

Part of this site is included within the State mapping. Unfortunately, no photos are available for the specific site, but it is clear from the aerial that this site has been previously cleared. This site has been chosen because it is in cluster with the existing buildings and as such seemed appropriate.



Figure 16: Site 1

2.3.3 Planning Scheme

The site is mostly excluded from the Environmental Significance Overlay except for the riparian corridors and a small portion of the wildlife habitat. The mapped Wildlife habitat area is outside the proposed work areas as seen on the map below:

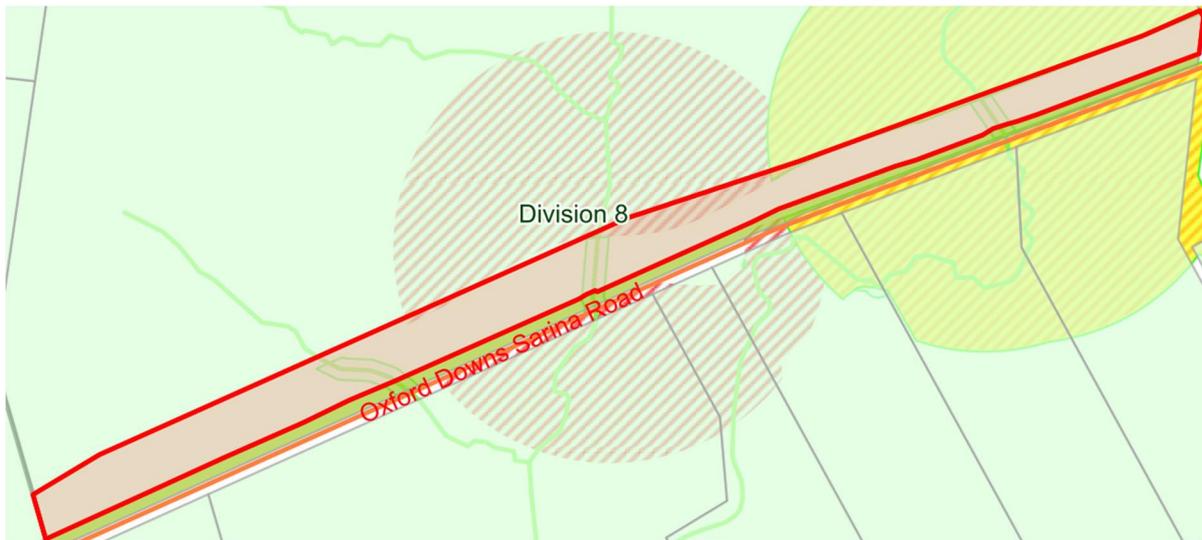


Figure 17: Environmental Significance Overlay Isaac Regional Council

The proposed development complies with the Environmental Significance Overlay as:

- The proposed development is outside the mapped areas;
- Ground truthing has demonstrated that no significant vegetation will be affected by the development.
- A construction management plan is proposed to be submitted prior to construction
- The aerial photos show that the subject sites have been cleared for a long time.
- The Wildlife Habitat is already fragmented due to the railway and the existing buildings.
- The riparian corridors will not be affected by the proposed development. There is more than 200 m distance between the riparian corridors and the proposed development site
- It is also proposed to rehabilitate some areas that have been degraded to comply with PO 18 of the Environmental Significance Overlay Code . These areas are identified below (Hatched dark green) :



2.3.4 Recommendations

The proposed development plan minimises the impact on vegetation and wildlife habitat and as such is considered acceptable. There is sufficient distance between the riparian corridor and the proposed development site to avoid any impacts. The following is recommended:

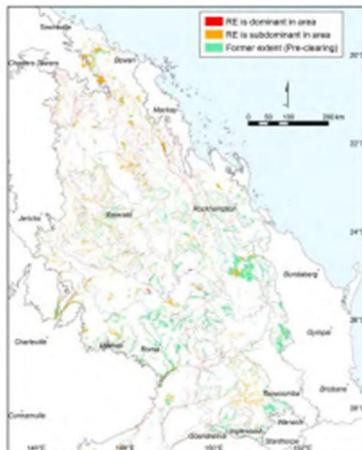
- A construction management plan is to be submitted prior to construction. It is proposed to include mitigation measures for the adjoining lots.
- Two degraded areas are proposed to be rehabilitated. A rehabilitation plan is proposed to be submitted prior to the start of construction. A weed and land management plan is intended to be put in place.

APPENDIX A – Technical descriptions

Technical Description

Regional ecosystem: **11.3.25**

Eucalyptus tereticornis or E. camaldulensis woodland fringing drainage lines



Pre-clearing area (ha), remnant area (ha) and per cent remaining: 685,740 430,808 63%

Species_recorded: Total: 530; woody: 104; ground: 467; Avg. spp./site: 32.2; std dev.: 12.6, 38 site(s)

Basal area: Avg./site: 14.7 m²/ha, range: 2.0 - 38 m²/ha, std. deviation: 8 m²/ha, 46 site(s)

Structural formation: Woodland: 44%; open-forest: 23%; open-woodland: 21%; tall woodland: 6%; tall open-forest: 2%; low woodland: 2%; closed-forest: 2%, 48 site(s)

Representative_sites 2459, 14146, 14164, 14595, 16233, 16236, 16590, 16608, 16623, 16641, 16677, 16724, 16736, 16751, 16787, 16795, 16867, 16877, 16936, 16958, 16967, 17094, 17133, 17155, 17260, 17385, 17400, 17482, 17654, 17682, 19112, 19113, 19210, 28778, 30413, 40910, 41705, 41715, 41915, 41916, 41975, 41995, 42015, 42016, 42190, 42194, 42237, 42264.

Stratum: Emergent

Height avg. = 23.9m, range 14-36m, 7 sites

Crown cover avg. = 5.0%, range 2.0-9.0%, 7 sites

Frequent species (cover, frequency): *Eucalyptus tereticornis* (6, 10%), *Casuarina cunninghamiana* (4, 2%), *Cymbidium canaliculatum* (2%), *Eucalyptus camaldulensis* (2, 2%)

Stratum: Tree 1

Height avg. = 22.1m, range 6-32m, 48 sites

Crown cover avg. = 34.9%, range 5.0-86.0%, 48 sites

Dominant species (relative cover, frequency): *Eucalyptus camaldulensis* (73, 46%), *Eucalyptus tereticornis* (61, 48%), *Corymbia tessellaris* (12, 21%)

Frequent species (cover, frequency): *Eucalyptus tereticornis* (23, 48%), *Eucalyptus camaldulensis* (25, 46%), *Corymbia tessellaris* (3, 21%), *Angophora floribunda* (15, 17%), *Eucalyptus coolabah* (15, 17%), *Eucalyptus populnea* (7, 10%), *Casuarina cunninghamiana* (10, 6%), *Corymbia clarksoniana* (4, 6%), *Lophostemon suaveolens* (1, 6%), *Acacia salicina* (1, 4%), *Cymbidium canaliculatum* (4%), *Eucalyptus crebra* (3, 4%), *Melaleuca bracteata* (47, 4%), *Melaleuca leucadendra* (27, 4%), *Acacia stenophylla* (7, 2%), *Angophora leiocarpa* (1, 2%), *Angophora subvelutina* (28, 2%), *Callitris glaucophylla* (10, 2%), *Casuarina cunninghamiana* subsp. *cunninghamiana* (8, 2%), *Eucalyptus melanophloia* (5, 2%), *Livistona decora* (2, 2%), *Livistona nitida* (25, 2%), *Melaleuca fluviatilis* (36, 2%), *Melaleuca linariifolia* (7, 2%), *Melaleuca viminalis* (12, 2%)

Dominant species: Relative cover (mean of cover of species / total cover of all species in that stratum for all values > zero) and frequency (percent of total sites) ordered by decreasing relative abundance. Up to five most dominant species with frequency > 20% listed for each stratum, (only comprehensive sites used for ground stratum).

Frequent species: Cover (mean of all values > zero) and frequency (percent of total sites) of all species occurring in more than 5% of sites ordered by decreasing frequency. Ground layer species % (of comprehensive sites) are listed as either graminoid or forb.

Naturalised species have an asterisk (*) after the name. indet. after listed name = indeterminate species or genus

1/03/2018

Technical Description

Regional ecosystem: **11.3.25**

Stratum: Tree 2

Height avg. = 10.9m, range 4-20m, 37 sites

Crown cover avg. = 10.6%, range 0.0-40.0%, 37 sites

Frequent species (cover, frequency): *Eucalyptus camaldulensis* (6, 19%), *Acacia salicina* (6, 15%), *Acacia stenophylla* (10, 15%), *Eucalyptus coolabah* (3, 15%), *Eucalyptus tereticornis* (2, 13%), *Angophora floribunda* (5, 8%), *Corymbia tessellaris* (3, 8%), *Melaleuca trichostachya* (7, 8%), *Lophostemon suaveolens* (2, 6%), *Melaleuca bracteata* (11, 6%), *Callitris glaucophylla* (9, 4%), *Eucalyptus populnea* (17, 4%), *Livistona nitida* (1, 4%), *Melia azedarach* (4%), *Terminalia oblongata subsp. oblongata* (1, 4%), *Acacia fasciculifera* (5, 2%), *Acacia indet.* (2, 2%), *Acacia leiocalyx subsp. leiocalyx* (1, 2%), *Acacia ramiflora* (2%), *Alphitonia excelsa* (2%), *Angophora subvelutina* (4, 2%), *Backhousia angustifolia* (2, 2%), *Brachychiton australis* (2%), *Cassia brewsteri* (2%), *Casuarina cunninghamiana* (1, 2%), *Casuarina cunninghamiana subsp. cunninghamiana* (10, 2%), *Celtis sinensis* (5, 2%), *Cissus oblonga* (2%), *Corymbia erythrophloia* (24, 2%), *Dendrophthoe glabrescens* (2%), *Ficus fraseri* (10, 2%), *Geijera parviflora* (15, 2%), *Geijera salicifolia* (4, 2%), *Hakea lorea* (2%), *Lysiphillum hookeri* (20, 2%), *Lysiphillum indet.* (20, 2%), *Melaleuca fluviatilis* (2, 2%), *Melaleuca leucadendra* (2%), *Melaleuca linariifolia* (7, 2%), *Planchonella cotinifolia* (1, 2%)

Stratum: Tree 3

Height avg. = 6.9m, range 4-12m, 12 sites

Crown cover avg. = 11.0%, range 0.0-62.0%, 12 sites

Frequent species (cover, frequency): *Acacia salicina* (1, 4%), *Corymbia tessellaris* (4%), *Eucalyptus camaldulensis* (1, 4%), *Eucalyptus coolabah* (2, 4%), *Melaleuca linariifolia* (4, 4%), *Acacia excelsa* (2%), *Acacia leiocalyx subsp. leiocalyx* (2, 2%), *Alectryon diversifolius* (2%), *Angophora floribunda* (2, 2%), *Casuarina cunninghamiana subsp. cunninghamiana* (3, 2%), *Cymbidium canaliculatum* (2%), *Diospyros geminata* (2%), *Erythrina vespertilio* (2%), *Eucalyptus tereticornis* (2%), *Ficus coronata* (6, 2%), *Ficus opposita* (7, 2%), *Livistona nitida* (4, 2%), *Lysiphillum hookeri* (50, 2%), *Lysiphillum indet.* (10, 2%), *Macaranga tanarius* (2%), *Mallotus philippensis* (3, 2%), *Melaleuca fluviatilis* (3, 2%), *Melaleuca trichostachya* (3, 2%), *Melaleuca viminalis* (4, 2%), *Pleiogynium timorense* (2, 2%), *Terminalia oblongata subsp. oblongata* (10, 2%), *Timonius timon var. timon* (3, 2%)

Stratum: Shrub 1

Height avg. = 2.5m, range 0.5-6m, 24 sites

Crown cover avg. = 7.2%, range 0.0-40.0%, 25 sites

Frequent species (cover, frequency): *Acacia salicina* (10%), *Ficus opposita* (1, 10%), *Alphitonia excelsa* (1, 6%), *Melaleuca trichostachya* (22, 6%), *Abutilon oxycarpum* (4%), *Alectryon diversifolius* (7, 4%), *Alstonia constricta* (4%), *Brachychiton rupestris* (4%), *Breynia oblongifolia* (4%), *Bridelia leichhardtii* (4%), *Casuarina cunninghamiana* (1, 4%), *Corymbia tessellaris* (4%), *Denhamia disperma* (4%), *Erythroxylum australe* (1, 4%), *Eucalyptus camaldulensis* (1, 4%), *Ficus fraseri* (4%), *Geijera parviflora* (4%), *Grewia latifolia* (1, 4%), *Lophostemon suaveolens* (4%), *Melaleuca bracteata* (4%), *Melaleuca viminalis* (4, 4%), *Notelaea microcarpa* (4%), *Petalostigma pubescens* (3, 4%), *Pleiogynium timorense* (4%), *Turraea pubescens* (4%), *Vachellia farnesiana* (1, 4%), *Acacia aulacocarpa* (1, 2%), *Acacia disparrima subsp. disparrima* (2%), *Acacia excelsa* (1, 2%), *Acacia glaucocarpa* (5, 2%), *Acacia holosericea* (2%), *Acacia indet.* (2%), *Acacia leiocalyx subsp. leiocalyx* (2%), *Acacia maidenii* (2%), *Acacia ramiflora* (2%), *Acacia stenophylla* (2, 2%), *Alyxia ruscifolia* (2%), *Angophora floribunda* (2%), *Angophora leiocarpa* (2%), *Angophora subvelutina* (2%), *Bertya oleifolia* (2%), *Brachychiton populneus* (2%), *Capparis indet.* (2%), *Carissa ovata* (2, 2%), *Cassia brewsteri* (1, 2%), *Casuarina cristata* (2%), *Casuarina cunninghamiana subsp. cunninghamiana* (1, 2%), *Clematicissus opaca* (2%), *Corymbia erythrophloia* (2%), *Cupaniopsis anacardioides* (2%), *Cymbidium canaliculatum* (2%), *Diospyros geminata* (2%), *Dodonaea viscosa* (2%), *Elaeodendron australe* (2%), *Eremophila mitchellii* (2%), *Erythroxylum sp. (Splityard Creek L. Pedley 5360)* (2%), *Grevillea striata* (2%), *Hovea longipes* (2%), *Jasminum simplicifolium subsp. australiense* (2%), *Leptospermum polygalifolium* (24, 2%), *Livistona decora* (1, 2%), *Livistona nitida* (5, 2%), *Lycium ferocissimum* (1, 2%), *Lysiphillum hookeri* (12, 2%), *Macaranga tanarius* (1, 2%), *Mallotus philippensis* (2%), *Melaleuca decora* (1, 2%), *Melaleuca fluviatilis* (1, 2%), *Melaleuca indet.* (2%), *Melaleuca linariifolia* (2, 2%), *Melia azedarach* (2%), *Opuntia tomentosa* (2%), *Pittosporum spinescens* (2%), *Psychodra odorata* (2%), *Santalum lanceolatum* (2%), *Terminalia oblongata subsp. oblongata* (10, 2%), *Timonius timon var. timon* (2%)

Dominant species: Relative cover (mean of cover of species / total cover of all species in that stratum for all values > zero) and frequency (percent of total sites) ordered by decreasing relative abundance. Up to five most dominant species with frequency > 20% listed for each stratum, (only comprehensive sites used for ground stratum).

Frequent species: Cover (mean of all values > zero) and frequency (percent of total sites) of all species occurring in more than 5% of sites ordered by decreasing frequency. Ground layer species % (of comprehensive sites) are listed as either graminoid or forb.

Naturalised species have an asterisk (*) after the name. indet. after listed name = indeterminate species or genus

1/03/2018

Technical Description**Regional ecosystem: 11.3.25****Stratum: Shrub 2****Height avg. = 1.1m, range 0.5-1.5m, 5 sites****Crown cover avg. = 2.2%, range 0.0-5.0%, 5 sites**

Frequent species (cover, frequency): *Grewia latifolia* (3, 4%), *Abutilon oxycarpum* (1, 2%), *Acacia aulacocarpa* (2%), *Acacia maidenii* (2%), *Acacia salicina* (2%), *Alyxia ruscifolia* (2%), *Breynia oblongifolia* (2%), *Carissa lanceolata* (1, 2%), *Corymbia tessellaris* (2%), *Glochidion ferdinandi* (2%), *Grewia retusifolia* (2%), *Macaranga tanarius* (2%), *Mallotus philippensis* (1, 2%), *Melaleuca fluviatilis* (2%), *Melia azedarach* (2%), *Pleiogynium timorensis* (2%), *Senna barclayana* (2%), *Senna indet.* (2%), *Sida hackettiana* (2%), *Terminalia oblongata* subsp. *oblongata* (4, 2%), *Turraea pubescens* (1, 2%), *Wikstroemia indica* (2%)

Stratum: Ground**Height avg. = 0.5m, range 0.1-1.3m, 38 sites****PFC avg. = 48.6%, range 0-100%, 38 sites**

Dominant species (relative cover, frequency): *Phyla canescens** (57, 26%), *Arundinella nepalensis* (15, 24%), *Heteropogon contortus* (14, 34%), *Themeda triandra* (8, 21%), *Lomandra longifolia* (8, 50%)

Frequent species (cover, frequency): GRAMINOIDS: *Cyperus gracilis* (34%), *Heteropogon contortus* (10, 34%), *Dichanthium sericeum* subsp. *sericeum* (26%), *Paspalidium distans* (2, 26%), *Arundinella nepalensis* (9, 24%), *Bothriochloa bladhii* subsp. *bladhii* (4, 24%), *Cyperus indet.* (1, 24%), *Paspalidium jubiflorum* (1, 24%), *Cynodon dactylon** (1, 21%), *Melinis repens** (1, 21%), *Themeda triandra* (8, 21%), *Aristida personata* (6, 18%), *Eriochloa crebra* (18%), *Chrysopogon filipes* (5, 16%), *Dichanthium sericeum* (4, 16%), *Eriochloa procera* (16%), *Sporobolus mitchellii* (1, 16%), *Bromus catharticus** (2, 13%), *Capillipedium spicigerum* (13%), *Chloris gayana** (1, 13%), *Eulalia aurea* (7, 13%), *Imperata cylindrica* (5, 13%), *Leptochloa digitata* (13%), *Megathyrsus maximus* var. *pubiglumis** (15, 13%), *Panicum effusum* (6, 13%), *Anthosachne scabra* (14, 11%), *Bothriochloa bladhii* (11%), *Cymbopogon refractus* (1, 11%), *Cynodon dactylon* var. *dactylon** (3, 11%), *Eragrostis leptostachya* (4, 11%), *Megathyrsus maximus** (5, 11%), *Panicum laevinode* (2, 11%), *Sorghum halepense** (3, 11%), *Sporobolus creber* (3, 11%), *Urochloa foliosa* (3, 11%), *Chionachne cyathopoda* (7, 8%), *Chloris divaricata* (8%), *Chloris ventricosa* (16, 8%), *Chrysopogon fallax* (2, 8%), *Cyperus fulvus* (1, 8%), *Digitaria brownii* (8%), *Echinochloa colona** (2, 8%), *Eleocharis plana* (8%), *Enteropogon acicularis* (8%), *Enteropogon ramosus* (8%), *Eragrostis sororia* (8%), *Eriochloa pseudoacrotricha* (8%), *Panicum larcomianum* (2, 8%), *Panicum simile* (1, 8%), *Setaria surgens* (4, 8%), *Themeda avenacea* (3, 8%)

FORBS: *Lomandra longifolia* (4, 50%), *Bidens pilosa** (45%), *Eustrephus latifolius* (26%), *Phyla canescens** (28, 26%), *Rumex brownii* (26%), *Xanthium occidentale** (26%), *Cyanthium cinereum* (24%), *Cyclosporum leptophyllum** (24%), *Rapistrum rugosum** (1, 24%), *Sonchus oleraceus** (24%), *Marsilea drummondii* (3, 21%), *Oxalis perennans* (21%), *Alternanthera denticulata* var. *denticulata* (1, 18%), *Cirsium vulgare** (18%), *Emilia sonchifolia** (18%), *Erigeron bonariensis** (18%), *Gomphrena celosoides** (18%), *Malvastrum americanum* var. *americanum** (18%), *Sida hackettiana* (3, 18%), *Alternanthera nodiflora* (16%), *Commelina diffusa* (16%), *Malvastrum coromandelianum* subsp. *coromandelianum** (16%), *Rorippa palustris** (16%), *Sida rhombifolia** (16%), *Crinum flaccidum* (13%), *Euphorbia dallachiana* (13%), *Phyllanthus virgatus* (13%), *Rhynchosia minima* (13%), *Rorippa eustylis* (13%), *Sida cordifolia** (4, 13%), *Argemone ochroleuca* subsp. *ochroleuca** (11%), *Asperula conferta* (11%), *Boerhavia* sp. (St George A.Hill AQ399299) (11%), *Duma florulenta* (11%), *Eclipta prostrata** (11%), *Opuntia stricta** (11%), *Sida spinosa** (11%), *Solanum nodiflorum** (11%), *Vachellia farnesiana** (11%), *Verbena indet.* (11%), *Vicia monantha* (11%), *Ageratum houstonianum** (8%), *Alternanthera denticulata* (8%), *Arthropodium strictum* (8%), *Asteraceae indet.* (8%), *Basilicum polystachyon* (8%), *Breynia oblongifolia* (8%), *Calostemma luteum* (8%), *Calyptocarpus vialis** (8%), *Dianella indet.* (8%), *Dichondra repens* (8%), *Euphorbia drummondii* (8%), *Euphorbia hirta** (8%), *Evolvulus alsinoides* (8%), *Galactia tenuiflora* (8%), *Glandularia aristigera** (8%), *Glycine tabacina* (8%), *Glycine tomentella* (8%), *Ipomoea lonchophylla* (8%), *Medicago polymorpha** (8%), *Neptunia gracilis* (8%), *Parthenium hysterophorus** (8%), *Physalis lanceifolia** (8%), *Polymeria calycina* (8%), *Portulaca oleracea** (8%), *Richardia brasiliensis** (8%), *Ricinus communis** (8%), *Ruellia tuberosa** (1, 8%), *Senna barclayana* (8%), *Spermacoce brachystema* (8%), *Tridax procumbens** (8%), *Verbena litoralis** (8%), *Verbesina encelioides** (8%), *Wahlenbergia gracilis* (8%)

Dominant species: Relative cover (mean of cover of species / total cover of all species in that stratum for all values > zero) and frequency (percent of total sites) ordered by decreasing relative abundance. Up to five most dominant species with frequency > 20% listed for each stratum, (only comprehensive sites used for ground stratum).

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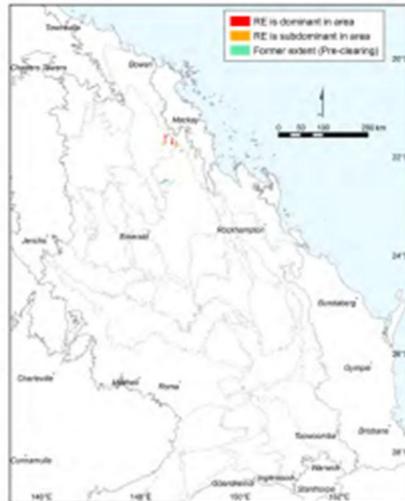
Naturalised species have an asterisk (*) after the name. indet. after listed name = indeterminate species or genus

1/03/2018

Technical Description

Regional ecosystem: 11.4.13

Eucalyptus orgadophila open woodland on Cainozoic clay plains



Pre-clearing area (ha), remnant area (ha) and per cent remaining: 22,960 11,520 50%

Species_recorded: Total: 44; woody: 5; ground: 39; Avg. spp./site: 23.0; std dev.: 8.0, 2 site(s)

Basal area: Avg./site: 5.0 m²/ha, range: 5.0 - 5 m²/ha, std. deviation: 0 m²/ha, 1 site(s)

Structural formation: Woodland: 50%; tussock grassland: 50%, 2 site(s)

Representative_sites 16880, 19244.

Stratum: Tree 1

Height avg. = 10.0m, 1 site

Crown cover avg. = 10.5%, range 1.0-20.0%, 2 sites

Dominant species (relative cover, frequency): *Eucalyptus orgadophila* (100, 50%), *Eucalyptus crebra* (90, 50%), *Corymbia erythrophloia* (10, 50%)

Frequent species (cover, frequency): *Corymbia erythrophloia* (2, 50%), *Eucalyptus crebra* (18, 50%), *Eucalyptus orgadophila* (50%)

Stratum: Shrub 1

Height avg. = 2.3m, range 2-2.5m, 2 sites

Crown cover avg. = 1.0%, range 1.0-1.0%, 2 sites

Dominant species (relative cover, frequency): *Atalaya hemiglauca* (75, 100%), *Vachellia farnesiana** (50, 50%)

Frequent species (cover, frequency): *Atalaya hemiglauca* (1, 100%), *Vachellia farnesiana** (1, 50%)

Dominant species: Relative cover (mean of cover of species / total cover of all species in that stratum for all values > zero) and frequency (percent of total sites) ordered by decreasing relative abundance. Up to five most dominant species with frequency > 20% listed for each stratum, (only comprehensive sites used for ground stratum).

Frequent species: Cover (mean of all values > zero) and frequency (percent of total sites) of all species occurring in more than 5% of sites ordered by decreasing frequency. Ground layer species % (of comprehensive sites) are listed as either graminoid or forb.

Naturalised species have an asterisk (*) after the name. indet. after listed name = indeterminate species or genus

1/03/2018

Technical Description

Regional ecosystem: 11.4.13

Stratum: Ground

Height avg. = 0.9m, range 0.8-1m, 2 sites

PFC avg. = 64.0%, range 60-68%, 2 sites

Dominant species (relative cover, frequency): *Iseilema vaginiflorum* (51, 50%), *Aristida leptopoda* (42, 50%), *Aristida latifolia* (42, 50%), *Themeda triandra* (32, 50%), *Enneapogon lindleyanus* (7, 50%)

Frequent species (cover, frequency): GRAMINOIDS: *Heteropogon contortus* (4, 100%), *Aristida latifolia* (25, 50%), *Aristida leptopoda* (25, 50%), *Astrebula elymoides* (2, 50%), *Bothriochloa ewartiana* (50%), *Digitaria divaricatissima* (50%), *Enneapogon lindleyanus* (5, 50%), *Enneapogon truncatus* (2, 50%), *Iseilema membranaceum* (50%), *Iseilema vaginiflorum* (35, 50%), *Panicum decompositum* var. *temuius* (50%), *Panicum effusum* (50%), *Panicum queenslandicum* var. *queenslandicum* (50%), *Thellungia advena* (50%), *Themeda triandra* (22, 50%)

FORBS: *Capparis canescens* (50%), *Capparis lasiantha* (50%), *Commelina* *indet.* (50%), *Corchorus trilocularis* (50%), *Eryngium plantagineum* (50%), *Euphorbia bifida* (50%), *Euphorbia* *indet.* (50%), *Euphorbia mitchelliana* (50%), *Galactia tenuiflora* (50%), *Grewia retusifolia* (50%), *Indigofera linnaei* (50%), *Ipomoea* *indet.* (50%), *Malvastrum americanum* var. *americanum** (50%), *Malvastrum americanum* var. *stellatum* (50%), *Melhania oblongifolia* (50%), *Neptunia gracilis* (50%), *Parthenium hysterophorus** (2, 50%), *Pimelea haematostachya* (50%), *Rhynchosia minima* (50%), *Sclerolaena muricata* var. *muricata* (50%), *Sida* *indet.* (50%), *Sida rohlenae* (50%), *Sida spinosa** (50%), *Tephrosia filipes* (50%)

Dominant species: Relative cover (mean of cover of species / total cover of all species in that stratum for all values > zero) and frequency (percent of total sites) ordered by decreasing relative abundance. Up to five most dominant species with frequency > 20% listed for each stratum, (only comprehensive sites used for ground stratum).

Frequent species: Cover (mean of all values > zero) and frequency (percent of total sites) of all species occurring in more than 5% of sites ordered by decreasing frequency. Ground layer species % (of comprehensive sites) are listed as either graminoid or forb.

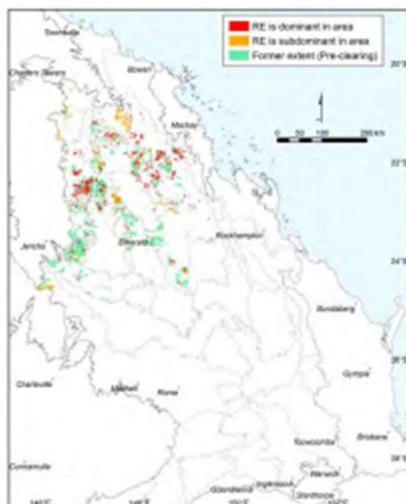
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1/03/2018

Technical Description

Regional ecosystem: **11.5.3**

Eucalyptus populnea +/- E. melanophloia +/- Corymbia clarksoniana woodland on Cainozoic sand plains and/or remnant surfaces



Pre-clearing area (ha), remnant area (ha) and per cent remaining: 974,585 376,888 39%

Species_recorded: Total: 207; woody: 64; ground: 160; Avg. spp./site: 27.6; std dev.: 7.8, 12 site(s)

Basal area: Avg./site: 7.2 m²/ha, range: 1.0 - 13 m²/ha, std. deviation: 4 m²/ha, 16 site(s)

Structural formation: Open-woodland: 50%; woodland: 44%; low open-woodland: 6%, 16 site(s)

Representative_sites 2460, 2467, 16868, 16888, 16891, 16901, 17017, 17032, 17056, 19030, 19163, 19169, 19186, 19194, 19217, 32290.

Stratum: Tree 1

Height avg. = 13.9m, range 8.4-20m, 16 sites
Crown cover avg. = 16.1%, range 2.0-30.0%, 16 sites

Dominant species (relative cover, frequency): *Eucalyptus populnea* (98, 50%), *Eucalyptus melanophloia* (93, 25%)

Frequent species (cover, frequency): *Eucalyptus populnea* (16, 50%), *Eucalyptus melanophloia* (17, 25%), *Eucalyptus brownii* (10, 19%), *Corymbia clarksoniana* (4, 13%), *Eucalyptus crebra* (2, 13%), *Ventilago viminalis* (13%), *Angophora leiocarpa* (1, 6%), *Atalaya hemiglaucula* (1, 6%), *Corymbia dallachiana* (6%), *Eucalyptus melanophloia subsp. melanophloia* (30, 6%), *Grevillea parallela* (1, 6%), *Grevillea striata* (1, 6%)

Stratum: Tree 2

Height avg. = 7.9m, range 5-12m, 9 sites
Crown cover avg. = 7.6%, range 0.0-25.0%, 9 sites

Frequent species (cover, frequency): *Acacia excelsa* (19%), *Archidendropsis basaltica* (3, 19%), *Eucalyptus populnea* (2, 19%), *Terminalia oblongata subsp. oblongata* (4, 19%), *Atalaya hemiglaucula* (13%), *Corymbia dallachiana* (13%), *Eucalyptus melanophloia* (9, 13%), *Grevillea parallela* (1, 13%), *Acacia fodenalis* (3, 6%), *Acacia longispicata* (6%), *Acacia rhodoxylon* (1, 6%), *Angophora leiocarpa* (1, 6%), *Cassia brewsteri* (1, 6%), *Corymbia erythrophloia* (6%), *Ehretia membranifolia* (6%), *Eremophila mitchellii* (4, 6%), *Erythroxylum australe* (2, 6%), *Eucalyptus brownii* (2, 6%), *Eucalyptus crebra* (1, 6%), *Geijera parviflora* (6%), *Grevillea striata* (1, 6%), *Lysiphylum carronii* (4, 6%), *Lysiphylum hookeri* (5, 6%), *Parsonia lanceolata* (6%)

Dominant species: Relative cover (mean of cover of species / total cover of all species in that stratum for all values > zero) and frequency (percent of total sites) ordered by decreasing relative abundance. Up to five most dominant species with frequency > 20% listed for each stratum, (only comprehensive sites used for ground stratum).

Frequent species: Cover (mean of all values > zero) and frequency (percent of total sites) of all species occurring in more than 5% of sites ordered by decreasing frequency. Ground layer species % (of comprehensive sites) are listed as either graminoid or forb.

Naturalised species have an asterisk (*) after the name. indet. after listed name = indeterminate species or genus

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Technical Description

Regional ecosystem: **11.5.3**

Stratum: Tree 3

Height avg. = 3.3m, range 1.5-6m, 3 sites

Crown cover avg. = 7.3%, range 1.0-15.0%, 3 sites

Frequent species (cover, frequency): *Eremophila mitchellii* (3, 19%), *Acacia excelsa* (2, 6%), *Acacia salicina* (1, 6%), *Alphitonia excelsa* (1, 6%), *Archidendropsis basaltica* (2, 6%), *Atalaya hemiglaucula* (1, 6%), *Bursaria incana* (1, 6%), *Erythroxylum australe* (1, 6%), *Flindersia dissosperma* (1, 6%), *Geijera salicifolia* (3, 6%), *Lysiphyllum carronii* (1, 6%), *Notelaea microcarpa* (1, 6%), *Terminalia oblongata subsp. oblongata* (2, 6%)

Stratum: Shrub 1

Height avg. = 2.0m, range 0.75-4m, 16 sites

Crown cover avg. = 5.1%, range 1.0-15.0%, 16 sites

Dominant species (relative cover, frequency): *Eremophila mitchellii* (36, 50%), *Erythroxylum australe* (23, 44%), *Grewia latifolia* (9, 38%)

Frequent species (cover, frequency): *Eremophila mitchellii* (3, 50%), *Erythroxylum australe* (2, 44%), *Grewia latifolia* (38%), *Acacia excelsa* (1, 19%), *Atalaya hemiglaucula* (19%), *Carissa ovata* (8, 19%), *Eucalyptus populnea* (1, 19%), *Acacia sericophylla* (1, 13%), *Archidendropsis basaltica* (1, 13%), *Capparis lasiantha* (13%), *Cassia brewsteri* (13%), *Denhamia cunninghamii* (1, 13%), *Eucalyptus brownii* (1, 13%), *Eucalyptus melanophloia* (2, 13%), *Flindersia dissosperma* (1, 13%), *Lysiphyllum carronii* (13%), *Psyrax oleifolia* (1, 13%), *Acacia fodinalis* (3, 6%), *Acacia laccata* (1, 6%), *Acacia longispicata* (6%), *Acacia salicina* (6%), *Alectryon oleifolius subsp. elongatus* (1, 6%), *Alphitonia excelsa* (6%), *Apophyllum anomalum* (6%), *Brachychiton australis* (6%), *Capparis canescens* (1, 6%), *Capparis loranthifolia var. loranthifolia* (1, 6%), *Cassytha pubescens* (6%), *Corymbia clarksoniana* (6%), *Dodonaea viscosa* (1, 6%), *Enchylaena tomentosa* (6%), *Eucalyptus crebra* (1, 6%), *Fabaceae* *indet.* (6%), *Geijera parviflora* (1, 6%), *Hakea chordophylla* (6%), *Hakea lorea* (6%), *Indigofera breviflora* (6%), *Melaleuca nervosa* (1, 6%), *Petalostigma pubescens* (6%), *Pittosporum spinescens* (1, 6%), *Senna artemisioides subsp. filifolia* (1, 6%), *Sida hackettiana* (6%), *Terminalia* *indet.* (1, 6%), *Terminalia oblongata subsp. oblongata* (1, 6%), *Ventilago viminalis* (6%)

Stratum: Shrub 2

Height avg. = 0.9m, range 0.6-1.3m, 4 sites

Crown cover avg. = 4.3%, range 0.0-14.0%, 4 sites

Frequent species (cover, frequency): *Carissa lanceolata* (19%), *Carissa ovata* (7, 13%), *Archidendropsis basaltica* (1, 6%), *Capparis lasiantha* (6%), *Denhamia cunninghamii* (6%), *Eremophila* *indet.* (6%), *Eucalyptus melanophloia* (6%), *Grewia latifolia* (1, 6%), *Grewia retusifolia* (6%), *Harrisia martinii** (6%), *Petalostigma pubescens* (6%), *Psyrax attenuata* (1, 6%), *Psyrax oleifolia* (6%)

Dominant species: Relative cover (mean of cover of species / total cover of all species in that stratum for all values > zero) and frequency (percent of total sites) ordered by decreasing relative abundance. Up to five most dominant species with frequency > 20% listed for each stratum, (only comprehensive sites used for ground stratum).

Frequent species: Cover (mean of all values > zero) and frequency (percent of total sites) of all species occurring in more than 5% of sites ordered by decreasing frequency. Ground layer species % (of comprehensive sites) are listed as either graminoid or forb.

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1/03/2018

Technical DescriptionRegional ecosystem: **11.5.3****Stratum: Ground**

Height avg. = 0.5m, range 0.2-1m, 11 sites

PFC avg. = 44.0%, range 10-90%, 12 sites

Dominant species (relative cover, frequency): *Cenchrus ciliaris** (39, 33%), *Themeda triandra* (28, 33%), *Aristida calycina* (23, 33%), *Chrysopogon fallax* (11, 50%), *Fimbristylis dichotoma* (9, 50%)

Frequent species (cover, frequency): GRAMINOIDS: *Chrysopogon fallax* (2, 50%), *Fimbristylis dichotoma* (1, 50%), *Heteropogon contortus* (4, 50%), *Aristida calycina* (7, 33%), *Cenchrus ciliaris** (28, 33%), *Digitaria brownii* (33%), *Panicum effusum* (1, 33%), *Themeda triandra* (22, 33%), *Cyperus fulvus* (25%), *Dichanthium sericeum* (25%), *Eragrostis lacunaria* (1, 25%), *Eragrostis sororia* (25%), *Aristida jerichoensis* (1, 17%), *Bothriochloa decipiens* (17%), *Bothriochloa decipiens* var. *decipiens* (17%), *Cymbopogon bombycinus* (17%), *Cyperus gracilis* (17%), *Digitaria ammophila* (17%), *Enneapogon lindleyanus* (1, 17%), *Enneapogon virens* (1, 17%), *Eragrostis brownii* (1, 17%), *Eragrostis leptostachya* (17%), *Eulalia aurea* (1, 17%), *Sporobolus caroli* (17%), *Tragus australianus* (17%), *Triodia pungens* (19, 17%), *Alloteropsis cimicina* (8%), *Alloteropsis semialata* (8%), *Aristida calycina* var. *calycina* (1, 8%), *Aristida holathera* var. *holathera* (8%), *Aristida* indet. (5, 8%), *Aristida jerichoensis* var. *subspinulifera* (1, 8%), *Aristida latifolia* (8%), *Aristida personata* (2, 8%), *Aristida ramosa* (1, 8%), *Bothriochloa ewartiana* (20, 8%), *Chloris divaricata* (5, 8%), *Chloris truncata* (8%), *Cleistochloa subjuncea* (8%), *Cymbopogon refractus* (8%), *Cyperus* indet. (1, 8%), *Dactyloctenium radulans* (8%), *Digitaria* indet. (8%), *Dinebra decipiens* var. *asthenes* (2, 8%), *Enneapogon gracilis* (1, 8%), *Enneapogon polyphyllus* (1, 8%), *Enteropogon acicularis* (8%), *Enteropogon ramosus* (1, 8%), *Eragrostis cumingii* (8%), *Eragrostis elongata* (8%), *Eriachne* indet. (8%), *Eriachne mucronata* (4, 8%), *Melinis repens** (2, 8%), *Panicum decompositum* (1, 8%), *Panicum queenslandicum* (8%), *Paspalidium criniforme* (5, 8%), *Perotis rara* (8%), *Schizachyrium fragile* (1, 8%), *Sporobolus actinocladius* (8%), *Sporobolus australasicus* (8%), *Sporobolus scabridus* (1, 8%), *Themeda avenacea* (8%), *Urochloa piligera* (8%)
FORBS: *Evolvulus alsinoides* (1, 33%), *Phyllanthus virgatus* (33%), *Glycine tomentella* (25%), *Grewia latifolia* (25%), *Spermacoce* indet. (25%), *Trianthema triquetra* (25%), *Waltheria indica* (25%), *Capparis lasiantha* (1, 17%), *Denhamia cunninghamii* (17%), *Euphorbia hyssopifolia** (17%), *Malvastrum americanum* var. *americanum** (3, 17%), *Melania oblongifolia* (17%), *Portulaca oleracea** (17%), *Pseuderanthemum variabile* (1, 17%), *Rhynchosia minima* (1, 17%), *Sauropus trachyspermus* (17%), *Sida atherophora* (1, 17%), *Sida hackettiana* (3, 17%), *Sida* indet. (1, 17%), *Zornia muelleriana* subsp. *muelleriana* (17%), *Abutilon subviscosum* (8%), *Acacia laccata* (8%), *Achyranthes aspera* (1, 8%), *Alternanthera angustifolia* (8%), *Alternanthera nana* (8%), *Apowollastonia spilanthisoides* (8%), *Blumea saxatilis* (8%), *Boerhavia* sp. (St George A.Hill AQ399299) (8%), *Buchnera linearis* (8%), *Cassia pubescens* (8%), *Chamaecrista absus* var. *absus* (8%), *Chrysocephalum apiculatum* (8%), *Cyanthillium cinereum* (8%), *Desmodium campylocaulon* (8%), *Desmodium macrocarpum* (8%), *Dianella longifolia* (8%), *Dipteracanthus australasicus* subsp. *australasicus* (8%), *Dysphania carinata* (8%), *Ehretia membranifolia* (8%), *Eitadia nutans* subsp. *nutans* (8%), *Enchylaena tomentosa* (8%), *Euphorbia crassimarginata* (8%), *Euphorbia* indet. (8%), *Euphorbia tannensis* subsp. *eremophila* (8%), *Galactia tenuiflora* (1, 8%), *Glycine latifolia* (8%), *Gomphrena celosoides** (8%), *Gomphrena* indet. (8%), *Goodenia glabra* (8%), *Grewia retusifolia* (8%), *Harrisia martinii** (8%), *Heliotropium peninsulare* (8%), *Hibiscus burtonii* (8%), *Indigofera colutea* (8%), *Jacquemontia paniculata* (1, 8%), *Jasminum didymum* subsp. *racemosum* (8%), *Marsdenia viridiflora* subsp. *viridiflora* (8%), *Marsilea hirsuta* (8%), *Melaleuca nervosa* (8%), *Oldenlandia mitrasacmoides* subsp. *trachymenoides* (8%), *Pandorea pandorana* (8%), *Parsonia* indet. (8%), *Phyllanthus fuernrohrrii* (8%), *Pluchea rubelliflora* (8%), *Polygala triflora* (8%), *Pterocaulon* indet. (8%), *Pterocaulon redolens* (1, 8%), *Rostellularia adscendens* (8%), *Ruellia tuberosa** (8%), *Sida brachypoda* (1, 8%), *Sida rohlenae* (1, 8%), *Sida* sp. (Musselbrook M.B.Thomas+MRS437) (1, 8%), *Spermacoce brachystema* (8%), *Streptoglossa adscendens* (8%), *Stylidium eriorhizum* (8%), *Stylosanthes scabra** (8%), *Tephrosia leptoclada* (8%), *Vittadinia sulcata* (8%), *Wahlenbergia graniticola* (8%), *Zornia muriculata* (8%), *Zornia muriculata* subsp. *angustata* (8%)

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