141079	148.5957136
238	Extent of dead trees	-32.23142005	148.5960052
239	Extent of dead trees	-32.23146844	148.5963567
240	Extent of dead trees	-32.23123068	148.5966438



241	Extent of dead trees	-32.23106397	148.5966855
242	Extent of dead trees	-32.23082913	148.59691
243	Extent of dead trees	-32.23065529	148.5969079
244	Extent of dead trees	-32.23046452	148.5971177
245	Extent of dead trees	-32.23002051	148.5972125
246	Extent of dead trees	-32.22989658	148.5970173
247	Extent of dead trees	-32.22988794	148.5968996
248	Extent of dead trees	-32.23003704	148.5966419
249	Extent of dead trees	-32.23015009	148.5964644
250	Extent of dead trees	-32.23034549	148.5964576
251	Extent of dead trees	-32.23050627	148.5966807
252	Extent of dead trees	-32.23064227	148.5966753
253	Extent of dead trees	-32.2307822	148.5965948
254	Extent of dead trees	-32.23087454	148.5964247
255	Extent of dead trees	-32.23082942	148.5961238
256	Extent of dead trees	-32.23084232	148.5959053
257	Extent of dead trees	-32.23077022	148.5954233
258	Extent of dead trees	-32.2305111	148.5955852
259	Extent of dead trees	-32.23031803	148.5957893
260	Extent of dead trees	-32.23016484	148.5961095
261	Extent of dead trees	-32.2299811	148.5961416
262	Extent of dead trees	-32.22978985	148.5961603
263	Extent of dead trees	-32.2297543	148.5959553
264	Extent of dead trees	-32.22971062	148.5956726
265	Extent of dead trees	-32.2296659	148.5954372
266	Extent of dead trees	-32.22965591	148.5952472
267	Extent of dead trees	-32.22981719	148.5951621
268	Extent of dead trees	-32.23004578	148.5951646
269	Extent of dead trees	-32.23024792	148.5951244
270	Extent of dead trees	-32.23042357	148.5950991
271	Extent of dead trees	-32.23061816	148.5951073

272	Extent of dead trees	-32.23066006	148.5951052
273	Significant river red gum 3 stems. dbh 60 cm x2, 30 cm x1. No major hollows	-32.22283008	148.6067948
274	Significant river red gum dbh 100 cm. Large hollows present	-32.22369876	148.6070415
275	Very significant river red gum dbh 150 cm. Lots of large hollows	-32.22368686	148.6066147
276	Significant river red gum dbh 110 cm. Few hollows	-32.22313255	148.6066041
277	Possible scar tree	-32.22309724	148.6065796
278	Significant river red gum 2 stems ea. 100 cm dbh. Few hollows	-32.22281313	148.606517
279	Significant river red gum dbh 80 cm	-32.22253978	148.6063277
280	2 X small river red gum	-32.2224149	148.6061858
281	Very significant river red gum dbh 150 cm. Possible scar tree many hollows some large	-32.22221099	148.6060291
282	Possible scar	-32.22209568	148.6060555
283	Very significant river red gum dbh 180 cm. Possible scar. Numerous small to large hollows	-32.22196497	148.6062731
284	Yellow box dbh 60 cm no visible hollows possible scar	-32.2248046	148.6054882
285	Yellow box. Possible scar dbh 160 cm	-32.22460451	148.6054484
286	Very significant river red gum dbh 160 cm. Some large hollows	-32.22431247	148.6054327
287	Very large dead habitat tree	-32.2243426	148.6060419
288	Very significant yellow box dbh 100 cm some hollows	-32.2244056	148.6059979
289	Large yellow box tree with scar and large hollows	-32.2245844	148.6059586
290	Group of three significant yellow box dbh 50 cm - 90 cm. Some hollows of various sizes	-32.22471967	148.6057481
291	Yellow box dbh 80 cm	-32.2249305	148.6054549
292	Yellow box dbh 70 cm. Some hollows	-32.22506274	148.6055519
293	Corner of concrete block structure	-32.22991657	148.5981439
294	Corner of concrete block structure	-32.23028174	148.5980927
295	Rock ballast stockpile extent	-32.23028344	148.5981027
296	Rock ballast stockpile extent	-32.23028838	148.5982011
297	Rock ballast stockpile extent	-32.23031428	148.5983524
298	Rock ballast stockpile extent	-32.23043437	148.5983687
299	Rock ballast stockpile extent	-32.23056319	148.5982903

