

PREPARED FOR:

A4 COMMUNITY CARE SERVICES INC

12 NOVEMBER 2021

ECOLOGY ASSESSMENT REPORT

320 RITCHIE ROAD, PALLARA QLD (LOT 3
RP136964)



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CLIENT	A4 COMMUNITY CARE SERVICES INC.
REPORT NO.	2700-PALLARA-EAR-R-01

New Ground Environmental Pty Ltd and the authors responsible for the preparation and compilation of this report declare that we do not have, nor expect to have a beneficial interest in the study area of this project and will not benefit from any of the recommendations outlined in this report.

The preparation of this report has been in accordance with the project brief provided by the client and has relied upon the information, data and results provided or collected from the sources and under the conditions outlined in the report.

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Abbreviations

AHD	Australian height datum
API	Aerial photography interpretation
BoM	Bureau of Meteorology
City Plan	Brisbane City Plan 2014
DAWE	Department of Agriculture, Water and the Environment (Commonwealth)
DES	Department of Environment and Science (Qld)
e.g.	For example
EH	Essential Habitat as defined by the VM Act
EP Act	<i>Environmental Protection Act 1994 (Qld)</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)</i>
etc.	etcetera
EVNT	Endangered, Vulnerable, Near Threatened as listed under the <i>NC Reg</i>
ha	Hectares
i.e.	That is
Koala Plan	Nature Conservation (Koala) Conservation Plan 2017
m	Metres
MLES	Matters of Local Environmental Significance
mm	Millimetres
MNES	Matters of National Environmental Significance
MSES	Matters of State Environmental Significance
NC Act	<i>Nature Conservation Act 1992 (Qld)</i>
NC (Admin) Reg	<i>Nature Conservation (Administration) Regulation 2006 (Qld)</i>
NC Reg	<i>Nature Conservation (Wildlife) Regulation 2006 (Qld)</i>
Planning Act	<i>Planning Act 2016 (Qld)</i>
Planning Reg	<i>Planning Regulation 2017 (Qld)</i>
PMST	Protected Matters Search Tool
RE	Regional Ecosystem
TEC	Threatened Ecological Community
VM Act	<i>Vegetation Management Act 1999 (Qld)</i>
WoNS	Weed of National Significance



Chapter 1: INTRODUCTION

1.1 Background

New Ground Environmental Pty Ltd ('New Ground') was engaged by A4 Community Services Inc ('the client') to undertake an ecological site assessment in relation to the proposed development of Lot 3 RP136964 ('the site'). The site is 4.165 ha in area and is located at 320 Ritchie Road, Pallara in the Brisbane City Local Government area (**APPENDIX A**).

The scope of works presented by this study has been prepared to review the ecological assessment and reporting requirements of the Biodiversity Areas Planning Scheme Policy (SC6.3) of the Brisbane City Plan (2014) as well as relevant State and Federal Government ecological planning policy. The key focus of the study was to identify areas of ecological significance within the site for the consideration of the client and Council in development design and assessment. Here it is noted that the Further Issues letter of Council (ref.: A005008062, dated 7 February, 2021) assisted to inform the terms of reference for this study and in refinement of the development proposal.

The proposed development concept considered by this report is presented in **APPENDIX B**. The proposed development is for material change of use of the site for community worship and charity purposes. The proposal includes a place of worship, ancillary food storage (for charitable donations) and carparking.

The proposed development allows for protection and rehabilitation of the portion of the site which hosts remnant regional ecosystem communities (designated by Council as High Ecological Significance).

1.2 Objectives of the Study

The objectives of this report are to:

- Present the findings from a desktop and literature review of the ecological values of the site;
- Assess and ground-truth the ecological values pertinent to the site; in particular, the flora, fauna and vegetation communities found within the site in accordance with section SC6.3 of the City Plan, with particular emphasis on prescribed matters that are of local, state or national environmental significance;
- Discuss the presence or expected presence of native flora and fauna species that are regulated under local, state and Commonwealth legislation;
- Describe and map vegetation communities and ecological features within the site that are regulated under relevant local, state and Commonwealth legislation; and
- Provide considerations with respect to ecological values within the site to inform detailed project design works.

1.3 Outline of the Report

This report has been prepared in a format that is generally consistent with the relevant requirements of the Brisbane City Plan 2014 (City Plan) (Brisbane City Council, 2014), *Vegetation Management Act 1999* (VMA), *Nature Conservation Act 1992* (NC Act), *Planning Act 2016* (Planning Act) and the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This report is structured as follows:

- **Chapter 1:** Provides an introduction to the project, the subject study and the report;
- **Chapter 2:** Discusses the site locality, climate, bioregion, geology and topography of the site;
- **Chapter 3:** Outlines the methodology used for the desktop review and field study and discusses the limitations associated with this study;
- **Chapter 4:** Presents and discusses the results of the desktop review and the field survey;
- **Chapter 5:** Provides an overview of ecological impacts associated with the proposed development; and
- **Chapter 6:** Provides a summary conclusion and lists recommended actions in light of the findings of the subject study.



Chapter 2: SITE CONTEXT

TABLE 2.1 below provides broad context around the site.

TABLE 2.1: SITE CONTEXT

CONTEXT	DESCRIPTION
Bioregion	<p>The site is located within the South- East Queensland bioregion (IBRA) which covers an area of 62,484.2 km² and covers the coastal area from Gladstone to the Queensland-New South Wales border and out west to the Great Dividing Range (DoE, 2016a). The south-east Queensland bioregion is dominated by open sclerophyll forests, predominantly eucalypt communities containing both grassy and shrubby understoreys (Tran and Wild, 2000).</p> <p>The South-East Queensland bioregion has been further divided into 14 sub-bioregions (IBRA) and the site is located within the Moreton Basin sub-region (DNRM, 2010; Queensland Globe, 2020).</p>
Pre-development land use	<p>The site is set within an urban land use context with conservation areas represented in the site's immediate vicinity. The site is fringed by conservation area/parkland to the north and east (Sweets Road Park; east of Ritchie Road) with rural-residential landuse to the site's immediate west and south.</p> <p>In its pre-developed state, the site is used for community worship purposes and hosts a series of built structures (sheds, dwelling).</p>
Soils and geology	<p>The topography of the site is generally flat at an approximate elevation of 20 m AHD (Queensland Globe, 2021).</p> <p>According to the Surface geology (1:100,000) data layer of Queensland Globe (2021), the geology of the site's north-west is described as alluvium (pediment slope wash, clay, scree, soil) of the late Tertiary-Quaternary. The balance site is described as alluvium (clay, silt, sand and gravel, flood-plain alluvium on high terraces) of the Pleistocene.</p> <p>Based on the 'Pre-clear regional ecosystems' data layer of Queensland Globe (Queensland Government, 2021), the site's west is within Land zone 9-10; while the balance to the east is within Land zone 3. Land zone 9-10 is described as Cainozoic/Proterozoic consolidated sediment, while Land zone 3 is described as Cainozoic alluvial plains and piedmont fans (Qld Government, 2021).</p>
Climate	<p>The climate of the site and broader locality is characteristic of sub-tropical Queensland. Climate data from Brisbane weather station (Bureau of Meteorology (BoM) site No: 040913) presents mean annual maximum and minimum temperatures of 26.6°C and 16.4°C respectively, and a mean annual rainfall of 1011.5 mm (BoM, 2020). On average, the warmest month is January and the coldest month is July. January has a mean annual maximum temperature of 30.5°C, and July has a mean annual maximum temperature of 22.1°C (BoM, 2020).</p> <p>Rainfall is generally typical of the sub-tropical climate, with approximately 40% of annual rainfall occurring during the summer months of December, January and February. On average, the wettest month is February (mean rainfall of 150.4 mm) and the driest month is July (mean rainfall of 24.7 mm) (BoM, 2020).</p>



Chapter 3: METHODOLOGY

3.1 Desktop and Literature Review

TABLE 3.1 below presents the sources that were utilized during the environmental planning desktop and literature review. Data searches were conducted using a 5 km radial buffer around the central coordinates of Latitude: -27.6136; Longitude: 153.0073.

TABLE 3.1: DESKTOP AND LITERATURE REVIEW SOURCES

DATABASE/POLICY/LEGISLATION/GUIDELINE
LOCAL GOVERNMENT (Brisbane City Plan 2014/EbiMap2)
Zoning map
Neighbourhood plans map
Biodiversity Areas overlay map
Wetlands overlay map
Significant landscape tree overlay map
Waterway corridors overlay map
STATE GOVERNMENT
SPP Interactive Mapping System (DA)
Department of Science, Information Technology and Innovation (DSITI) Nature Conservation Act 1992 (NC Act) Protected Species Lists Wildlife Online Database (DSITI, 2021)
Department of Natural Resources and Mines (DNRM) Vegetation management regional ecosystem and remnant map (DNRM, 2021).
Koala Plan (Koala Habitat Area and Priority Koala Area) Mapping (DES, 2021)
Protected plants flora survey trigger map (DES, 2021b)
Queensland Waterways for Waterway Barrier Works (DAF, 2016)
FEDERAL GOVERNMENT
EPBC Act Protected Matters Search Tool (DAWE, 2021)

3.2 Field Assessment

Diurnal field investigations were undertaken by a New Ground senior ecologist on 27 October 2021 using the methodology detailed in the following sections. Accordingly to BoM weather station 040211 (Archerfield Airport), there was 15 mm rain in the week leading up to the field surveys; however no rain during surveys (BoM, 2021). Temperatures reached a high of 29.2°C during the field survey period (BoM, 2021). The location of formal survey points undertaken during the field surveys are demonstrated in **APPENDIX A**. Formal surveys were supplemented with opportunistic observations and random meanders.

3.2.1 Vegetation Community Surveys

The vegetation community survey was conducted in accordance with industry best practice standards and employed a methodology generally consistent with the established format detailed within *Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland, Version 5* (Neldner et al., 2019). Site selection was determined in the field based on perceived aerial photography patterns in vegetation composition and in response to variation in vegetation communities encountered during site traverses. The survey design emphasised the collection of vegetation community data using quaternary sites.

Vegetation community data was collected from three (3) quaternary survey sites during the survey. At each survey site, data was collected from a 25-50 m radial plot (**APPENDIX A**). In general accordance with Neldner et al, (2019), at a minimum the following data was collected from each survey site:

- Date and time;
- Location;



- In-field determination of the remnant status of the vegetation;
- Structural formation class using the modified Specht (1970) classification system (Neldner et al., 2019);
- Floristic composition and relative abundance data for the predominant species in the canopy (quaternary sites); and
- Floristic composition and relative abundance data for the predominant species in the canopy, shrub and ground layers (tertiary sites).

3.2.2 Tree Survey

Individual trees within and overhanging the proposed disturbance footprint with a diameter at breast height of >150mm were assessed, tagged (with identification numbering) and plotted by ArborAustralis arborists on 27 October 2021. Trees were plotted to a spatial accuracy of +/- 1m.

3.2.3 Fauna Habitat Assessment

Fauna habitat assessments were undertaken in conjunction with vegetation survey sites, using the plot that was sampled for the vegetation community survey. These formal assessments were undertaken when a new or different type of vegetation or habitat was intersected, as it is anticipated that similar vegetation types would host similar habitat features. A total of three (3) formal habitat assessments were undertaken within the site (**APPENDIX A**). At a minimum, the following data was collected from each fauna habitat assessment site:

- Bare ground (estimated % cover);
- Boulders (estimated % cover);
- Fallen bark (estimated % cover);
- Groundcover (estimated % cover);
- Leaf litter (estimated % cover);
- Embedded rocks (estimated % cover);
- Loose rocks (estimated % cover);
- Shrub layer (estimated % cover);
- Crevices and ledges (abundance);
- Overhangs and caves (abundance);
- Nests (abundance);
- Small logs (abundance);
- Large logs (abundance);
- Logs with hollows (presence & size);
- Termite mounds (abundance);
- Mistletoe (abundance);
- Soil cracks (presence);
- Water features (type & presence); and
- Other (stags, senescing trees, tree hollows, soil features, etc.) (type & number).

3.2.4 Ecological Feature Surveys

Ecological features were recorded where encountered during the survey. We refer to habitat associations in this report as potential fauna habitat or breeding places, as well as signs of fauna presence (tracks, scats and scratches). When habitat associations were encountered, a GPS point was taken to record the location and a description of the habitat was recorded. Fauna habitat types and signs that were recorded included:

- Scratch marks;
- Scats;
- Tracks;
- Orts;
- Nests;
- Aquatic features;



- Hollow logs and size of hollows (small: < 35mm diameter; medium: 35-100 mm diameter; large: >100 mm diameter);
- Log piles; and
- Hollow-bearing trees/stags and size of hollows (small: < 35 mm diameter; medium: 35-100 mm diameter; large: >100 mm diameter).

3.2.5 Targeted Threatened Flora and Fauna Surveys

Targeted flora and fauna searches were undertaken for threatened species identified through the desktop review process. Searches were undertaken within areas considered to contain likely habitat for the target species. Survey effort was apportioned between the following survey techniques at the discretion of the ecologist:

- Diurnal active search, comprising investigation of potential habitat features (e.g. leaf litter, logs, rocks, peeling bark) and scanning vegetation canopies for fauna and inferential evidence of fauna presence (e.g. scratches, scats, tracks, diggings, shed skins, orts, nests, stick or mud nests and dreys);
- Diurnal bird survey, with species being identified through either visual observation and/or call recognition; and
- Diurnal active search targeting threatened amphibians.

Koala Strip Transect Technique

Koala searches were conducted in general accordance with the strip transect technique as outlined in the Dique et al. 2003. Since the site is less than 50 hectares, the entire site was searched. One (1) observer traversed the site in transects searching for koalas in tree canopies as well as koala scats at the base of potential koala habitat trees.

3.2.6 Exotic Flora and Fauna Surveys

Non-native flora and fauna species were recorded when encountered during the survey (i.e. in survey plots, during targeted searches and opportunistically during site traverses) to produce a cumulative non-native flora and fauna list for the site. This included restricted matters (invasive plants and animals) scheduled under the *Biosecurity Act 2014*, as well as Weeds of National Significance (WoNS).

3.2.7 Disturbance Surveys

Disturbance data was recorded at each formal vegetation survey plot, and opportunistically during site traverses at the discretion of the ecologist. At each disturbance survey site, frequency and severity were assessed and recorded for the following disturbance categories:

- Blade ploughing;
- Erosion;
- Fence lines;
- Fire breaks;
- Flooding;
- Grazing;
- Logging;
- Mechanical clearing;
- Prescribed burning;
- Thinning;
- Wild fire;
- Wind storm; and
- Vehicular track.

3.2.8 Opportunistic Flora and Fauna Searches

To maximise data collection across the range of vegetation and habitats present, site traverses were conducted on foot. This facilitated a higher sampling resolution for the field survey and enabled greater site coverage by the field ecologist, which increases the likelihood of detecting threatened species and potentially threatened species habitat.



3.2.9 Data Collection Protocol

All positional, quantitative, qualitative and photographic data was recorded using Konect® data capture software using proprietary electronic forms for the recording of specific ecological data. A smartphone was used to run the data capture software. Spatial accuracy of ± 5 m is generally achieved using the data capture process described.

3.2.10 Survey Limitations

Whilst a range of variation has been assessed throughout all vegetation communities encountered on-site, the entirety of each community has not been investigated at a fine level of detail. For example, cryptic flora species that occur within the region that may only be detectable during their flowering period may not have been observed during the current survey period. Consequently, whilst a diversity of flora species has been recorded, the inventory of flora species compiled from the survey should not be considered an exhaustive list of flora species within the site.

It should also be noted that the fauna component of the field survey was a rapid assessment that provides a 'snapshot' of the species present and detectable at the site at the time of the survey. The ecological survey was undertaken in Spring 2021 and therefore does not account for the full range of seasonal habitat utilisation by, or detectability of, every fauna species that may utilise the site, nor does it account for the influence of weather during preceding seasons or years upon the presence or detectability of fauna during the survey. Aquatic trapping surveys did not form part of the survey scope.



Chapter 4: RESULTS

4.1 Desktop and Literature Review – Local Government Mechanisms

TABLE 4.1 below presents the results of the desktop review of the provisions of the Brisbane City Plan (2014) as they relate to the ecological planning context of the site and the proposed development.

TABLE 4.1: DESKTOP REVIEW OF MATTERS OF LOCAL ENVIRONMENTAL SIGNIFICANCE

CITY PLAN OVERLAY	DESIGNATION/ CLASSIFICATION	COMMENTS
Zoning Map	The majority of the site is in the Environmental Management Zone, while the far eastern balance site is in the Conservation Zone (APPENDIX C).	<p>The proposed development is concentrated at the site's east; with built structures in the Conservation Zone (fronting Ritchie Road) and access/carparking within the Environmental Management Zone.</p> <p>As per s.6.2.4 of the City Plan, the purpose of the Environmental management zone is to:</p> <ol style="list-style-type: none"> a. <i>identify environmentally sensitive areas; and</i> b. <i>provide for the protection of the environmentally sensitive areas from urban and industry activities, other than:</i> <ol style="list-style-type: none"> i. <i>dwelling houses and other low-impact activities; and</i> ii. <i>quarries, if the protection or promotion of the quarries is identified in the planning scheme as a strategic outcome for the local government area.</i> <p>While the site is flanked by vegetated conservation area, it is generally not deemed an environmentally sensitive area from an ecological planning perspective given its highly disturbed and modified nature. Notwithstanding, the site is acknowledged to contribute to fauna movement conduits of the locality and does host a polygon of intact regional ecosystem.</p> <p>Given the nature of the proposed land use, spatially limited extent of development, highly modified condition of the site and proposed rehabilitation works, the proposed development is interpreted to comply with the purpose of the Environmental management zone.</p> <p>The purpose of the Conservation Zone is for the management, protection and restoration of areas that support 1 or more of the following:</p> <ol style="list-style-type: none"> a. <i>biological diversity;</i> b. <i>ecological integrity;</i> c. <i>naturally occurring land forms;</i> d. <i>coastal processes.</i> <p>The conservation zone-portion of the site is limited to the far eastern frontage with Ritchie Road (approx. 8,500 m²). This portion of the site includes existing dwelling and shed structures as well as storage areas; as described in this report, ecological features within this area are limited to a sparse distribution of local native trees. The proposed development will result in an improvement of the ecological condition (and functionality) of the HES-designated portion of the site from the status quo via proposed rehabilitation works which will assist to improve the condition of vegetated corridors on the site. As such, the proposed development is taken to comply with the general intent of the Conservation zone code given site condition, context and the nature of development.</p>
Neighbourhood Plan	The site is within the Lower Oxley Creek south neighbourhood plan area	<p>As per s7.2.12.3.2, overall outcomes for the Lower Oxley Creek south neighbourhood plan area (land in the Environmental management zone) are:</p> <p><i>The rural residential character in this precinct is retained, predominantly characterised by large rural residential lots and lots with Biodiversity values.</i></p> <p><i>Where opportunities arise, environmental offset planting is to be located in this zone in accordance with requirements of the Offsets planning scheme policy</i></p> <p>The proposed development has been located at the site's east within a heavily disturbed area. Further, vegetation rehabilitation works are proposed to enhance the ecological condition of the site. Accordingly, the proposed development is sensitive to the Environmental Management/Conservation zone context in which it is set.</p>



