Pervasive inaction on national conservation law in Queensland 2016–18

Executive summary

- WWF-Australia overlaid Queensland Government maps of tree-clearing on known or likely habitats for threatened species (as mapped by the Australian Government) and identified which of these instances of habitat destruction were referred for assessment and approval as required by the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Key findings

- Habitats for 265 EPBC Act-listed threatened species covering almost 250,000 hectares were destroyed between 2016 and 2018 in Queensland, with no evidence of any referral and approval under the EPBC Act, including 50,000 hectares of koala habitat.
- Of this destruction, 94% was for livestock pasture development, and 79% fell in just two bioregions: Brigalow Belt and Mulga Lands.
- More referrals (applications for assessment and approval) have been made for development of sewage plants than for all agricultural clearing in Queensland (nine and eight referrals, respectively).
- There has not been a referral for clearing for livestock pasture in the last 10 years in Queensland and there have been no successful prosecutions under the Act in Queensland.
- The Australian Government is clearly failing to use its powers to protect threatened species from habitat destruction in Queensland on a vast scale and, in so doing, is allowing these species to be driven to extinction, contrary to the Australian Government's obligations under the EPBC Act and international conventions.

Recommendations

- The federal Environment Minister must immediately institute thorough and even-handed enforcement to curtail the pervasive unauthorised destruction of threatened species habitats, without regard to who is doing the destruction or why.
- The Australian Government can already use free weekly satellite imagery to detect unauthorised destruction of threatened species habitats and could be halting it promptly before it becomes too extensive, obviating more expensive and onerous prosecutions.

Contents

Introduction

Under the Australian Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), a person must not take an action that has a significant impact on threatened species without authorisation.[1] Such an action is called a "controlled action". It is prohibited to take a controlled action without approval under part 9 of the EPBC Act.[2]

The process for seeking approval is called "referral". After an action is referred, the regulator determines whether the action is controlled or otherwise. If an action is deemed otherwise (not a controlled action), approval is not needed or is implicit. If an action is deemed a controlled action, it must proceed to assessment and approval before it can commence.[3]

A large area of approximately seven million hectares of threatened species known or likely to occur habitats was destroyed nationwide from 2000 to 2017, which was neither referred nor approved under the EPBC Act, much of it attributable to agricultural developers.[4]

The recent independent report on the interactions between the EPBC Act and the agriculture sector confirmed that agriculture developments are greatly under-represented in the lists of referrals. The report states that "a total of 165 referrals have been received by DoEE from the agriculture sector since 2000, representing 2.7 per cent of the 6,002 referrals received under the Act". Of those 165 referrals for agricultural developments, 60 were deemed to be controlled actions. These low numbers are out of proportion to the fact that agricultural development accounts for the overwhelming bulk of forest and woodland destruction, in Queensland in particular.[5]

We examined the extent to which instances of destruction of threatened species habitats were referred and had obtained approval in Queensland for the 2016–18 period, using the Queensland Government Statewide Landcover and Tree Study (SLATS) maps of woody vegetation clearing. Thresholds for potentially significant impact were at least one hectare (ha) of known habitat or at least two hectares of likely habitat for a listed species destroyed on any one property. These criteria were considered precautionary and reasonable, in light of the fact that

[1] EPBC Act Sect 18

[2] EPBC Act Sect 67A

[3] EPBC Act Sect 68ff

[4] University of Queensland, Australian Conservation Foundation, WWF-Australia and the Wilderness Society 2018, *Fast-tracking extinction: Australia's national environmental law*, report (https://www.acf.org.au/threatened_species_habitat_environment_law).

[5] Craik W 2019, *Independent review of interactions between the EPBC Act and the agriculture sector,* Independent report prepared for the Commonwealth Department of the Environment and Energy (https://www.environment.gov.au/epbc/publications/review-interactions-epbc-act-agriculture-final-report) and Queensland Government 2020, *Statewide Landcover and Trees Study,* website (https://www.qld.gov.au/environment/land/management/mapping/statewide-monitoring/slats).

unauthorised destruction of as little as half a hectare of a threatened ecological community has been successfully prosecuted by the Australian Government.[6]

Methods

Mapping destruction of bushland

The Queensland Government SLATS record of woody vegetation change was downloaded for the period 2001 to 2018.[7] Polygons in categories "6- Timber Plantation (harvest)", "10- Natural disaster damage" and "11- Natural tree death" were excluded, since they did not involve active, large-scale destruction of native bushland.

All polygons for all years were combined and flattened. For any polygons where clearing was recorded twice or more, only the earliest year was assigned to the polygon, to avoid double-counting of clearing and to ensure any clearing observed in the period of study 2016–18 was of native bushland at least 15 years old.

Those polygons cleared in either 2016–17 or 2017–18 were then extracted. Areas were calculated in hectares in the Queensland Albers Equal Area projection as used for SLATS. Any isolated or small polygons less than one hectare were absorbed into neighbouring polygons or if they could not be absorbed, deleted.[8]

Polygons were clipped to vegetation that was at least 11% foliage projective cover as of 2014 (the latest available) to ensure that only clearing of actual forest or woodland habitat was included in addition to being at least 15 years old. Clearing of sparse vegetation (less than 11% foliage projective cover), even if remnant or never-before cleared, was excluded.[9]

Using the Queensland Government Land Use Mapping Program (QLUMP) layer for 2015,[10] we also clipped areas cleared to those from relatively natural land uses to avoid counting areas that had already been developed or converted to non-natural land covers before the period of study. Primary land use categories considered undeveloped were "Conservation and natural environments" and "Production from relatively natural environments". Under the primary category of "Water", the secondary category of "Marsh or wetland" was also included because marshes can be wooded and also susceptible to clearing.

Finally, the clearing purpose codes 1 to 5, 7 and 8 in SLATS were reclassified to enable matching to EPBC Act referral classifications as described below (Appendix 1). The resulting processed layer of such polygons is denoted CLRD1618.

Mapping the fraction of destruction of bushland outside of the footprint of relevant referrals

The EPBC Act referrals spatial database was downloaded on 1/6/18, which represents approximately the end of the SLATS 2016–18 period. Referral polygons were excluded if:

- they had not been approved at that time and were still in pre-approval stage (a determination that an action was not a controlled action was taken to be the same as approval);
- they did not intersect the CLRD1618 polygons; or
- they did not entail vegetation destruction such as biocontrol of rabbits or marine actions.

---

[6] Commonwealth Department of Agriculture, Water and the Environment 2020, *Compliance outcomes*, webpage (http://www.environment.gov.au/epbc/compliance-and-enforcement/compliance-outcomes).

[7] Queensland Government 2019, *Statewide Landcover and Trees Study Queensland series,* spatial data (http://qldspatial.information.qld.gov.au/catalogue/custom/detail.page?fid={BFE72491-2233-4FDF-8F6A-274E49F42FDC}).

[8] That means dissolving polygons into neighbours using the ArcGIS Eliminate tool based on longest shared boundary.

[9] Queensland Government 2019, *Landsat Foliage Projective Cover - Queensland 2014.* spatial data (http://qldspatial.information.qld.gov.au/catalogue/custom/detail.page?fid={E3A795AC-867D-4AA2-96DA-FF6F7BC6F3CD}).

[10] Queensland Government 2019, *Queensland Land Use Mapping Program (QLUMP) Datasets,* spatial data (https://www.qld.gov.au/environment/land/management/mapping/statewide-monitoring/qlump/qlump-datasets).

This left 348 referrals.

On the basis of the purpose category of the referral, we sorted referrals into one of four land use classes for purposes of matching to the purpose codes in the CLRD1618 layer. There were some unexpected assignments made on the basis of the project description (Appendix 1).

The full list of referrals that could possibly explain the destruction of habitat observed are shown in Appendix 2. We did not attempt to assign every single SLATS event to a given referral, as this is not practically possible on available information. Instead, we used co-incidence of both broad purpose and of spatial overlap to infer that EPBC Act authorisation was at least *possible* for a given instance of clearing.

We intersected CLRD1618 with this referrals layer and removed any polygons for which the land use class of the referral matched that for SLATS.

This was presumed to be that fraction of CLRD1618 which was *possibly* referred and approved under the EPBC Act, although not confirmed to be such. We erased these possibly referred areas from CLRD1618 to produce a subset denoted "CLRD1618_noapproval", which was taken to be that fraction which was neither referred nor approved.

Mapping unreferred destruction of threatened species habitat

The Species of National Environmental Significance spatial database 2016 release was reduced down to those non-marine, threatened species whose known or likely to occur habitats (KL) intersected with the clearing polygons generated above for which no referral of matching type could be found (CLRD1618_noapproval).

The intersecting polygons were in turn intersected with the Queensland Government *Rural Properties* spatial data.[11] Since rural properties do not capture all properties in the state, those intersected polygons that did not overlap any rural property were then intersected with the state Digital Cadastral Database (DCDB).[12] These two layers were then merged, dissolved by property (or lot descriptor), species and type of habitat (known or likely), and areas of all polygons were calculated in Queensland Albers projection.

A given species on a given property was only retained as "potentially significantly impacted" on that property if the known habitat for any given species destroyed on that property across both years and land uses was one hectare or greater, or if the likely habitat destroyed was two hectares or greater, or the sum of the two habitat types was two hectares or greater.

We then dissolved respectively by property, by epoch and purpose of clearing, or by species respectively, calculated areas of polygons and tabulated results.

[11] Queensland Government 2014, *Rural Properties Queensland*, spatial data (http://qldspatial.information.qld.gov.au/catalogue/custom/detail.page?fid={056BC8D6-A24C-423E-9C05-AA6952C5F0D4}).
[12] Queensland Government 2019, *Property boundaries Queensland*, spatial data (http://qldspatial.information.qld.gov.au/catalogue/custom/detail.page?fid={3F217A59-1FDB-412A-813D-A1E7843FB618}).

Results and discussion

In the two-year period 2016–18 in Queensland, 748,000 hectares of woodland and forest of any age or type were cleared.[13]

Of this area, 246 582 hectares of known or likely to occur habitats for 265 nationally threatened species[14] (as mapped by the Australian Government) were destroyed on 4,794 properties in Queensland, with no evidence of relevant referrals and approvals under the EPBC Act (Table 1). This area is larger than the entire Australian Capital Territory (235,800 hectares).[15]

Over three-quarters (79%) of all unreferred habitat destruction fell in just two bioregions: Brigalow Belt and Mulga Lands (Figure 1).

In an earlier version of this analysis over the preceding three years 2013–2016,[16] we reported that nearly 300,000 hectares of threatened species habitats, threatened ecological communities or stream buffers in the Great Barrier Reef catchments were destroyed in Queensland.

This analysis, by comparison, is for the most recent two-year period for which clearing data have been made available, and only for threatened species. Unreferred and unapproved, and therefore potentially unauthorised, non-compliant destruction of matters of national environmental significance has not declined in Queensland.

A subset of 740 properties, 15% of all properties, each with more than 60 hectares of combined known or likely habitat destroyed without referrals, accounted for 81% of the area of all combined habitat destroyed.

Properties were highly variable in the numbers of species with habitats destroyed. For example, a single property with 278 hectares of combined habitat destroyed had the following list of 19 threatened species losing habitat:[17]

- Mammals: northern quoll (EN, 278 ha); large pied bat (VU, 278 ha);
- Birds: star finch (EN, 259 ha); black-throated finch (EN, 149 ha); red goshawk (VU, 278 ha); squatter pigeon (VU, 277 ha);
- Reptiles: ornamental snake (VU, 273 ha);

Table 1. Areas of combined known or likely to occur threatened species habitats destroyed 2016–18, and not referred, for respective purposes as extracted from Queensland Government SLATS mapping

Purpose	2016–17	2017–18	Both years	% of total
Pasture	104,568	101,400	205,968	84%
Thinning (usually for Pasture)	7,698	16,437	24,135	10%
Crop	3,779	1,886	5,665	2.3%
Missed clearing from previous era (no purpose identified)		4,206	4,206	1.7%
Mining	2,516	3,021	5,537	2.2%
Infrastructure	256	538	794	0.3%

[13] Queensland Government 2019, *Statewide Landcover and Trees Study (SLATS): Reports and spatial products*, webpage (https://www.qld.gov.au/environment/land/management/mapping/statewide-monitoring/slats/slats-reports).

[14] Listed as critically endangered, endangered or vulnerable under the EPBC Act.

[15] Geoscience Australia 2019, *Area of Australia - States and Territories, w*ebpage (http://www.ga.gov.au/scientific-topics/national-location-information/dimensions/area-of-australia-states-and-territories).

[16] WWF-Australia 2019, *Pervasive inaction on national conservation law over tree clearing in Queensland, 2013-16*, website (https://sites.google.com/view/pervasiveinaction).

[17] EN means Endangered, VU means vulnerable.

Settlement	147	130	277	0.1%
Grand Total	118,964	127,618	246,582	100%

- Plant: *Cycas megacarpa* (EN, 158 ha); *Cycas ophiolitica* (EN, 278 ha); *Capparis thozetiana* (VU, 24 ha); Glen Geddes bloodwood (VU, 90 ha); three-veined hakea (VU, 48 ha); *Marsdenia brevifolia* (VU, 48 ha); *Neoroepera buxifolia* (VU, 50 ha); *Olearia macdonnellensis* (VU, 199 ha); Mt Larcom silk pod (VU, 48 ha); *Pimelea leptospermoides* (VU, 48 ha); *Pultenaea setulosa* (VU, 48 ha); *Samadera bidwillii* (VU, 113 ha).

The top six species losing habitat statewide were: squatter pigeon (VU) 111,706 ha; red goshawk (VU) 106,953 ha; star finch (EN) 81,459 ha; painted honeyeater (VU) 70,592 ha; northern quoll (VU) 62,804 ha and koala (VU) 53,391 ha. The areas of mapped habitat destroyed for each species are shown in Appendix 3.

Development of pasture for livestock accounted for over 94% of all threatened species habitat destruction, while all agricultural development accounted for 98% (Table 1). However, there has not been a single referral for approval of threatened species habitat destruction for livestock pasture in the past 10 years from Queensland in the list of EPBC Act referrals, and there has never been a successful case judgement listed for Queensland.[2]

The recent independent *Review of interactions between the EPBC Act and the agriculture sector* also observed that referrals for agricultural developers represent only a small fraction of all referrals made under the Act.[18]

The Queensland Government could have, but does not have, a program for exercising its EPBC Act Sect. 69 powers to refer actions that likely have a significant impact on listed species to the Australian Government.

The Australian Government has no publicly reported program to rein in this widespread disregard of the referral obligations under the EPBC Act.[19] It is quite possible for the Australian Government to monitor continually for destruction of known and likely habitats for protected species and ecosystems using free weekly satellite imagery, and to immediately intervene to halt unauthorised destruction before more harm is done.

The Queensland Government has instituted just such an Early Detection System of continual real-time monitoring to halt infractions of native vegetation legislation before they become serious.[20]

Such a program of monitoring and enforcement should also be instituted by the Australian Government in regard to destruction of forest and woodland habitats for threatened species, as well as other matters of national environmental significance.

[18] Craik W 2019, *Independent review of interactions between the EPBC Act and the agriculture sector,* Independent report prepared for the Commonwealth Department of the Environment and Energy (https://www.environment.gov.au/epbc/publications/review-interactions-epbc-act-agriculture-final-report).

[19] In Australian Senate Budget Estimates hearings on 4/4/2019, the Department advised there were only 10 investigations of possible non-compliance in Queensland pp. 11-12 in https://parlinfo.aph.gov.au/parlInfo/download/committees/estimate/d156d4b9-a846-46e2-85d3-b0062851dbcc/toc_pdf/Environment%20and%20Communications%20Legislation%20Committee_2019_04_04_7044.pdf;fileType=application%2Fpdf#search=%22committees/estimate/d156d4b9-a846-46e2-85d3-b0062851dbcc/0000%22

[20] Queensland Government 2019, *Monitoring and compliance of clearing activities*, webpage (https://www.qld.gov.au/environment/land/management/vegetation/monitoring).

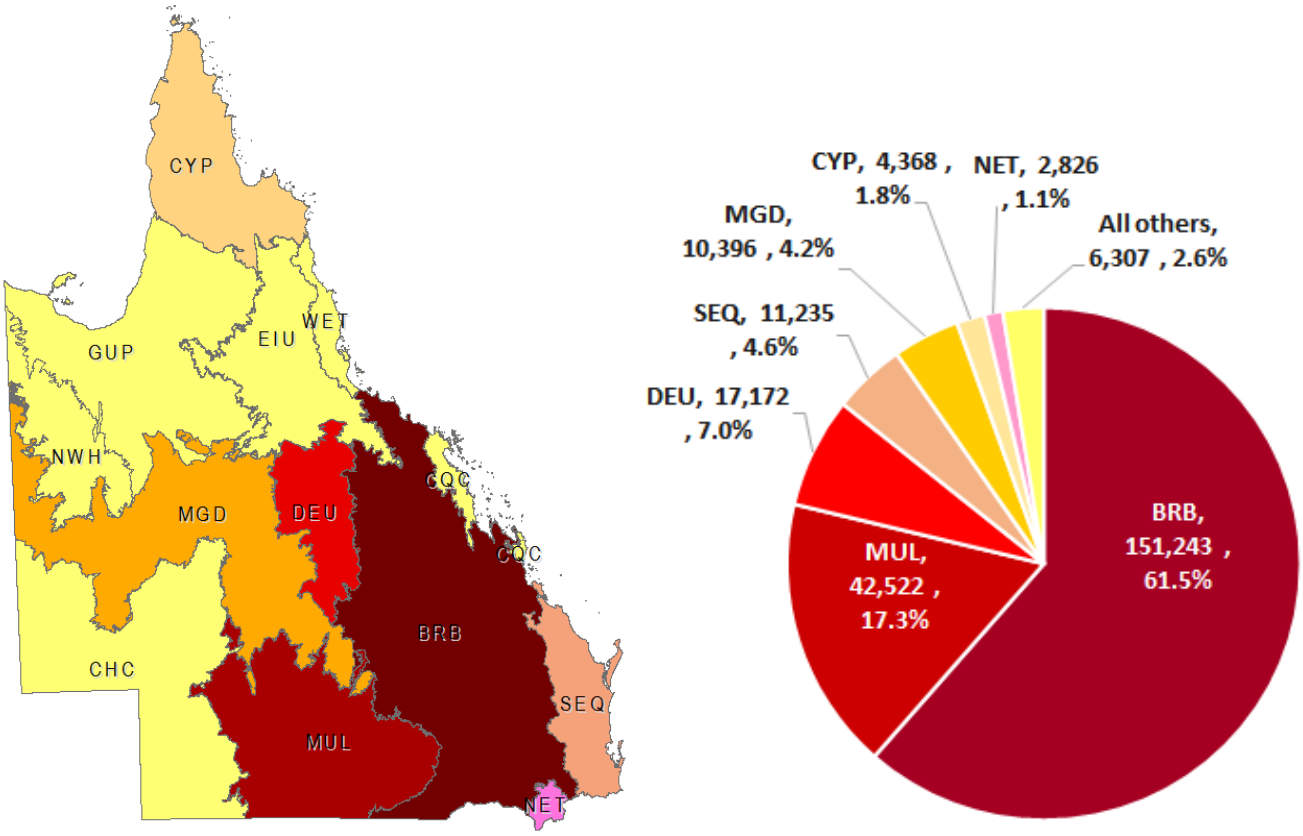

Figure 1. Map of bioregions (left) and areas (ha) and proportions of total threatened species habitat destruction from 2016 to 2018 in respective bioregions of Queensland (right)

Authors

Dr Martin Taylor

Dr Stuart Blanch

Appendix 1. Alignment of EPBC Act referral and SLATS clearing categories

Common purpose category	SLATS purpose	Referral purpose category	Referrals
Agriculture	Pasture, Thinning, Crops, Forestry, Missed in previous period	Agriculture and Forestry	8
		Natural Resources Management	1
Agriculture subtotal			**9**
Infrastructure	Infrastructure	Aquaculture	2
		Energy Generation/Supply (non-renewable)	62
		Energy Generation/ Supply (renewable)	13
		Manufacturing	1
		Telecommunications	1
		Transport – Air and Space	5
		Transport – Land	40
		Transport – Water	6
		Waste Management (non-sewerage)	1
		Waste Management (sewerage)	9
		Water Management and Use	19
Infrastructure subtotal			**159**
Mining	Mining	Exploration (mineral, oil and gas – non-marine)	4
		Mining	99
Mining subtotal			**103**
Settlement	Settlement	Agriculture and Forestry	1
		Commercial Development	17
		Manufacturing	4
		Residential Development	42
		Tourism and Recreation	13
Settlement subtotal			**57**
Total			**348**

Appendix 2. Referrals that may explain clearing observed

2001/221	2001/232	2001/262	2001/264	2001/270
2001/276	2001/286	2001/287	2001/294	2001/322
2001/349	2001/460	2001/484	2001/497	2002/637
2002/639	2002/640	2002/728	2002/770	2002/795
2002/823	2002/880	2003/1024	2003/1043	2003/1090
2003/1096	2003/1098	2003/1103	2003/1118	2003/1122
2003/1124	2003/1143	2003/1152	2003/1155	2003/1160
2003/1164	2003/1167	2003/1173	2003/1216	2003/1234
2003/1245	2003/1264	2003/1277	2003/1287	2003/1297
2003/1302	2003/1312	2003/924	2003/941	2003/947
2003/962	2003/992	2004/1335	2004/1340	2004/1361
2004/1390	2004/1401	2004/1427	2004/1435	2004/1452
2004/1486	2004/1494	2004/1499	2004/1529	2004/1547
2004/1553	2004/1571	2004/1592	2004/1606	2004/1644
2004/1713	2004/1716	2004/1741	2004/1743	2004/1749
2004/1770	2004/1797	2004/1822	2004/1849	2004/1850
2004/1861	2004/1869	2004/1879	2004/1885	2004/1908
2004/1918	2004/1920	2004/1924	2005/1988	2005/1995
2005/2015	2005/2035	2005/2047	2005/2049	2005/2058
2005/2059	2005/2064	2005/2070	2005/2077	2005/2080
2005/2095	2005/2123	2005/2124	2005/2130	2005/2135
2005/2136	2005/2137	2005/2162	2005/2170	2005/2179
2005/2204	2005/2207	2005/2209	2005/2246	2005/2248
2005/2254	2005/2257	2005/2301	2005/2319	2005/2334
2005/2351	2005/2358	2005/2361	2005/2376	2005/2377
2005/2384	2005/2404	2005/2487	2005/2488	2006/2506
2006/2527	2006/2532	2006/2547	2006/2555	2006/2563
2006/2593	2006/2604	2006/2615	2006/2641	2006/2709
2006/2745	2006/2757	2006/2820	2006/2845	2006/2896
2006/2916	2006/2997	2006/3040	2006/3043	2006/3106
2006/3150	2006/3157	2007/3230	2007/3257	2007/3316

2007/3334	2007/3353	2007/3358	2007/3400	2007/3423
2007/3430	2007/3434	2007/3465	2007/3501	2007/3574
2007/3648	2007/3686	2007/3764	2007/3773	2007/3785
2007/3824	2007/3877	2007/3925	2008/3944	2008/4059
2008/4061	2008/4096	2008/4130	2008/4237	2008/4278
2008/4283	2008/4285	2008/4287	2008/4308	2008/4313
2008/4390	2008/4398	2008/4399	2008/4417	2008/4418
2008/4429	2008/4435	2008/4441	2008/4452	2008/4456
2008/4483	2008/4559	2008/4620	2008/4648	2009/4737
2009/4755	2009/4795	2009/4821	2009/4840	2009/4892
2009/4934	2009/4966	2009/4974	2009/4976	2009/5029
2009/5033	2009/5072	2009/5087	2009/5158	2009/5173
2009/5175	2009/5195	2009/5215	2009/5245	2010/5308
2010/5326	2010/5343	2010/5344	2010/5394	2010/5418
2010/5421	2010/5427	2010/5450	2010/5457	2010/5482
2010/5496	2010/5497	2010/5514	2010/5581	2010/5615
2010/5616	2010/5642	2010/5727	2010/5730	2010/5736
2010/5775	2010/5778	2010/5783	2011/5800	2011/5820
2011/5823	2011/5873	2011/5905	2011/5906	2011/5937
2011/5965	2011/5968	2011/5976	2011/5987	2011/6010
2011/6031	2011/6032	2011/6034	2011/6062	2011/6069
2011/6082	2011/6091	2011/6101	2011/6106	2011/6129
2011/6130	2011/6181	2011/6225	2011/6228	2012/6236
2012/6246	2012/6257	2012/6262	2012/6324	2012/6337
2012/6348	2012/6357	2012/6377	2012/6385	2012/6459
2012/6555	2012/6562	2012/6615	2012/6660	2013/6717
2013/6718	2013/6797	2013/6799	2013/6800	2013/6821
2013/6865	2013/6885	2013/6886	2013/7025	2013/7030
2013/7035	2013/7047	2013/7057	2013/7066	2013/7074
2013/7106	2014/7190	2014/7206	2014/7240	2014/7256
2014/7272	2014/7281	2014/7291	2014/7292	2014/7305
2014/7306	2014/7310	2014/7319	2014/7325	2014/7338
2014/7350	2014/7382	2014/7384	2014/7392	2014/7393

2014/7394	2014/7396	2015/7463	2015/7464	2015/7485
2015/7513	2015/7531	2015/7538	2015/7575	2015/7581
2016/7676	2016/7683	2016/7694	2016/7717	2016/7723
2016/7728	2016/7788	2016/7810	2017/7858	2017/7876
2017/7888	2017/7904	2017/7969	2017/8000	2017/8055
2017/8076	2017/8116	2018/8190		

An Excel file listing more details of these referrals that might explain the clearing observed is available online at: https://drive.google.com/open?id=165vXV5gDU7IsFeYZqreKSGTEUEXtJbKJ8XvplpkeWxg

Appendix 3. Areas of known or likely habitats for threatened species (ha) cleared without referrals in Queensland 2016–18

SPRATID	Name	Status[21]	Known	Likely
	Animals			
66	water mouse	VU	90	295
96	pookila mouse	VU	28	1815
98	koontoo mouse	EN	-	201
183	large pied bat	VU	-	14,574
185	spectacled flying fox	VU	225	991
186	grey-headed flying fox	VU	6,911	8,476
214	northern bettong	EN	-	30
225	brush-tailed rock-wallaby	VU	6	382
226	Proserpine rock-wallaby	EN	-	11
282	bilby	VU	39	5,169
305	Julia Creek dunnart	EN	2	269
331	northern quoll	EN	653	62,151
26775	mahogany glider	EN	-	95
59283	Carpentarian antechinus	VU	-	23
64475	northern tiger quoll	EN	13	27
66645	long-nosed potoroo	VU	10	742
66889	bare-rumped sheathtail bat	CE	-	1,360
66890	greater large-eared horseshoe bat	EN	765	77
75184	tiger quoll	EN	16	759
83395	south-eastern long-eared bat	VU	-	14,919
85104	koala	VU	17,463	35,928
87620	black-footed tree-rat	VU	-	216
88022	yellow-bellied glider	VU	-	12
413	Gouldian finch	EN	499	874
470	painted honeyeater	VU	1,399	69,193
533	eastern bristlebird	EN	-	431
720	golden-shouldered parrot	EN	22	32
744	swift parrot	EN	-	4,567
856	curlew sandpiper	CE	7	0
906	plains-wanderer	CE	-	729
923	black-breasted button-quail	VU	178	8,739
942	red goshawk	VU	3,982	102,971
1001	Australasian bittern	EN	1,782	316
25986	cassowary	EN	81	138
26027	star finch	EN	-	81,459
26048	northern masked owl	VU	2	1,593
59293	buff-breasted button-quail	EN	-	131
59350	night parrot	EN	-	283
59714	Coxen's fig-parrot	EN	4	4
64440	squatter pigeon	VU	9,827	101,879
64443	crimson finch	VU	3	5
64447	black-throated finch	EN	155	9,552
67090	Dawson yellow chat	CE	-	2
77037	Australian painted snipe	EN	-	1,160
82338	regent honeyeater	CE	590	2,431
1193	ornamental snake	VU	213	37,882
1308	Mt Cooper striped lerista	VU	-	22
1378	retro slider	EN	44	255
1420	yakka skink	VU	431	27,633
1656	collared delma	VU	215	2,248
25934	long-legged worm-skink	VU	-	264

[21] EN means endangered, VU means vulnerable.

59254	Dunmall's snake	VU	242	1,927
59550	Nangur spiny skink	CE	-	7
64389	Mary River turtle	EN	60	73
67197	gulf snapping turtle	EN	1	-
81648	southern snapping turtle	CE	0	685
83821	plains death adder	VU	9	147
84578	border thick-tailed gecko	VU	-	686
86071	Bell's saw-shelled turtle	VU	-	2
1802	common mistfrog	EN	19	353
1817	waterfall frog	EN	13	185
1820	mountain mistfrog	CE	32	32
1821	wallum sedge frog	VU	-	29
1841	armoured mistfrog	CE	-	3
1887	Eungella day frog	EN	-	120
1944	giant barred frog	EN	5	16
25960	Fleay's frog	EN	-	31
64385	magnificent brood frog	VU	-	41
82063	Kuranda tree frog	EN	0	26
86707	lace-eyed tree frog	EN	19	294
26185	Lake Eacham rainbowfish	EN	-	2
67620	lungfish	VU	20	-
83806	Mary River cod	EN	2	7
67458	boggomoss snail	CE	2	12
	Plants			
2406	Belson's panic	VU	-	4
2705	*Pultenaea setulosa*	VU	-	152
2794	clear milkvine	VU	-	2
3066	cossinia	EN	-	5,295
3141	*Xerothamnella parvifolia*	VU	-	9
3160	swamp stringybark	EN	-	3
3205	wedge-leaf tuckeroo	VU	-	5,952
3322	Boonah tuckeroo	VU	-	19
3412	*Macrozamia platyrhachis*	EN	-	415
3539	smooth-bark rose apple	VU	-	43
3566	*Acacia grandifolia*	VU	13	35
3567	*Daviesia discolor*	VU	-	28
3763	*Acacia ammophila*	VU	-	190
3908	curly-bark wattle	VU	-	10
4124	blue knob orchid	VU	-	144
4146	*Xerothamnella herbacea*	EN	-	217
4165	*Acacia lauta*	VU	9	81
4243	black grevillea	VU	-	25
4311	stream clematis	VU	-	403
4690	*Toechima pterocarpum*	EN	-	18
4822	*Westringia parvifolia*	VU	-	1,636
4918	yellow swamp-orchid	EN	-	24
5481	king blue-grass	EN	37	4,795
5712	pineapple zamia	EN	-	1,814
5780	*Cycas cairnsiana*	VU	-	9
5872	lesser swamp-orchid	EN	-	76
5948	*Romnalda strobilacea*	VU	-	13
6021	*Capparis thozetiana*	VU	-	24
6416	*Alectryon ramiflorus*	EN	-	16
6649	hoop pine orchid	VU	-	10
6765	slender darling-pea	VU	-	248
7214	Gympie nut	VU	-	262
7326	Queensland nut	VU	-	128
7718	*Apatophyllum olsenii*	VU	6	0
7979	*Grevillea glossadenia*	VU	-	47

8029	*Rhaphidospora bonneyana*	VU	-	1,227
8299	*Aponogeton bullosus*	EN	-	14
8587	*Bertya pinifolia*	VU	-	20
8601	Mt Blackwood holly	VU	-	9
8635	*Cajanus mareebensis*	EN	890	696
8738	southern penda	VU	-	41
8836	*Sophora fraseri*	VU	-	278
9003	*Macropteranthes montana*	VU	-	11
9074	*Pterostylis bicornis*	VU	-	7
9174	*Coopernookia scabridiuscula*	VU	-	10
9338	hairy-joint grass	VU	-	77
9828	ooline	VU	-	43,393
9940	*Drosera prolifera*	VU	-	5
10181	*Eucalyptus virens*	VU	-	2,580
10306	Cooktown orchid	VU	4	4,385
10577	spiny gardenia	EN	-	8
10584	button grass	EN	-	63
10690	*Acacia attenuata*	VU	1	310
10838	*Paspalidium grandispiculatum*	VU	-	38
10839	hawkweed	VU	-	103
10927	pink gidgee	VU	-	984
11344	onion cedar	VU	-	9
11371	*Calophyllum bicolor*	VU	30	445
11852	ant plant	VU	-	106
11976	stinking laurel	VU	-	21
12431	*Euphorbia carissoides*	VU	-	338
12673	blotched sarcochilus	VU	-	273
12836	*Acacia deuteroneura*	VU	-	192
13189	*Sauropus macranthus*	VU	-	10
13375	*Neoroepera buxifolia*	VU	-	51
13451	bacon wood	VU	1	21
13585	chocolate tea tree orchid	VU	-	117
13792	*Bertya opponens*	VU	-	54
13819	*Solanum dunalianum*	VU	-	722
14035	wandering pepper-cress	EN	6	201
14069	*Germainia capitata*	VU	-	996
14159	bluegrass	VU	-	51
14180	*Olearia macdonnellensis*	VU	1	242
14319	*Neisosperma kilneri*	VU	-	26
14659	native jute	EN	-	61
14747	*Triunia robusta*	EN	7	49
14767	*Tectaria devexa*	EN	-	30
14928	Hando's wattle	VU	-	46
15002	Lloyd's olive	VU	-	100
15140	velvet hopbush	VU	-	4
15202	Austral toadflax	VU	7	5,640
15585	*Diplazium cordifolium*	VU	-	8
15762	possum nut	VU	-	24
15931	three-veined hakea	VU	-	149
15961	satin-top grass	VU	-	4
16091	yellow satinheart	VU	-	6,829
16344	black ironbox	VU	1	926
17140	rusty desert phebalium	VU	-	10
17340	shiny-leaved condoo	EN	-	24
17906	*Aristida annua*	VU	-	418
18106	small-leaved denhamia	VU	-	3,508
18229	*Lastreopsis walleri*	VU	-	24
18260	*Westringia rupicola*	VU	-	3
18598	granite boronia	EN	-	82
18776	*Ristantia gouldii*	VU	-	11