300	Rock ballast stockpile extent	-32.23064567	148.5981554
301	Rock ballast stockpile extent	-32.23062553	148.5979632
302	Rock ballast stockpile extent	-32.23055731	148.5978195
303	Rock ballast stockpile extent	-32.23041806	148.59785
304	Rock ballast stockpile extent	-32.23035137	148.5978927
305	Rock ballast stockpile extent	-32.23025465	148.5978088
306	Rock ballast stockpile extent	-32.23020846	148.5978419
307	Corner of concrete block structure	-32.23021386	148.5978364
308	Corner of concrete block structure	-32.22985808	148.5979734
309	Kurrajong dbh 40 cm. No hollows or nests	-32.22986886	148.597985
310	Kurrajong dbh 60 cm. No hollows or nests	-32.22894442	148.5919377
311	Kurrajong dbh 40 cm. No hollows or nests	-32.22879074	148.5919085
312	Inland grey box? dbh 90 cm. Some hollows. No visible nests	-32.22867343	148.5920576
313	Kurrajong dbh 50 cm. No hollows or nests	-32.22819404	148.5920473
314	Kurrajong dbh 50 cm. No hollows or nests	-32.22806073	148.5920694
315	Kurrajong dbh 60 cm. No hollows or nests	-32.22794504	148.5921068
316	Kurrajong dbh 70 cm. No hollows or nests	-32.22781317	148.5920815
317	Kurrajong dbh 60 cm. No hollows or nests	-32.22768739	148.5921286
318	Small stockpile maybe fence material, soil, tree branches	-32.22712531	148.5924199
319	Kurrajong planted dbh 44 cm no nest or hollows	-32.22720278	148.5922448
320	Kurrajong dbh 45 cm no nest or hollows, canopy dying	-32.22708976	148.5922816
321	Kurrajong planted dbh 45 cm, no habitat	-32.22697332	148.5922987
322	Kurrajong planted dbh 45 cm, no habitat	-32.22682014	148.5922999
323	Kurrajong dbh 45 cm planted, no habitat	-32.22643271	148.592385
324	Kurrajong planted 45 cm, no habitat, canopy thinning	-32.2263375	148.5923856
325	Stockpile fencing soil	-32.22629066	148.5925
326	Water tank	-32.2264095	148.5925951
327	Water tank	-32.22650938	148.592559
328	Old concrete trough	-32.22572954	148.5927062
329	Stag 2 hollows	-32.22578423	148.5925925
330	Grey box dbh 90 cm potential hollow	-32.22576309	148.5934148



331	Grey box dbh 110 cm potential small hollows	-32.22413343	148.5934882
332	Grey box dbh 110 cm large hollow from dead centre stem	-32.22456978	148.5948008
333	Grey dbh 60 cm no visible hollows	-32.22570543	148.5986569
334	Farm shed and stock yards potential contamination site	-32.2267026	148.5982976