TABLE 4.1: DESKTOP REVIEW OF MATTERS OF LOCAL ENVIRONMENTAL SIGNIFICANCE

CITY PLAN OVERLAY	DESIGNATION/ CLASSIFICATION	COMMENTS
Biodiversity Areas	<p>Biodiversity Area overlay themes mapped over the site (APPENDIX C) are described as:</p> <ul style="list-style-type: none"> Koala habitat area – entire site High Ecological Significance (HES) –far northern portion of site (~3700 m²) High Ecological Significance Strategic (HES) – entire site (that is not HES) Matters of State Environmental Significance (MSES) – the above-noted HES polygon is also mapped MSES as well as a polygon at the far east (~255 m² (total site area mapped as MSES = ~3975 m²) <p>The proposed development will does not trigger assessment against the Biodiversity areas overlay code of Part 8 of the City Plan (2014) since it does not require encroachment into the HES-mapped area. It is noted that the HES designation of the site was not in place at the time that the subject development application was properly made.</p>	<p>The HES designation over the site largely coincides with the State Government regulated vegetation (category B) designations of the site (refer to section 4.2 for further details around regulated vegetation). The proposed development has been designed to avoid this area.</p> <p>The primary purpose of the HESS designation is for the provision of and strengthening of ecological corridors and connectivity. The HESS-designation of the site is anticipated to be associated with the site’s proximity to a series of conservation areas/parkland. Given the whole-of-site extent of this designation, development can not avoid it. However, the proposed development has been designed to consolidate the disturbance footprint to the site’s east and allows for the retention of the remnant vegetation polygon at the site’s north as well as rehabilitation of areas at the site’s west. The proposed rehabilitation works are expected to improve connectivity between properties in the site’s surrounds.</p> <p>The koala habitat area designation of the entire site under the City Plan is consistent with the State Government koala plan mapping for the locality (i.e. Identified Koala Broad-hectare area) (refer section 4.2 for further detail). The proposed development does not require clearing of the State Government-designated Koala Habitat Area polygon of the site and allows for retention of all non-juvenile koala habitat trees on the site (refer Chapter 5 for further detail).</p> <p>The Biodiversity areas overlay code does not present performance outcomes particularly focussing on areas designated as MSES. This designation is taken as a ‘flag’ for potential for values such as regulated vegetation, buffer area to historic threatened species records and watercourses/wetlands. The MSES polygon at the site’s north is generally analogous to the regulated vegetation linework for this area. The MSES polygon at the far east appears to be associated with a stand of vegetation at the boundary of adjacent Lot 7 RP149220. The proposed development does not require clearing within a MSES polygon.</p>
Waterway corridors and wetlands	<p>The site is not designated as within a designated waterway corridor nor is it designated as hosting wetland under the Waterway corridors and wetlands overlay map.</p>	<p>The proposed development does not trigger an assessment against the Waterway corridors overlay code of Part 8 of the City Plan (2014).</p> <p>The nearest designated waterway corridor is ~80m to the site’s south.</p>
EbiMap2 data layers- Ecological Corridors	<p>The site’s far north is designated as being part of a City wide ecological corridor and buffer (APPENDIX C).</p>	<p>The designated corridor forms a connection between Blunder Creek to the site’s west and Oxley Creek to the east. The designated corridor traverses the eastern developed area of the site as well as the regulated vegetation polygon at the north. The proposed development will not result in an increased level of corridor fragmentation from the status quo; since the development footprint is within existing hardstand/developed area and does not require clearing. The vegetated conservation area to the site’ immediate north (Lot 8 SP183655) (also mapped as City wide corridor) appears to form the core of the fauna movement conduit associated with this corridor.</p>
EbiMap2 data layers- Natural Assets Local Law	<p>The entire site is designated under the Natural Assets Local Law (NALL) as Significant Native Vegetation (APPENDIX C)</p>	<p>The proposed development will require a NALL clearing permit (with regard to any native ground covers, shrubs and regrowth) proposed to be removed within the disturbance footprint prior to the operational works phase.</p>

4.2 Desktop and Literature Review – State Government Mechanisms

TABLE 4.2 below presents the results from the desktop review of Matters of State Environmental Significance that relate to the subject site.

TABLE 4.2: DESKTOP REVIEW OF MATTERS OF STATE ENVIRONMENTAL SIGNIFICANCE

STATE ENVIRONMENTAL MATTER	DESIGNATION/DESCRIPTION	COMMENTS
Koala Habitat Areas and Koala Planning Provisions	<p>The site entire site is mapped within a Koala Priority Area (‘KPA’) and is within the Identified Koala Broad-hectare Area (‘IBHA’). A polygon of Koala Habitat Area (KHA) occurs at the northern boundary pursuant to</p>	<p>The proposed development does not trigger the State Koala Planning Provisions pursuant to Schedule 10, part 10 of the Planning Regulation since it relates to a development application that properly made before 7</p>



TABLE 4.2: DESKTOP REVIEW OF MATTERS OF STATE ENVIRONMENTAL SIGNIFICANCE

STATE ENVIRONMENTAL MATTER	DESIGNATION/DESCRIPTION	COMMENTS
	<p>Queensland Government Koala Plan mapping (APPENDIX D).</p> <p>The KHA-designated area of the site coincides with the regulated vegetation designation of the site (refer row below) and also largely coincides with the HES (Local Government) designation over the site discussed in TABLE 4.1.</p> <p>A total of ~3700 m² of the site is designated as KHA.</p>	<p>February 2020. Notwithstanding, it is noted that the proposed development does not require clearing of any non-juvenile koala habitat trees.</p> <p>..</p>
Regulated vegetation	<p>A polygon designated Category B Of Concern Remnant Regional Ecosystem (RE) 12.3.11 is mapped at the site's north (APPENDIX D). This polygon is approximately 3700 m² and is also designated as Essential Habitat for the Koala (APPENDIX D).</p>	<p>As described in section 4.4, the regulated vegetation-designated areas of the site were found to conform with the <i>Vegetation Management Act 1999</i> definition of remnant regional ecosystem.</p> <p>From an environmental planning triggers perspective, the proposed development does not trigger State concurrence cgency assessment concerning regulated vegetation since the proposal does not require clearing of regulated vegetation and given that the site is less than 5 ha (as per schedule 21, part 1 of the Planning Regulation)</p>
Protected Plants	<p>The site is not designated as High-Risk Area under the Protected Plants Flora Survey Trigger Map (DES, 2021) (APPENDIX D).</p>	<p>Since the site is not mapped as a High Risk Area and given that Protected plants were not recorded on site during surveys, the proposed development does not trigger the Protected Plants regulatory provisions of the Nature Conservation (Plants) Regulation 2020.</p>
Wildlife online	<p>A total of six (6) fauna species and two (2) flora species, which are listed as Endangered, Vulnerable or Near Threatened (EVNT) were recorded in the Wildlife Online database as potentially present within the site (APPENDIX D).</p>	<p>As discussed in section 4.4, traces (scratches) of koala (vulnerable under NC Act) were recorded during site surveys. No other threatened species were recorded on site.</p>
Waterways for Waterway Barrier Works	<p>The site is not designated as hosting a Queensland waterway for waterway barrier works.</p>	<p>The development does not propose works within a Waterway for waterway barrier works and therefore does not trigger the associated permit requirements of the <i>Fisheries Act 1994</i>.</p>

4.3 Desktop and Literature Review – Federal Government Mechanisms

TABLE 4.3 below presents the results from the desktop review of Matters of National Environmental Significance.

TABLE 4.3: DESKTOP REVIEW OF MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

NATIONAL ENVIRONMENTAL MATTER	DESIGNATION/DESCRIPTION	COMMENTS
Wetlands of International Importance (Ramsar)	<p>The site is <20 km upstream of Moreton Bay (a Ramsar wetland).</p>	<p>The proposed development is not anticipated to offer a significant impact upon Moreton Bay given nature of development and distance between. Notwithstanding, stormwater impacts are to be managed in accordance with a Council-approved stormwater management plan in order to mitigate water quality/loading impacts on downstream receivers.</p>
Listed Threatened Ecological Communities (TECs).	<p>The search returned four (4) TECs as likely to occur within 5km of the site area (APPENDIX E):</p> <ul style="list-style-type: none"> Coastal Swamp Oak (<i>Casuarina glauca</i>) Forest of New South Wales and South East Queensland. Lowland Rainforest of Subtropical Australia. Poplar Box Grassy Woodland on Alluvial Plains. 	<p>No TECs were recorded on site during New Ground survey works.</p>



TABLE 4.3: DESKTOP REVIEW OF MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

NATIONAL ENVIRONMENTAL MATTER	DESIGNATION/DESCRIPTION	COMMENTS
	<ul style="list-style-type: none"> White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland. 	
Listed Threatened Species.	A total of 42 listed threatened species are potentially present within the survey area (APPENDIX E).	As discussed in section 4.4 , traces (scratches) of koala (vulnerable under EPBC Act) were recorded during site surveys. No other threatened species were recorded on site. Notwithstanding, development of the site would not be anticipated to offer a significant impact on a Federal-listed threatened species as per EPBC Act Policy 1.1.
Listed Migratory Species.	A total of 16 listed migratory species are potentially present within the survey area (APPENDIX E).	The proposed development is not anticipated to offer a significant impact on a Federal-listed migratory species as per EPBC Act Policy 1.1.

4.4 Field Survey Results

4.4.1 Vegetation Community Surveys

The vegetation community surveys identified that the site comprises Three (3) vegetation community associations. The ground-truthed vegetation communities recorded on site are:

- Derived grassland /Shrubland
- Eucalyptus racemosa* dominated Woodland.
- Ecotonal Riparian Open Forest (RE12.3.11).

TABLE 4.4 provides a summary of the ground-truthed vegetation communities verified during the field survey. **APPENDIX F** presents a map of the ground-truthed vegetation communities, **APPENDIX G** presents flora and fauna species recorded during surveys and **APPENDIX H** presents representative site photographs.

TABLE 4.4: GROUND-TRUTHED VEGETATION COMMUNITIES PRESENT ON SITE

COMMUNITY	STATUS	VEGETATION DESCRIPTION
Derived Grassland/ Shrubland	-	<p>The community is a derived community after extensive clearing and is dominated by a mix of native regrowth sapling trees and shrubs while sections are dominated by introduced grasses.</p> <p>Upper Stratum (height 20 - 25 m; projected foliage cover <1%) The upper stratum of this community is comprised of a small numbers of scattered remnant <i>Eucalyptus racemosa</i> and <i>Eucalyptus resinifera</i>.</p> <p>Mid Stratum (height 1 - 2 m; projected foliage cover 5 -20 %) <i>Eucalyptus racemosa</i>, <i>Eucalyptus resinifera</i> <i>Corymbia citriodora</i>, <i>Lophostemon suaveolens</i>, <i>Alphitonia excelsa</i>, <i>Melaleuca quinquenervia</i>, <i>M.nodosa</i> and <i>Acacia disparima</i>.</p> <p>Lower Stratum (height to 0. 5 m; cover 40 - 80%) The groundcover is variable with both native and introduced grasses, herbs and forbs including; <i>Pteridium esculentum</i>, <i>Entolasia stricta</i>, <i>Themeda triandra</i>, <i>Imperata cylindrica</i>, <i>Gahnia aspera</i>, <i>Lomandra longifolia</i>, <i>Hibbertia vestita</i>, <i>Oplismenus aemulus</i>, <i>Ptilothrix deusta</i>, <i>Lantana camara</i>*, <i>Paspalum dilatatum</i>*, <i>Hypochaeris radicata</i>, <i>Axonopus fissifolius</i>, <i>Pennisetum clandestinum</i>, <i>Cynodon dactylon</i>. <i>Andropogon gayanus</i>, <i>Cyperus rotundus</i>, <i>Bidens pilosa</i>*, <i>Eragrostis curvula</i>, <i>Ageratum houstonianum</i>* and <i>Lantana montevidensis</i>*.</p> <p>Extent of Disturbance The community has been extensively disturbed due to historical clearing, and continued slashing, and is impacted further by vehicle tracks, weed intrusion and rubbish.</p> <p>Conservation Significance and Equivalence Regional Ecosystem Equivalence The vegetation occurring within this stratification unit is designated as Non remnant Category X on the Regulated Vegetation Mapping. Notwithstanding the vegetation was compared to Pre clearing Regional Ecosystem mapping and Technical descriptions of Regional ecosystems occurring in the local area.</p> <p>This vegetation community was found to contain an assemblage of species that are analogous to 12.9-10.4 (<i>Eucalyptus racemosa</i> subsp. <i>racemosa</i> woodland on sedimentary rocks); however due to its extremely disturbed nature cannot be classed as a regrowth regional ecosystem.</p>



TABLE 4.4: GROUND-TRUTHED VEGETATION COMMUNITIES PRESENT ON SITE

COMMUNITY	STATUS	VEGETATION DESCRIPTION
Ecotonal Riparian Open Forest	12.3.11/HES under City Plan/Local Significant Vegetation Community	<p>This community occurs along the northern fenceline and is largely limited to a strip of vegetation approximately 25m wide. This community is ecotonal area of vegetation between alluvial (Land zone 3) and consolidated (non-alluvial) sediment (Land zone 9-10)</p> <p>Upper Stratum (height 20 - 25 m; projected foliage cover 5-10%)</p> <p>The upper stratum of this community is comprised of remnant trees dominated by <i>Eucalyptus racemosa</i> with occasional <i>Eucalyptus tereticornis</i>, <i>Corymbia intermedia</i> and <i>Melaleuca quinquenervia</i>.</p> <p>Mid Stratum (height 2 - 12 m; projected foliage cover <40 -60%)</p> <p><i>Eucalyptus tereticornis</i>, <i>Lophostemon suaveolens</i>, <i>Alphitonia excelsa</i>, <i>Melaleuca quinquenervia</i>, <i>Melaleuca nodosa</i>, <i>Acacia disparrima</i>, <i>Allocasuarina littoralis</i> and <i>Pinus elliotti</i>.*</p> <p>Lower Stratum (height to 0.5 m; cover 60 - 80%)</p> <p>The groundcover is relatively intact dominated by native sedges including; <i>Carex maculata</i>, <i>Juncus polyanthemus</i>, <i>Cyperus leiocaulon</i>, <i>Cyperus polystachyos</i>, <i>Pteridium esculentum</i>, <i>Entolasia stricta</i>, <i>Themeda triandra</i>, <i>Alloteropsis semialata</i>, <i>Imperata cylindrica</i>, <i>Gahnia aspera</i>, <i>Lomandra longifolia</i>. Introduced species abundance/cover varied with patches of <i>Lantana camara</i>* and <i>Megathryus maximus</i>*.</p> <p>Extent of Disturbance</p> <p>Despite being reduced to a thin strip of vegetation the community has been subject to a moderate to low extent of disturbance with the shrub layer and the understorey of the community remaining dominated by native sedges, grasses, herb and forb species. The community has been dissected by a number of tracks and has significant rubbish and patches of introduced species such as <i>Lantana camara</i>* and <i>Megathryus maximus</i>* on the edges.</p> <p>Conservation Significance and Equivalence</p> <p>Regional Ecosystem Equivalence</p> <p>The vegetation occurring within this area of the subject site is designated as Remnant (Category B) Regional Ecosystem 12.3.11 on the Regulated Vegetation Mapping and was found to be generally analogous to this RE type.</p>
Eucalyptus Racemosa Woodland	Local Significant Vegetation Community	<p>This community occurs around the western and southern fencelines and is largely limited to a strip of vegetation ranging between 5 and 15m wide.</p> <p>Upper Stratum (height 20 - 25 m; projected foliage cover 5-10%)</p> <p>The upper stratum of this community is comprised of remnant trees dominated by <i>Eucalyptus racemosa</i> with occasional <i>Corymbia citriodora</i>, <i>Eucalyptus resinifera</i>, <i>Corymbia intermedia</i> and scattered <i>Pinus elliotti</i>*.</p> <p>Mid Stratum (height 3 - 16 m; projected foliage cover <5 %)</p> <p><i>Eucalyptus racemosa</i>, <i>Corymbia citriodora</i>, <i>Lophostemon suaveolens</i>, <i>Alphitonia excelsa</i>, <i>Melaleuca quinquenervia</i> <i>Acacia disparrima</i>, <i>Acacia leiocalyx</i>, <i>Jacksonia scoparia</i>, <i>Allocasuarina littoralis</i> and <i>Pultenaea paleacea</i></p> <p>Lower Stratum (height to 0.15 m; cover 40 - 80%)</p> <p>The groundcover is relatively intact dominated by native grasses, herbs and forbs including; <i>Pteridium esculentum</i>, <i>Entolasia stricta</i>, <i>Themeda triandra</i>, <i>Alloteropsis semialata</i>, <i>Imperata cylindrical</i>, <i>Gahnia aspera</i>, <i>Lomandra longifolia</i>, <i>Hibbertia vestita</i>, <i>Oplismenus aemulus</i>, <i>Hardenbergia violacea</i>, <i>Eustrephus latifolius</i>, <i>Desmodium rhytidophyllum</i>, <i>Daviesia ulicifolia</i>, <i>Patersonia sericea</i>, <i>Ptilothrix deusta</i> and <i>Glycine sp.*</i> introduced species abundance/cover varied with patches of <i>Lantana camara</i>*.</p> <p>Extent of Disturbance</p> <p>Despite being reduced to a thin strip of vegetation the community has been subject to a moderate to low extent of disturbance with the shrub layer and the understorey of the community remaining dominated by native grass, herb and forb species.</p> <p>Conservation Significance and Equivalence</p> <p>Regional Ecosystem Equivalence</p> <p>The vegetation occurring within this area of subject site is designated as Non remnant Category X on the Regulated Vegetation Mapping. Notwithstanding the vegetation was compared to Pre clearing Regional Ecosystem mapping and Technical descriptions of Regional ecosystems occurring in the local area.</p> <p>This stratification unit was found to contain an assemblage of overstorey species that are analogous to RE12.9-10.4 <i>Eucalyptus racemosa subsp. racemosa</i> woodland on sedimentary rocks. However, due to its spatially limited extent cannot be classed as a regrowth regional ecosystem.</p>

4.4.2 Fauna Habitat Assessment

The fauna habitat assessment recorded three (3) broad habitat types within the site. These were aligned with vegetation community descriptions recorded over the site. Representative surveys were undertaken within each of these habitat types and the survey locations are presented in APPENDIX A and APPENDIX H presents representative site photographs. Error! Reference source not found. presents a summary of the habitat survey results and a description of the microhabitat features recorded within each habitat type.



TABLE 4.5: FAUNA HABITAT ASSESSMENT SURVEY FINDINGS

HABITAT SURVEY	EXTENT OF OCCURRENCE	DESCRIPTION
Habitat Survey (H1)	The area of habitat associated with this Habitat Survey point occurs in the area classified as 'Ecotonal Riparian Open Forest RE12.3.11' in APPENDIX F .	The noted habitat values associated with this habitat unit are: <ul style="list-style-type: none">• Vegetated ground cover of 51-75% of the survey area.• Intermittent cover of decorticating bark habitat resources (associated with <i>Melaleuca sp.</i> and <i>Lophostemon sp.</i>)• Low cover of small (<30cm diameter) logs (1-5 recorded).• Tree canopy cover of 26-50%.• This habitat unit hosts a small area of aquatic habitat resources• Low cover of small (<30cm diameter), medium (30-50cm diameter) and large (>50cm diameter) rocks (1-5 recorded of each size class); and• Leaf litter/small sticks covered 25-50% of the survey area.
Habitat Survey (H2)	The area of habitat associated with this Habitat Survey point is the area of the site classified as 'Derived shrubland and grassland' in the ecological features map (APPENDIX F).	The noted habitat values associated with this habitat unit are: <ul style="list-style-type: none">• Vegetated ground cover of 51-75% of the survey area (regrowth shrubs, slashed grasses and exotics).• Scattered hollow bearing trees.• Extremely Low cover of small (<30cm diameter) logs• Tree canopy cover of <5%; and• Leaf litter/small sticks covered <10% of the survey area.
Habitat Survey (H3)	The area of habitat associated with this Habitat Survey point occurs in the area of the site classified as 'Eucalyptus racemosa dominated Woodland' in the ecological features map (APPENDIX F).	The noted habitat values associated with this habitat type are: <ul style="list-style-type: none">• Vegetated ground cover over 51-75% of the survey area.• Tree canopy cover of <25%.• Leaf litter/small sticks covered <25% of the survey area.• Intermittent cover of small (<30cm diameter) logs (1-5 recorded).• Aquatic habitats (identified dams) include macrophytes namely <i>Typha orientalis</i> and <i>Shoenopectus spp.</i>• Moderate cover of small (<30cm diameter) logs (1-5 recorded).• Moderate amount of Large and medium hollow-bearing trees observed (6-10 recorded across both size classes).

4.4.3 Fauna Breeding Place Features Survey

During the breeding habitat survey, a total of 16 records were collected, of these five (5) were identified as active fauna breeding places given presence of fauna within these (namely rainbow lorikeets and sulfur crested cockatoos using tree/stag hollows). The locations of the potential fauna breeding habitat features are presented in **APPENDIX F**. **TABLE 4.6** below contains a tabulated summary of the fauna breeding habitat place survey findings.



TABLE 4.6: FAUNA BREEDING PLACE FEATURES SURVEY RESULTS

BREEDING PLACE (TREE) ID #	ECOLOGICAL FEATURES	DETAILS OF ECOLOGICAL FEATURES	SUITABLE FAUNA	GPS COORDINATES	
				EASTING	NORTHING
2051	Hollow bearing tree	Numerous hollows 35-100mm	Current Breeding place occupied hollow (rainbow lorikeet)	6945559.451	500751.862
2052	Stag	Numerous hollows 35-100mm	Potential breeding place small birds and Bats	6945547.494	500698.139
2053	Hollow bearing tree	Numerous hollows >100mm	Hollows suitable for Microchiroptera bats to gliders/possums	6945528.998	500766.46
2056	Hollow bearing tree	Numerous large hollows >100mm	occupied hollow (sulfur-crested cockatoo)	6945572.723	500804.078
2057	Hollow bearing tree	Numerous hollows 35-100mm	Potential breeding place small birds and Bats	6945599.28	500824.086
2061	Hollow bearing tree	Small hollows <35mm	Potential breeding place small birds and Bats	6945670.982	500783.026
2064	Hollow bearing tree	Numerous large hollows >100mm	Hollows suitable for Microchiroptera bats to gliders/possums and occupied hollow (rainbow lorikeet)	6945640.645	500804.166
2065	Hollow bearing tree	Numerous large hollows >100mm	Hollows suitable for Microchiroptera bats to gliders/possums	6945647.45	500802.957
2066	Hollow bearing tree	Medium hollows 35-100mm	Potential breeding place birds, gliders and Bats	6945646.174	500816.015
2068	Hollow bearing tree	Small hollows <35mm	Potential breeding place small birds and Bats	6945665.432	500804.504
2070	Hollow bearing tree	Medium 35-100mm	Potential breeding place birds, gliders and Bats	6945672.68	500820.261
2072	Hollow bearing tree	Numerous large hollows >100mm	Hollows suitable for Microchiroptera bats to gliders/possums Current Breeding place occupied hollow (rainbow lorikeet)	6945618.684	500871.633
2073	Hollow bearing tree	Numerous large hollows >100mm	Hollows suitable for Microchiroptera bats to gliders/possums	6945606.292	500865.855
2074	Hollow bearing tree	Numerous large hollows >100mm	Hollows suitable for Microchiroptera bats to gliders/possums Current breeding place (sulfur-crested cockatoo)	6945591.747	500857.179
2082	Hollow bearing tree	Numerous large hollows >100mm	Hollows suitable for Microchiroptera bats to gliders/possums	6945645.588	500867.939
2083	Hollow bearing tree	Small hollows <35mm	Potential breeding place small birds and Bats	6945662.151	500885.105



4.4.4 Fauna and Flora Surveys

A total of 19 fauna species were detected on site comprising of; fifteen (15) avifauna, three (3) mammal and one (1) reptile species. Of these records, one (1) species is vulnerable (koala) under both the EPBC Act and NC Act and two (2) are 'locally significant species' as listed under the Biodiversity Areas overlay code of the Brisbane City Plan 2014 (refer **section 4.4.5**). The fauna species list (**APPENDIX G**) not an exhaustive list of species located in the area, rather, a list of species that were encountered during the survey.

The Koala was recorded via the detection of scats during the fauna transects undertaken within the study area. The transects identified that a number of trees had scratches attributed to the species demonstrating previous utilisation of the site's habitats.

A total of 59 species of flora were recorded during the survey. Of these, 47 species are listed as Least Concern flora under the NC Act and 14 species are exotic species and/or environmental weeds. Of the exotic species recorded, four (4) are category 3 restricted matters under the *Biosecurity Act 2014* and three (3) are listed by the Federal Government as Weeds of National Significance (WoNS) In addition, two (2) of the recorded species are listed as Locally Significant Flora in the Brisbane Council Area and are discussed further (See sections 4.4.5 and 4.4.6 for further detail).

APPENDIX G presents the list of flora and fauna detected on site during the survey.

Targeted Koala Searches

Traces of koala (*Phascolarctos cinereus*) were recorded at one tree (Tree reference no. 2057) (refer **APPENDIX F**).

4.4.5 Locally Significant Fauna and Flora

Species of city-wide significance ('locally significant') are listed under the Biodiversity Areas overlay code of the Brisbane City Plan (2014). The City Plan (2014) defines local significant species as those that are either;

- Listed as extinct, endangered, vulnerable or near threatened under the EPBC Act (1999) or the NC Act (1992); and/or
- Those identified as being of city-wide significance within the Brisbane local government area, because they are uncommon, have restricted distribution, are in decline, at risk of local extinction, at the limit of their range or of a disjunct population.

Four (4) flora species and two (2) fauna species of local significance were identified during this survey (**TABLE 4.7**). Aside from koala, these species are not listed as threatened under the EPBC Act and/or NC Reg list; being recognised as common at legislative level.

TABLE 4.7: LOCALLY SIGNIFICANT FLORA AND FAUNA RECORDS

SPECIES	COMMON NAME
FLORA	
<i>Corymbia intermedia</i>	pink bloodwood
<i>Eucalyptus racemosa</i>	scribbly gum
<i>Eucalyptus resinifera</i>	red mahogany
<i>Eucalyptus tereticornis</i>	forest red gum
FAUNA	
<i>Phascolarctos cinereus</i>	Koala (recorded by scats only)
<i>Wallabia bicolor</i>	swamp wallaby

4.4.6 Exotic Fauna and Flora Survey

During the field survey, a total of four (4) flora species listed as a restricted matter under the *Biosecurity Act 2014* and three (3) WoNS species were recorded on site (refer **TABLE 4.8**). A cumulative list of non-native flora species recorded on site during the field survey is provided in **APPENDIX G**. No invasive animals under the *Biosecurity Act 2014* were recorded on site.



TABLE 4.8: EXOTIC FLORA AND FAUNA PRESENT ON SITE

SCIENTIFIC NAME	COMMON NAME	RESTRICTED CATEGORY NUMBER	WONS
FLORA			
<i>Asparagus africanus</i>	<i>asparagus fern</i>	Category 3	WoNS
<i>Baccharis halimifolia</i>	<i>groundsel bush</i>	Category 3	-
<i>Lantana camara</i>	<i>lantana</i>	Category 3	WoNS
<i>Lantana montevidensis</i>	<i>trailing lantana</i>	Category 3	WoNS

4.4.7 Individual Tree Survey

The results of the individual tree survey are presented in **APPENDIX I**. A total of 35 trees were recorded within and immediately adjacent to the proposed development footprint.

4.4.8 Disturbance

A number of disturbance types were recorded on site. These are detailed in **TABLE 4.9** below.

TABLE 4.9: SITE DISTURBANCES

DISTURBANCE TYPE	DESCRIPTION
Weed invasion	Moderate to high throughout the site with significant invasion observed in the site's RE12.3.11 polygon.
Rubbish	Low to medium levels of anthropogenic debris, namely in the site's RE12.3.11 polygon.
Clearing	The entire site has been historically cleared; with the RE12.3.11 polygon the site's only area of intact regional ecosystem
Construction	The site hosts several built structures and driveway alignments

4.4.9 Site Connectivity and Corridors

A review of the site's role in local ecological connectivity was undertaken by New Ground. New Ground referred to desktop data layers (namely Regulated Vegetation mapping, City Plan Biodiversity Overlay mapping and EbiMap2 layers) through the review (refer **TABLE 4.1**) as well as field survey data documented within this report.

As noted in **TABLE 4.1**, the site's north is within an east-west corridor designated by Council (City Wide Ecological Corridor). Of note here is that the site's north-east hosts built structures/hardstand areas. It is also noted that the designated Ecological corridor traverses a series of developed (and fenced allotments to the site's east in particular); suggesting that the mapped linework is indicative owing to map scale. While the site does contribute to fauna movement resources, it is expected that the vegetated property to the site's north (Lot 8 SP183655) (understood to be controlled by Council) forms the 'core' of the ecological corridor.

Notwithstanding, opportunities were identified in the EAR for improvement of fauna connectivity via rehabilitation of the HES polygon at the site's north (within mapped Ecological corridor) and replacement/reetrofitting of the Council cyclone wire and barbed wire fence along the northern boundary with fauna friendly fencing/crossing installations (refer to **Chapter 5**).



Chapter 5: IMPACTS AND MITIGATION

A summary of the potential ecological impacts and impact mitigation measures associated with the proposed development concept (**APPENDIX B**) is provided in the following section in order to guide development planning and assessment. Refer to **APPENDIX I** for Tree Removal/Retention Plan which presents proposed clearing extents. In summary, the development has been designed to avoid the need to clear mature trees and avoid encroachment into the HES/RE12.3.11 mapped polygon. Notwithstanding, the development does offer indirect disturbance; namely in the form of edge effects of light, noise and exotic flora incursion impacts.

5.1 MLES and other Local Matters

Locally Significant Species

Six (6) local significant species were recorded on the subject site. Four (4) of these species are flora species that are associated with the vegetation communities recorded on the site. The proposed development does not intend direct disturbance upon any such species (aside from young regrowth within the Derived grassland/shrub land community); allowing for the retention of mature trees and the site's HES/RE12.3.11 polygon. Rehabilitation works are proposed within the HES/RE12.3.11 polygon which will result in greater abundance of Local significant species associated with this community.

Swamp wallaby (*Wallabia bicolor*) and koala (*Phascolarctos cinereus*) were the Local significant fauna species recorded on site during surveys. Koala (*Phascolarctos cinereus*) was recorded by traces (scats at one location). The proposed development would contribute to a cumulative reduction of potential foraging area for these species (i.e. additional hardstand area associated with proposed car park). However, mature trees on site are to be retained and the RE12.3.11/HES polygon (also mapped as Core Koala Habitat Area under Nature Conservation (Koala) Conservation Plan mapping) is to be retained and rehabilitated as a result of the proposed development. On this basis, proposed development is not anticipated to alone represent a significant impact on local distribution and abundance of these species.

Habitat Features

There were 16 fauna breeding habitat features recorded on the site. The proposed development does not require direct disturbance of these breeding places. However, an arborist assessment is recommended to assess the viability of retention of tree 2051 given the status-quo presence of a constructed driveway within the Tree Protection Zone (TPZ) of this tree (refer **APPENDIX I**).

Locally Significant Vegetation Communities

The proposed development allows for the retention of the HES polygon which is a Local significant vegetation community (RE12.3.11) as well as balance areas which resemble RE12.9-10.4 (also a Local significant vegetation community) at the southern and western site boundaries. Accordingly, the proposed development does not offer direct impacts on local distribution and abundance of this community. Rather, proposed rehabilitation works are expected to improve condition of this community.

5.2 MSES

Threatened Flora

No threat-listed flora species were recorded as occurring on site. The proposed activity is not deemed to offer a significant impact on protected flora habitats within the site's locality.

Threatened Fauna

Koala (*Phascolarctos cinereus*) was recorded indirectly on site via scats at one (1) tree. The proposed development does not seek removal of non-juvenile koala habitat trees. As such, will not result in a reduction in koala sheltering and foraging resources in the site's locality. It is however noted that the boundary fencing at the site's north (between site and Council-land) and within the Council mapped City-wide ecological corridor is deemed a barrier to koala movement given its cyclone wire with barbed strands at top construction. The value of the site and its surrounds (including the City-wide corridor) could be improved via replacement/reterofitting of the fence with koala friendly measures (e.g. post and rail fence or installation of climbing posts along both sides of the fence at regular intervals).



The proposed development would result in an increase of key threatening processes to koala on site such as increased risk of road strike. However, such an increase is likely to be minor given the small scale of the development and the site's position within an increasingly growing urban area. The proposed activity is unlikely to significantly impact the local koala population.

Regulated Vegetation

The proposed development allows for the retention (and rehabilitation) of the regulated vegetation designated over the site.

Koala Habitat Areas

The proposed development allows for the retention (and rehabilitation) of the KHA designated over the site.

5.3 MNES

Threatened Ecological Communities

The proposed activity will not result in the removal of vegetation that is a MNES (Threatened Ecological Community).

EPBC Flora and Fauna

The proposed development is not deemed to offer a significant impact to EPBC Act-listed flora or fauna species.

The proposed development will have an indirect impact upon potential koala (*Phascolarctos cinereus*) habitat. However, in a review of the EPBC Act referral guidelines for the vulnerable koala (DoE 2014), the proposed development does not trigger a referral to the Department of Agriculture, Water and the Environment given the small spatial scale of potential koala habitat within the development footprint.

5.4 Other

5.4.1 Predation by Domestic Pets

Given the nature of the proposed development, it is unlikely to increase the number of domestic pets in the area, and consequently unlikely to contribute to an increased likelihood of domestic pets entering adjoining habitats. Notwithstanding, given domestic dogs are common-place in the site's locality, it is again recommended that the Council fence along the site's north is reterofitted/replaced with fauna friendly measures to avoid predators funnelling fauna toward the fence.

Any new fencing associated with the development is to be fauna friendly (as per the specifications outlined by the Koala Sensitive Design Guideline (DES, 2020)); aside from any areas where domestic dogs are to be kept. Koala encounters with dogs can be significantly reduced by the provision of fencing in dog containment areas which ensures containment of dogs and exclusion of koalas (such as timber fencing without gaps between palings with support braces on the yard side).

5.4.2 Fauna Mortality During Clearing and Construction

Clearing and earthworks associated with development may result in injury or death to fauna present at the time of disturbance. Similarly, construction works, such as trenching, have the potential to cause death or injury to fauna via trapping. Fauna mortality risk during site preparation and construction of the proposed development is deemed low given the relatively low extent of native vegetation clearing required to facilitate the proposed activity. Notwithstanding, supervision of clearing and earthworks by a licenced fauna spotter catcher would further reduce such a risk.

5.4.3 Altered Hydrology

The removal of vegetation from the site as well as the introduction of impermeable surfaces may alter infiltration and absorption and consequently, development has the potential to alter the hydrological regime. Indirect impacts are to be managed through accordance with an approved erosion sediment control plan.



5.4.4 Light and Noise Impacts

The proposed development is expected to offer limited light and noise impacts on the ecological context of the locality. In that, the site will be operated during daylight hours for church service and community food distribution purposes. Additional lighting is not proposed beyond the status quo; this includes the proposed carpark (which fringes the HES polygon), whereby installation of lighting is not proposed. Given the daytime nature of operations, the site will be dimly lit (i.e. lights on for security purposes within buildings) and quiet at night. The only exception here may be occasional church events that run into the early evening. The proposed development has been designed to avoid installation of new lighting and is of a scale and land use that does not raise concern around significant ecological impacts concerning noise generation.

5.4.5 Rubbish and Nutrients

Development of the site may increase the amount of rubbish being transported to adjacent areas.

Litter, including food scraps, can provide opportunities for introduced species which can then create competition and predation pressures with native species in receiving areas. Similarly, nutrients can encourage the growth of exotic species which can change species composition of retained habitats and further provide opportunities for introduced flora species. The impact of exotic flora species may also be exacerbated through the use of exotic species in gardens/landscaped areas which can then spread into adjoining bushland. Appropriate stormwater management, the use of local native species in landscaping features and prudent management of construction waste (packaging etc.) will assist in the management of this impact.



Chapter 6: CONCLUSION AND RECOMMENDATIONS

6.1 Conclusions

This ecology report has been prepared to explore the ecological value of the site and potential impacts of future development within the site. Conclusions of this report are based on the desktop-based environmental constraints investigation and field survey results documented with this report.

The elements of ecological value and ecological condition of the site identified by this study include:

- The site is generally in a highly modified and disturbed ecological condition; notwithstanding hosts a relatively small area of regulated remnant regional ecosystem vegetation as well as several potential and active fauna breeding places in the form of hollow bearing trees and stags.
- Three (3) distinct vegetation communities were recorded on site; Ecotonal riparian open forest (RE12.3.11), *E.racemosa* dominated woodland (floristically analogous to RE12.9-10.4) and Derived grassland/shrubland. The proposed development is concentrated within the Derived grassland/shrubland community.
- The proposed development does not require clearing of mature trees nor does it require encroachment into the Council-designated HES polygon at the site's north.
- Sixteen potential fauna breeding habitat resources (hollow bearing trees and stags) were recorded on site.
- The proposed development allows for the retention of all hollow bearing trees and stags recorded on site (notwithstanding the viability of retention of Tree 2051 will need to be explored by an arborist given the status quo-location of the driveway within the Tree Protection Zone of this tree).
- One threat-listed species (koala) was recorded onsite indirectly during field surveys (via scats). The proposed development allows for the retention of non-juvenile koala habitat trees on site and the portion of the site mapped as Core Koala Habitat Area (KHA) under the Koala Plan. This area is also mapped as HES (mentioned above) and remnant regional ecosystem 12.3.11.
- The site is within a Council designated Citywide significant ecological corridor. The alignment of this corridor fringes the site's north and traverses existing built structures at the site's north-east. It also traverses residential allotments to the site's east. It is expected that the property to the site's immediate north (Lot 8 SP183655) forms the core of this corridor (given the presence of relatively contiguous polygon of seemingly intact remnant vegetation). However, a cyclone fire fence (with barbed wire strands at top) occurs at the site's north between these properties. This fence is expected to significantly impair fauna movement opportunities and poses a prey-funnelling risk.
- The site has moderate to high levels of weed incursion, including scheduled weeds under the *Biosecurity Act 2014*.

In summary, the proposed development will result in limited clearing of native vegetation; being situated within a highly disturbed area of the site and amongst existing built structures.

6.2 Recommendations

The following recommendations are to guide the development feasibility assessment process.

- Local native plant species are to be used in landscaping features.
- It is recommended that weed species identified, particularly scheduled pest plants are controlled.
- Construction is undertaken in accordance with an approved erosion sediment control plan and fauna management plan.
- Rehabilitation works are to be undertaken in accordance with an approved rehabilitation plan.
- If applicable, any fencing between development and the HES polygon or any new boundary fencing should be of fauna friendly design, allowing for fauna movement through the subject site.
- It is suggested that Council replace or reterofit the Lot 8 SP183655 fenceline at the site's north with fauna friendly movement measures.
- Works are to be undertaken in accordance with all relevant statutory approvals.



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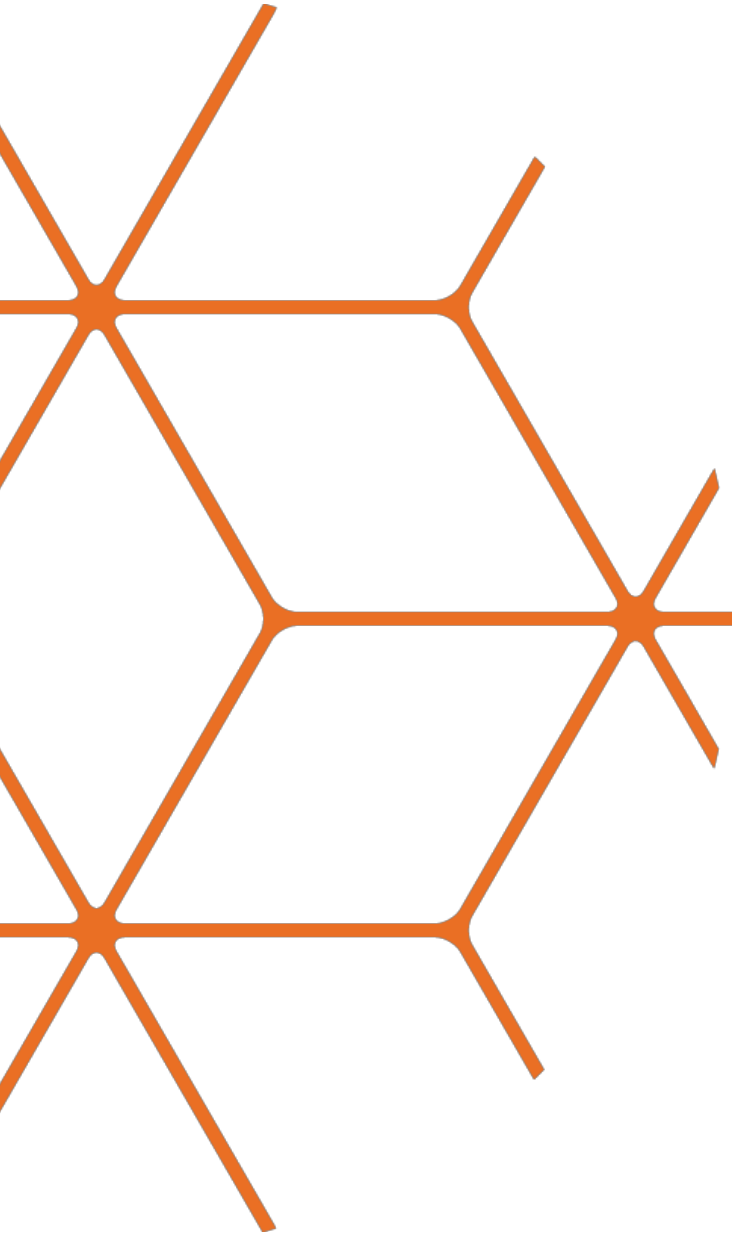
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APPENDIX A

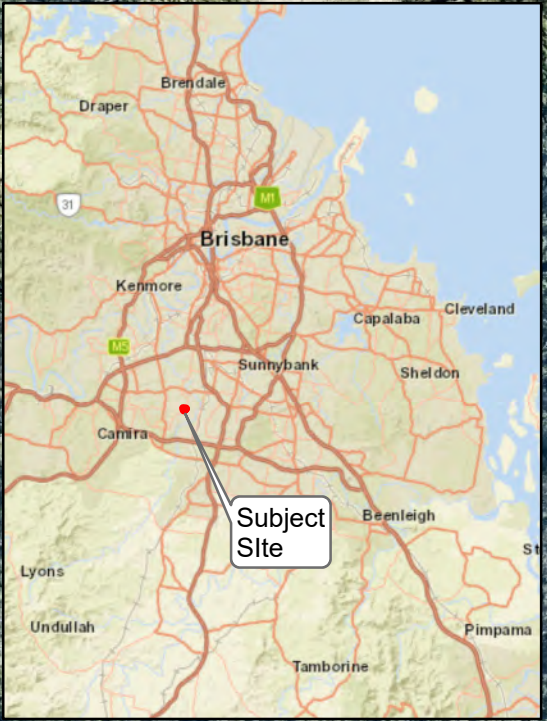
Site Locality and Survey Sites Plan



Notes:
 1. Figure indicative only.
 2. Random meanders were undertaken within the site.

Legend

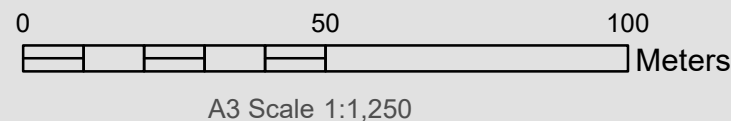
- Subject Site
- Survey site**
- Formal Habitat
- Quaternary



File: 2700Pallara-LocalityAndSurveySites-211111

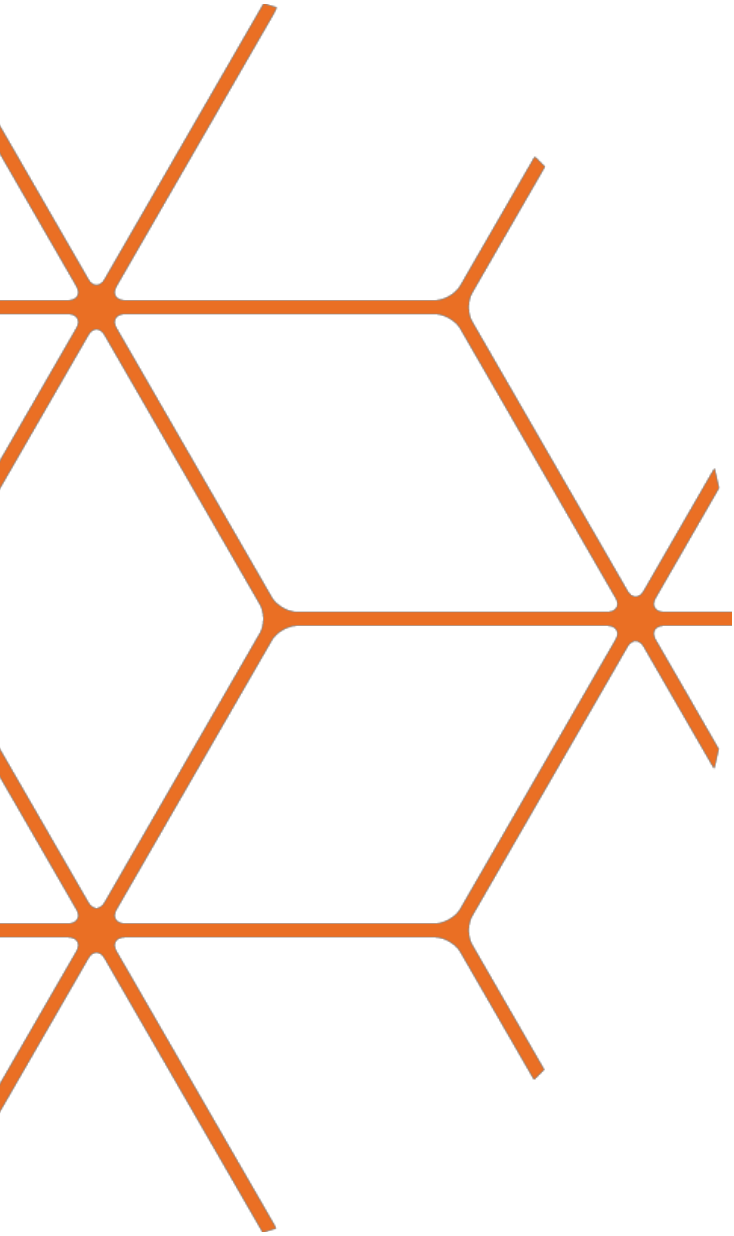


SITE LOCALITY AND SURVEY SITES PLAN - LOT 3 RP136964

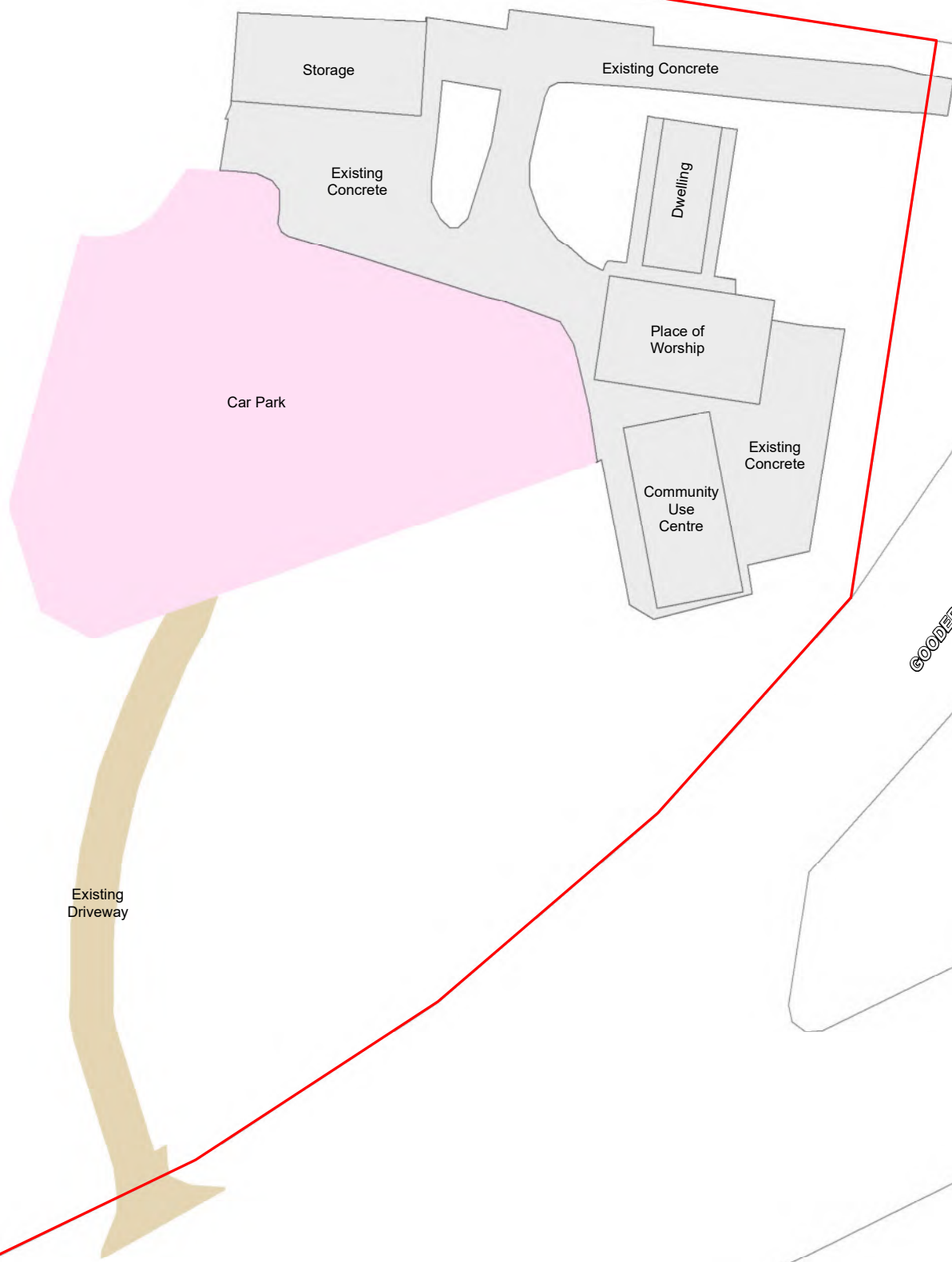


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APPENDIX B
Plan of Development

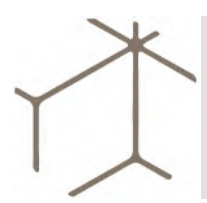


Notes:
1. Figure Conceptual
and not for construction
purposes.

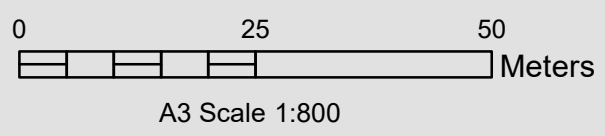


	Subject Site
	Existing infrastructure
	Existing Driveway
	Car Park

File: 2700Pallara-ConceptPlan-211111



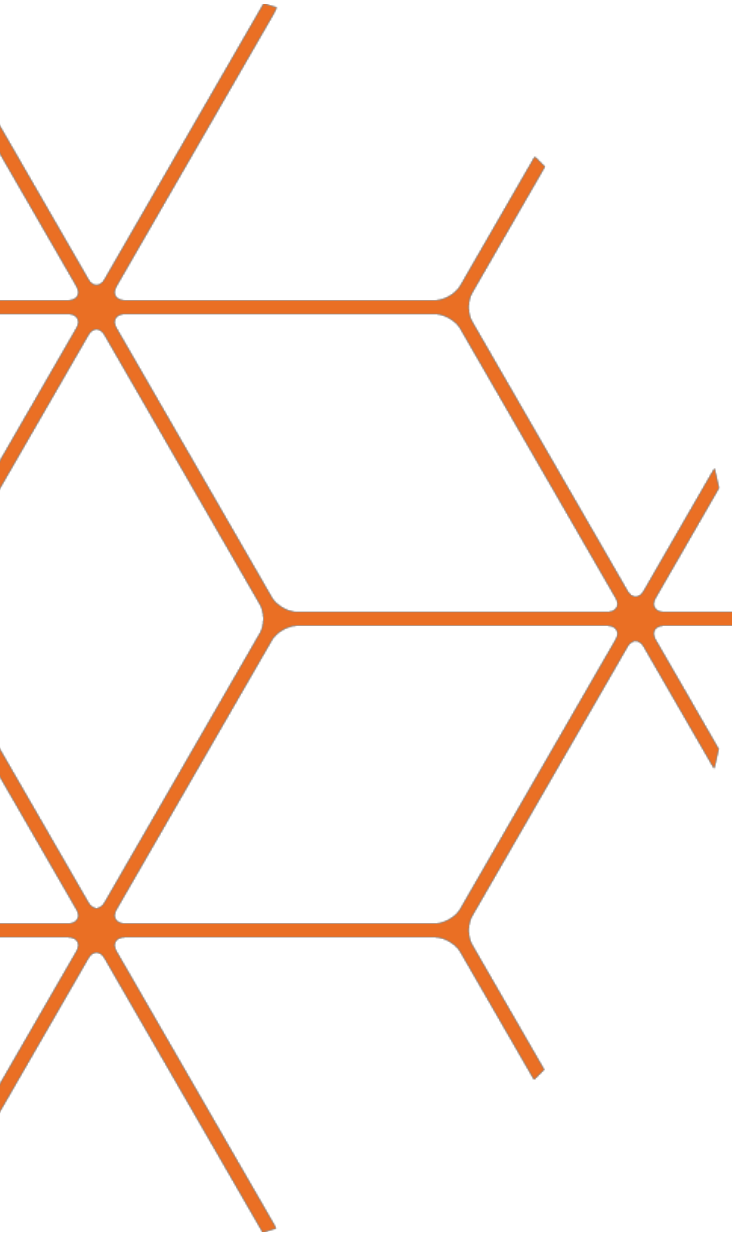
PROPOSAL CONCEPT PLAN - LOT 3 RP136964

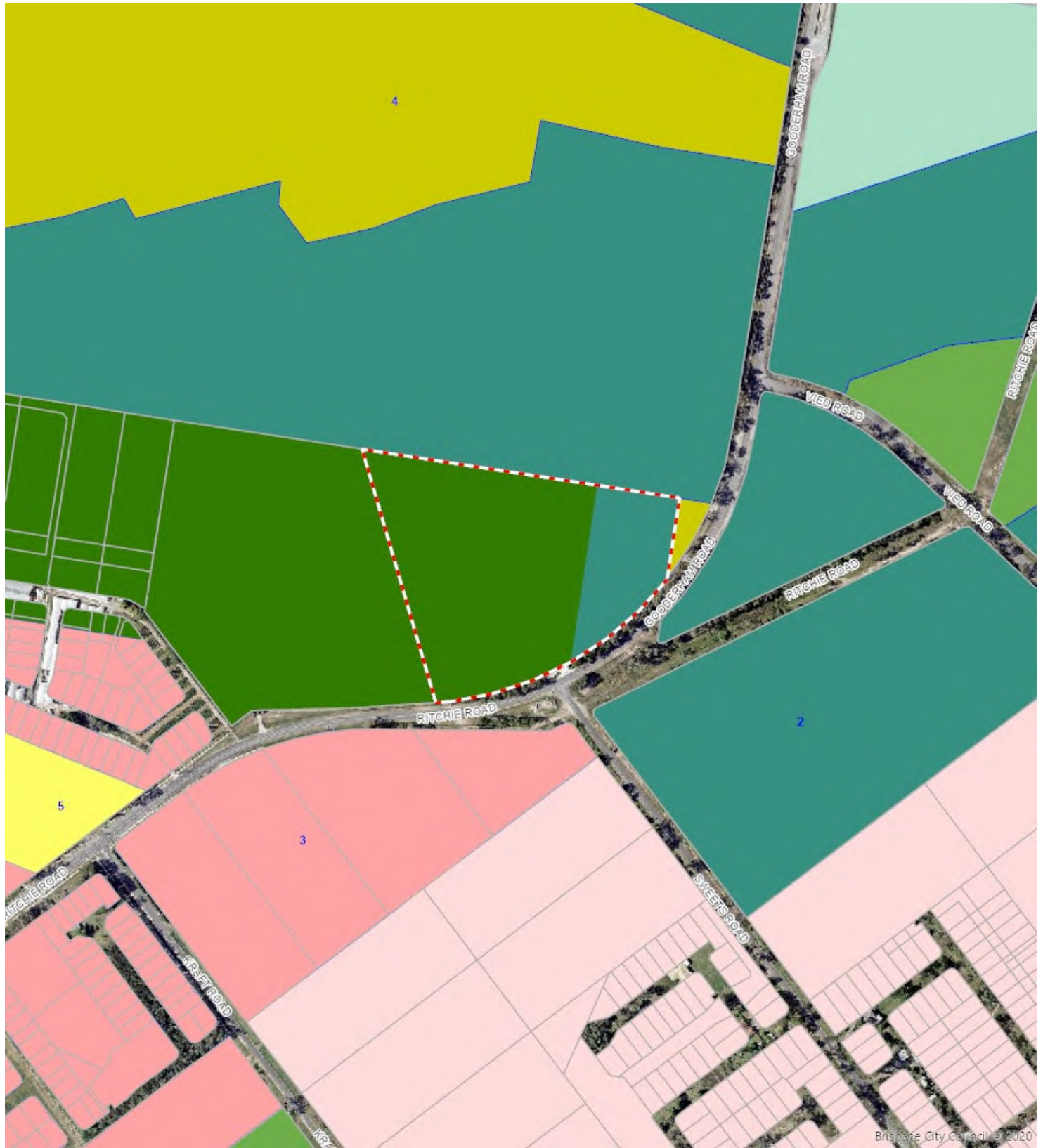


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Version: 0
Date: 11/11/2021
Sources: Cadastral boundaries: QLD DCDB DNRME 2021
Aerial photo: NearMap 08/10/2021

APPENDIX C

Desktop Assessment Results (Local Government Mechanisms)






























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




























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City Plan 2014 — Zoning overlay

	Refer to Part 10 of the planning scheme
	LDR Low density residential
	CR1 Character residential (Character)
	CR2 Character residential (Infill housing)
	LMR1 Low-medium density residential (2 storey mix)
	LMR2 Low-medium density residential (2 or 3 storey mix)
	LMR3 Low-medium density residential (Up to 3 storeys)
	MDR Medium density residential
	HDR1 High density residential (Up to 8 storeys)
	HDR2 High density residential (Up to 15 storeys)
	TA Tourist accommodation
	NC Neighbourhood centre
	DC1 District centre (District)
	DC2 District centre (Corridor)
	MC Major centre
	PC1 Principal centre (City centre)
	PC2 Principal centre (Regional centre)
	LII Low impact industry
	IN1 General industry A
	IN2 General industry B
	IN3 General industry C
	SI Special industry
	II Industry investigation
	SR Sport and recreation
	SR1 Sport and recreation (Local)
	SR2 Sport and recreation (District)
	SR3 Sport and recreation (Metropolitan)
	OS Open space
	OS1 Open space (Local)
	OS2 Open space (District)
	OS3 Open space (Metropolitan)
	EM Environmental management

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	CN Conservation
	CN1 Conservation (Local)
	CN2 Conservation (District)
	CN3 Conservation (Metropolitan)
	EC Emerging community
	EI Extractive industry
	MU1 Mixed use (Inner city)
	MU2 Mixed use (Centre frame)
	MU3 Mixed use (Corridor)
	RU Rural
	RR Rural residential
	T Township
	CF1 Community facilities Major health care
	CF2 Community facilities Major sports venue
	CF3 Community facilities Cemetery
	CF4 Community facilities Community purposes
	CF5 Community facilities Education purposes
	CF6 Community facilities Emergency services
	CF7 Community facilities Health care purposes
	SC1 Specialised centre (Major education and research facility)
	SC2 Specialised centre (Entertainment and conference centre)
	SC3 Specialised centre (Brisbane Markets)
	SC4 Specialised centre (Large format retail)
	SC5 Specialised centre (Mixed industry and business)
	SC6 Specialised centre (Marina)
	SP1 Special purpose (Defence)
	SP2 Special purpose (Detention facility)
	SP3 Special purpose (Transport infrastructure)
	SP4 Special purpose (Utility services)
	SP5 Special purpose (Airport)
	SP6 Special purpose (Port)
Local Government Authorities	
	LGA boundary
property_boundaries_holding	
	Property Holding

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City Plan 2014 Biodiversity areas overlay Biodiversity MSES areas

 Matters of state environmental significance areas (MSES)


Matters of state environmental significance lines

 Matters of state environmental significance lines (MSES)


Biodiversity areas overlay Koala habitat areas

 Koala habitat area


Biodiversity areas overlay Biodiversity areas

 High ecological significance


Biodiversity areas overlay Biodiversity areas

 High ecological significance strategic


Biodiversity areas overlay Biodiversity areas

 General ecological significance

Biodiversity areas overlay Biodiversity areas

 General ecological significance strategic

Local Government Authorities

 LGA boundary

property_boundaries_holding

 Property Holding



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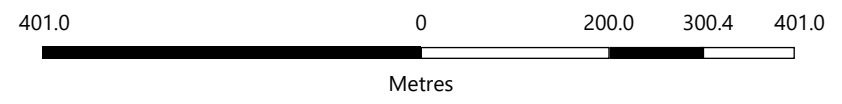
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Dedicated to a better Brisbane

Print Date:
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 Projection:
 Web Mercator Auxiliary Sphere

EbiMap2 data layer- Ecological Corridors



Scale: 1:8,011

Legend

Ecological Corridors

•• City Wide

■ State

■ Local

□ Parcel - Outside Brisbane

● State

●● Local

■ Regional

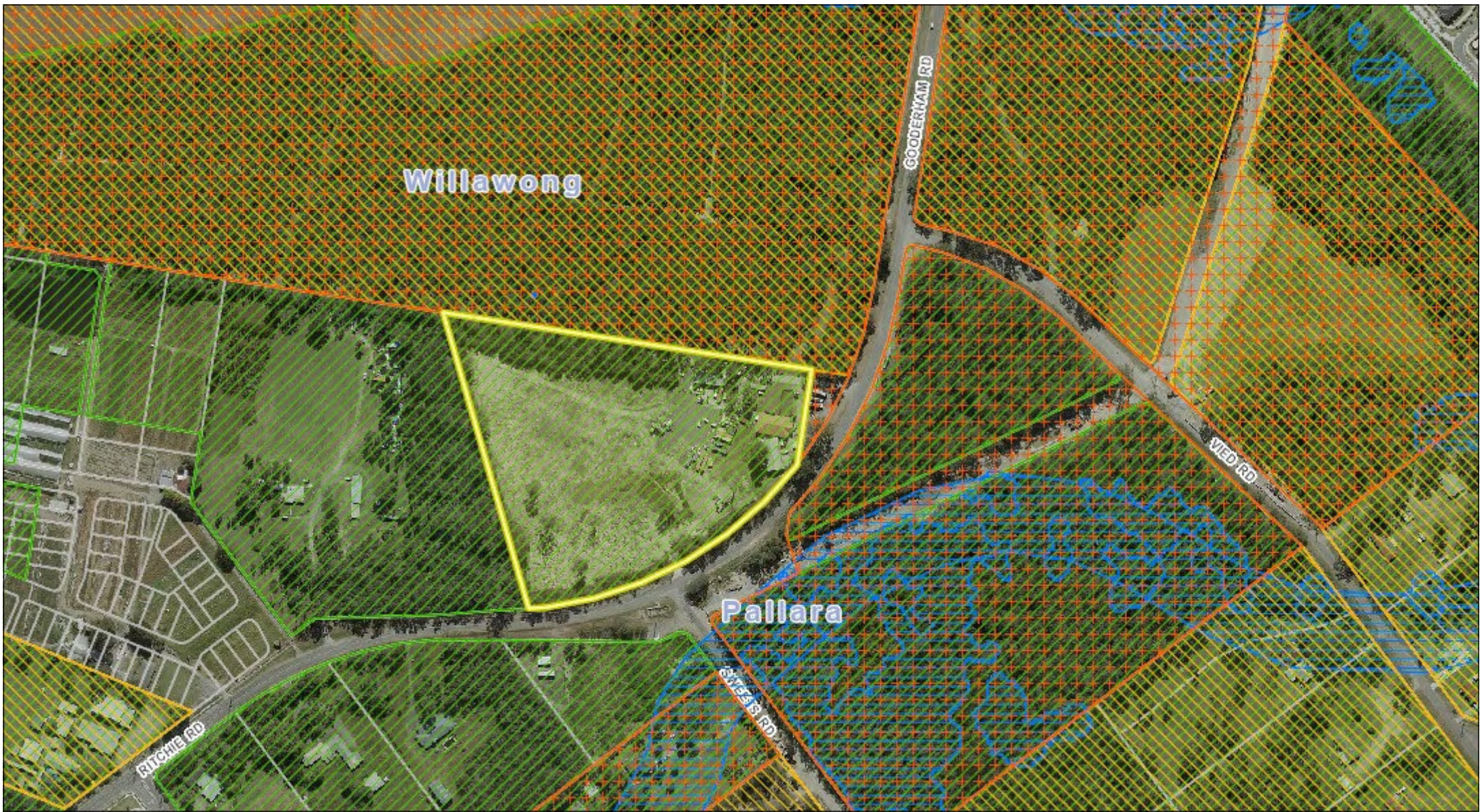
□ Property Holding

●● Regional

Ecological Corridor Buffers

■ City Wide

□ Sealed Plan



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Dedicated to a better Brisbane

Print Date:
4/11/2021 - 12:46 PM

Projection:
Web Mercator Auxiliary Sphere

Natural Assets Local Law (NALL) Map Extract



Metres

Scale: 1:4,005

Legend



Council Vegetation



Waterway and Wetland Vegetation



Parcel - Outside Brisbane



Significant Urban Vegetation



Property Holding



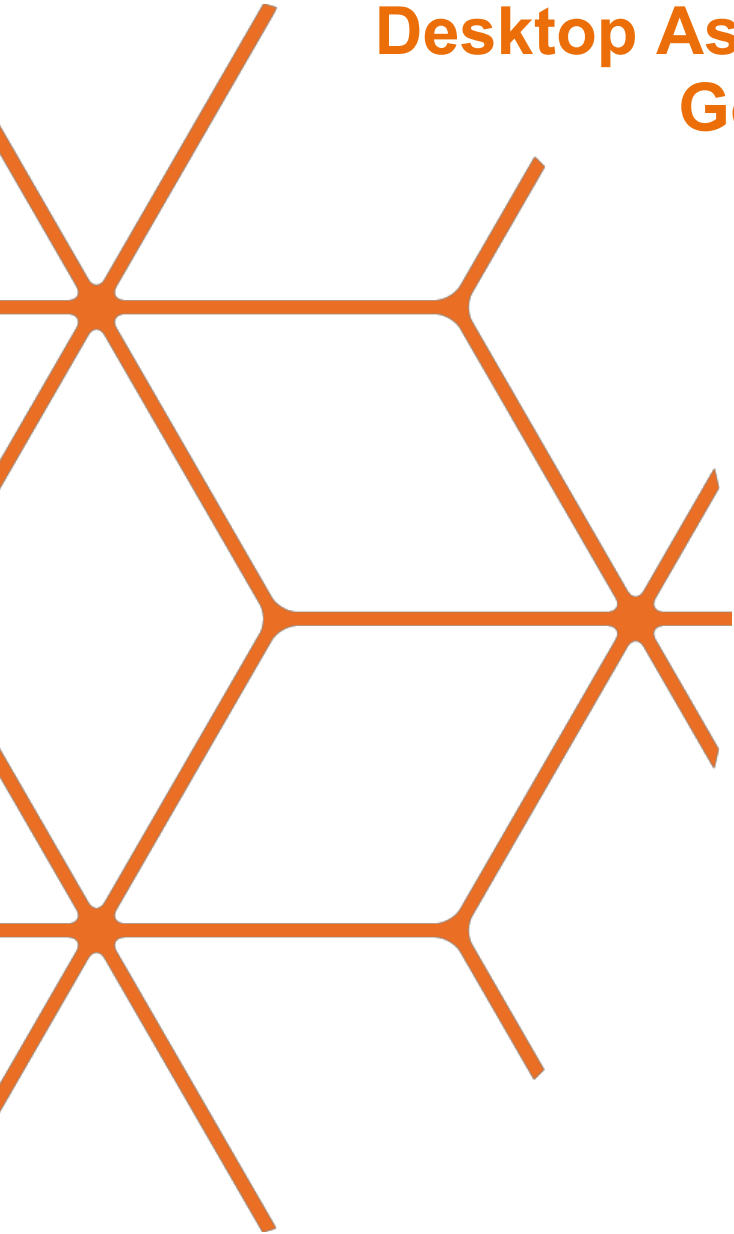
Significant Native Vegetation



Sealed Plan

APPENDIX D

Desktop Assessment Results (State Government Mechanisms)



Koala Planning Map

27°36'43"S 153°0'19"E

27°36'43"S 153°0'33"E



27°36'55"S 153°0'19"E

27°36'55"S 153°0'33"E

A product of



Legend located on next page



0 50 metres

Scale: 1:2182

Printed at: A4

Print date: 19/10/2021

Datum: Geocentric Datum of Australia 1994
Projection: Web Mercator EPSG 102100

For more information, visit
<https://qldglobe.information.qld.gov.au/help-info/Contact-us.html>

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Koala Planning Map

Legend

Attribution

Koala priority area



Core koala habitat area



Identified koala broad-
hectare area



Locally refined koala habitat
area



Land parcel



Land parcel - gt 1 ha



Land parcel - gt 10 ha



Land parcel - gt 1000 ha



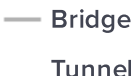
Land parcel label

Land parcel label - gt 1 ha

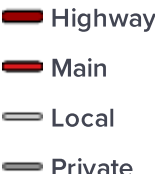
Land parcel label - gt 10 ha

Land parcel label - gt 1000 ha

Road crossing



Road



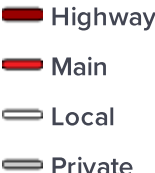
Cities and Towns



Road Crossing



Road



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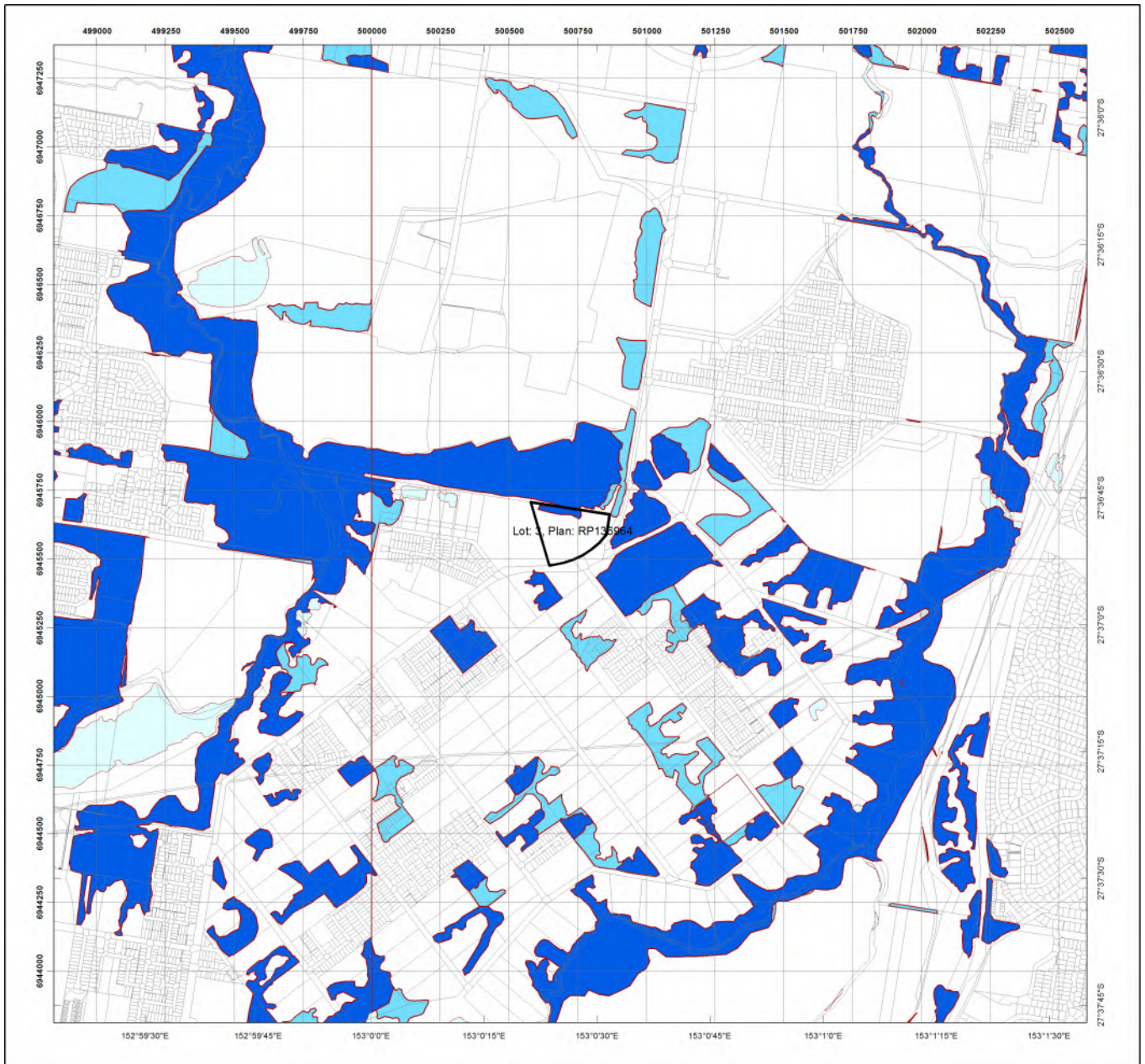
© State of Queensland (Department of Resources) 2021

Koala Planning Map

 Legend










Railway

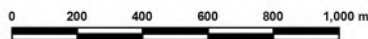




Regulated Vegetation Management Map

Legend

-  Selected Lot and Plan
-  Category A area (Vegetation offsets/compliance notices/VDecs)
-  Category B area (Remnant vegetation)
-  Category C area (High-value regrowth vegetation)
-  Category R area (Reef regrowth watercourse vegetation)
-  Category X area (Exempt clearing work on Freehold, Indigenous and Leasehold land)
-  Water
-  Area not categorised
-  Other land parcel boundaries



This product is projected into:
 GDA 1994 MGA Zone 56

Disclaimer:

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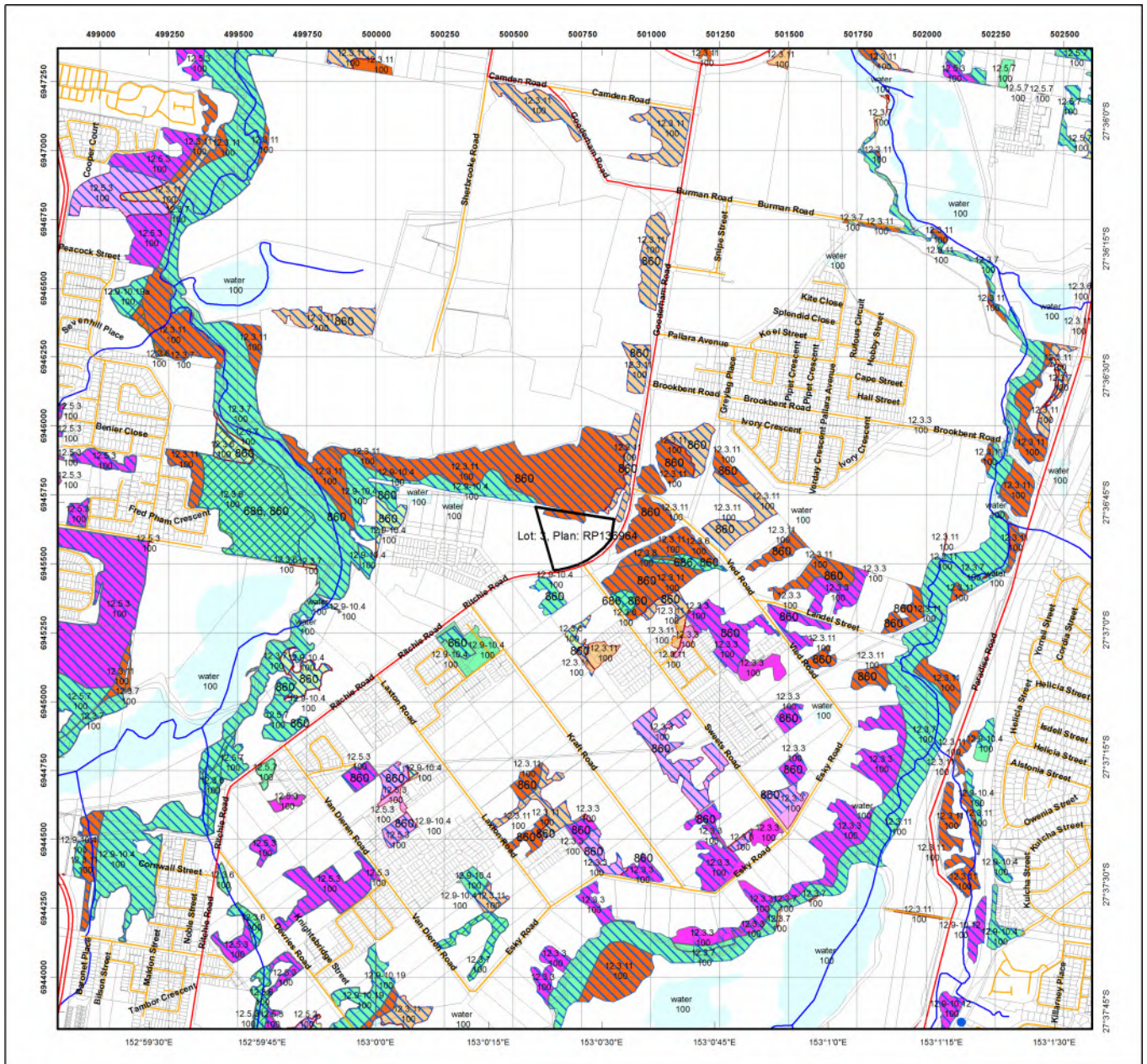
Additional information required for the assessment of vegetation values is provided in the accompanying "Vegetation Management Supporting map". For further information go to the web site: www.resources.qld.gov.au or contact the Department of Resources.

Digital data for the regulated vegetation management map is available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>

Land parcel boundaries are provided as locational aid only.

This map is updated on a monthly basis to ensure new PMAVs are included as they are approved.

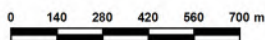




Vegetation Management Supporting Map

Legend

- Selected Lot and Plan
- Category A or B area containing endangered regional ecosystems
- Category A or B area containing of concern regional ecosystems
- Category A or B area that is a least concern regional ecosystem
- Category C or R area containing endangered regional ecosystems
- Category C or R area containing of concern regional ecosystems
- Category C or R area that is a least concern regional ecosystem
- Category X area
- Water
- Wetland on the vegetation management wetlands map
- Essential habitat on the essential habitat map
- Essential habitat species record
- Watercourses and drainage features on the vegetation management watercourse and drainage features map (Stream order shown as black number against stream where available)
- Highway
- Connector
- Street/Local Road
- National Parks, State Forest and other reserves
- Other land parcel boundaries



This product is projected into:
 GDA 1994 MGA Zone 56

Labels for Essential Habitat are centred on the area of enquiry.

Regional ecosystem linework has been compiled at a scale of 1:100 000, except in designated areas where a compilation scale of 1:50 000 is available. Linework should be used as a guide only. The positional accuracy of RE data mapped at a scale of 1:100 000 is +/- 100 metres.

Disclaimer:
 While every care is taken to ensure the accuracy of this product, the Department of Resources makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the product being inaccurate or incomplete in any way and for any reason.

Additional information may be required for the purposes of land clearing or assessment of a regional ecosystem map or PMAV applications. For further information go to the web site: www.resources.qld.gov.au or contact the Department of Resources.

Digital data for the vegetation management watercourse and drainage feature map, vegetation management wetlands map, essential habitat map and the vegetation management remnant and regional ecosystem map are available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>

Land parcel boundaries are provided as locational aid only.

Vegetation Management Act 1999 - Extract from the essential habitat database

Essential habitat is required for assessment under the:

- State Development Assessment Provisions - State Code 16: Native vegetation clearing which sets out the matters of interest to the state for development assessment under the Planning Act 2016; and
- Accepted development vegetation clearing codes made under the Vegetation Management Act 1999

Essential habitat for one or more of the following species is found on and within 1.1 km of the identified subject lot/s on the accompanying essential habitat map.

This report identifies essential habitat in Category A, B and Category C areas.

The numeric labels on the essential habitat map can be cross referenced with the database below to determine which essential habitat factors might exist for a particular species.

Essential habitat is compiled from a combination of species habitat models and buffered species records.

The Department of Resources website (<http://www.dnrme.qld.gov.au>) has more information on how the layer is applied under the State Development Assessment Provisions - State Code 16: Native vegetation clearing and the Vegetation Management Act 1999.

Regional ecosystem is a mandatory essential habitat factor, unless otherwise stated.

Essential habitat, for protected wildlife, means a category A area, a category B area or category C area shown on the regulated vegetation management map-

- 1) that has at least 3 essential habitat factors for the protected wildlife that must include any essential habitat factors that are stated as mandatory for the protected wildlife in the essential habitat database; or
- 2) in which the protected wildlife, at any stage of its life cycle, is located.

Protected wildlife includes critically endangered, endangered, vulnerable or near-threatened native wildlife prescribed under the Nature Conservation Act 1992.

Essential habitat in Category A and/or Category B and/or Category C

Label	Scientific Name	Common Name	NCA Status	Vegetation Community	Altitude	Soils	Position in Landscape
860	<i>Phascolarctos cinereus</i>	koala	V	Open forests and woodlands containing <i>Eucalyptus</i> , <i>Corymbia</i> , <i>Lophostemon</i> or <i>Melaleuca</i> trees having a trunk of a diameter of more than 10cm at 1.3m above the ground. Tree species used for food and habitat varies across the state and can include: <i>Corymbia citriodora</i> , <i>Corymbia henryi</i> , <i>Corymbia intermedia</i> , <i>Eucalyptus acmenoides</i> , <i>Eucalyptus bancroftii</i> , <i>Eucalyptus biturbinata</i> , <i>Eucalyptus blakelyi</i> , <i>Eucalyptus brownii</i> , <i>Eucalyptus camaldulensis</i> , <i>Eucalyptus carnea</i> , <i>Eucalyptus chloroclada</i> , <i>Eucalyptus coolabah</i> , <i>Eucalyptus crebra</i> , <i>Eucalyptus dealbata</i> , <i>Eucalyptus drepanophylla</i> , <i>Eucalyptus dunii</i> , <i>Eucalyptus eugenioides</i> , <i>Eucalyptus exserta</i> , <i>Eucalyptus fibrosa</i> , <i>Eucalyptus grandis</i> , <i>Eucalyptus helidonica</i> , <i>Eucalyptus latisinensis</i> , <i>Eucalyptus longirostrata</i> , <i>Eucalyptus major</i> , <i>Eucalyptus melanophloia</i> , <i>Eucalyptus melliodora</i> , <i>Eucalyptus microcarpa</i> , <i>Eucalyptus microcorys</i> , <i>Eucalyptus microtheca</i> , <i>Eucalyptus moluccana</i> , <i>Eucalyptus montivaga</i> , <i>Eucalyptus orgadophila</i> , <i>Eucalyptus papuana</i> , <i>Eucalyptus pilularis</i> , <i>Eucalyptus platyphylla</i> , <i>Eucalyptus populnea</i> , <i>Eucalyptus portuensis</i> , <i>Eucalyptus propinqua</i> , <i>Eucalyptus racemosa</i> , <i>Eucalyptus resinifera</i> , <i>Eucalyptus robusta</i> , <i>Eucalyptus saligna</i> , <i>Eucalyptus seeana</i> , <i>Eucalyptus siderophloia</i> , <i>Eucalyptus sideroxylon</i> , <i>Eucalyptus tereticornis</i> , <i>Eucalyptus thozettiana</i> , <i>Eucalyptus lindalae</i> , <i>Eucalyptus umbra</i> , <i>Lophostemon confertus</i> , <i>Melaleuca leucadendra</i> , <i>Melaleuca quinquenervia</i> .	Sea level to 1000m.	None	Riparian areas, plains and hill/escarpment slopes.

Label	Regional Ecosystem (mandatory unless otherwise specified)
860	4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.3.5, 4.3.6, 4.3.8, 4.3.10, 4.3.11, 4.5.3, 4.5.5, 4.5.6, 4.5.8, 4.5.9, 4.7.1, 4.7.7, 4.7.8, 4.9.6, 4.9.10, 4.9.12, 4.9.17, 6.3.1, 6.3.2, 6.3.3, 6.3.4, 6.3.5, 6.3.7, 6.3.8, 6.3.9, 6.3.11, 6.3.12, 6.3.17, 6.3.18, 6.3.22, 6.3.24, 6.3.25, 6.4.1, 6.4.2, 6.4.3, 6.4.4, 6.5.1, 6.5.2, 6.5.3, 6.5.5, 6.5.6, 6.5.7, 6.5.8, 6.5.9, 6.5.10, 6.5.11, 6.5.13, 6.5.14, 6.5.15, 6.5.16, 6.5.17, 6.5.18, 6.5.19, 6.6.2, 6.7.1, 6.7.2, 6.7.5, 6.7.6, 6.7.7, 6.7.9, 6.7.11, 6.7.12, 6.7.13, 6.7.14, 6.7.17, 6.9.3, 7.2.3, 7.2.4, 7.2.7, 7.2.11, 7.3.7, 7.3.8, 7.3.9, 7.3.12, 7.3.13, 7.3.14, 7.3.16, 7.3.19, 7.3.20, 7.3.21, 7.3.25, 7.3.26, 7.3.39, 7.3.40, 7.3.42, 7.3.43, 7.3.44, 7.3.45, 7.3.47, 7.3.48, 7.3.50, 7.5.1, 7.5.2, 7.5.3, 7.5.4, 7.8.7, 7.8.8, 7.8.10, 7.8.15, 7.8.16, 7.8.17, 7.8.18, 7.8.19, 7.11.5, 7.11.6, 7.11.13, 7.11.14, 7.11.16, 7.11.18, 7.11.19, 7.11.20, 7.11.21, 7.11.31, 7.11.32, 7.11.33, 7.11.34, 7.11.35, 7.11.37, 7.11.41, 7.11.42, 7.11.43, 7.11.44, 7.11.45, 7.11.46, 7.11.47, 7.11.48, 7.11.49, 7.11.50, 7.11.51, 7.12.4, 7.12.5, 7.12.17, 7.12.21, 7.12.22, 7.12.23, 7.12.24, 7.12.25, 7.12.26, 7.12.27, 7.12.28, 7.12.29, 7.12.30, 7.12.33, 7.12.34, 7.12.35, 7.12.51, 7.12.52, 7.12.53, 7.12.54, 7.12.55, 7.12.56, 7.12.57, 7.12.58, 7.12.59, 7.12.60, 7.12.61, 7.12.62, 7.12.63, 7.12.65, 7.12.66, 7.12.69, 8.1.5, 8.2.3, 8.2.6, 8.2.7, 8.2.8, 8.2.11, 8.2.12, 8.2.13, 8.2.14, 8.3.1, 8.3.2, 8.3.3, 8.3.5, 8.3.6, 8.3.8, 8.3.10, 8.3.11, 8.3.13, 8.5.1, 8.5.2, 8.5.3, 8.5.5, 8.5.6, 8.5.7, 8.9.1, 8.10.1, 8.11.1, 8.11.3, 8.11.4, 8.11.5, 8.11.6, 8.11.8, 8.11.10, 8.11.12, 8.12.4, 8.12.5, 8.12.6, 8.12.7, 8.12.8, 8.12.9, 8.12.12, 8.12.14, 8.12.20, 8.12.22, 8.12.23, 8.12.25, 8.12.26, 8.12.27, 8.12.29, 8.12.31, 8.12.32, 9.3.1, 9.3.2, 9.3.3, 9.3.4, 9.3.5, 9.3.6, 9.3.7, 9.3.8, 9.3.10, 9.3.11, 9.3.13, 9.3.14, 9.3.15, 9.3.16, 9.3.17, 9.3.19, 9.3.20, 9.3.21, 9.3.22, 9.3.27, 9.4.1, 9.4.2, 9.5.1, 9.5.3, 9.5.4, 9.5.5, 9.5.6, 9.5.7, 9.5.8, 9.5.9, 9.5.10, 9.5.11, 9.5.12, 9.5.15, 9.5.16, 9.5.17, 9.7.1, 9.7.2, 9.7.3, 9.7.4, 9.7.5, 9.7.6, 9.8.1, 9.8.2, 9.8.3, 9.8.4, 9.8.5, 9.8.9, 9.8.10, 9.8.11, 9.8.13, 9.10.1, 9.10.3, 9.10.4, 9.10.5, 9.10.7, 9.10.8, 9.11.1, 9.11.2, 9.11.3, 9.11.4, 9.11.5, 9.11.7, 9.11.10, 9.11.12, 9.11.13, 9.11.14, 9.11.15, 9.11.16, 9.11.17, 9.11.18, 9.11.19, 9.11.21, 9.11.22, 9.11.23, 9.11.24, 9.11.25, 9.11.26, 9.11.28, 9.11.29, 9.11.30, 9.11.31, 9.11.32, 9.12.1, 9.12.2, 9.12.3, 9.12.4, 9.12.5, 9.12.6, 9.12.7, 9.12.10, 9.12.11, 9.12.12, 9.12.13, 9.12.14, 9.12.15, 9.12.16, 9.12.17, 9.12.18, 9.12.19, 9.12.20, 9.12.21, 9.12.22, 9.12.23, 9.12.24, 9.12.25, 9.12.26, 9.12.27, 9.12.28, 9.12.29, 9.12.30, 9.12.31, 9.12.32, 9.12.33, 9.12.35, 9.12.36, 9.12.37, 9.12.38, 9.12.39, 9.12.44, 10.3.2, 10.3.3, 10.3.5, 10.3.6, 10.3.9, 10.3.10, 10.3.11, 10.3.12, 10.3.13, 10.3.14, 10.3.15, 10.3.17, 10.3.20, 10.3.27, 10.3.28, 10.4.3, 10.4.9, 10.5.1, 10.5.2, 10.5.4, 10.5.5, 10.5.7, 10.5.8, 10.5.9, 10.5.10, 10.5.11, 10.5.12, 10.7.1, 10.7.2, 10.7.3, 10.7.4, 10.7.5, 10.7.9, 10.7.10, 10.7.11, 10.7.12, 10.9.2, 10.9.3, 10.9.5, 10.10.1, 10.10.3, 10.10.4, 10.10.5, 10.10.7, 11.2.1, 11.2.5, 11.3.1, 11.3.2, 11.3.3, 11.3.4, 11.3.5, 11.3.6, 11.3.7, 11.3.9, 11.3.10, 11.3.12, 11.3.13, 11.3.14, 11.3.15, 11.3.16, 11.3.17, 11.3.18, 11.3.19, 11.3.21, 11.3.23, 11.3.25, 11.3.26, 11.3.27, 11.3.28, 11.3.29, 11.3.30, 11.3.32, 11.3.33, 11.3.35, 11.3.36, 11.3.38, 11.3.39, 11.4.2, 11.4.3, 11.4.7, 11.4.8, 11.4.9, 11.4.10, 11.4.12, 11.4.13, 11.5.1, 11.5.2, 11.5.3, 11.5.4, 11.5.5, 11.5.7, 11.5.8, 11.5.9, 11.5.12, 11.5.13, 11.5.14, 11.5.17, 11.5.18, 11.5.20, 11.5.21, 11.7.1, 11.7.2, 11.7.3, 11.7.4, 11.7.6, 11.7.7, 11.8.1, 11.8.2, 11.8.4, 11.8.5, 11.8.8, 11.8.11, 11.8.12, 11.8.14, 11.8.15, 11.9.1, 11.9.2, 11.9.3, 11.9.5, 11.9.6, 11.9.7, 11.9.9, 11.9.10, 11.9.11, 11.9.13, 11.9.14, 11.10.1, 11.10.2, 11.10.3, 11.10.4, 11.10.5, 11.10.6, 11.10.7, 11.10.9, 11.10.11, 11.10.12, 11.10.13, 11.11.1, 11.11.2, 11.11.3, 11.11.4, 11.11.6, 11.11.7, 11.11.8, 11.11.9, 11.11.10, 11.11.11, 11.11.12, 11.11.13, 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12.5.80, 12.5.81, 12.5.82, 12.5.83, 12.5.84, 12.5.85, 12.5.86, 12.5.87, 12.5.88, 12.5.89, 12.5.90, 12.5.91, 12.5.92, 12.5.93, 12.5.94, 12.5.95, 12.5.96, 12.5.97, 12.5.98, 12.5.99, 12.5.100, 12.5.101, 12.5.102, 12.5.103, 12.5.104, 12.5.105, 12.5.106, 12.5.107, 12.5.108, 12.5.109, 12.5.110, 12.5.111, 12.5.112, 12.5.113, 12.5.114, 12.5.115, 12.5.116, 12.5.117, 12.5.118, 12.5.119, 12.5.120, 12.5.121, 12.5.122, 12.5.123, 12.5.124, 12.5.125, 12.5.126, 12.5.127, 12.5.128, 12.5.129, 12.5.130, 12.5.131, 12.5.132, 12.5.133, 12.5.134, 12.5.135, 12.5.136, 12.5.137, 12.5.138, 12.5.139, 12.5.140, 12.5.141, 12.5.142, 12.5.143, 12.5.144, 12.5.145, 12.5.146, 12.5.147, 12.5.148, 12.5.149, 12.5.150, 12.5.151, 12.5.152, 12.5.153, 12.5.154, 12.5.155, 12.5.156, 12.5.157, 12.5.158, 12.5.159, 12.5.160, 12.5.161, 12.5.162, 12.5.163, 12.5.164, 12.5.165, 12.5.166, 12.5.167, 12.5.168, 12.5.169, 12.5.170, 12.5.171, 12.5.172, 12.5.173, 12.5.174, 12.5.175, 12.5.176, 12.5.177, 12.5.178, 12.5.179, 12.5.180, 12.5.181, 12.5.182, 12.5.183, 12.5.184, 12.5.185, 12.5.186, 12.5.187, 12.5.188, 12.5.189, 12.5.190, 12.5.191, 12.5.192, 12.5.193, 12.5.194, 12.5.195, 12.5.196, 12.5.197, 12.5.198, 12.5.199, 12.5.200, 12.5.201, 12.5.202, 12.5.203, 12.5.204, 12.5.205, 12.5.206, 12.5.207, 12.5.208, 12.5.209, 12.5.210, 12.5.211, 12.5.212, 12.5.213, 12.5.214, 12.5.215, 12.5.216, 12.5.217, 12.5.218, 12.5.219, 12.5.220, 12.5.221, 12.5.222, 12.5.223, 12.5.224, 12.5.225, 12.5.226, 12.5.227, 12.5.228, 12.5.229, 12.5.230, 12.5.231, 12.5.232, 12.5.233, 12.5.234, 12.5.235, 12.5.236, 12.5.237, 12.5.238, 12.5.239, 12.5.240, 12.5.241, 12.5.242, 12.5.243, 12.5.244, 12.5.245, 12.5.246, 12.5.247, 12.5.248, 12.5.249, 12.5.250, 12.5.251, 12.5.252, 12.5.253, 12.5.254, 12.5.255, 12.5.256, 12.5.257, 12.5.258, 12.5.259, 12.5.260, 12.5.261, 12.5.262, 12.5.263, 12.5.264, 12.5.265, 12.5.266, 12.5.267, 12.5.268, 12.5.269, 12.5.270, 12.5.271, 12.5.272, 12.5.273, 12.5.274, 12.5.275, 12.5.276, 12.5.277, 12.5.278, 12.5.279, 12.5.280, 12.5.281, 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Protected Plants Map

27°36'43"S 153°0'19"E

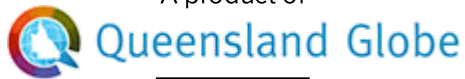
27°36'43"S 153°0'33"E



27°36'55"S 153°0'19"E

27°36'55"S 153°0'33"E

A product of



Legend located on next page



0 50 metres

Scale: 1:2182

Printed at: A4

Print date: 19/10/2021

Datum: Geocentric Datum of Australia 1994
Projection: Web Mercator EPSG 102100

For more information, visit
<https://qldglobe.information.qld.gov.au/help-info/Contact-us.html>

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Protected Plants Map

Legend

Attribution

Protected plants trigger map



Land parcel



Land parcel - gt 1 ha



Land parcel - gt 10 ha



Land parcel - gt 1000 ha



Land parcel label

Land parcel label - gt 1 ha

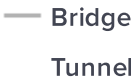
Land parcel label - gt 10 ha

Land parcel label - gt 1000 ha

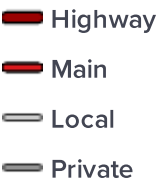
Railway



Road crossing



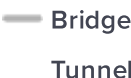
Road



Cities and Towns



Road Crossing



Road



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Queensland Government

WildNet species list

Search Criteria: Species List for a Specified Point
Species: All
Type: All
Queensland status: Rare and threatened species
Records: Confirmed
Date: Since 1980
Latitude: -27.6136
Longitude: 153.0073
Distance: 5
Email: ksavage@newground.com.au
Date submitted: Tuesday 19 Oct 2021 13:00:21
Date extracted: Tuesday 19 Oct 2021 13:10:05

The number of records retrieved = 8

Disclaimer

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The State of Queensland disclaims all responsibility for information contained in this product and all liability (including liability in negligence) for all expenses, losses, damages and costs you may incur as a result of the information being inaccurate or incomplete in any way for any reason.

Information about your Species lists request is logged for quality assurance, user support and product enhancement purposes only.

The information provided should be appropriately acknowledged as being derived from WildNet database when it is used. As the WildNet Program is still in a process of collating and vetting data, it is possible the information given is not complete. Go to the WildNet database webpage (<https://www.qld.gov.au/environment/plants-animals/species-information/wildnet>) to find out more about WildNet and where to access other WildNet information products approved for publication. Feedback about WildNet species lists should be emailed to wildlife.online@des.qld.gov.au.

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	amphibians	Myobatrachidae	<i>Crinia tinnula</i>	wallum froglet		V		5/3
animals	birds	Apodidae	<i>Hirundapus caudacutus</i>	white-throated needletail		V	V	1
animals	birds	Charadriidae	<i>Charadrius mongolus</i>	lesser sand plover		E	E	1
animals	birds	Strigidae	<i>Ninox strenua</i>	powerful owl		V		2
animals	mammals	Phascolarctidae	<i>Phascolarctos cinereus</i>	koala		V	V	26
animals	mammals	Pseudocheiridae	<i>Petauroides armillatus</i>	central greater glider		V	V	1
plants	land plants	Maundiaceae	<i>Maundia triglochinos</i>			V		3/3
plants	land plants	Myrtaceae	<i>Eucalyptus curtisii</i>	Plunkett mallee			NT	1/1

CODES

I - Y indicates that the taxon is introduced to Queensland and has naturalised.

Q - Indicates the Queensland conservation status of each taxon under the *Nature Conservation Act 1992*.

The codes are Extinct (EX), Extinct in the Wild (PE), Critically Endangered (CR), Endangered (E), Vulnerable (V), Near Threatened (NT), Special Least Concern (SL) and Least Concern (C).

A - Indicates the Australian conservation status of each taxon under the *Environment Protection and Biodiversity Conservation Act 1999*.

The values of EPBC are Extinct (EX), Extinct in the Wild (XW), Critically Endangered (CE), Endangered (E), Vulnerable (V) and Conservation Dependent (CD).

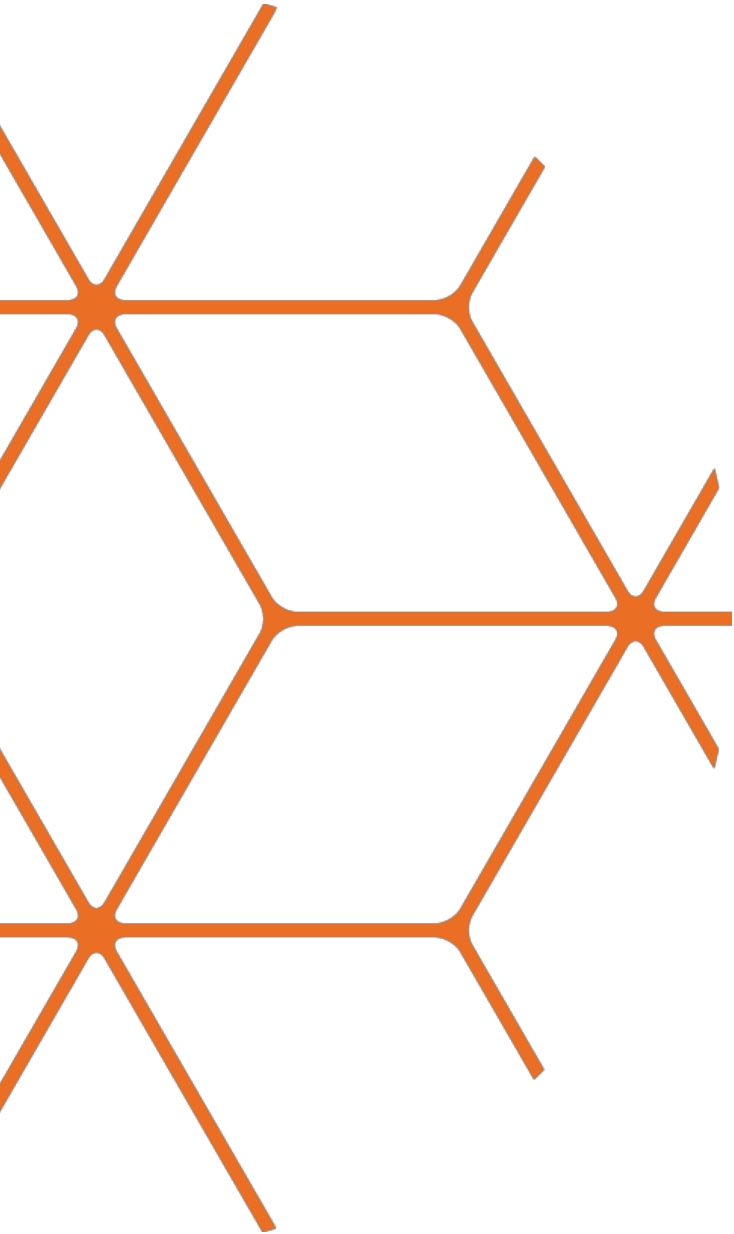
Records - The first number indicates the total number of records of the taxon (wildlife records and species listings for selected areas).

This number is output as 99999 if it equals or exceeds this value. A second number located after a / indicates the number of specimen records for the taxon.

This number is output as 999 if it equals or exceeds this value.

APPENDIX E

Desktop Assessment Results (Federal Government Mechanisms)





EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 19/10/21 13:57:13

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)



This map may contain data which are
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[Coordinates](#)

Buffer: 5.0Km



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	4
Listed Threatened Species:	42
Listed Migratory Species:	16

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	1
Commonwealth Heritage Places:	1
Listed Marine Species:	22
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	1
Regional Forest Agreements:	None
Invasive Species:	44
Nationally Important Wetlands:	1
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)	[Resource Information]
Name	Proximity
Moreton bay	10 - 20km upstream

Listed Threatened Ecological Communities

 [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	Endangered	Community may occur within area
Lowland Rainforest of Subtropical Australia	Critically Endangered	Community may occur within area
Poplar Box Grassy Woodland on Alluvial Plains	Endangered	Community may occur within area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community may occur within area

Listed Threatened Species

 [Resource Information]

Name	Status	Type of Presence
Birds		
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat known to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species

Name	Status	Type of Presence
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	habitat likely to occur within area Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area
Thinornis cucullatus cucullatus Eastern Hooded Plover, Eastern Hooded Plover [90381]	Vulnerable	Species or species habitat may occur within area
Turnix melanogaster Black-breasted Button-quail [923]	Vulnerable	Species or species habitat likely to occur within area
Frogs		
Mixophyes fleayi Fleay's Frog [25960]	Endangered	Species or species habitat may occur within area
Insects		
Argynnis hyperbius inconstans Australian Fritillary [88056]	Critically Endangered	Species or species habitat may occur within area
Mammals		
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat may occur within area
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat may occur within area
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area
Petauroides volans Greater Glider [254]	Vulnerable	Species or species habitat likely to occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat known to occur within area
Potorous tridactylus tridactylus Long-nosed Potoroo (SE Mainland) [66645]	Vulnerable	Species or species habitat may occur within area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Roosting known to occur within area
Plants		
Arthraxon hispidus Hairy-joint Grass [9338]	Vulnerable	Species or species habitat likely to occur within area
Bosistoa transversa Three-leaved Bosistoa, Yellow Satinheart [16091]	Vulnerable	Species or species habitat likely to occur within area
Corchorus cunninghamii Native Jute [14659]	Endangered	Species or species habitat may occur within area
Cryptocarya foetida Stinking Cryptocarya, Stinking Laurel [11976]	Vulnerable	Species or species habitat may occur within area

Name	Status	Type of Presence
Cryptostylis hunteriana Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat may occur within area
Cupaniopsis shirleyana Wedge-leaf Tuckerroo [3205]	Vulnerable	Species or species habitat may occur within area
Dichanthium setosum bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area
Fontainea venosa [24040]	Vulnerable	Species or species habitat may occur within area
Gossia gonoclada Angle-stemmed Myrtle [78866]	Endangered	Species or species habitat likely to occur within area
Macadamia integrifolia Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak [7326]	Vulnerable	Species or species habitat likely to occur within area
Macadamia tetraphylla Rough-shelled Bush Nut, Macadamia Nut, Rough-shelled Macadamia, Rough-leaved Queensland Nut [6581]	Vulnerable	Species or species habitat may occur within area
Notelaea ipsviciensis Cooneana Olive [81858]	Critically Endangered	Species or species habitat may occur within area
Phaius australis Lesser Swamp-orchid [5872]	Endangered	Species or species habitat likely to occur within area
Rhodamnia rubescens Scrub Turpentine, Brown Malletwood [15763]	Critically Endangered	Species or species habitat likely to occur within area
Rhodomyrtus psidioides Native Guava [19162]	Critically Endangered	Species or species habitat may occur within area
Samadera bidwillii Quassia [29708]	Vulnerable	Species or species habitat likely to occur within area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area

Reptiles

Coeranoscincus reticulatus Three-toed Snake-tooth Skink [59628]	Vulnerable	Species or species habitat may occur within area
Delma torquata Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species habitat likely to occur within area
Furina dunmalli Dunmall's Snake [59254]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species

[[Resource Information](#)]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur

Name	Threatened	Type of Presence within area
Migratory Terrestrial Species		
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat known to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land [\[Resource Information \]](#)

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Name

Defence - GREENBANK TRAINING AREA

Commonwealth Heritage Places [\[Resource Information \]](#)

Name	State	Status
------	-------	--------

Natural		
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Greenbank Military Training Area (part)	QLD	Listed place
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Listed Marine Species [\[Resource Information \]](#)

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
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Birds		
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Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
--	--	--

Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area
---	--	--

Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
---	--	--

Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
--	--	--

Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
--	--	--

Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
---	-----------------------	--

Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
--	--	--

Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area
--	--	---

Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
---	--	---

Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
--	------------	---

Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
---	-----------------------	--

Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
---	--	--

Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
--	--	---

Name	Threatened	Type of Presence
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat known to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat known to occur within area
Thinornis rubricollis rubricollis Hooded Plover (eastern) [66726]	Vulnerable*	Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Extra Information

State and Territory Reserves [\[Resource Information \]](#)

Name	State
Blunder Creek Reserve	QLD

Invasive Species [\[Resource Information \]](#)

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis European Goldfinch [403]		Species or species

Name	Status	Type of Presence
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		habitat likely to occur within area Species or species habitat likely to occur within area
Lonchura punctulata Nutmeg Mannikin [399]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Frogs		
Rhinella marina Cane Toad [83218]		Species or species habitat known to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		

Name	Status	Type of Presence
Alternanthera philoxeroides Alligator Weed [11620]		Species or species habitat likely to occur within area
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus aethiopicus Asparagus Fern, Ground Asparagus, Basket Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus [62425]		Species or species habitat likely to occur within area
Asparagus africanus Climbing Asparagus, Climbing Asparagus Fern [66907]		Species or species habitat likely to occur within area
Asparagus plumosus Climbing Asparagus-fern [48993]		Species or species habitat likely to occur within area
Cabomba caroliniana Cabomba, Fanwort, Carolina Watershield, Fish Grass, Washington Grass, Watershield, Carolina Fanwort, Common Cabomba [5171]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
Chrysanthemoides monilifera subsp. rotundata Bitou Bush [16332]		Species or species habitat likely to occur within area
Cryptostegia grandiflora Rubber Vine, Rubbervine, India Rubber Vine, India Rubbervine, Palay Rubbervine, Purple Allamanda [18913]		Species or species habitat likely to occur within area
Dolichandra unguis-cati Cat's Claw Vine, Yellow Trumpet Vine, Cat's Claw Creeper, Funnel Creeper [85119]		Species or species habitat likely to occur within area
Eichhornia crassipes Water Hyacinth, Water Orchid, Nile Lily [13466]		Species or species habitat likely to occur within area
Genista monspessulana Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126]		Species or species habitat likely to occur within area
Hymenachne amplexicaulis Hymenachne, Olive Hymenachne, Water Stargrass, West Indian Grass, West Indian Marsh Grass [31754]		Species or species habitat likely to occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Parkinsonia aculeata Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]		Species or species habitat likely to occur within area
Parthenium hysterophorus Parthenium Weed, Bitter Weed, Carrot Grass, False Ragweed [19566]		Species or species habitat likely to occur within area
Sagittaria platyphylla Delta Arrowhead, Arrowhead, Slender Arrowhead [68483]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Senecio madagascariensis Fireweed, Madagascar Ragwort, Madagascar Groundsel [2624]		Species or species habitat likely to occur within area
Solanum elaeagnifolium Silver Nightshade, Silver-leaved Nightshade, White Horse Nettle, Silver-leaf Nightshade, Tomato Weed, White Nightshade, Bull-nettle, Prairie-berry, Satansbos, Silver-leaf Bitter-apple, Silverleaf-nettle, Trompillo [12323]		Species or species habitat likely to occur within area
Reptiles		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to occur within area
Ramphotyphlops braminus Flowerpot Blind Snake, Brahminy Blind Snake, Cacing Besi [1258]		Species or species habitat likely to occur within area

Nationally Important Wetlands		[Resource Information]
Name		State
Greenbank Army Training Area C		QLD

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-27.6136 153.0073

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- [-Natural history museums of Australia](#)
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- [-Other groups and individuals](#)

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact Us](#) page.

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APPENDIX F
Ecological Features Plan



Notes:
1. Figure indicative only.

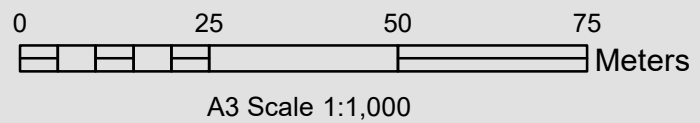


	Subject Site
	Existing infrastructure
	Derived grassland /Shrubland
	Ecotonal Riparian Open Forest (RE12.3.11)
	Eucalyptus racemosa dominated Woodland (analogous to RE12.9-10.4)
	Location of Koala Scat Record
Breeding Places	
Actual	
	Hollow-bearing Stag
	Hollow-bearing Tree
Potential	
	Hollow-bearing Stag
	Hollow-bearing Tree

File: 2700Palara-EcologicalFeatures-211111



ECOLOGICAL FEATURES PLAN - LOT 3 RP136964



Sheet Number: 1
 Project: 2700
 Version: 0
 Date: 11/11/2021
 Sources: Cadastral boundaries: QLD DCDB DNRME 2021
 Aerial photo: NearMap 08/10/2021

APPENDIX G

Site-wide Flora and Fauna Species List

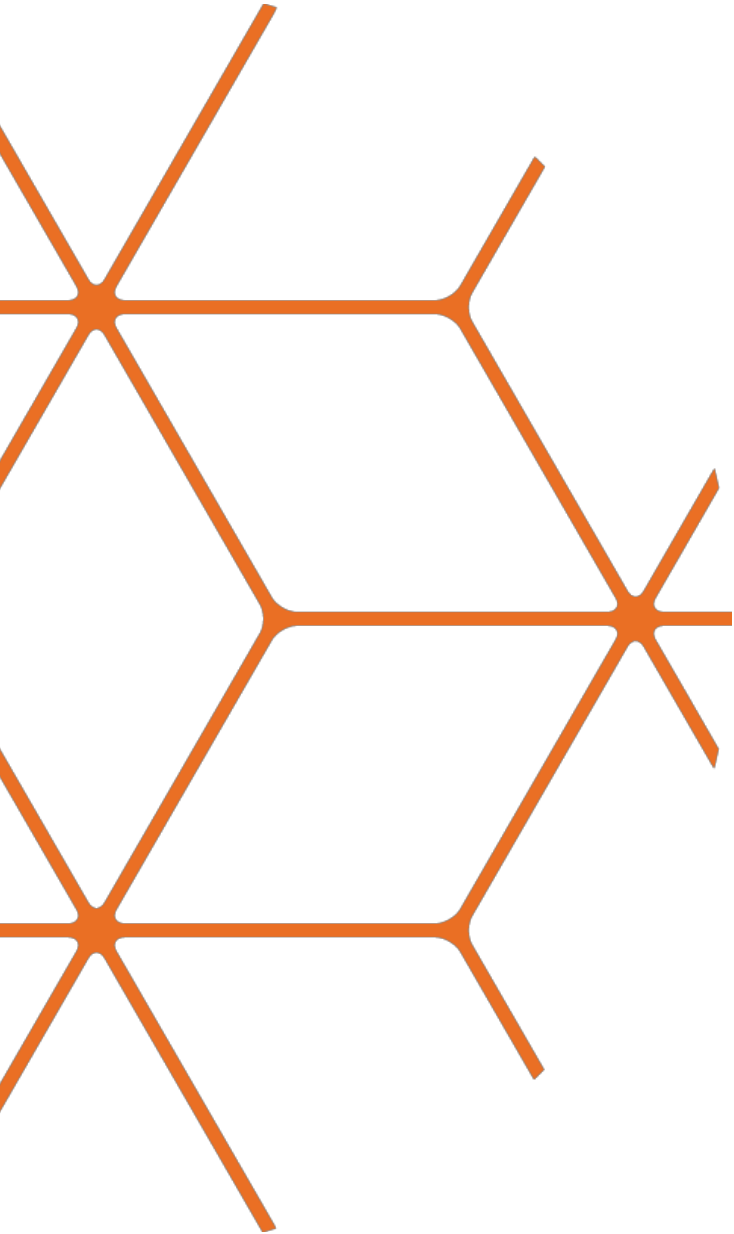




TABLE G1 FLORA SPECIES RECORDED DURING NEW GROUND FIELD SURVEY

SCIENTIFIC NAME	COMMON NAME
<i>Acacia concurrens</i>	black wattle
<i>Acacia leiocalyx</i>	black wattle
<i>Acacia disparrima</i>	salwood
<i>Adiantum hispidulum</i>	rough maidenhair fern
<i>Ageratum houstonianum</i> *	blue billygoat weed
<i>Allocasuarina littoralis</i>	Black she-oak
<i>Alloteropsis semialata</i>	cockatoo grass
<i>Andropogon virginicus</i>	whiskey grass
<i>Asparagus africanus</i> *, ^{C3}	climbing asparagus fern
<i>Baccharis halimifolia</i> *, ^{C3}	groundsel bush
<i>Bidens pilosa</i> *	cobbler's pegs
<i>Callistemon salignus</i>	willow bottlebrush
<i>Carex maculata</i>	
<i>Chloris gayana</i> *	Rhodes grass
<i>Corymbia intermedia</i> ^{L5}	pink bloodwood
<i>Cynodon dactylon</i>	common couch
<i>Cyperus rotundus</i>	purple nutsedge
<i>Cyperus leiocaulon</i>	
<i>Cyperus polystachyos</i> var. <i>polystachyos</i>	bunchy sedge
<i>Eragrostis curvula</i>	African lovegrass
<i>Eucalyptus resinifera</i> ^{L5}	red mahogany
<i>Eucalyptus racemosa</i> ^{L5}	scribbly gum
<i>Eucalyptus tereticornis</i> ^{L5}	forest red gum
<i>Entolasia stricta</i>	wiry pani
<i>Eustrephus latifolius</i>	wombat berry
<i>Gahnia aspera</i>	rough saw-sedge
<i>Goodenia rotundifolia</i>	star goodenia
<i>Hardenbergia violacea</i>	native sasparilla
<i>Hibbertia vestita</i>	hairy Guinea-flower
<i>Hypochaeris radicata</i> *	flatweed
<i>Imperata cylindrica</i>	blady grass
<i>Jacksonia scoparia</i>	dogwood
<i>Juncus polyanthemus</i>	a juncus
<i>Lantana camara</i> * ^{C3, WoNS}	lantana
<i>Lantana montevidensis</i> * ^{C3, WoNS}	Creeping lantana
<i>Lepironia articulata</i>	grey rush
<i>Leucopogon juniperinus</i>	prickly heath
<i>Lomandra longifolia</i>	mat rush
<i>Lophostemon suaveolens</i>	swamp box
<i>Mallotus philippensis</i>	red kamala
<i>Megathyrsus maximum</i> var. <i>maximum</i> *	guinea grass
<i>Melaleuca nodosa</i>	prickly-leaved paperbark
<i>Melaleuca quinquenervia</i>	swamp paperbark



TABLE G1 FLORA SPECIES RECORDED DURING NEW GROUND FIELD SURVEY

SCIENTIFIC NAME	COMMON NAME
<i>Melaleuca viminalis</i>	Weeping paperbark
<i>Ochna serrulata</i> *	ochna
<i>Oplismenus aemulus</i>	Australian Basket Grass
<i>Parsonsia straminea</i>	monkey rope
<i>Paspalum dilatatum</i> *	paspalum
<i>Pennisetum clandestinum</i>	kikuyu grass
<i>Pimelea linifolia</i>	slender riceflower
<i>Pinus elliotii</i> *	slash pine
<i>Pteridium esculentum</i>	bracken
<i>Ptilothrix deusta</i>	horned sedge
<i>Ricinus communis</i> *	castor oil plant
<i>Senna pendula</i> *	Easter cassia
<i>Setaria sphacelata</i> *	Pigeon grass
<i>Shoenoplectus validus</i>	river club rush
<i>Themeda triandra</i>	Kangaroo grass
<i>Viola hederacea</i>	native violet

NOTES

* - Introduced species

C³ – Category 3 restricted matter under the *Biosecurity Act 2014*

W^oN^S – Weed of National Environmental Significance (as listed by Federal Government)

L^S – Locally significant species under Brisbane City Plan 2014



TABLE G2 FAUNA SPECIES RECORDED DURING THE NEW GROUND FIELD SURVEY

SCIENTIFIC NAME	COMMON NAME
BIRDS	
<i>Alectura lathamii</i>	Australian brushturkey
<i>Cacatua galerita</i>	sulphur-crested cockatoo
<i>Corvus orru</i>	Torresian crow
<i>Dacelo novaeguineae</i>	laughing kookaburra
<i>Eolophus roseicapilla</i>	galah
<i>Eurystomus orientalis</i>	Dollarbird
<i>Gymnorhina tibicen</i>	Australian magpie
<i>Malurus melanocephalus</i>	Red-backed fairywren
<i>Manorina melanocephala</i>	noisy miner
<i>Meliphaga lewinii</i>	Lewin's honeyeater
<i>Merops ornatus</i>	rainbow bee-eater
<i>Threskiornis spinicollis</i>	Straw-necked ibis
<i>Todiramphus macleayii</i>	forest kingfisher
<i>Trichoglossus chlorolepidotus</i>	scaly-breasted lorikeet
<i>Trichoglossus haematodus moluccanus</i>	rainbow lorikeet
MAMMALS	
<i>Phascolarctos cinereus</i> ^{V,V,LS}	Koala (by scat and scraches)
<i>Trichosurus vulpecula</i>	common brushtail possum
<i>Wallabia bicolor</i> ^{LS}	swamp wallaby
REPTILES	
<i>Cryptoblepharus virgatus</i>	striped snake-eyed skink

NOTES

* - Introduced species

LS - Locally significant species under Brisbane City Plan 2014

^{V,V} - Vulnerable-listed species under the EPBC Act and Nature Conservation (Animals) Regulation 2020

APPENDIX H

Site Photographs

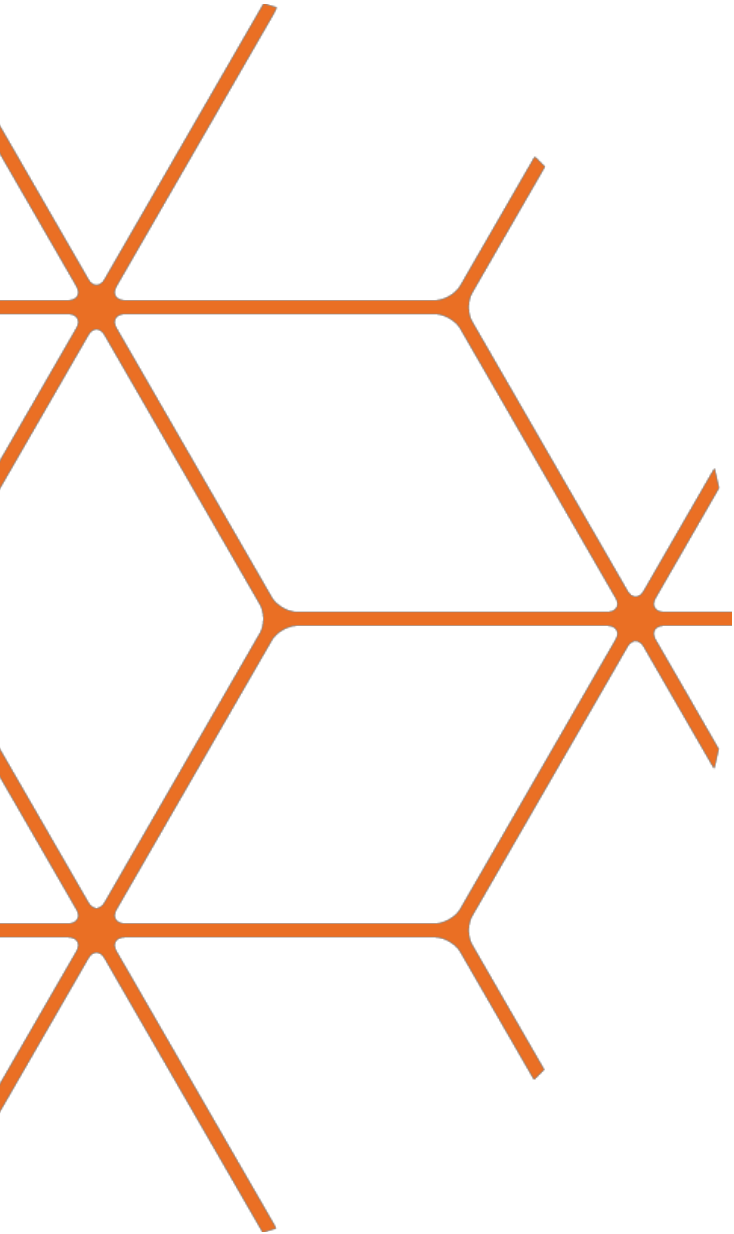




PHOTO NO. 1 - RIPARIAN OPEN FOREST (RE12.3.11) LOOKING NORTH FROM THE SOUTH-WEST OF THE POLYGON. NOTE REFUSE



PHOTO NO. 2 - RIPARIAN OPEN FOREST (RE12.3.11), LOOKING WEST ALONG NORTHERN BOUNDARY. NOTE CYCLONE FENCE ALONG NORTHERN BOUNDARY, FIRE TRAIL CLEARING AND REFUSE



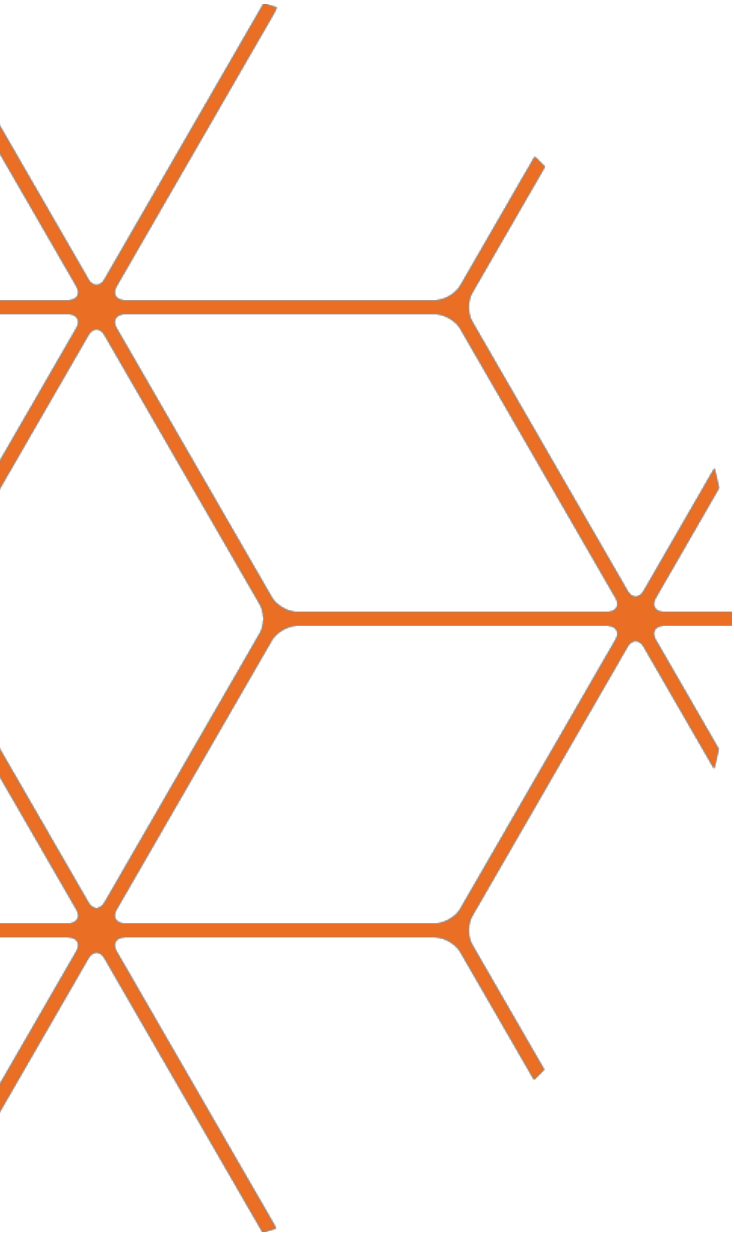
PHOTO NO. 3 - VEGETATION ANALOGOUS TO RE12.9-10.4 AT NORTHWEST



PHOTO NO. 4 - DERIVED GRASSLAND/SHRUBLAND NEAR Q2

APPENDIX I

Tree Retention/Removal Plan



Notes:
 1. Figure not for construction purposes.
 2. Refer to Sheets 2-3 for individual tree data.

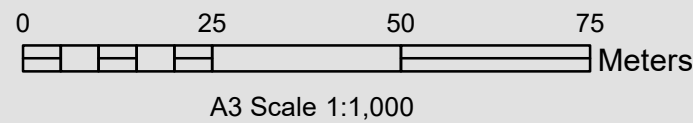


	Subject Site
	Proposed development disturbance extents footprint
	Existing infrastructure
	Biodiversity area (High ecological significance strategic)
	Biodiversity area (High ecological significance)
Tree stem	
	To be retained
	Prospects for retention subject Arborist Assessment
Tree Protection Zone (TPZ)	
	To be retained
	Prospects for retention subject Arborist Assessment

File: 2700Pa-llara-TreeRetention-Removal-211111



TREE RETENTION / REMOVAL PLAN - LOT 3 RP136964



Sheet Number: 1
 Project: 2700
 Version: 0
 Date: 11/11/2021
 Sources: Cadastral boundaries: QLD DCDB DNRME 2021
 Aerial photo: NearMap 08/10/2021
 Biodiversity areas: Brisbane City Plan 2014



TREE NO	SCIENTIFIC NAME	COMMON NAME	TREE HEIGHT (M)	CROWN WIDTH (M)	DBH (MM)	TPZ RADIUS FROM TRUNK (M)	HOLLOWS	NUMBER OF HOLLOWS	TREE HEALTH	HEALTH COMMENT	TREE STRUCTURE	STRUCTURE COMMENT	COMMENTS	SUITABILITY FOR RETENTION	COORDINATES	
															NORTHING	EASTING
2051	<i>Eucalyptus racemosa</i>	scribbly gum	22	17	900	10.8	Medium 35-100mm	6 to 10	Fair	Typical	Fair	Crown Cavity	occupied hollow (rainbow lorikeet)	Suitable	6945559.451	500751.862
2052	-	stag	19	12	750	9.0	Medium 35-100mm	6 to 10	Dead	Typical	Fair	Deadwood	-	Suitable	6945547.494	500698.139
2053	<i>Eucalyptus tereticornis</i>	forest red gum	17	15	800	9.6	Large >100mm	6 to 10	Fair	Typical	Fair	Fill around tree base	-	Suitable	6945528.998	500766.46
2054	<i>Allocasuarina littoralis</i>	black she-oak	14	12	400	4.8	No	1 to 5	Fair	Typical	Fair	Crown Wound	-	Suitable	6945520.314	500773.235
2055	<i>Acacia sp.</i>	an acacia	8	4	160	2.0	No	1 to 5	Good	Typical	Fair	Typical	-	Suitable	6945516.321	500770.228
2056	-	stag	26	18	950	11.4	Large >100mm	6 to 10	Dead	Typical	Poor	Deadwood	occupied hollow (sulfur-crested cockatoo)	Suitable	6945572.723	500804.078
2057	<i>Eucalyptus resinifera</i>	red mahogany	25	17	880	10.6	Medium 35-100mm	1 to 5	Fair	Typical	Fair	Root damage	-	Suitable	6945599.28	500824.086
2058	<i>Acacia sp.</i>	an acacia	9	5	130	2.0	No	-	Fair	Typical	Poor	Poor Form	-	Low	6945660.035	500759.268
2059	<i>Eucalyptus racemosa</i>	scribbly gum	10	6	260	3.1	No	-	Fair	Typical	Fair	Multi-stemmed at base	-	Suitable	6945667.481	500757.622
2060	<i>Eucalyptus racemosa</i>	scribbly gum	17	15	380	4.6	No	-	Fair	Typical	Fair	Typical	-	Suitable	6945677.621	500757.718
2061	<i>Eucalyptus racemosa</i>	scribbly gum	19	16	650	7.8	Small <35mm	1 to 5	Fair	Typical	Fair	Deadwood	-	Suitable	6945670.982	500783.026
2062	<i>Pinus elliotii*</i>	slash pine	18	12	320	3.8	No	-	Fair	Typical	Fair	Typical	neighbours tree	Suitable	6945676.636	500767.424
2063	<i>Allocasuarina littoralis</i>	black she-oak	8	5	320	3.8	No	-	Fair	Typical	Fair	Typical	-	Suitable	6945676.463	500762.948
2064	<i>Eucalyptus racemosa</i>	scribbly gum	18	15	1000	12.0	Large >100mm	6 to 10	Fair	Typical	Fair	Root damage	occupied hollow (rainbow lorikeet)	Suitable	6945640.645	500804.166
2065	<i>Eucalyptus racemosa</i>	scribbly gum	16	14	750	9.0	Large >100mm	6 to 10	Fair	Typical	Fair	Crown Failure	-	Suitable	6945647.45	500802.957
2066	<i>Eucalyptus racemosa</i>	scribbly gum	18	15	650	7.8	Medium 35-100mm	1 to 5	Fair	Typical	Fair	Trunk Wound	-	Suitable	6945646.174	500816.015
2067	<i>Eucalyptus racemosa</i>	scribbly gum	15	15	670	8.0	No	-	Fair	Typical	Fair	Crown Wound	-	Suitable	6945669.588	500794.376
2068	<i>Eucalyptus tereticornis</i>	forest red gum	17	15	620	7.4	Small <35mm	1 to 5	Fair	Typical	Fair	Fill around tree base	-	Suitable	6945665.432	500804.504
2069	<i>Angophora leiocarpa</i>	smooth-barked apple	17	13	320	3.8	No	-	Fair	Typical	Fair	Typical	-	Suitable	6945666.091	500831.789
2070	<i>Eucalyptus tereticornis</i>	forest red gum	17	20	1000	12.0	Medium 35-100mm	1 to 5	Fair	Typical	Fair	Multi-stemmed	neighbours tree, low crown. Untagged	Suitable	6945672.68	500820.261
2071	<i>Pinus elliotii*</i>	slash pine	17	8	360	4.3	No	-	Fair	Typical	Fair	Typical	neighbours tree,	Suitable	6945662.202	500861.801
2072	<i>Eucalyptus racemosa</i>	scribbly gum	28	18	1200	14.4	Large >100mm	6 to 10	Fair	Typical	Fair	Crown Wound	street tree, occupied hollow (rainbow lorikeet)	Suitable	6945618.684	500871.633
2073	<i>Eucalyptus racemosa</i>	scribbly gum	30	18	1050	12.6	Large >100mm	6 to 10	Fair	Typical	Fair	Crown Wound	street tree, occupied hollow (native bees)	Suitable	6945606.292	500865.855
2074	<i>Eucalyptus racemosa</i>	scribbly gum	34	22	1300	15.0	Large >100mm	>10	Fair	Typical	Fair	Crown Wound	street tree, occupied hollow (sulfur-crested cockatoo)	Suitable	6945591.747	500857.179
2075	<i>Allocasuarina littoralis</i>	black she-oak	14	7	340	4.1	No	-	Fair	Typical	Fair	Asymmetric Crown Form	street tree	Suitable	6945591.31	500855.469
2076	<i>Allocasuarina littoralis</i>	black she-oak	14	6	330	4.0	No	-	Fair	Typical	Fair	Asymmetric Crown Form	street tree	Suitable	6945589.68	500854.057
2077	<i>Allocasuarina littoralis</i>	black she-oak	11	5	220	2.6	No	-	Fair	Typical	Fair	Asymmetric Crown Form	street tree	Suitable	6945588.371	500855.27
2078	<i>Allocasuarina littoralis</i>	black she-oak	13	5	450	5.4	No	-	Fair	Typical	Fair	Poor Form	street tree	Suitable	6945588.223	500856.294



TREE NO	SCIENTIFIC NAME	COMMON NAME	TREE HEIGHT (M)	CROWN WIDTH (M)	DBH (MM)	TPZ RADIUS FROM TRUNK (M)	HOLLOWS	NUMBER OF HOLLOWS	TREE HEALTH	HEALTH COMMENT	TREE STRUCTURE	STRUCTURE COMMENT	COMMENTS	SUITABILITY FOR RETENTION	COORDINATES	
															NORTHING	EASTING
2079	<i>Acacia sp.</i>	an acacia	15	7	350	4.2	No	-	Fair	Typical	Poor	Poor Form	street tree	Low	6945589.347	500857.294
2080	<i>Acacia sp.</i>	an acacia	17	12	600	7.2	No	-	Good	Typical	Fair	Multi-stemmed at base	street tree	Suitable	6945591.208	500860.587
2081	<i>Alphitonia excelsa</i>	red ash	9	6	150	2.0	No	-	Good	Typical	Fair	Asymmetric Crown Form	street tree	Suitable	6945593.071	500859.128
2082	-	stag	22	15	1100	13.2	Large >100mm	6 to 10	Dead	Typical	Fair	Trunk Cavity	street tree	Suitable	6945645.588	500867.939
2083	<i>Eucalyptus resinifera</i>	red mahogany	23	17	750	9.0	Small <35mm	1 to 5	Fair	Typical	Fair	Deadwood	street tree	Suitable	6945662.151	500885.105
2084	<i>Eucalyptus tereticornis</i>	forest red gum	17	13	480	5.8	No	-	Fair	Typical	Fair	Typical	up to 1 m GPS location accuracy only	Suitable	6945660.528	500880.285
2085	<i>Eucalyptus tereticornis</i>	forest red gum	16	12	400	4.8	No	-	Fair	Typical	Fair	Typical	up to 1 m GPS location accuracy only	Suitable	6945664.379	500872.053

Notes: Trees were identified and assessed by ArborAustralis arborists. Reproductive material could not be found for all trees to allow conclusive identification.

Individual tree survey targeted native trees within and overhanging the proposed development disturbance footprint with a DBH >150mm

Tree Protection Zone and multi-stem tree DBH were calculated in accordance with AS4970-2009

A detailed arboricultural assessment of trees to be retained where new disturbance is proposed within TPZ will be required. This will allow for formulation of appropriate impact mitigation measures for individual trees as well as a detailed review of viability for retention.