19131	ravine orchid	VU	-	5
19154	*Asplenium wildii*	VU	9	1
19748	Queensland white gum	VU	-	686
19799	velvet wattle	VU	-	18
20433	Goodwood gum	VU	-	35
20503	*Tylophora woollsii*	EN	-	4
20849	*Pimelea leptospermoides*	VU	-	268
20992	narrow-leaved peppermint	VU	-	3
21189	bopple nut	VU	-	35
21315	border boronia	EN	-	46
21484	small-leaved tamarind	EN	-	16
21816	*Xanthostemon formosus*	EN	-	5
22564	*Phaius pictus*	VU	-	39
22647	Austral cornflower	VU	-	1,555
23956	*Canarium acutifolium*	VU	-	5
24039	*Fontainea rostrata*	VU	-	167
24040	*Fontainea venosa*	VU	-	1,044
24178	*Carronia pedicellata*	EN	-	10
24241	*Calytrix gurulmundensis*	VU	-	47
24319	*Homoranthus montanus*	VU	-	30
24603	*Chingia australis*	EN	1	13
29708	*Samadera bidwillii*	VU	-	351
41998	*Hydriastele costata*	VU	-	15
46794	velvet jewel orchid	VU	-	11
52955	Floyd's walnut	EN	-	54
55130	Cardwell midge orchid	EN	-	33
55145	Durikai mallee	VU	-	47
55151	*Pomaderris clivicola*	VU	-	16
55186	*Homoranthus decumbens*	EN	-	9
55196	*Homoranthus porteri*	VU	-	26
55231	*Tylophora linearis*	EN	-	942
55237	*Tylophora rupicola*	EN	-	3
55406	*Macrozamia lomandroides*	EN	-	42
55417	Yarwun whitewood	EN	-	61
55459	veiny graptophyllum	EN	-	12
55581	*Callistemon pungens*	VU	-	247
55728	*Plectranthus torrenticola*	EN	-	16
55729	*Plectranthus omissus*	EN	-	16
55794	*Cycas megacarpa*	EN	476	4,090
55796	*Cycas platyphylla*	VU	-	35
55797	*Cycas ophiolitica*	EN	840	6,312
56133	*Ozothamnus eriocephalus*	VU	-	33
56312	*Astrotricha roddii*	EN	-	145
56320	Bean's ironbark	VU	-	19
56400	red silky oak	VU	-	49
56714	*Syzygium velarum*	VU	-	4
56758	*Zieria obovata*	VU	-	3
56761	*Zieria verrucosa*	VU	-	136
61156	*Acacia purpureopetala*	CE	7	11
64021	Glen Geddes bloodwood	VU	9	133
64072	*Corymbia clandestina*	VU	14	361
64500	Myola palm	EN	-	9
64582	*Macrozamia conferta*	VU	-	496
64583	*Macrozamia machinii*	VU	2	11
64585	*Marsdenia brevifolia*	VU	-	247
64586	*Omphalea celata*	VU	-	785
64587	Mt Larcom silk pod	VU	-	123
64589	*Plectranthus habrophyllus*	EN	-	51
64651	*Grevillea quadricauda*	VU	-	31
64681	*Macrozamia cranei*	EN	-	90

64682	*Macrozamia parcifolia*	VU	-	132
64925	*Leionema obtusifolium*	VU	-	13
64944	Kogan waxflower	VU	-	620
65889	middle filmy fern	EN	-	36
66351	*Hakea maconochieana*	VU	-	558
68391	Proston *Lasiopetalum*	CE	8	19
78349	*Bertya ernestiana*	VU	2	2
78700	*Cepobaculum carronii*	VU	-	38
78703	*Durabaculum mirbelianum*	EN	-	6
78704	*Durabaculum nindii*	EN	-	9
78866	angle-stemmed myrtle	EN	-	7
78893	dwarf butterfly orchid	EN	4	4,385
78894	Cooktown orchid	VU	4	4,385
81869	Mt Berryman phebalium	CE	-	632
82049	*Phaleria biflora*	VU	-	11
82771	thin feather orchid	VU	-	9
82772	*Polianthion minutiflorum*	VU	-	356
82846	*Rhinerrhizopsis matutina*	VU	-	30
83575	*Vrydagzynea grayi*	EN	-	15
83928	pale chandelier orchid	VU	-	14
84115	*Prostanthera* sp. Dunmore	VU	-	101
86550	blue tassel-fern	EN	-	30
86551	rat's tail tassel-fern	EN	-	10
86553	water tassel-fern	VU	-	25
86555	square tassel fern	VU	-	12