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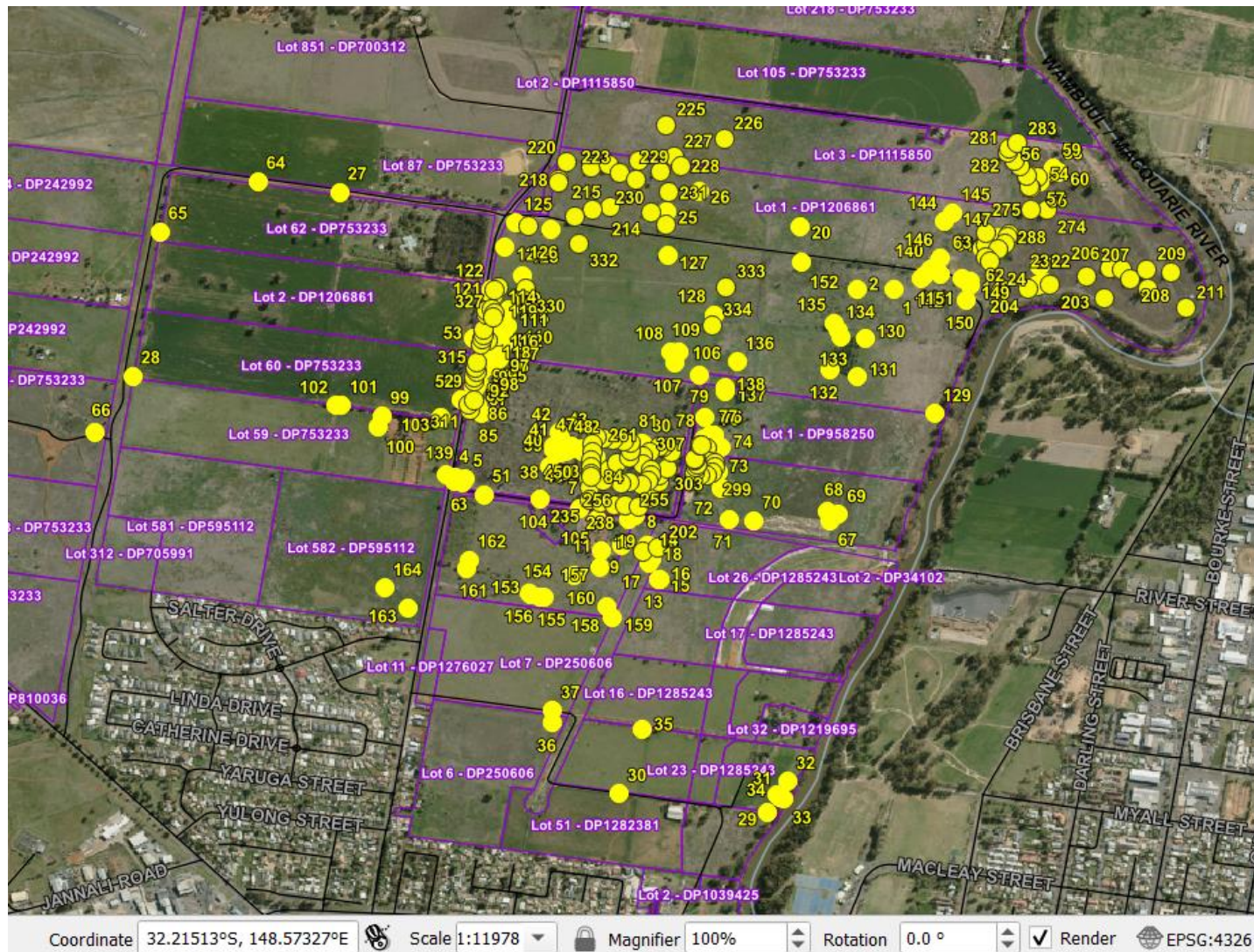
Eucalypts: River red gum (*Eucalyptus camaldulensis*), yellow box (*E. melliodora*), grey box (*E. microcarpa*) and occasional poplar box (*E. populnea*)

Other: Kurrajong (*Brachychiton populneus*) and planted spotted gum (*Corymbia maculata*).

### **Mitigation Actions that May Influence Design and Construction**

- **Avoid unnecessary tree removal, retain where possible.**
  - **Conserve and protect all cultural trees**
  - **Avoid unnecessary root disturbance and exercise care with ground works, especially in the vicinity of large trees that will be retained.**
  - **Where large tree removal is necessary consider installing 4 – 6 nest boxes per tree and microbat habitat requirements.**
  - **Removal of dead trees is a KTP, retain dead trees and large fallen logs in adjacent areas, where possible and safe to do.**
  - **Any proposed work in or around EECs requires impact assessment with a test of significance.**
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GPS waypoints recorded on site inspection:

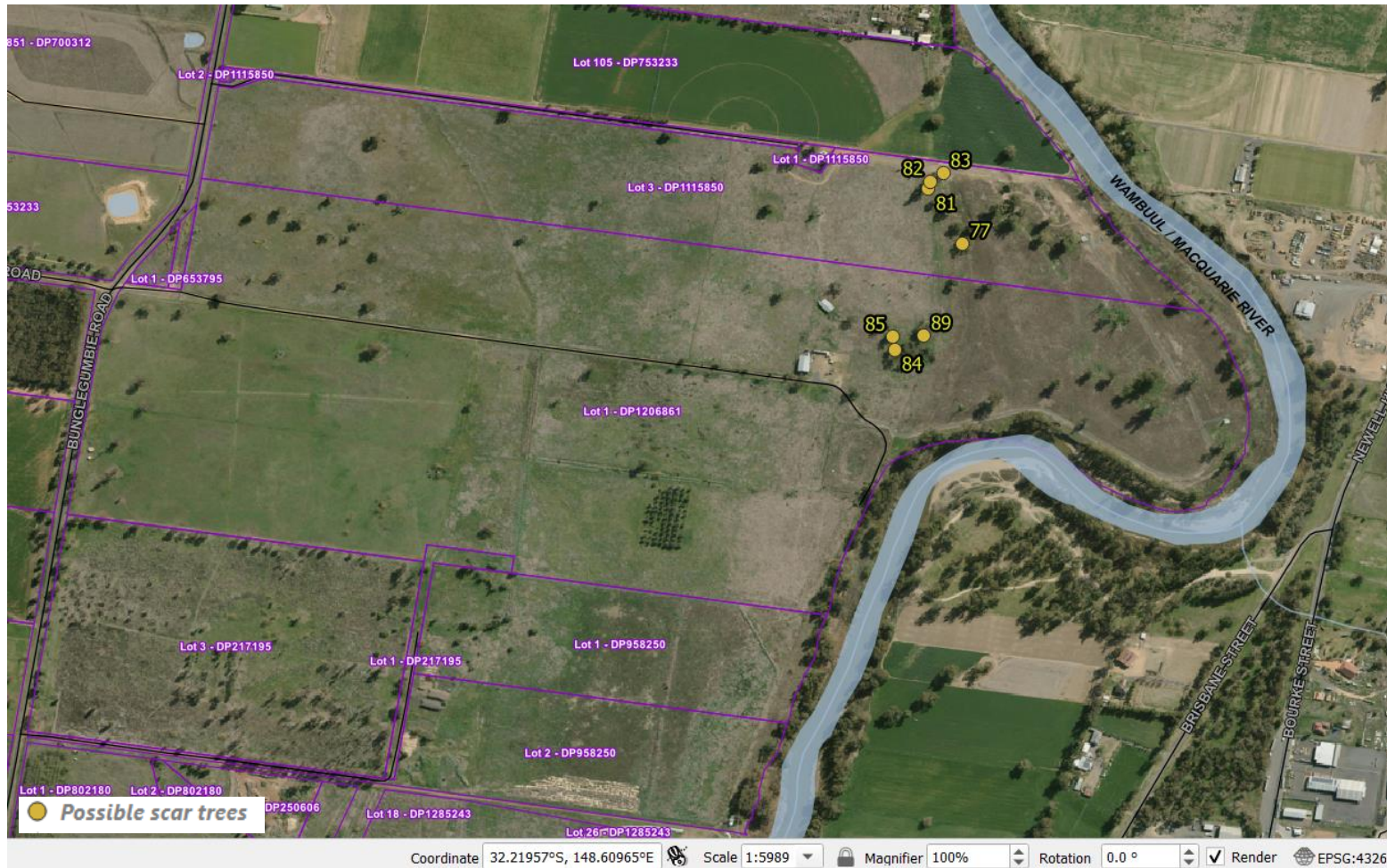








Potential Cultural Heritage Trees – note these were recorded incidentally during the course of site survey for biodiversity values and may not represent all possible sites of potential culturally important trees.





Infrastructure, rubbish, stockpiles and unknown fill:

